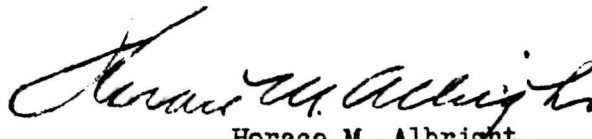


U. S. Department of the Interior

NATIONAL PARK SERVICE

A FORESTRY POLICY FOR THE NATIONAL PARKS

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Director.

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Field Educational and Forestry Headquarters,
Berkeley, California.

A FORESTRY POLICY FOR THE NATIONAL PARKS

FOREST PROTECTION, GENERAL. Until such time as forest investigations disclose special methods of handling, necessary in maintaining wilderness areas under natural conditions, the parks will be as completely protected as possible against damage by vandalism, fire, insects (except as modified in subsequent statement dealing with insect control), fungi, mechanical injury, and grazing by domestic animals. This protection will be extended to all park areas, including land covered by forests, brush, grass or other cover.

FIRE PROTECTION

1. Fire Protection Plan. The protection of each park from fire will be based upon a written FIRE PROTECTION PLAN covering the prevention, detection and suppression of all fires on or threatening the park area. Where no Fire Protection Plan is yet available, a preliminary plan will be prepared and put into operation by the superintendent. Technical assistance in the preparation of more complete Fire Protection Plans will be provided by the Fire Control Expert of the Forestry Division, who will visit the individual parks to study conditions at first hand and prepare, in cooperation with the superintendents, fire chiefs and other members of the local organizations, detailed Fire Protection Plans. These will be revised from year to year as conditions necessitate, the revision being submitted through Field Headquarters (Forestry Division, Berkeley) for approval by the Director before being put into effect.

2. Training of Fire Control Personnel, for forest fire protection, is exceedingly important. Wherever practicable, superintendents will, at the beginning of the fire season, arrange for a local conference of all men taking part in fire protection activities in that particular park. The purpose of this meeting will be:

- (a) To give each individual a definite idea of the fire protection system of the park as a whole, and of his place and work in that organization.
- (b) To instruct each man in the use and repair of fire suppression tools and equipment; installation of emergency telephone lines and instruments; etc.
- (c) To see that each member of the fire suppression organization understands the proper technique for fire suppression in the various types of cover with which he will have to deal, and under varying conditions of slope, wind, humidity, etc.

- (d) To instruct each man in the essentials for finding and preserving evidence in the case of man-caused fires, and securing statements and affidavits in connection with fire law enforcement.

Wherever possible, specialists in fire protection should be called in to meet the men in these park fire conferences. This would include the N. P. S. Fire Control Expert, the District Fire Weather Forecaster and officers in control of adjacent Federal, State, or private areas under fire protection.

3. Cooperation with Other Protective Agencies. Wherever there is an area under fire protection adjacent to a national park, efforts will immediately be made to coordinate the Fire Protection Plans for those two areas. This plan for cooperation should ordinarily be reduced to a written agreement, or at least to memorandum form.

In case of a fire close to the park boundary, communication should immediately be established and maintained with the fire chief of the other agency or agencies involved and all control measures shall be coordinated as closely as possible.

4. Hazard Reduction. Provision will be made to fireproof so far as possible all camp grounds and roadsides where the annual vegetation creates an especially high fire hazard, by such means as local conditions necessitate, due regard for the preservation of scenic factors and wild flowers being given every possible consideration consistent with proper and adequate protection. Clean-up of dead and down timber and brush along roads and trails will also be attended to as far as money for such purpose can be secured.

All hazard reduction projects should be graphically shown on a hazard reduction map, one copy of which will be kept at the headquarters of the individual park, a copy submitted to the Forestry Division of Field Headquarters, and a copy to the Director.

5. Fire Equipment. The purchase of fire equipment should be planned in cooperation with the Fire Control Expert in order to insure the type of equipment best suited for local conditions.

Fire Protection Equipment of any character purchased from fire protection funds (which includes both the Fire Prevention Appropriation and the Emergency Reconstruction and Fighting Forest Fires Fund) shall be held exclusively for forest protection purposes. Such equipment must be available for fire suppression during the entire fire season, but outside that period may be utilized in connection with insect control and tree disease control work, but shall at no time be assigned to use, or requisition for general park operations or for activities outside those financed from forest protection funds.

The only exception to the foregoing will be where light-delivery patrol trucks purchased for fire protection work are needed for the general transportation pool outside the period of the fire season and new trucks or those in equally as fit condition will be furnished for protection purposes at the beginning of the next fire season to replace them. In any event the replacement of the light-delivery fire protection trucks shall be financed from other funds to the proportionate extent to which they were used for other than fire protection purposes, and if their use for other than fire protection purposes will result in impaired efficiency for fire protection use, then their use for other activities is prohibited.

The above exception for light-delivery fire patrol trucks does not apply at any time to the larger special trucks purchased for transportation of firefighters and fire suppression equipment nor to tank fire trucks. Such trucks are to be held exclusively for fire suppression purposes at all times until they are replaced or condemned for fire suppression use. Trucks purchased for fire use exclusively shall be painted red and shall have thereon the name of the park, the words Fire Truck and the number under which the truck is recorded.

6. Law Enforcement. An effort will be made to ascertain the exact cause of each fire, and where such a fire proves to be man-caused every effort will be made to apprehend the person or persons responsible for the starting of the fire. Whether the starting of the fire was intentional or accidental, the party or parties responsible will, if possible, be made to pay (a) the cost of fire suppression, and (b) the commercial value of the forest and improvements destroyed. In case legal action is necessary, especially in the case of large fires, the services of the Fire Control Expert will be available for assistance in obtaining affidavits and in the preparation of the case for legal procedure. Every effort should be made by the superintendent and fire chief, however, to secure legal depositions from witnesses, and other data, at the time of the fire.

7. Fire Reports.

- (a) Telegraphic Reports. Each serious fire or one which will apparently cover 200 or more acres, or cost \$500 or more for suppression will be immediately reported by wire both to the Director and to Field Headquarters, with the request to the latter, if necessary, for the advisory services of the Fire Control Expert.
- (b) Individual Fire Reports will be prepared in duplicate as soon as possible after the fire is out. One copy of the report will be retained at park headquarters and one copy sent to the Forestry Division of Field Headquarters.

- (1) Volume of work maps, showing:
 - (a) Starting point of fires separately by A's, B's and C's.
 - (b) Lightning zones.
 - (c) Camper zones.
 - (d) Other, if needed.
- (2) Hazard map: showing all fires over 40 acres in actual area by years.
- (3) Visibility maps: showing visibility from lookouts and classifying visibility of the areas covered into
 - (a) Direct
 - (b) Indirect
 - (c) Blind.
- (4) Hour control map; to assist in making and checking distribution of fire guards.
- (5) Physical improvement map: diagram of communication and transportation systems; locations of fire protection buildings, pastures, etc.
- (6) Statistical Records:
 - (a) Summary of individual fire reports.
 - (b) Cost of fires by classes.
 - (c) Analysis of man-caused fires.
 - (d) Detection record.
 - (e) Elapsed time record summary.
 - (f) Other records as found necessary.
- (7) Type cover map.

The Fire Atlas will be prepared and kept up to date in triplicate; one copy at the headquarters of each park; one copy for Field Headquarters (Forestry Division, Berkeley); and one copy for the Director.

9. Fire Reviews. For the purpose of determining and developing the best practice and technique in fire suppression work, a review of large or important fires or of the fire control work for the season on one or more parks, following the close of the fire season, is a highly desirable practice. A board consisting of the Chief Forester, Fire Control Expert, and a representative of the field force designated by the Director, will cooperate with the park personnel in making such a review, unless circumstances or the exigencies of the situation should make it desirable for the review to be performed simply by the Fire Control Expert in cooperation with the local organization.

The purpose of such review will be to examine in detail the history of each fire studied with a view to discovering principles and technique which can be effectively applied in fire control activities on that and

other parks, and also to indicate the ways in which fire control in the individual parks can be strengthened and made most effective.

Such reviews are also highly valuable in connection with important fires in the suppression of which other agencies have participated, in which case a joint board of review embracing all organizations concerned can be established. Such reviews should be for the purpose of perfecting cooperation so as to effect the closest coordination of protection work by all the cooperating agencies.

10. Fire Research: The data submitted to Field Headquarters (Forestry Division, Berkeley) on individual fire reports, on fire atlas sheets, etc., will be used in a careful study by the Fire Control Expert of fire conditions in the individual parks. This officer will also correlate the available data from the Weather Bureau, the Forest Service, Forest Experiment Stations, and other agencies involved in research on fire control subjects, so that this information can be used in preparing or revising the Fire Protection Plans for the individual parks.

INSECT CONTROL

Cooperation by the Bureau of Entomology. The functions of the Bureau of Entomology in respect to forest insects are three-fold. These are (1) research or investigations; (2), cooperative service in control; and (3) educational service. These activities are centered in the Division of Forest Insect Investigations.

The handling of the preliminary surveys, necessary for keeping the Bureau of Entomology acquainted with the conditions within each park, is an obligation of the Park Service itself, as are also the actual control operations. The Bureau of Entomology, however, is the clearing house on all technical matters pertaining to the technique and advisability of control. Where control operations are advisable the Bureau of Entomology will detail a member of its organization to assist in and direct the more detailed survey necessary in the development of the program for insect control operations, and in the case of the larger control projects will provide technical supervision for a period of time varying from a few days to the entire period of control, depending on the technicalities involved.

Insect Control Policy. It will be the policy to secure and maintain, so far as practicable, full protection from insect epidemics in areas of the following character within the national parks and monuments.

- (1) Areas of intensive use, such as camp grounds.
- (2) Areas of important scenic or esthetic attraction (unless the partial loss of the tree species attached within a mixed stand will not materially affect the general appearance of the stand and its scenic or esthetic value, nor materially add to the fire hazard).
- (3) Areas of prospective intensive use within the next ten-year period.

- (4) Areas within the national park threatening protected areas either within or outside the national park.
- (5) Areas of unusual fire hazard.
- (6) Areas set aside for study and research (unless natural agencies are to be left undisturbed).

Complete protection in the sense here used would call for removal of light endemic infestation in areas of intensive use.

With such insects as the mountain pine beetle in lodgepole pine and the Black Hills beetle in yellow pine, there can be no question but that every outbreak should be immediately controlled before it develops into a widespread epidemic costing often thousands of dollars.

Quite a different example is presented in case of the western pine beetle in Oregon and California. This beetle takes annually a small percentage of the stand and at intervals of some years a considerably larger percentage. The main objective in controlling the depredations of this beetle would be to prevent the peaks of this type of infestation developing and thus prolong the life of the existing stand over a longer rotation of gradual replacement; in other words, the objective would be to carry on a certain amount of maintenance control from year to year in an effort to keep the losses at the lowest possible status all the time.

With defoliating insects, it is possible to readily control them where the trees are accessible to high-powered pumping equipment such as along main highways. Within a few years it may be practical to use airplanes for dusting some of these infestations.

Under the above policy, remote areas of no special scenic value and not of high fire hazard, little used or seen by the public and not planned for intensive use within a reasonable period of years, may be omitted from insect control plans if they will not endanger control in adjacent areas, unless there are other special factors which make their protection from insects important.

Maintenance Control must be carried on during subsequent years to follow up initial control work in any area. It is an essential part of our insect control policy that such maintenance control shall be systematically planned for in the annual estimates in order that the good accomplished by initial control shall not be lost or dissipated.

Right of Way Clearing. In the preparation of instructions for disposal of timber cut in clearing rights of way for roads, trails, telephone lines, power lines and other clearings, provision shall be made to insure satisfactory measures to avoid the development of any insect epidemic. The advice of the appropriate field station of the Bureau of Entomology should be secured to insure the incorporation of the proper provisions in this regard.

Handling Insect Control Work. On each timbered park the superintendent will designate some member of his organization to give special attention to insect matters within that park. This man should keep himself thoroughly informed at all times regarding the condition of the forest stand, and in case of any insect infestation shall make such preliminary survey as is necessary to furnish intelligent information regarding conditions for transmittal to the field station of the Bureau of Entomology in order to secure action by that Bureau. The man assigned to this work should also accompany the field representative of the Bureau of Entomology in making more detailed field surveys and in planning insect control activities, and is the logical man to supervise the actual control operations.

In selecting the man to be assigned to insect work, it is highly desirable that a man trained and experienced in this line of work should be selected, if available. If no one with these qualifications is available within the park in question, possibly a transfer of a suitable man elsewhere within the Service can be arranged. If not, it will be necessary to provide training and experience for the best available man as early as possible on those parks where this line of work is of importance. In this connection, other qualities being equal, a training in entomology, biology or forestry will furnish a better background for intelligent understanding of the problems involved.

The man assigned to insect work must be given sufficient time to devote to a survey of the forest stands each year to insure that no epidemics become established because of a lack of information of the presence of insect infestation. Our aim must be to discover infestation promptly so that insect control can be maintained at the minimum expense and under conditions which will give the greatest promise of success. It is important also that all the rangers be given instruction in recognizing the signs of insect infestation, either by the man detailed to insect work or by field representatives of the Bureau of Entomology, so that they may participate in the discovery and report of incipient infestations within their respective districts.

An Annual Report of Insect Conditions within each forested park will be prepared and submitted not later than November 1 to the Forestry Division on the forms furnished for this purpose. Such reports should indicate where important problems exist, and the assistance of the Bureau of Entomology will be requested where the problems are of sufficient importance. In case of a serious situation at any time, it should be immediately reported to the Forestry Division and to the Bureau of Entomology for action without delaying report until the regular annual report date.

TREE DISEASE CONTROL

The Bureau of Plant Industry is the agency designated to furnish technical advice relative to fungous diseases and pathological conditions affecting the park trees and forests. Dr. E. P. Meinecke,

Principal Pathologist, Bureau of Plant Industry, Ferry Building, San Francisco, California, has been designated as general advisor to the National Park Service in matters of forest pathology.

In the control of blister-rust the Office of Blister-Rust Control of the Bureau of Plant Industry will act in the capacity of technical adviser and supervisor of control operations in a manner similar to that of the Bureau of Entomology in insect control. For this work in the West the Office of Blister-Rust Control, Senior Pathologist S. N. Wyckoff in Charge, 618 Realty Building, Spokane, Washington, will furnish men for field examinations and preparation of estimates for control work, and for technical supervision of control operations. In the East, this work will be handled through the Office of Blister-Rust Control of the Bureau of Plant Industry, Department of Agriculture, Washington, D. C.

In order to permit of complete and accurate surveys by members of the Office of Blister-Rust Control, it is essential that type maps be completed at the earliest possible date showing the distribution of all species of pine belonging to the white pine group susceptible to blister-rust damage, in order that such surveys by the representatives of the Office of Blister-Rust Control may cover the entire field in which protection might be desirable without having to spend time in determining the distribution of these species.

It is further essential that in any eradication of currant and gooseberry bushes (Ribes) for the prevention of the spread of blister-rust to the white pine species, consideration should be given to all the values at stake and the local importance of Ribes as a part of the landscape as contrasted with scattered white pines. The viewpoint of the Landscape Division and of the Branch of Research and Education should be obtained in connection with any contemplated Ribes eradication in order that all factors shall be given proper consideration in the determination of the most advisable program.

CAMP GROUND PROTECTION

Where camp grounds are located within timber, intensive use year after year results in removal of the humus, packing of the surface layers of the ground where the feeder roots are located, and in mechanical injury to the trees themselves where they are unfenced, resulting in conditions unfavorable to tree growth which may eventually so disturb the vitality of the trees that they will become easy prey to insect attacks and tree diseases. In some instances this has already resulted in the gradual loss of shade trees from year to year to such an extent that new camp grounds or the fencing off of the remaining trees constitute the only remedy.

In solving this important problem of camp ground protection the advice of the forest pathologists of the Bureau of Plant Industry and of the entomologists of the Bureau of Entomology is extremely desirable in determining the protective measures to be applied.

LAND AND TIMBER EXCHANGE

In case of any land and timber exchange, all cutting will be done under conservative forestry regulations, which must be submitted to Field Headquarters (Forestry Division, Berkeley) for examination as to their sufficiency before incorporation in the contract.

Cutting regulations in exchange contracts shall be strictly enforced by the superintendents and no changes shall be effected without prior approval of the Director through Field Headquarters (Forestry Division, Berkeley).

FOREST PRODUCTS

1. Clean-up. Dead and down timber constitutes a fire menace and should be removed from the forest, especially along roads, whenever practicable. In the case of large burns this may sometimes be effected by the sale of burned material or by the granting of it free to the park operator or others who will guarantee to take all of it from a specified area, thus reducing the fire hazard. Clean-up work along roadsides, lake shores, etc., must be planned in cooperation with Field Headquarters (Landscape Division), and when in progress will be under the supervision of the landscape architect assigned to the park.

2. Firewood. Firewood will, so far as practicable, be secured from dead timber and from clearing operations on roads and other projects. If it becomes necessary to cut live standing trees for firewood purposes solely, the marking of such trees for cutting will be done under the supervision of a representative of Field Headquarters (Forestry Division, Berkeley).

GRAZING

It is the policy of the Park Service to eliminate the grazing of domestic livestock on national park ranges as soon as practicable.

Local regulations relative to the grazing of saddle and pack animals will be made and enforced by the superintendent, with approval by the Director.