

Fire Fighting Fire To Manage California's Brush Rangelands

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Environmental conditions associated with California shrublands have changed dramatically during the last 200 years. Plant succession has allowed shrublands to expand and occupy areas of woodland and grasslands through disturbance of native plant cover. A public concerned with wildfire damages and supported by agencies responsible for fire protection has excluded fire and permitted fuel quantities in shrublands to increase. Together with a growing population, an increase in wildfire intensity and a dramatic increase in wildfire frequency has occurred.

Today, the situation is improving. Greater knowledge of the role of fire in shaping and maintaining plant communities and how to use fire as a management tool are producing changes in management policies. The new Chaparral Management Program is an example. Administered by the California Department of Forestry, this new cost-share program joins the state and landowners by contract in the planned use of fire. Among its objectives are prevention of high-intensity wildfires, watershed management, range improvement, vegetation management, forest improvement, wildlife habitat improvement, and maintenance of air quality. Since October 1981, 60,000 acres have been burned under prescription in the Chaparral Management Program.

Early History

Changes have not come easily. Ranchers have argued for many years with the State Board of Forestry over the handling of brush ranges. Charged by law with the responsibility of suppressing fire, the State Division of Forestry (now Department of Forestry) effectively prevented the removal of brush by fire. On the other hand, ranchers wanted permission to burn the brush on lands under their control as a means of maintaining and increasing forage production.

To understand the situation, we have to go back in history. In 1905, an act "...to provide for the regulation of fires on, and the protection and management of, public and private forest lands,..." became law. Punishment by fine or imprisonment was established for malicious or negligent setting of fires on land, other than that owned by the individual, or allowing fires to escape to other lands. It became illegal to burn brush, stubble or other vegetation on any lands without a permit between May 15 and October 15. Recovery of damage from fire which escaped from private land was made possible by holding the offender liable for double the amount of damage, provided such escaped fire was due to neglect. If the spread of fire was due to unavoidable causes, the offender was liable only for the actual damage. To administer its provisions, the act created a State Board of Forestry, a Division of Forestry and a State Forester whose duty it was to implement Board



Burning brush in California

policy through the Division.

In the 1927 reorganization of administration of state resources, the Division of Forestry became part of the Department of Natural Resources while remaining under the jurisdiction of the Board and State Forester. At this time, punishment for offenses defined under the 1905 act was made more severe. Liability for damage was set as the costs of actual damage and control of the fire. The length of the permit burning season also was extended. It became unlawful to burn without a permit on any forest land, grassland or brush area between April 15 and December 1.

In 1932, at the urgent request of California livestock interests, the Dean of the University of California's College of Agriculture appointed a special committee within the University. The Committee on Range Management was responsible for studying ways and means of improving brush ranges. Investigations were started and information developed on vegetation behavior after a brush area was burned.

Also, investigations were started on the controversial problems of runoff and erosion.

The Committee on Range Management was reorganized in 1945 as the Committee On Range Land Utilization. It became a committee responsible for recommending and sponsoring a sound research program.

In 1945 the state legislators authorized the range improvement program of the California Division of Forestry (CDF). Statutes adopted and modified in 1949 authorize and govern the range improvement program. The legislation outlined a procedure for issuing permits for controlled burning of privately owned brush-covered lands. It also charged the Division with administrative duties in connection with its general responsibilities in fire control.

The newly created range improvement program was to increase the carrying capacity of foothill rangelands for domestic livestock and wildlife, and to encourage wise use of the range resource. Further objectives included fire prevention and protection, watershed protection and conservation, and the prevention of soil erosion. Under this program, more than 2.5 million acres have been burned and more than 0.8 million acres reburned since 1945. This figure is not large compared with the 20 million acres of brushlands in California, of which about half are privately owned. Fear of liability costs has discouraged greater landowner participation.

In 1945 the Board of Forestry requested the appointment of a Range Improvement Advisory Committee to improve relations with ranchers. The committee is now known as the Range Management Advisory Committee. The present Committee has representatives from the California Wool Growers Association, the California Farm Bureau Federation, the California Cattlemen's Association, the California Forest Protective Association, the Watershed Fire Council of Southern California, the California Association of Resource Conservation Districts and the general public. The Committee has helped develop a better understanding between the Board and livestock interests. To the Board it has pointed out that complete protection of brush is in many situations not good management. At the same time, the committee has brought to the attention of livestock operators that indiscriminate burning of brush is not the only solution to range improvement.

The Range Land Utilization Committee of the College of Agriculture provided the leadership for a series of brush range improvement demonstrations beginning in 1950 at several locations throughout the state. Their purpose was to test and demonstrate on a field-scale basis the application and economics of management techniques. Cooperating in these demonstrations were ranchers, Cooperative Extension, other segments of the University of California and the California Division of Forestry.

At a meeting of the Range Improvement Advisory Committee in 1951, a resolution was formed and submitted to the State Board of Forestry. It recommended that a broad plan be pursued to promote a coordinated brush range improvement program and to organize effective local organizations to carry out the program. The Cooperative Extension, the College of Agriculture and the CDF were to assist in the organization and development of the program. The plan developed was approved by the Board in 1953, after being approved by both the Range Land Utilization Committee of the College of Agriculture and the Range Improvement Advisory Committee.

The plan was patterned after the Madera County Con-

trolled Burning Program with modifications suggested by various individuals in the College of Agriculture and the CDF. The Madera plan had been developed over a period of more than 10 years. It represented extensive experience in the use of fire for brush range improvement.

Current Policy

During a two-week period from late September to early October 1970, fire raged through more than half a million acres of brush and forest-covered wildlands in California. The disaster was unique in terms of the geographical area involved, acreage burned, wildland-urban nature, the number of homes destroyed, and the number of agencies, people, and equipment involved.

Following the disaster, the Governor, through the Secretary for Resources, requested formation of a Task Force on California's Wildland Fire Problem. Represented on the task force were many groups and organizations including Cooperative Extension and the University of California's Agricultural Experiment Station.

Two recommendations developed by the Fuel Management and Hazard Reduction Committee of the task force were of particular significance. The first was to determine the role and responsibility of public agencies for fuel management and hazard reduction on wildlands in private ownership. Second, develop a cooperative program between land management and fire control agencies to demonstrate fuel management techniques. The latter recommendation was implemented by creation in 1974 of the 130,000 acre Laguna-Morena Fuel Management Area in San Diego County.

A legislative resolution was passed by the State Assembly in 1976 calling for adequate resources for public agencies. Increased emphasis could then be placed on "...fuel management as an aid to the suppression and prevention of wildfires."

During the first half of 1978, the State Senate passed legislation requiring various state agencies to report on their vegetation management activities. The published summary was an incomplete analysis of vegetation management responsibilities. However, it represented the first effort to prepare a comprehensive review of programs affecting brushlands in California.

Also, the Governor signed into law the Wildland Fire Protection and Resources Management Act in September 1978. Based on legislation introduced in 1977, it provided for one northern and one southern fuel management demonstration area to be established by the CDF. Use of prescribed burning and other techniques for fuel management were identified. Elements of wildlands fuel management addressed in the demonstrations included fuel modification and reduction, air and water quality, water conservation and watershed improvement, soil conservation, wildlife habitat improvement and protection, range and forage improvement, and timberland improvement and protection. The results provided the basis for a new CDF Vegetation Management Program.

A second program created by the signing of legislation in 1979 allowed CDF to undertake four pilot projects, each representing different soils and vegetation types. Their purpose was to demonstrate the value of emergency revegetation and management of critical watersheds following wildfire. The Revegetation Pilot Projects for Fuel Management and Other Purposes is now part of the Public Resources Code.

As the result of wildland fire prevention and vegetation management legislation signed in 1980, the CDF under policies established by the State Board of Forestry is required to make its wildland fire prevention and vegetation management expertise available to local governments.

Landmark legislation was signed into law in July 1980. It declares prescribed burning of brush-covered lands to be an official program of CDF. It authorizes CDF to enter into cost-share contracts "...with the owner or any other person who has legal control of any property which is included within any wildland for . . . reduction of fire hazard, watershed management, range improvement, vegetation management, forest improvement, wildlife habitat improvement, and maintenance of air quality. . . ." "The state's share of such costs shall bear the same ratio to the total cost of the operation as the public benefits bear to all public and private benefits to be derived from the operation as estimated and determined by the director. In no event may the state's share of such costs exceed 90% of the total costs of the operation."

The most important feature of the new program deals with landowner's liability. Any costs incurred by the Department in suppressing a prescribed burn escaping under contract cannot be collected from the landowner or other contract parties. A third-party liability insurance policy was purchased by the Department to provide coverage of losses resulting from an escaped prescribed burn. The losses covered are those sustained by any person or public agency, including the federal government. Under each contract, the landowner and the Department are named as joint policy holders and the premium is shared between the landowner and CDF. The state is now responsible for any liability arising from prescribed burn projects which are conducted under the provisions of the 1980 statute.

The Chaparral Management Program spurred additional legislation to enhance the program. In September 1981, legislation was signed providing for a closed contract between the CDF and any landowner participating in the program. All costs are agreed to before the contract is executed. Prescribed burning was redefined to include ". . . any necessary

followup activities, such as revegetation and erosion control measures". It also provided liability protection for private contractors providing services as part of the contract between the landowner and the CDF.

Cleanup legislation in 1982 addressed two concerns. It clarified the role of private contractors and the services they can provide when there are more requests for prescribed burning than can be conducted directly by CDF. Secondly, it authorized local fire protection agencies to receive assistance from CDF in fuel management programs on lands contiguous to lands classified as a state responsibility.

Summary

In California, wildfire protection has concentrated on efforts to exclude fire through suppression of all unintentional fire starts.¹ This has contributed to holocaust-type wildfires as the build up of brush and forest fuels created wildfire conditions that technology could not dominate. The inability to curb nature, demonstrated by the disastrous 1970 wildfire season, triggered a reexamination of the state's wildfire problem.

A series of executive and legislative actions during the last 10 years has produced a new fuel management program. Born in 1980, the California Chaparral Management Program combines private land management objectives and public concerns for resource management and wildfire protection. The key element is use of prescribed fire to meet fuel management objectives. Under liability protection, this is accomplished with cost-share contracts between landowners and the CDF. Ranchers can now develop better brush range improvement plans. Public concerns for natural resources and the need for wildfire protection are addressed. Everybody benefits, and, in the long term, money will be saved.

¹The author wants to indicate that fire protection agencies have tried to provide fire protection through over-emphasis on fire fighting technology. This strategy, to rapidly suppress all fire starts—in effect, trying to exclude fire and deny its ecological role—has led to the current crisis in which wildfires that defy early attack can turn into holocausts.

A Challenge to You

President Schuster has set a very realistic membership goal of a 500-member increase for 1984. This would be about a 10% increase. If each of the regular members attending the Rapid City meeting would solicit one member, we could exceed that goal by 50%. Will Blackburn and myself would ask for your individual efforts toward this goal. We have given each Section the challenge of a 10% increase.

We are also enthusiastic about the new commercial membership made a reality in Rapid City. We feel this affords a real opportunity for those companies with range interests or interests in range to become involved in the Society. We have challenged each Board member and each Section to solicit a commercial membership. If you need help in working with individual firms or businesses, contact Will Blackburn or myself or Executive Vice-President Pete Jackson in Denver. Let's all give out some effort to membership this year. Sometimes all it takes is being prepared and then asking.—**Art Armbrust**, Membership Chairman