

INITIAL STATEMENT OF REASONS

Modified Timber Harvesting Plan for Fuel Hazard Reduction, 2009

[February, 2009]

Title 14 of the California Code of Regulations (14 CCR):

Adopt:

§ 1051.3 – 1051.5 Modified Timber Harvesting Plan for Fuel Hazard Reduction

PUBLIC PROBLEM, ADMINISTRATIVE REQUIREMENT, OR OTHER CONDITION OR CIRCUMSTANCE THE REGULATIONS ARE INTENDED TO ADDRESS

The State Board of Forestry and Fire Protection recognizes the urgent, extensive and on-going wildfire hazard existing on private and public forest lands resulting from the combination of increasing quantity, density and arrangement of natural vegetation. This wildfire hazard is a significant threat to human and natural resources on more than 48 million of the State's 81 million acres of forests and rangelands.

In recent years, the public has expressed significant concern about the potential for severe forest wildfire. 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 their ecological function.

Catastrophic fire also has significant implications to the rising public concern about climate change. A 2007 publication by Wiedinmyer and Neff indicates that fire emissions of carbon dioxide in the United States between 2002 and 2006 were equivalent to 4%-6% of anthropogenic emissions at the continental scale. At the state scale, fire emissions of carbon dioxide can exceed annual emissions from fossil fuel sources. It is estimated that Southern California's wildfires of September 2006, including the Day Fire, resulted in emissions equivalent to approximately 50% of estimated total monthly fossil fuel burning emissions across the entire state (Wiedinmyer and Neff, 2007).

While modern fire frequency is much lower in most areas than prior to European settlement, much of California's wildlands support conditions of high or very high potential fire behavior if fires are not aggressively suppressed. Much of the forests and rangelands have fuel and slope conditions that would support high or very high fire behavior when burned under typical severe weather conditions. Fires that burn in these areas under hot, dry, and windy conditions are difficult to control even by the Department of Forestry and Fire Protection's comprehensive wildland fire protection system.

Fire hazard, the combination of terrain and fuel types and condition, is steadily increasing on timberlands. Recent measurements by the USFS Forest Inventory and Analysis Program (FIA) indicate increasing levels of stocking on private lands over the last three decades. While quantity of fuels is just one measure of fire hazards, another indicative factor is the density and arrangement of fuels.

Research by the USFS Forest Health monitoring Group suggests that millions of acres of coniferous forest types have stand densities far above stocking levels associated with 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, these conditions can lead to catastrophic wildfire effects.

According to *CAL FIRE*'s statistics for 2007, a total of 3,610 fires within its jurisdiction burned a total of 434,667 acres and destroyed 3,079 structures. *CAL FIRE*'s estimated cost for suppression of these fires was \$298.3 million and the estimated damage in dollars amounted to \$254.1 million. Outside of *CAL FIRE*'s Direct Protection Area (DPA) and including contract counties as well as federal lands managed by the United States Forest Service, Bureau of Land Management, and National Park Service, the total acres burned in 2007 was estimated at 1,520,362.

Perhaps the most noteworthy aspect of the 2007 fire season is that most of the activity came at the very end of the season. As excerpted from the "2007 Fire Summary" on page 10 of *CAL FIRE*'s, 2007 Wildfire Activity Statistics Annual Report:

Up until October, California's fire season had been relatively light. Seasonable conditions were seen throughout the state through the middle of October. That all changed as forecasters predicted a strong off shore flow beginning October 21, 2007. CAL FIRE and other fire departments began to pre-position staff and fire equipment throughout Southern California. On October 21st, numerous wildfires sparked across Southern California. With the combination of strong winds, low humidity, and dry conditions, the situation was set for disaster. Fueled by dry vegetation and strong Santa Ana Winds, firefighters battled several raging infernos. Nearly one million residents were evacuated. This was the largest mass evacuation in California history. Ten people lost their lives and over 510,000 acres were charred from the fire siege. The last of the raging wildfires were not fully contained until early November, 2007.

The catastrophic fires thus far experienced in the 2008 fire season are no less examples of the extreme interaction of weather, fuels and topography. As reported by *CAL FIRE*, a total of 2,096 fires have burned nearly 2.1 million acres to date. In addition, 511 structures have burned to the ground and 15 individuals have lost their lives.

On June 20, 2008, over 6,000 lightning strikes were recorded in at least 26 California counties. These lightning strikes resulted in over 2,000 distinct fires that were fought by over 25,000 firefighting personnel from local, state, federal, and international sources. The "Mendocino Lightning Complex Fire" consisted of 129 distinct fires that burned an estimated 54,817 acres at a cost of \$48.5 million. Similarly, the "Butte Lightning Complex Fire" consisted of 37 separate fires that consumed 59,440 acres at a cost of \$85.3 million. Small mountain communities suffered significantly as a result of the fires. Over two hundred residences in the Butte community of Concow alone were lost as a result of the lightning fires and hundreds there remain homeless today. The implication of these fires is that the combination of untreated natural landscapes increasingly proximate to homes and communities can have catastrophic, if not historically poignant effects.

The fires to this point in the 2008 fire season have impacted much of the state's population either through the direct loss of standing timber and residential structures, or the indirect effects of poor air quality and related health issues.

Since May 22, 2008, Governor Schwarzenegger has declared a state of emergency in 10 counties across the state due to the magnitude of the fires. In light of the number of California counties experiencing extreme fire suppression activity, the Governor requested and received a federal declaration of emergency for the entire state on June 28, 2008.

The National Academy of Public Administration's 2004 Panel Report to Congress, Containing Wildland Fire Costs: Enhancing Hazard Mitigation Capacity (NAPA Report), identifies three actions to reduce fire hazard and suppression costs as follows:

1. ***Create fire-resistant communities and defensible spaces (places that are less prone to burn because of precautions taken ahead of time);***
2. ***Create strategic fuel break systems that can be used to compartmentalize and dampen fire progression patterns across large expanses of wildlands, transforming them into more manageable fire control areas;***
3. ***Reduce heavy vegetative fuel loads and restore forests to healthy levels that permit successful initial attack, do not contribute to large uncontrollable fires, and help to avoid damage to communities, municipal watersheds, the environment, and other values at risk.***
(NAPA Report to Congress, January 2004, p. 4)

Though this proposed regulation is focused upon the permitting of operations to reduce heavy fuel loads, it actually supports all three actions identified above. The reduction of heavy fuel loads on a landscape scale helps to create fire-resistant communities and serves as a component of an effective fuel break system. This regulation is complementary to the Public Resources Code §4291 requirements for defensible space around structures and the accompanying Board-adopted General Guidelines for the Creation of Defensible Space. It is likewise complementary and not a replacement of the Board's previously adopted regulations that created the non-discretionary Forest Fire Prevention Exemption (14 CCR §1038(i)) and Emergency Notice for Fuel Hazard Reduction (14 CCR 1052.4).

The NAPA Report notes among other things that the cost of fire suppression is increasing because hazardous fuels conditions are increasing simultaneous to residential expansion into previously undeveloped areas.

Hazardous fuels are accumulating in the nation's forests and rangelands while more people are moving into these areas. The Panel concluded, therefore, that the nation's best opportunity to contain suppression costs is to increase the capacity to reduce the accumulation of hazardous fuels and to mitigate wildfire risks to communities.
(NAPA Report to Congress, January 2004, p. 21)

As more of the national populace moves into these previously "wild" areas, the potential for catastrophic interactions with existing fuel loads increases. As has been illustrated again in the most recent fire season, this interaction of untreated fuels and residential development increases the suppression resources required, thereby increasing the cost of suppression, and elevates the already high level of risk firefighters assume with their duties.

Rather than fighting a “conventional” wildland fire in which fire suppression resources can be marshaled toward creation of a common perimeter, firefighters are increasingly faced with responsibility for direct structure protection. Such house to house fire suppression in the midst of a large wildfire can be extremely risky to personnel on the ground and in fact has resulted in multiple contemporary firefighter fatalities.

Public demand for fire protection in the wildland-urban interface has led to large public fund expenditures for such tools as a DC-10 aircraft converted to drop fire retardant and the employment of firefighting personnel from local, state, federal, and international sources. This is indicative of the public perception that large scale wildfires can be extinguished with the addition of enough fire suppression equipment and personnel. Following every major fire season in the last decade, the state legislature has considered or asked the Governor to sign bills that increase funding for fire suppression equipment and personnel. Still, even with the addition of a former commercial passenger jet capable of dropping 12,000 gallons of retardant, catastrophic fire continues to devastate communities like Concow with each new fire season.

As was recognized in the NAPA Report, fire suppression equipment and personnel will never be enough to prevent the catastrophic interaction of excessive fuel loading and residential infrastructure. Effective fire suppression must therefore begin with robust fire prevention efforts. Reduction of hazardous fuels across the broadest possible landscape of private, state, and federally owned lands is fundamental to an overarching, cost-effective strategy for reduction of catastrophic fire risk at all levels. To that end, this proposed regulation supports the landscape level reduction of hazardous fuels conditions on private and state lands and provides a process for cost-effective discretionary review of fuel modification projects.

SPECIFIC PURPOSE AND NECESSITY OF THE REGULATIONS

The threat of catastrophic fire requires landowners to constantly manage vegetation to reduce fuel loads while maintaining growth to meet Maximum Sustained Production (MSP) of high quality timber products pursuant to the Forest Practice Act. The Board’s proposed *Modified Timber Harvest Plan for Fuel Hazard Reduction* is intended to encourage forest landowners to consistently manage their fuel loads for long term resiliency to the impacts of fire on a broader landscape basis.

As has been well established by various research efforts, fire behavior may be greatly influenced by the quantity, density and spatial arrangement of existing natural fuels such as trees, shrubs and grasses. Vegetation treatment that reduces surface and ladder fuel accumulations while increasing spacing between residual tree and shrub species can be very effective in reducing the potential for uncontrollable conflagrations.

Existing forest practice regulations allow for treatment of fuels around habitable structures and across ~~the landscape~~ ownerships under certain conditions. The two primary ~~landscape level~~ permitting options currently available to landowners are the “Forest Fire Prevention Exemption” (14 CCR §1038(i)) and the “Emergency Notice for Fuel Hazard Reduction” (14 CCR §1052.4). These two permitting options both have share a significant constraint in that timber operations other than slash burning must be completed within 120-days of project commencement.

Additionally, because these permit options are non-discretionary, the harvest tree diameter limit as well as the ladder and surface fuel treatment specifications are codified in the regulation rather than developed by a Registered Professional Forester on the basis of ~~specific~~ specified project site conditions.

This proposed regulation is intended to allow for longer term permitting of fuel hazard modification treatments that are developed to fit individual project site conditions by a ~~state-licensed~~ Registered Professional Forester.

The effective period of this proposed permit would be the same as that of a conventional Timber Harvesting Plan (THP): three (3) years with possible extension up to two (2) additional years for a total of five (5) years from the approval date. This increase in the amount of time available to complete the prescribed fuel modification would likely ensure a more comprehensive outcome in terms of the acreage treated.

The existing regulations for Modified Timber Harvesting Plans found in 14 CCR §1051.1(d) includes the express presumption that significant adverse impacts are not likely to occur under the specifications of the regulation. This presumption of unlikely impacts supports the use of, “an alternative to the cumulative impacts assessment specified in 14 CCR 898, 912.9 [932.9, 952.9], and Technical Rule Addendum No. 2.” The existing regulation goes on to provide that the RPF must complete the appropriate portion of Technical Rule Addendum No. 2 where the Director determines, based upon agency or public comment, that a “fair argument” exists that significant individual or cumulative impacts would be the result of timber operations.

The “fair argument” language of 14 CCR 1051.1(d) is proposed, without modification, for inclusion in this regulatory proposal for a *Modified Timber Harvesting Plan for Fuel Hazard Reduction*. In this instance, the Board similarly presumes that significant individual or cumulative adverse impacts are not likely to occur under the specifications of the regulation. The Board further presumes that the potential for significant adverse impacts under these proposed regulations is additionally mitigated by the overarching benefit of landscape-level fuels treatment to reduce the potential for catastrophic fire occurrence and spread.

As mentioned previously, fuel modification prescriptions would be developed and explained in the *Modified Timber Harvest Plan for Fuel Hazard Reduction* by a Registered Professional Forester (RPF) on the basis of specified project site conditions. The discretionary nature of this proposed permit process means that these site-specific prescriptions would then be reviewed by a multi-disciplinary, interagency review team prior to consideration of plan approval by the Director of *CAL FIRE*. This provision of the proposed regulation recognizes the regional variation in vegetation types and treatment options thereby ensuring the utility of the regulation on a statewide basis. It likewise acknowledges the particular expertise of state-licensed professional foresters to develop hazardous fuels modification plans ~~that may reduce~~ with the goal of reducing the risk of catastrophic fire on state and private lands for public benefit.

The aforementioned discretionary review of a proposed *Modified Timber Harvest Plan for Fuel Hazard Reduction* is a critical distinction from the existing fuel hazard reduction permit options identified above. The requisite review by personnel from local, state, and federal agencies representing the public interest ensures that the fuel modification treatments prescribed by the RPF are appropriate to the project site and that potential

impacts of proposed operations have been assessed. It may also result in project modifications that, however minor in scope, support both the fuels modification and public trust resources protection objectives of the state.

ALTERNATIVES TO THE REGULATIONS CONSIDERED BY THE BOARD AND THE BOARD'S REASONS FOR REJECTING THOSE ALTERNATIVES

The Board has evaluated several alternatives to the proposed regulation.

Alternative 1: Include Sunset Date and Acreage Limitation

This alternative would alter the current proposal only to include a time certain date by which the Board would have to readopt the regulation, as well as a maximum acreage allowance. The express purpose of the sunset date is to give the Board and interested public an opportunity to evaluate the efficacy of the adopted regulation. The purpose of the acreage maximum is to provide greater public assurance that the potential for environmental impacts is wholly mitigated by the scale of operations permitted.

The Board has historically added sunset dates to various regulations for the purposes of tracking overall use, effectiveness of environmental protections, and utility to the regulated public. They have likewise been included where the Board's regulation is intended to be a short term measure complemented by a longer term initiative.

A potential benefit of a sunset date is that it ensures the Board will review the regulation on an ongoing basis. It is presumed that the Department of Forestry and Fire Protection (*CAL FIRE*) would provide the Board with periodic reports on the implementation of the regulation pursuant to existing Board policy. The Board could then use that information to retain or modify the regulation at its discretion.

A potential negative effect of the sunset date is that the Board is then required to spend a disproportionate amount of its limited meeting time on the same regulation repeatedly. Further, Department monitoring of rule effectiveness may not yield meaningful information in the time interval between adoption and the initial sunset date. This means that the Board could be forced to readopt the regulation with revised sunset dates on one or more occasions until such time as the regulation has been utilized sufficiently enough to generate meaningful information for its review.

Another potential negative effect of a sunset date is the lack of regulatory certainty provided by the finite, but unknown lifespan of the regulation. Landowners otherwise interested in fuel hazard reduction across their ownerships may shy away from a permitting process they perceive as transient.

Acreage maximums as contemplated in this alternative are employed in the existing Modified Timber Harvesting Plan (MTHP) and Non-industrial Timber Management Plan (NTMP) regulations, 14 CCR §1051 and §1090, respectively. The 2,500 acre maximum for NTMPs helps define the threshold between industrial and non-industrial timberland ownership. The 100-acre maximum for MTHPs was intended to support the Board's finding that timber operations at that scale when coupled with the operational restrictions provided in the regulation are not likely to cause a significant adverse impact to the environment.

Similar to the existing MTHP regulation, the obvious potential benefit of an acreage maximum is that it may provide the public with additional assurance that significant harm to the environment is not a likely outcome of operations under the proposed regulation. The scale of permitted operations would in itself limit the potential for impacts especially in light of the operational restrictions contained within this regulatory proposal. An additional potential benefit of the acreage maximum is that it would provide the Board with a consistent harvesting unit size from which to assess the possible short and long term environmental, economic, and social effects.

Perhaps the most significant potential negative effect of the acreage maximum is that less acreage may get treated on a project-specific basis. Though there is no way to accurately predict the total acreage likely to be treated annually under this regulatory proposal, it is intuitive that a permit for a smaller project area means that additional permits would be required to complete fuels treatment over a larger aggregate area.

When combined, the sunset date and acreage maximum could provide the general public with the desired level of assurance that the operations authorized by the Board are not likely to result in a significant adverse impact to the environment. However, both provisions could also result in limited use of this proposal by the regulated public.

Alternative 2: Addition of Prescriptive Measures for Minimization of Operational Flexibility.

This alternative would alter the current regulatory proposal by adding identified prescriptive measures and operational limits to the proposed rule requirements. The purpose of this alternative is to further limit professional discretion and operational flexibility in the proposed regulation. Additional prescriptive measures could include, but not be limited to greater Watercourse and Lake Protection Zone (WLPZ) widths, further slope-related operational limitations, and reduction in the amount of allowable new road construction among other possibilities.

A potential benefit of additional prescriptive measures is that the perceived risk of unmitigated adverse impacts to resources is further minimized. Registered Professional Forester, Licensed Timber Operator, and landowner responsibility for the success or failure of fuel hazard treatments would also likely be reduced to some extent, notwithstanding rule compliance problems.

A potential negative effect of additional prescriptive measures is that the regulatory proposal would quickly resemble the two non-discretionary permitting options currently available for fuel reduction: the Forest Fire Prevention Exemption (14 CCR §1038(i)) and Emergency Notice for Fuel Hazard Reduction (14 CCR §1052.4). These two permitting options are constrained by prescriptive measures because they are ministerial. The inclusion of similar such prescriptions in this proposal coupled with the interagency review, public hearing, lead agency response to public comments, and the Director's discretion to deny approval would likely result in non-utilization of this proposed permitting option. It is therefore rejected.

Alternative 3: Inclusion of Performance-Based, Non-Prescriptive Measures for Maximization of Operational Flexibility

This alternative would alter the current regulatory proposal by reducing the number and extent of prescriptive measures and operating restrictions in favor of outcome-based guidelines and increased Registered Professional Forester oversight.

Alternative 4: No alterations to current Forest Practice Rules.

This alternative would cause no change to the current Forest Practice Rules thereby preserving the permitting options for fuel hazard reduction operations currently authorized by the Board without the addition of a Modified Timber Harvesting Plan specific to fuel hazard reduction. This alternative does not meet the Board's intent to promote broader treatment of forested landscapes for the sake of reducing the threat of catastrophic wildfire. It is therefore rejected.

POSSIBLE SIGNIFICANT ADVERSE ENVIRONMENTAL EFFECTS AND MITIGATIONS

This regulatory proposal specifies a series of prescriptive environmental protections consistent with existing Board regulation for Modified Timber Harvest Plans (14 CCR §1051, *et seq*). These mandatory protective measures together with the anticipated reduction in project-level fuel load and arrangement collectively support the Board's presumption that operations conducted under this proposed regulation are not likely to cause a significant adverse impact to the environment. The anticipated overarching benefit of the landscape-level reduction in the potential for catastrophic fire occurrence to originate and spread from a treated project area is likewise a significant mitigation standard.

As discussed previously, the potential for significant individual or cumulative adverse impacts must be assessed by the RPF using an alternative to the cumulative impacts assessment specified in 14 CCR §898, 912.9 [932.9, 952.9], and Technical Rule Addendum No. 2. However, consistent with existing regulation, this regulatory proposal also provides for further cumulative impacts assessment utilizing Technical Rule Addendum No. 2. This additional requirement is imposed when the Director determines, based upon agency or public comment, that a "fair argument" exists that significant individual or cumulative impacts would be the result of timber operations.

As noted previously, this regulatory proposal creates a permitting process that is discretionary and allows for multidisciplinary agency and public review prior to possible plan approval. A Registered Professional Forester (RPF) must develop fuel modification prescriptions that result in quantifiable, beneficial changes to the density and spatial arrangement of surface and ladder fuels. These prescriptions must also be developed within the strict confines of the protection measures required by the proposed regulation and any additional measures identified by the RPF. These measures combined with the inclusion of the "fair argument" standard for impacts assessment assure protection of public trust resources and the preservation of ecological values. The overarching public benefit of the reduction in the potential for catastrophic fire occurrence and spread from treated project areas is also a significant mitigation that cannot be understated.

In order to monitor the efficacy and environmental effects of this regulatory proposal, the Board will direct the Department of Forestry and Fire Protection to provide periodic reports for the Board's information. These reports will include, at a minimum, the number of projects implemented under the regulation, acreage treated, post-treatment consistency with the treatment prescription(s), results of photo point monitoring by project proponents, identified adverse impacts resulting from project implementation, and identified problems with rule compliance.

ALTERNATIVES TO THE PROPOSED REGULATORY ACTION THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS

The Board finds that this proposed regulation would not have an adverse impact on small business.

EVIDENCE SUPPORTING FINDING OF NO SIGNIFICANT ADVERSE ECONOMIC IMPACT ON ANY BUSINESS

This regulatory proposal does not impose a requirement for its use upon commercial timberland owners, Licensed Timber Operators, Registered Professional Foresters, sawmills, or other wood product manufacturers. Use of the proposed Modified Timber Harvesting Plan for Fuel Hazard Reduction is purely voluntary.

TECHNICAL, THEORETICAL, AND/OR EMPIRICAL STUDY, REPORTS, OR DOCUMENTS

Pursuant to Government Code § 11346.2(b)(6)

The State Board of Forestry and Fire Protection consulted the following listed information and/or publications as referenced in this *Initial Statement of Reasons*. Unless otherwise noted in this *Initial Statement of Reasons*, the Board did not rely on any other technical, theoretical, or empirical studies, reports or documents in proposing the adoption of this regulation.

1. California Forest Practice Rules, 2008. *Modified Timber Harvesting Plan*. 14 CCR §1051
2. Fuel Hazard Reduction Emergency Regulation, Staff paper authored by Board Regulations and Policy Coordinator, Christopher Zimny in support of Board's Emergency Notice for Fuel Hazard Reduction Regulation, 2004.
3. California Forest Practice Rules, 2008. *Emergency Notice for Fuel Hazard Reduction*. 14 CCR §1052.4.
4. California Forest Practice Rules, 2008. *Forest Fire Prevention Exemption*. 14 CCR §1038(i).
5. Board Rulemaking File for Readoption of the Modified Timber Harvesting Plan Rules, September 14, 1994. Various documents including *Final Statement of Reasons (FSOR)*, *Response to Comments*, and *Board Findings* produced by former Board Regulations Coordinator, Gary Brittner.
6. USFS Forest Inventory and Analysis Program (FIA)
7. CAL FIRE Fire and Resource Assessment Program (FRAP)
8. Executive Order S-08-08, Governor Arnold Schwarzenegger, July 2, 2008.
9. 2007 Wildfire Activity Statistics Annual Report, CAL FIRE, September 2008.

10. Probability of wildfire-induced tree mortality in an interior pine forest: effects of thinning and fire. Forest Ecology and Management Ritchie, M.W., C.N. Skinner, T.A. Hamilton. 2007. 247:200-208
11. Effects of prescribed fire and thinning on wildfire severity: the Cone Fire, Blacks Mountain Experimental Forest, Skinner, C.N., M.W. Ritchie, T.A. Hamilton, and J. Symons. 2005.
12. Containing Wildland Fire Costs: Enhancing Hazard Mitigation Capacity, National Academy of Public Administration Panel Report to Congress. January 2004.
13. Estimates of Carbon Dioxide from Fires in the United States: Implications for Carbon Management, Wiedinmyer C., Neff J. 2007.

In order to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues as those addressed under the proposed regulation revisions listed in this *Initial Statement of Reasons*; the Board has directed the staff to review the Code of Federal Regulations. The Board staff determined that no unnecessary duplication or conflict exists.

PROPOSED TEXT

The proposed revisions or additions to the existing rule language are represented in the following manner:

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UNDERLINE indicates an addition to the California Code of Regulations, and ~~strikeout~~ indicates a deletion from the California Code of Regulations.

All other text is existing rule language.