

FOREST PROTECTION

Protection against Organic Nature

A - Protection against man.

Par. 1. Protection Against Adverse Possession.

Adverse possession and its consequences are best prevented by continuous, open and notorious possession of every acre of land comprised in the property. To that end, a proper survey is necessary, coupled with demarkation [sic] of the boundary lines by proper marks or by fences; of the corners by proper corner trees and witnesses.

The exactness of the survey depends on the acre-value of the forest.

The lines of the property, established by the demarkation [sic], must be maintained by continuous patrolling. The posting of trespass notices and the trimming of bushes along the lines are advisable, if not legally required. Foremen, tenants and guards should know the lines perfectly so as to be witnesses available in lawsuits. In the case of disputes with neighbors, refuge to “proceSSIONING proceedings” is taken. The forester should endeavor to straighten the lines of the forest by purchase or exchange, and to substitute natural boundary lines for artificial lines.

Squatters, with the help of state grants or other colorable title, – or without title but with distinct boundary lines and with distinct possession – become owners within a few years.

All deeds pertaining to a piece of property should be placed on public record. Suit should be brought in the federal courts, preferably.

In the distant future, the increased value of real property will force the states to “legalize” the individual holdings after careful survey.

Par. 2. Protection Against Forest Fires.

Protection against forest fires means, practically, protection against man who, intentionally or carelessly, causes the very large majority of all forest fires. Fires due to lightning are of rare occurrence in the East.

A: CAUSES OF FIRES:

I.—Fires are intentionally set:—

To improve pasture.

To uncover minerals for prospecting.

To gather chestnuts.

To improve the huckleberry crop.

To facilitate access to thick woods.

To get a job at stopping fires.

To surround farms, pastures of forests with a safety belt of burned land.

To take revenge for supposed acts of animosity.

II.—Fires carelessly started result from—

Locomotive sparks and cinders.

Sparks from forest cabins.

Campers' and hunters' fires.

Charcoal burning, rock blasting, tobacco smoking, burning adjoining fields or pastures.

B: KINDS OF FOREST FIRES:

Fires are distinguished as:— Surface fires.

Underground fires. Top fires.

C: DAMAGE BY FIRES:

The damage done by forest fires consists of the loss of present values or of the loss of prospective values; seedlings are killed; saplings burst open; stool shoots replace seedling growth.

A heavy growth of weeds, frequently following in the wake of forest fires, prevents natural or artificial regeneration. A deterioration of productiveness is the natural consequence of deteriorated soil, due to destruction of humus.

Trees weakened by fires cease to resist the attacks of insects and fungi. Trees burned at the stump are subject to breakage by sleet or snow.

D: the measures taken against forest fires are either of a preventive or of a remedial nature:

I.—Preventive measures:—

Education of the people and of the legislature through the newspapers and from the pulpit.

Friendly relations with all neighbors.

Securing proper fire laws and publishing notices giving the essence of such laws.

The purchase of all interior holdings.

Settlements of tenants within the forest.

Telephone connection in the forest.

Fire lanes kept clear from inflammable material.

Burning all around the forest at the beginning of the dangerous season.

Burning débris after lumbering – a measure of doubted expediency.

Removing débris from the close proximity of valuable trees.

Proper contracts for all work in the woods by which the liability for damage caused by fires is thrown upon the contractor.

Annual burning of the woods intended to prevent the accumulation of vegetable

matter or mould.

Unceasing patrol of the forest during the dry season or during dry spells, day and night, by an increased staff of watchmen, thoroughly acquainted with their beat and with the people living in the neighborhood.

II.—Remedial Measures:—

a.—Main Principles:—

Have one man in full charge and hold him alone responsible.

Have helpers and relays for helpers ready in the various ranges (*scattering the work*) during droughts, employing them in lumbering or in silviculture until their help is required at a fire.

The foreman, upon arrival at the fire, must first ascertain the speed of the Fire and the length of the line of attack; further, the distance from the next fire lane (trail, brook, pasture), and the amount of help locally available.

The foreman must not hesitate to abandon the burning district, up to the next or second fire lane.

Food and water for the fire-fighters must be provided.

The fire is subdued only when the last spark is extinguished. The edges of the burned area must be watched for 24 hours succeeding the fire.

b.—Tools:—

The axe, hoe, spade, shovel, rake (preferably wooden teeth); brooms; plows on abandoned fields, water buckets and sprinkling cans; pack-train, and fire extinguishers.

c.—Actual Work:—

(1) Underground fires can be stopped only by digging ditches and by turning water into them.

(2) Surface fires are stopped:

By plowing or digging a furrow around the fire.

By beating the fire out with brooms or green twigs.

By removing the humus and débris from a narrow line in front of the fire by hand or by rake.

By throwing dirt on the fire.

By sprinkling in front of the fire.

By the use of extinguishers against the flame itself.

By back-firing from the next point of vantage with due regard for the speed of the fire—the best and only remedy in the case of heavy conflagrations.

(3) Top fires can be stopped only by providing broad fire lanes on which the trees are cut, and by back-firing from such lanes.

(4) Stem fires burning in hollow trees are stopped by filling the holes in the trunk with dirt or by cutting the tree down.

Fires going down hill, against the wind and in the hours following midnight, are the easiest to subdue.

For a number of tree species (notably Douglas fir, Yellow pines, Jack pine, Lodgepole pine, Aspen) fire must be considered as an excellent silvicultural tool or as a means of securing regeneration.