



Findings and Recommendations

The Board of Forestry's California Fire Plan findings and recommendations were developed by the Fire Plan working team. These findings and recommendations are summarized into three categories:

- Levels of Wildland Fire Protection Services
- Wildland Fire Protection Fiscal Issues
- Prefire Management to Reduce Wildfire Costs/Losses

Levels of Wildland Fire Protection Services

A primary Board of Forestry responsibility is set forth in Public Resources Code Section 4130, which directs the Board to classify all lands within state

Board of Forestry is responsible for preparing a Fire Plan to assure adequate statewide protection.

responsibility areas (SRA) based on cover, beneficial water uses, probable erosion damage and fire risks and hazards; to determine the intensity of protection to be given each type of wildland; and to prepare a fire plan to assure adequate statewide fire protection so that lands of each type be assigned the same intensity of protection. With the recent integration of the State Fire Marshal's office, the responsibility for the protection of structures included in Health and Safety Code Sections 13143, 17920.7, 17921, and 18930 is considered in the PRC 4130 evaluation.

This California Fire Plan is the result. It is the Board's approach to assessing the level of wildland fire protection.

Findings

1. The history of California wildfires indicates that the following trends will continue.
 - Risk from wildfire to life, property, natural resources, and firefighter safety is increasing.

- Population will grow and more people will live and use wildland areas, especially in the Central Sierra and in the Southern California counties of Riverside, San Bernardino and San Diego.
 - Topography and climate support ecosystems where large wildfires can be expected.
 - Drought and fuel moisture conditions will be unpredictable but almost always dangerous in fire season.
 - More structures will be constructed in areas that are very susceptible to wildfire.
 - Historical legacy of narrow roads, difficult entrance, insufficient water supplies, flammable building construction and location that make many communities and homes wildfire-prone still exists.
 - Public demand for wildland fire protection and other services will increase.
2. Deteriorating forest health, increasing fuel loads and other factors have led to more intense, destructive wildfires; unabated this pattern will continue.
 3. Assets at risk will increase, especially watershed assets, because of the rapid rise in the demand for water to supply more people. Based on population projections, the potential for accelerating loss of protected assets, especially life and property, will be greater from disastrous wildfires.
 4. Large wildfires do not respect political or property boundaries. Historically, a strength of California's firefighting agencies is found within a concept of mutual cooperation at the federal, state, and local levels of government. Day-to-day mutual aid for initial attack, as well as a statewide mutual-aid system for fire disasters, are the basis of this cooperation and coordination. The ability to rapidly mobilize, effectively deploy and support large numbers of specialized firefighting resources is essential to cope with large multiple fires. Hence, CDF, in cooperation with other fire agencies, must maintain infrastructure, including communications and capital improvements necessary to facilitate such a response.
 5. Fire protection forces in California must have sufficient depth to respond to large, multiple wildfires and still prevent other small fires from becoming large damaging fires. CDF plays a key role in supplying and coordinating such forces; it should maintain and enhance this ability. The 1985 Fire Plan



Large wildfires do not respect political or property boundaries, thus cooperation among fire agencies is necessary. (Department of Forestry and Fire Protection photo)

California Fire Plan

includes a model to provide adequate depth of resources that show CDF needing 96 additional engines and 825 personnel for managing large fires using the Incident Command System. There is a greater need today as reflected in the California Fire Plan.

Recommendations

1. The Board of Forestry directs CDF to further develop and implement a new Fire Plan framework that includes:

CDF will implement a fire plan framework that includes LOS, assets, fire history and costs and losses.

- Level of service (LOS) initial attack success and major fire failure rates.
- Identification and assessment of assets protected, covering both commodity (economic) and non-commodity assets.

- History of wildfires by intensity levels, size and vegetation types. Identification and rankings of high-value/high-risk wildland areas for use by local, state, and federal agencies and the private sector for allocating prefire management and suppression resources.
- Severe fire weather rankings to relate probability that large damaging fires will occur by local area.
- History and projections of changes in total costs and losses of California's wildland fire protection system that can result from potential increases or decreases in local, state, and federal agency expenditures and private-sector investments.

2. CDF should identify options to expand its suppression force to meet the multiple, large fire scenario (such as the 1985 Fire Plan's proposal to retain, in a reserve fleet, 96 engines that were being replaced) and determine a cost-effective way to staff these engines with trained personnel in severe fire weather in targeted areas identified in the California Fire Plan assessment framework. The number of reserve engines should be increased to 100 for the California Fire Plan. This allotment would:

Create reserve fire engine fleet for multiple fire responsibility.

- Allow better management of SRA fires by minimizing CDF's dependence on the reduced federal agencies resources.
- Keep cost under control because of reduced ordering through the Office of Emergency Services, thereby better controlling emergency fund expenditures.
- Help limit the need to exceed maximum drawdown when there are large multiple fires, as now occurs.

3. CDF should assess and report back to the Board annually on what can be done during the next five years to reduce the impact in numbers and damage of large, disastrous fires in California annually.

4. CDF should use the new fire plan assessment framework at the ranger units and for creating local forums to obtain expertise and other input from citizens, community groups, local agencies and other stakeholders on assets protected. The questions of wildland resource assets and structure protection can be better addressed at the ranger unit community levels, in terms of level of service, benefits and financial responsibilities.

Create local stakeholder forums to improve fire protection.

5. The new fire plan assessment framework also should be applied to federal wildlands. The Board of Forestry has assigned its Resource Protection Committee to work with federal agencies that are primary participants in California's wildland fire protection system. The focus would be the complementary relationships of changes in federal agencies' budgets and policies that could affect California's total costs and losses from wildfires on federal, state, and local responsibility lands. Agencies such as the USDA Forest Service, Bureau of Land Management, Bureau of Indian Affairs, National Park Service, US Fish and Wildlife Service, Environmental Protection Agency and Federal Emergency Management Agency should be invited to participate.

Wildland Fire Protection Fiscal Issues

Findings

1. Multi-year fiscal problems are occurring at all governmental levels, constraining the availability of funding to address the increasing workload, costs and losses of the California wildland fire protection system.
2. The increasing number of structures and people in California wildlands and the growing importance of the state's natural resources create a growing demand to fund additional wildland fire protection services for both the structures and the wildland resource assets.
3. The primary fiscal responsibilities for the initial attack responsibilities: (1) for federal wildland fire protection are the federal taxpayers, (2) for privately owned wildland fire protection are the state taxpayers, and (3) for structure fire protection in wildland areas are the local taxpayers. However, during the annual fire season, the state and federal taxpayers provide a minimum level of structural fire protection that is incidental to their primary missions of wildland fire protection. Similarly, in most wildland areas, local taxpayers provide year-round wildland fire protection on both state and federal responsibility areas that is incidental to the local government primary mission of structural fire protection.
4. Over the last decade, part of the increased costs for additional initial attack wildland resource protection and structural protection have been funded by local taxpayers through property taxes, fire district fees and volunteer firefighters. However, when a wildland fire overwhelms local resources and reaches a major fire status, both the state and the federal taxpayers pay for the costs of wildfires, structure protection and the resulting disaster relief.
When wildfire overwhelms local forces, both state and federal taxpayers pay for resulting costs and losses.
5. For the local taxpayers, the following continue to increase: (1) the structural values and number of people being protected on wildlands (2) the costs of wildland and structure initial attack fire suppression funded at the local levels and (3) the losses from the extended attack and larger fires.

6. For state and federal taxpayers, the following will continue to increase: (1) extended and large fire emergency fund expenditures for wildland fires (2) protecting structures during initial attack and extended attack fires, and (3) state and federal agency disaster expenditures for damages to wildland resources and structures.
7. Health and Safety Code Section 13009 allows for recovery of fire suppression costs which, when obtained, be placed back into the state's general fund rather than invested in a prefire management program.

Prefire management investments can reduce emergency fund costs.

8. There is a direct relationship between reduced expenditures for prefire management and suppression and increased emergency fund expenditures, disaster funding, and private taxpayers expenditures and losses. Reduction of prefire management or suppression resources allows more fires to become major disastrous fires. Major fires create additional suppression and disaster relief costs at all levels of government and increase citizen and business losses.
9. According to representatives of the insurance industry that insures structures in California wildland areas, (1) the insurer average costs and losses are about \$1.09 for each \$1.00 received in premiums, and (2) the urban dwellers are subsidizing the wildland homeowner through service-wide rating schedules.

Recommendations

1. To better evaluate future public policy changes, CDF should annually refine and update its comprehensive wildland fire protection fiscal framework to allow a more systematic assessment of the future costs and losses to California taxpayers. This fiscal framework should continue to include summaries of annual expenditures by local, state, and federal agencies; economic losses of the state's resources; and private-sector costs and losses.
2. To reduce the future total costs and losses to California taxpayers, the

To reduce costs and losses, expansion of the prefire management program should be considered.

following actions and ideas should be considered to support a major new state prefire management initiative

- Continue to implement the new CDF prefire initiative and the new Fire Plan assessment framework by September 1998.
- Redirect fire cost recovery money from the General Fund to support an investment in reducing wildland fire hazards.
- Provide a tax credit, as part of the governor's proposed tax-cut program, for private taxpayer investments in reducing wildland fire hazards in areas that have been identified under this fire plan framework that will reduce the state taxpayer's future suppression costs.

The Board and CDF will work with insurance industry to reduce taxpayer and citizen losses.

3. Get the insurance industry to develop an approach to reduce taxpayer and insurance underwriting losses.
4. Ensure a major federal prefire management initiative on federal wildlands in California. The purpose is to reduce total federal

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taxpayer costs for wildland fire protection.

Prefire Management Program to Reduce Wildfire Costs and Losses

Findings

1. Suppression of fire in California's Mediterranean climate has significantly altered the ecosystem and increased losses from major fires and fire protection costs. Historical fire suppression has increased
 - periods between fires
 - volumes of fuel per acre
 - fire intensities
 - fire damage and losses
 - fire suppression difficulties, and
 - total taxpayer costs and losses.
2. With continued fire suppression in wildland areas, fuel volumes per acre will continue to increase, unless a substantial long-term program of fuel reduction is implemented.
3. Fuel loading problems are occurring on federal and state responsibility areas, as well as in wildlands within city limits, which are local responsibility areas.
4. Similarly, California's eight straight years of drought increased the dead and dying vegetation, the volumes of drier fuel per acre, and the acres with vegetation fuel ladders, all of which contribute to increased size and severity of fires resulting in greater costs and losses.
5. To address the long-term trends of fuel loading increases and population growth, CDF is implementing a prefire management initiative is needed that combines the existing vegetation management, fire prevention and engineering programs into a coordinated effort with the objectives of reducing fire hazards, improving the effectiveness of ignition management, and reducing losses and costs to California's Wildland Fire Protection System.

A prefire management initiative is being implemented.
6. Prefire management can serve as a tool to reduce the overall emissions caused by wildland fires. Based on the annual average acres burned by wildfire from 1985-1994, wildfire is causing the emission of almost 600,000 tons of air pollutants per year.

Wildfires cause an estimated 600,000 tons of air pollutants annually.
7. There are tradeoffs between taxpayer investments in prefire management and the related state and federal emergency fund (fire disaster) expenditures, ecological and natural resource losses, private citizen losses, and safety problems for civilians and firefighters during wildland fires.

8. With continued population-driven increases of people and structures in the wildlands, there are more life and property assets at risk in wildland areas, and increasing risks to ecological, economic and natural resource assets. This increases the values of wildland homes and other structures, as well as the number of wildland fires caused by people.
9. To reduce the wildland fire protection costs to taxpayers, development of wildfire protection zones and fire hazard mitigation measures (including ignition-resistant building standards) are needed as part of the local government planning and land-use decisions on permitting developments in wildland areas within incorporated cities and unincorporated areas.
10. A prefire management database is needed to provide more definitive risk assessment information to the public and the insurance industry, code officials, building industry and local fire jurisdictions. The objectives are to establish comprehensive minimums for wildfire protection zones, develop ignition-resistant building construction for improved reduction of fire hazards around wildland structures, and provide insurers and homeowners with information on reducing risks and support more equitable insurance rating for wildland structures.
11. The public doesn't sufficiently understand the risks and impacts of wildfires on natural resource assets, structures and people living and recreating in California wildlands. Agencies have not adequately communicated those risks. There is a false sense of security among wildland homeowners that they are not at risk if there are fire protection organizations, insurance policies for fire coverage, and the minimum fire prevention prescriptions are met.

Recommendations

CDF should develop a prefire management program for state responsibility areas and provide technical assistance to help local governments develop prefire management programs on local responsibility areas. The Board will encourage federal agencies to increase their funding for efforts on their lands and joint efforts in the wildland intermix.



In California's Mediterranean climate, the question is when, not if accumulated fuels will burn. (California Department of Forestry and Fire Protection photo)

1. CDF will develop prefire management data that will:
 - Support state, local and federal agencies' efforts to implement a coordinated prefire management program on California wildlands.
 - Provide the insurance industry with better fire hazard risk assessment data for underwriting,

rating and pricing fire protection policies in wildland areas. These are incentives to homeowners to invest in fire hazard reduction efforts.

2. To increase the market alternatives for using biomass materials removed from wildlands and to reduce future dependence on prescribed fire and vegetation management burns, CDF, in conjunction with other state agencies, should develop an assessment of future biomass marketing opportunities for California. It should include projections of potential market uses and actions local, state and federal governments could take to expand those markets.
3. The fire prevention education programs of local, state and federal agencies and private industry should be communicating the level of risk to the people who live in wildland areas. An evaluation should be made to determine the correct message to influence people to modify their behavior. That message should incorporate the standards for both vegetation management and ignition resistant building construction, as well as what citizens and businesses can do to reduce wildfire risks.

Fire prevention education programs should communicate levels of risk to people living in wildlands.
4. The Board of Forestry support examining legislation that would condition state disaster relief on the development and implementation of prefire management programs on wildlands. The Board recommends that federal disaster relief be similarly conditioned.
5. To provide state funding for prefire management projects, legislation should be sponsored to provide that fire cost recovery funds collected by CDF be returned to CDF's budget for implementing the projects, as a means of reducing wildfire costs and losses.
6. Legislation should be sought to authorize local government to create special service districts for prefire management projects. CDF will prepare recommendations as part of its in-depth plan.
7. To remove a major obstacle to increased vegetation management burns, with their potential for reducing wildfire costs and losses, liability limits should be examined for conducting such burns in high-risk/high-value wildlands. The state's worker compensation program may be a model for needed changes.
8. Given the potential for prefire management to reduce the total level of air pollutant emissions from wildfire, the state, federal, and local wildfire protection and air quality agencies should jointly develop policies for reducing air pollutant emissions from California wildfires.