State Board of Forestry and Fire Protection

Findings Pursuant to Government Code Section 11346.1(b) in Support of Adoption of Emergency Rules to Implement

Lake Tahoe Region Exemption Emergency Rule, 2005

Notice Date: June 13, 2005

The California State Board of Forestry and Fire Protection (Board) is promulgating an emergency regulation necessary to amend regulations under the Forest Practice Rules (FPR) Title 14, Chapter 4, Subchapter 7, Article 2, and Section 1038, Exemptions. This amendment would exempt Timber Harvesting Plan filing requirements of the Forest Practice Act (FPA) when harvesting live trees in a watercourse and lake protection zone (WLPZ) in the Lake Tahoe region for purposes of reducing fire hazards. Exemptions conducted under this amendment shall be in accordance with a Tree Removal Permit Issued by the Tahoe Regional Planning Agency (TRPA) and certified by the Lahontan Regional Water Quality Board (LRWQCB). The amendment also requires that any timber operations conducted using an Exemption outlined in the FPRs under section 1038 in the Lake Tahoe Region obtain a TRPA permit prior to exemption submission to the California Department of Forestry and Fire Protection (CDF).

Comments on this emergency regulation may be submitted by mail and should be addressed to

Board of Forestry and Fire Protection
Attn: Christopher Zimny
Regulations Coordinator
P.O. Box 944246
Sacramento, CA 94244-2460
Tel: (916) 653-9418

and mailed, fax or courier to:

Office of Administrative Law
300 Capital Mall, Suite 1250
Sacramento, CA 95814
Fax: (916) 323-6826
Tel: (916) 323-6225

Written comments can also be hand couriered or delivered to the contact person listed in this notice at the following address:

Board of Forestry and Fire Protection
Room 1506-14
1416 9th Street
Sacramento, CA

Written comments may also be sent to the Board via facsimile at the following phone number:

(916) 653-0989

Written comments may also be sent via e-mail at the following address:

board.public.comments@fire.ca.gov

Comments must be received by 5:00 PM, June 20, 2005. It is requested, but not required, that written statements or arguments be submitted in triplicate.

I. Finding of Emergency

The Board finds wildfire conditions are a threat to the resources in the Lake Tahoe Basin area and to the overall public health and safety of persons of the region. Past disruptions of natural fire cycles and other activities have resulted in wildfires of increasing intensity and severity that are a threat to the forest ecosystem, air quality, unique Lake Tahoe characteristics, private citizens of the Lake Tahoe region, and emergency services personnel. Fire threats to private citizens of the area are a particular concern, as over 100 thousand persons reside in the Lake Tahoe Basin, with millions of additional visitors to the region every year. Additionally, a clear pristine Lake supported by healthy surrounding forests is a common goal for Californians. These values are being threatened by overstocked forests causing increased tree mortality and resulting in the build up of flammable fuels. The treatment of these hazardous fuels will reduce the impact of wildfires on communities, natural and cultural resources, and will restore health to fire-adapted ecosystems.

The State Board of Forestry and Fire Protection (Board) recognizes the urgent, extensive and on-going wildfire hazard existing on private forest lands in the Lake Tahoe Region resulting from the combination of increasing quantity and arrangement of natural vegetation. This wildfire hazard is a significant threat to human and natural resources on over 200,000 acres of terrestrial land cover in the Lake Tahoe Basin and to the over 122 thousand acres of the Lake Tahoe water body itself. The imminent emergency nature of the fuel hazard problem has also been repeatedly recognized by many high profile efforts including the federal Lake Tahoe Restoration Act of 2000, the Lake Tahoe Watershed Assessment of 2000, The Tahoe Basin Fuel Hazard Reduction Plan of 2004, the US Forest Service Lake Tahoe Basin Management Unit Fire and Fuels Assessment of 2002, Tahoe Regional Planning Agency (TRPA) Regional Plan, 1987, the Western Governors' Association promulgation of the National Fire Plan, the USDA Forest Service (USFS) Sierra Nevada Forest Plan Amendment, 2004, and local Basin fire departments. This recognition was demonstrated by the March 2004 "Lake Tahoe Fire Prevention Forum." This summit brought together many of the above listed groups along with state and federal legislators to address fuel hazard reduction needs and opportunities for the Basin.

The Board finds modern fire frequency is much longer than prior to European settlement, with much of Lake Tahoe's vegetation able to support intense catastrophic wildfires. Past disruptions of natural fire cycles and other activities have resulted in wildfires

of increasing intensity and severity that are a threat to the forest ecosystem, air quality, fresh water supplies, private citizens, emergency services personnel, and the overall public health and safety of California. Much of the forests have fuel and slope conditions that would support high or very high fire behavior when burned under severe weather conditions. Fires that burn in these areas under hot, dry, and windy conditions are difficult to control even by the world's most comprehensive wildland fire protection system.

The Board finds fire hazard, the combination of terrain, fuel type and fuel condition, is steadily becoming more hazardous on timberlands throughout Lake Tahoe. Healthy forests are a common goal for Californians, but overstocked forests cause increased tree mortality resulting in the build up of flammable fuels. Recent measurements by the USFS Forest Inventory and Analysis Program (FIA) indicate increasing level of stocking on private lands over the last three decades, with millions of acres of coniferous forest types (statewide), including forest lands in the Tahoe Basin, having stand densities far beyond stocking levels associated with the site capacity. This suggests that stands are very susceptible to significant levels of pest mortality and increased dead fuel loads. When combined with on-going drought and atmospheric zone damage, these conditions can lead to catastrophic wildfire events. The treatment of these hazardous fuels reduces the impact of wildfires on communities, natural and cultural resources, and restores health to fire-adapted ecosystems.

The Board finds the values at stake in Lake Tahoe and throughout California needing wildland fire protection are extensive and at imminent threat. The Board finds that nearly 100 thousand acres in the Lake Tahoe basin are highly susceptible to damaging fire. Over 24 thousand of these acres were found to be in the wildland urban interface and have significant fire threat to thousands of housing units. This threat, resulting from the combination of fuel, weather and valuable human and natural resource assets, have created an increasing amount of wildfire and increasing losses. Major wildland fires in California, epitomized by the extraordinary fires of October, 2003, threaten a wide range of public and private assets. In 2003, wildfires destroyed more than 730,000 acres, 3,600 residential structures, and resulted in the tragic loss of 25 lives in California. The southern California wildfires were followed by mudslides that tragically killed 14 people. The subsequent mudslides possibly resulted from vegetation lost to wildfire and flash flooding.

Recent five year average shows over 500,000 acres per year were burned (statewide), and as seen recently in 2003, this annual total varies greatly with over 700 thousand acres burned in some years. While the area burned in wildfires varies greatly year to year, when viewed statewide, there has been an apparent increase in high fire years (total area burned greater than 500,000 acres) since 1985.

While the acreage and number of wildfires each is extensive and increasing on a statewide basis, a more significant trend is the climbing wildfire-related financial losses. From 1947 to 1990, the dollar damages to structures and other resources in State Responsibility Areas (SRA) exceeded $100 million (2001 dollars) only once. Between 1990 and 2001, losses exceeded $100 million five times.

The Board finds that treating hazardous fuels in all portions of the landscape, including limited vegetation removal in proximity to watercourses, reduces the threat of wildfire damage to the most sensitive ecological areas important to water quality attributes of Lake Tahoe. The potential adverse impacts to the unique natural resources of the Lake Tahoe Region are threatened by ignoring the fuel hazards in watercourse areas and the resultant degradation of the riparian characteristics following wildfire. Threatened resources of particular concern at Lake Tahoe include pristine lake conditions, watercourses and wet areas immediately related to the water quality of Lake Tahoe, remnant old growth forests, and wildlife habitat.

The Board finds the proposed regulation, when conducted in accordance with permitting requirements of the Tahoe Region Planning Agency, the Lahontan Regional Water Quality Control Board and the operational limitations defined in the regulation, will treat surface, ladder and, to lesser extent crowns of trees, and is necessary for reduction of fire hazard needed for immediate preservation of the public peace, health and safety, and the general welfare. Such treatments are found to provide adequate protection to natural resources. The treatments and operational limitations under the regulation and in cooperation with the TRPA and LRWQCB, will reduce the tree crowns density, retain larger fire resistant trees, and prioritize removal of smaller trees that contribute to meeting fuel hazard reduction goals. Such treatments require strict equipment limitations, and are determined to cause no potential adverse effects to water quality.

The Board finds this amendment affects an existing regulation focused on fuel hazard reduction and is consistent with the intent and previously evaluated environment impacts considered in 14 CCR 1052.4, Fuel Hazard Reduction Emergency Notice. Adoption of the amendment to subsection 1038 (f) affects regulation requirements of section 1052.4. This connection is found in that fuel hazard reduction operations conducted in accordance with section 1052.4 (b) require the operational limitations of section 1038(f). Amendments under 1038(f) to permit harvesting in Watercourse and Lake Protection Zones (WLPZs) mean this activity is also permitted under permits conducted under section 1052.4. The Board has considered the potential environmental effects of permitting harvesting in proximity to watercourses in the Lake Tahoe Region when conducted under section 1052.4 Emergency Notice permits. The Board has found that operational limitations and the consultation of cooperating agencies (TRPA and LRWQCB) provide adequate protection to avoid any potentially significant adverse effects to water quality resulting from operations in the WLPZ.

Based on the above findings, the Board finds there is an emergency situation present with action needed for immediate preservation of the public peace, health and safety, and the general welfare.

II. Authority and Reference

Authority: Authority cited: Sections 4551, 4553 and 4584, Public Resources Code. Reference: Sections 4516, 4527 and 4584, Public Resources Code

III. Informative Digest/policy statement

This proposed amendment revises the "Tahoe Dead and Dying Tree Removal" exemption under 14 CCR section 1038(f) of the California Forest Practice Rules. It also amends the permitting requirements of any section 1038 exemption conducted in the Lake Tahoe Region by requiring obtaining a TRPA permit prior to submitting the exemption form to CDF.

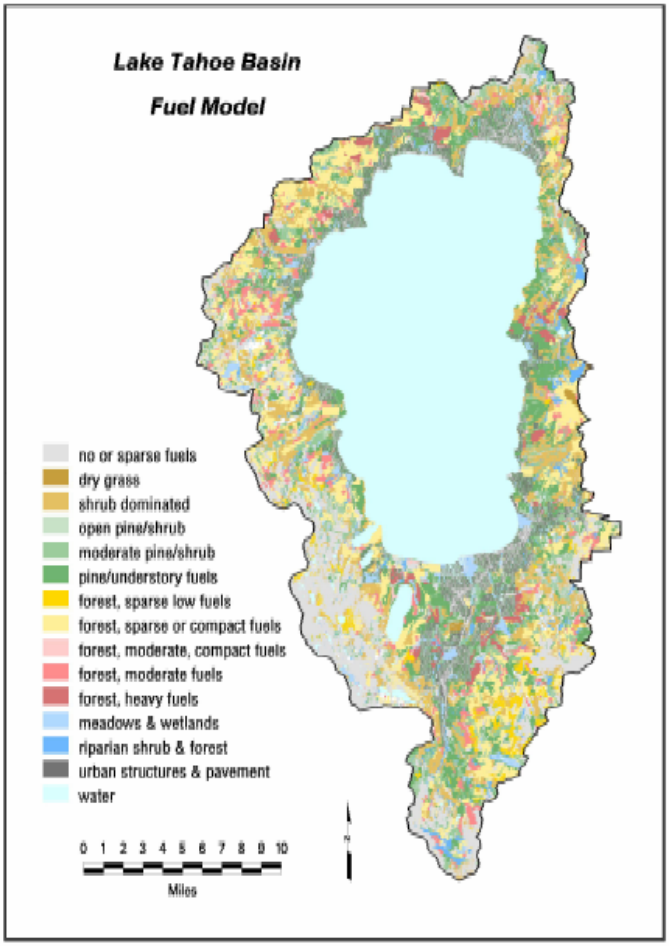
The revisions to sections 1038 and 1038 (f) fundamentally change three sections:

- **Section 1038 preamble is amended to require that all timber operations conducted using an Exemption outlined in the FPRs in the Lake Tahoe Region obtain a TRPA permit prior to exemption submission to CDF.**

- **Amendments to subsection 1038(f) permit live tree harvesting, for fuelwood uses only, in Stream Environment Zones (SEZs) or in Watercourse and Lake Protection Zones (WLPZs) defined in the FPRs.** Amendments to subsections 1038 (f) and 1038 (f)(7) eliminate tree removal restrictions in SEZs and WLPZs. Existing rules under subsection 1038 (f) do not permit any live tree removal on parcels less than 20 acres in the Tahoe Basin , including in SEZs/WLPZs. It would permit live fuelwood or minor forest products, dead trees, dying trees and other vegetation removal from SEZs/WLPZs when approved by TRPA and the Lahontan Regional Quality Control Board prior to exemption submission to CDF. The tree removal prescription/limitation would be the WLPZ standards currently outlined in Article 6, Watercourse and Lake Protection Zones, Sections 956 through 956.12.

- **Amendments require the use of low impact equipment in SEZs/WLPZs:** Subsection 1038 (f) (2) permits "low impact" equipment in SEZs, WLPZs or other high erosion hazard areas for tree removal, if approval is also obtained from the TRPA and the LRWQCB.

The geographic scope affected by the regulation is private timberlands with hazardous fuel conditions, within the California side of the Lake Tahoe Region, as defined in the amendment. This area is estimated at approximately 50,000 acres, based on ownership patterns outlined in the Tahoe Basin Fuels Reduction Action Plan and fuel modeling conducted under the Lake Tahoe Watershed Assessment of 2000 (see figure). Watercourses comprising this area were not calculated but were estimated to be approximately 10% of the private



timberlands on the California side of the basin, totaling approximately 5000 acres.

IV. Statement of Specific Purpose and Necessity

Specific Purpose

Fuel hazard reduction needs in the Lake Tahoe Basin (Basin) have been recognized by the Tahoe Regional Planning Agency (TRPA), local Basin fire departments, the Tahoe Conservancy, federal and state land management and fire protection agencies, and other local stakeholders. This recognition was demonstrated by the March 2004 "Lake Tahoe Fire Prevention Forum." This summit brought together many of the above listed groups along with state and federal legislators to address fuel hazard reduction needs and opportunities for the Basin.

To address the hazardous situations, the Board of Forestry and Fire Protection (Board) has during 2004 and 2005 adopted regulations that address these conditions throughout the State. Regulations including Emergency Notices for Fuel Hazard Reduction (14 CCR 1052.4) and Exemptions implementing legislation AB 2420 (14 CCR 1038 i) have provided significant regulatory relief to help streamline the permitting process needed to harvest commercial trees for fuel hazard reduction.

Both of the recent Board regulations permitted thinning and slash removal in critical fire protection areas, but did not permit these fuel reductions in Watercourse and Lake Protection Zones (WLPZs). Exclusion of treatments in WLPZs was determined necessary by the Board because the regulations are non-discretionary permits (Emergency Notice or Exemption) where detailed reviews of harvesting activities prior to harvesting are generally not conducted. The presumption of these non-discretionary permits is that they generally meet Regional Water Quality Control Board Basin Plan objectives because there are no harvesting activities in WLPZs.

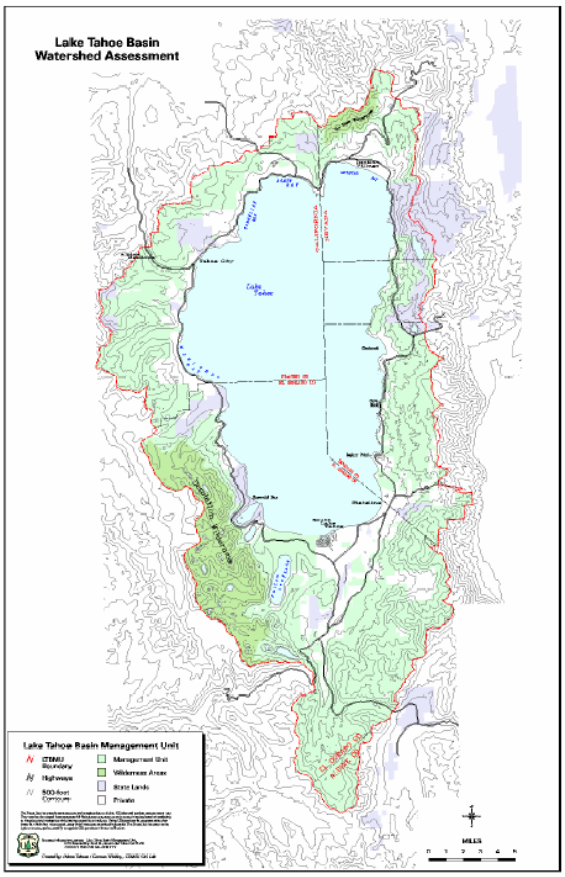
In late 2004, TRPA amended its ordinances to permit limited tree removal in its streamcourse and wet areas, which are termed Stream Environment Zones (SEZs). These amendments were made in response to the recognition that treatments of fuels in streamcourses are part of a landscape-level protection strategy. However, treatment of fuels in SEZs is not permitted under the recent Board fuel hazard reduction rules.

In March of 2005, a representative from the Lahanton Regional Water Quality Control Board submitted written comments and made an oral presentation before the Board of Forestry regarding the inability of landowners to treat fuels in SEZs and WLPZs under either of the Board's recent Emergency Notice or Exemption fuel reduction rules. The Lahontan representative requested that the Board address this issue, using emergency rules, to permit limited fuel reduction in SEZs and WLPZs in the Tahoe Basin beginning in the field season of 2005. The LRWQCB is concerned about the potential for catastrophic fire in the Lake Tahoe Region and the effects that catastrophic fire could have on water quality and beneficial uses of water. Staff of the LRWQCB worked closely with the Board of Forestry to craft an emergency

rule that would allow the needed fuels reduction treatments while also preventing any potential for significant adverse effects.

Necessity (Text and graphic excerpts from the Lake Tahoe Watershed Assessment, Murphy, Dennis D.; Knopp, Christopher M., technical editors. 2000. Lake Tahoe Watershed Assessment: Volume I. Gen. Tech. Rep. PSW-GTR-175. Albany, CA: Pacific Southwest Research Station, Forest Service, US Department of Agriculture; 753 p.)

In recent years, the public has become deeply concerned about the potential for severe forest wildfires. Of particular concern are the wildfires in the Wildland Urban Interface (WUI) areas where homes and development intermix with the wildland vegetation. Conversely, forest managers are concerned about the spread of fire from these residential areas into wildland areas and the impacts they have on natural resources and ecological system such as habitats, water cycling and carbon sequestration.



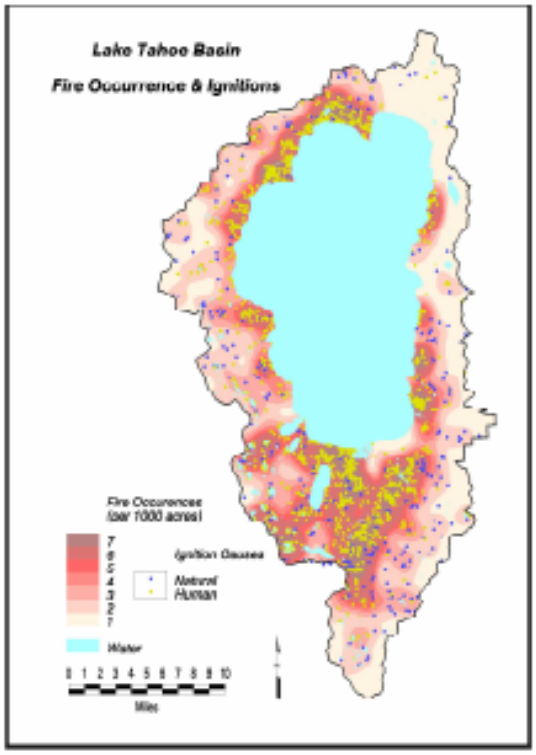
This concern has been expressed in many forums in regards to wildfire affects in the Lake Tahoe Basin, the 500 square miles of which more than a third (122,600 acres) is the lake itself (see figure). Of nearly 200,000 acres of terrestrial lands in the Basin, of most concern relative to fire are the lower elevation, more populated, "Wildand Urban Interface." This WUI comprises about 24,000 acres of public and private land, in both California and Nevada.

Increasing hazardous fire conditions have been observed in the Lake Tahoe Basin over time. In the Sierra Nevada, most fires prior to European settlement were thought to be of low to moderate intensity, with extensive areas (>100 acres) of high tree mortality uncommon (Skinner and Chang 1996). But by the 1920s, fire protection was a primary concern. Historically 2,100 to 8,000 acres burned on average annually in the basin, compared to fewer than 500 acres of burning currently.

Tahoe has now completed 75 years of fire suppression management, during which there normally would have been three to five fire cycles in the mixed-confer and pine zones. One consequence has been an increase in the amount of fuel on the forest floor and increased density of understory vegetation.

Today fires are likely to be more intense because of the accumulation of surface fuels and understory. The amount of fuels available to burn at any given time in a given area is referred to as fire hazard. Our very successful program of fire suppression of low to moderate intensity fires has made the occurrence of high intensity fires more likely than ever.

In the Lake Tahoe Basin, there have been many additional changes in vegetation from the time of settlement, which are the result of activities other than fire suppression. Extensive harvest in the late 1800s and early 1900s resulted in an overall young forest. There is concern that these changes have contributed to an increased likelihood of severe fire. Younger forests are more susceptible to mortality from fires. This is due to the lower height and size of small trees. Their bark is thinner, and their crowns are lower to the ground, making them more susceptible to lethal heating by flames of a low height. With much of the Basin in a younger state, a large proportion of it could burn severely, with high rates of mortality. These two human activities—creating younger forests by harvesting older trees and suppressing fires that otherwise would have burned off accumulated fuel—have increased the likelihood of severe fire in the Basin.



In addition to instituting fire suppression measures that may have increased fire hazard through fuel accumulation, humans have increased the number and changed the distribution of ignitions. Human caused fires are the source of most of the acres burned by wildland fire in the Lake Tahoe Basin (see figure). People tend to ignite fires that escape and become larger than do lightning fires. Some of the fires that people ignite are on severe fire days, which are dry, windy, and hot; lightning fires often are ignited under conditions of higher humidity and cooler temperatures and during events that are usually forecasted, allowing fire managers to gear up for the subsequent fires.

Fires in the 20th century have been few, due to effective fire suppression and the high elevation environment, with its short fire season. Fire detection and suppression is excellent. Because of the large number of fire departments, response time to human-caused fires is among the shortest in the Sierra Nevada. Nonetheless, some of the highest fire ignition rates in the Sierra Nevada occur in the Basin, concentrated around the urban interfaces.

Even under the most extreme conditions, fires are unlikely to spread to more than one or two subwatersheds because of their orientation relative to wind patterns and the dissected topography along the lakeshore. Fire escape rates are low, at less than half a percent of recent historical ignitions. However, should a fire escape initial control attempts under extreme wildfire conditions, at least 50 percent of the area in the resulting burn would likely be crown fire, with overstory tree mortality greater than 50 percent.

Tree mortality (representing severity of fire effects on vegetation) likely would be high in most fires, given current surface and ladder fuel conditions. Locations of drought-, insect-, and pathogen-related tree mortality can result in decreased fire line construction rates and increased tree mortality in fires. These effects are most important where mortality is widespread and

continuous. Drought-stressed trees often succumb to fires more readily than non-drought-stressed trees.

Longer-term weather patterns, namely drought, also influence the likelihood of fire. It is likely that droughts will occur in the future to an unknown degree and frequency and that the greatest likelihood of large or severe fires will be associated with these droughts. It appears that the climate generally is warming and that past warm periods have been associated with dryness (Stine 1996). Therefore the trend appears to be one toward climate conditions with an increasing likelihood of large or severe fires.

Fuels, ignitions, and weather conducive to fire simultaneously contribute to the likelihood of large or high severity fires. As mentioned previously, ignition rates are high in the Basin, particularly in the urban interface areas. These ignitions occur in the portion of the Basin with the greatest amount of fuel: the low elevation rim around the lake in the pine and mixed-conifer zone. The weather is rarely a factor in fire suppression because of the high elevation environment and relatively short fire season.

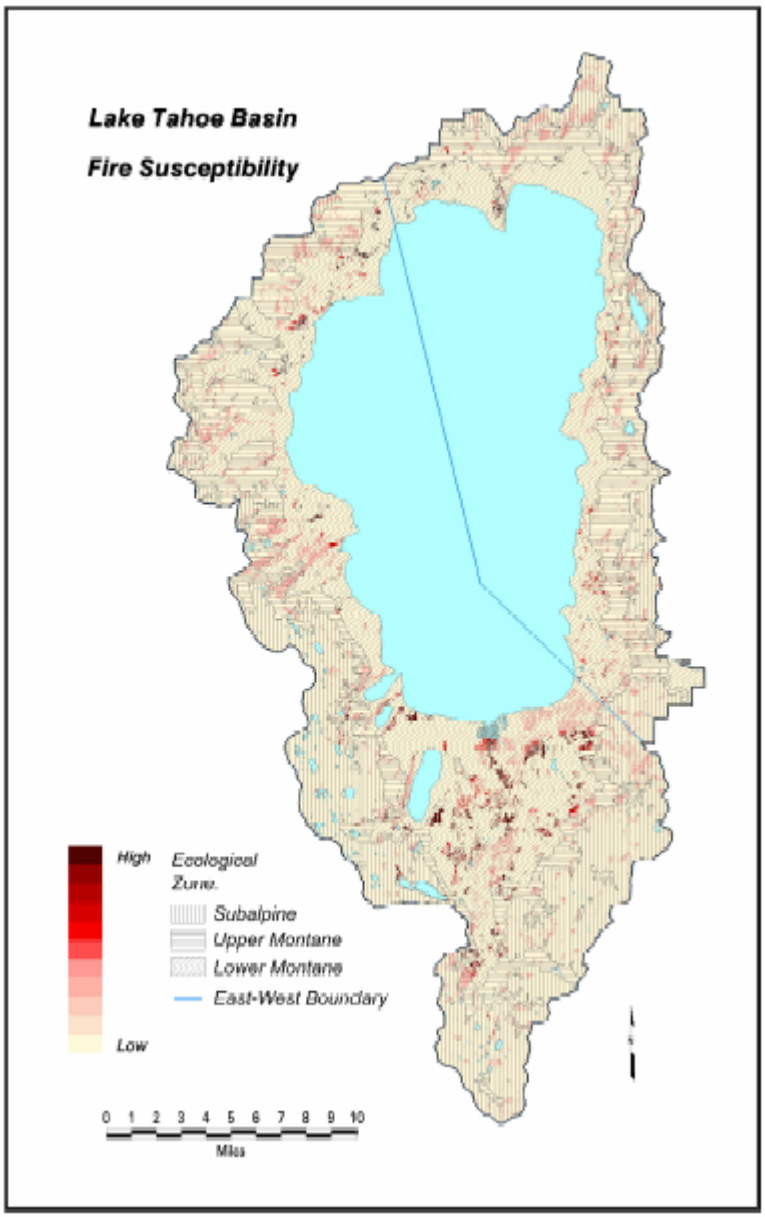
In summary, weather, fuels, and ignitions all contribute to the likelihood of large or severe fires. Although weather conditions usually limit large or severe fires in the Basin, some weather conditions can result in large or severe fires, particularly in hot and dry years. Additionally the high proportion of WUI increases the likelihood that fires will be severe. Importantly, ignition densities are high in the WUI. Although high levels of suppression forces and relatively cool, wet weather conditions limit the number and sizes of fires from these ignitions, reducing the number of ignitions would substantially reduce the likelihood of fire.

Effects of a high severity or large unplanned fire on soil erosion, air quality, lake clarity, biotic health, old growth, and urban areas

The potential effects of unplanned fire on vegetation in the Basin are also important to consider. Vegetation in the Basin provides important ecosystem and social values that would be at risk if a large, high severity fire occurred. Vegetation provides cover for the soil, filtering nutrients and sediment that might flow into the lake, reducing water quality. Vegetation also provides wildlife habitat and is an important component of the scenic beauty of the Basin.

The greatest concern with large fires in the Basin is the high property and natural resource values that they threaten (including lake clarity and limited old-growth forests). Even a small wildfire in the Basin is potentially a significant event because of the juxtaposition of high ignition potential, high density and value of human developments, and high fuel hazard.

In modeled fire impact analysis, fire was modeled for two burning periods (48 hours). Fires were started in locations in each selected watershed where the density of ignitions have been the greatest; usually at the interface between the urban and wildland areas. Every run showed spotting and crowning of fire, but with simulated direct attack fire suppression tactics, fire were controlled to a small size (42 to 546 acres). The largest simulated fire was on the north shore, where it reached 546 acres, due to the orientation of wind with the slope in that area. Without simulated suppression, flame lengths were high enough to reach the crowns and surface fuels were heavy enough to carry fire in the crowns in part of the fire perimeter. However, only a portion of each area burned as a crown fire, as surface fires dominated (55 to 87 percent) the simulated fires.



Relative fire susceptibility index measures (see figure) is the ratio among expected acres to be burned within a fire occurrence zone and burnable acres. It fundamentally indicates the fire spread potential. Precise estimates of acres burned would be required to produce an actual probability of an acre burning. However, estimates for small watersheds modeled indicate nearly 30 percent of the west side lower and upper montane land covers have over a 75 % relative ratings of the likelihood of an unplanned large or severe fire.

Values at risk were analyzed at the watershed scale because ecosystem values at risk, such as lake clarity, are impacted at these broader scales. Lake clarity is most likely to be affected by larger fires occurring in a particular watershed, with erosion and sediment and nutrients funneled through stream channels and roads. Such a watershed focus also will protect old-growth stands.

The greatest coincidence of watersheds with a high proportion of erodible soils and the likelihood of fire occurs on the east shore. Steep granitic soils and flammable fuels occur here.

The south and north shores also contain some watersheds with high ratings. Urban and urban interface areas on the south and north shores have the greatest fire occurrence, whereas the west shore and the Incline area have relatively low ratings.

V. Disclosures Regarding the Proposed Action

The Board has determined the proposed action will have the following effects:

- Mandate on local agencies and school districts: None

- Costs or savings to any State agency: No direct savings identified although long term fire suppression costs and loss to public trust natural resources may be reduced by an unestimated amount. The regulation also could result in unknown, potentially significant, General Fund cost avoidance by reducing forest fire risk and making it easier for CDF to contain fires while they are small; thereby preventing large conflagrations. CDF annually spends more than $400 million from the General Fund on fire protection and suppression.

- Cost to any local agency or school district which must be reimbursed in accordance with the applicable Government Code (GC) sections commencing with GC §17500: None

- Other non-discretionary cost or savings imposed upon local agencies: None

- Cost or savings in federal funding to the State: None

- The Board has made an initial determination that there will be no statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states.

- Cost impacts on representative private persons or businesses: The Board is not aware of any cost impacts that a representative private person or businesses would necessarily incur in reasonable compliance with the proposed action.

- Significant effect on housing costs: None

- Adoption of these regulations will not: (1) create or eliminate jobs within California; (2) create new businesses or eliminate existing businesses within California; or (3) affect the expansion of businesses currently doing business within California.

- Effect on small business: None. The Board has determined that the proposed amendments will not have an adverse affect on small business. The proposed regulation is designed to provide regulatory relief, leading to substantial reduction in regulatory filing and preparation fees.

- The proposed rules do not conflict with, or duplicate Federal regulations.

CZ file: OAL Emergency Findings 6_13_05