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The School of Forestry, University of Idaho, Moscow, Idaho

# THE FIRE SEASON OF 1926 IN IDAHO

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(Note:- Publishers using the contents, in part or entire, of this bulletin are requested to credit the School of Forestry, University of Idaho, as well as the author of the article.)

In northern Idaho the spring of 1926 opened with subnormal snowfall and rainfall. A quotation from a letter sent out by the District Forester at Missoula to all National Forest officers in northern Idaho is, perhaps, significant of the uneasiness which prevailed about April 30 among those most concerned with forest fire control:

> "Reports from the Forest Experiment Station and from Savenac Forest Nursery show that forest fire danger is developing rapidly under prevailing conditions. Rainfall for the months of March and April is far below normal. Maximum temperatures have been up around 80 degrees-summer temperature, with relative humidities as low as 18 per cent at Priest River. As a consequence all of the lighter weight and smaller fuels are becoming dangerously inflammable. The moisture content of the top layer of duff at Savenac Nursery (near the Idaho-Montana line) was down to 15 per cent on April 26 and appears to be falling rapidly. Twigs and slash probably are as dry or drier than top duff.
>
> Such unusual conditions at this season of the year warrant unusual attention to the fire problem. You are urged to take active measures in regulating all spring burning wherever possible, and to watch the weather and weather forecasts very keenly so that you may be prepared if unseasonable thunderstorms occur. Several lightning fires have been reported. In all, 23 fires have been reported in the District for the period ending April 20. This is greatly in excess of any previous record for the entire month of April. If materials continue to dry out at the present rate, future fires can be expected to spread with dangerous rapidity."

The pertinence of the foregoing warning is further borne out by the following tabulation of precipitation:

Precipitation at Priest River Experiment Station

| Year | April | May | June | July | August | September |
|---|---|---|---|---|---|---|
| 1925 | 1.24 | 2.19 | 1.70 | 0.96 | 1.12 | 1.68 |
| Normal | 1.96 | 2.18 | 1.64 | 0.91 | x1.33 | 1.73 |
| 1926 | 0.70 | 2.06 | 0.85 | 0.16 | 4.24 | 2.40 |
| 1926 Departure from Normal | -1.26 | -0.12 | -0.79 | -0.75 | +2.91 | +0.67 |

x All received after August 15.

Some timely rains in May and early June together with lush growth of spring vegetation temporarily relieved the situation, but at no one time during the season until August 16 did the sum total of precipitation again approach normal. In the southern part of the State, fire conditions because of a difference in climatic type and forest cover types, never become so acute and dangerous as in the Panhandle, and 1926 developed nothing unusual south of the St. Joe River drainage. This in spite of the fact that very serious fire danger conditions often develop in the Clearwater, Selway, and Salmon River drainages in north central Idaho. Serious losses were confined to the Priest River, Kootenai River, and Pend Oreille Lake localities.

Although a number of early fires occurred they were less disastrous than those of the spring of 1924. June 8 was an extremely bad day because of high winds following a period of warm dry weather. A pronounced dust storm and gale was in evidence throughout the day and during the afternoon a number of fires spread. The most serious and destructive was in Grouse Creek about 25 miles northeasterly from Sandpoint. This fire covered over 1200 acres and although the loss in merchantable timber was not great there was a heavy loss in decked logs and logging improvements. A careless smoker employed in a nearby logging camp is believed to have been responsible for this destructive fire. Extreme weather did not long continue and the other fires which sprung up on June 8 were controlled without serious losses. No further serious trouble with fire was experienced until July 5. In this interval, all protection forces were built up to normal and placed in readiness for the danger season then reconized as already in progress.

On July 5, dry thunderstorms broke over the northern panhandle, leaving at least 300 fires in the region from Salmon River to the Canadian boundary. In spite of drouth and heat all of these fires were successfully handled by the protective agencies and none became large. In the Priest Lake region with 65 fires from this storm the Priest Lake Timber Protective Association and the Kaniksu National Forest forces were severely taxed, but they held, and were safely on top of the situation on July 11.

July 12, the most severe lightning-fire storm ever experienced in nineteen years of record broke over the Priest Lake region and extended with less severity over other parts of the panhandle. At least 425 fires are known to have been set by lightning in a twelve-hour period.

On the Kaniksu Forest where a record has been kept for 19 years the greatest number of lightning fires recorded in any previous year is 101. This one storm left in its path in about 12 hours over 150 fires which were actually located and reported. It is known that some fires not discovered and not reported at the time were enveloped by others that became large. Dry, hot, windy weather followed July 12 and in general prevailed until August 16, when general rains intervened. The local forces, already somewhat strained and partly occupied on the fires of July 5 were wholly inadequate to meet the situation. All available logging crews and other local labor supplies were called into action and in the evening of July 12 the recruiting of emergency firefighters on a large scale was started in Spokane. In spite of all efforts many fires became relatively large and passed out of control during the next few days. A prolonged and desperate fight ensued during the next six weeks. It is not known just how many men were engaged by the different organizations but it is fairly certain that at least 2500 were engaged in fire control in the Panhandle at one time during the peak of the emergency. The story of costs and losses is best told by the accompanying tabulation. Further checking of the figures will change them but little and are approximately correct:

Causes and Number of Fires. Idaho, 1926

| Causes | No. of Fires |
|---|---|
| Lightning | 1109 |
| Railroads | 33 |
| Camp Fires | 118 |
| Smokers | 138 |
| Brush Burning | 68 |
| Incendiary | 22 |
| Lumbering | 39 |
| Miscellaneous | 33 |
| Unknown | 36 |
| Total number of fires | 1596 |

Forest Fire Damage in Idaho, 1926.

| | Timber Burned M. ft.B.M. | Young Growth Killed, Acres | Damage to Logs, Improvements, etc.Dollars | Approximate Total Damage Dollars |
|---|---|---|---|---|
| National Forest | 444,229 | 96,622 | 105,194 | 600,800 |
| Other Lands | 232,206 | 21,202 | 95,712 | 368,000 |
| TOTALS | 676,435 | 117,824 | 200,906 | 968,800 |

Area Burned Over in Idaho, 1926

| | Net Total Acreage | Area Burned acres | Percentage Burned |
|---|---|---|---|
| National Forest | 19,072,000 | 225,870 | 1.2 |
| Other Lands | 4,009,000 | 110,752 | 2.7 |
| TOTALS | 23,081,000 | 336,622 | 1.5 |

Final figures on cost of suppression are not yet available but it is known that National Forest expenditures amount to about $650,000 and the expense to other agencies about $185,000.

Important questions which naturally arise out of such a record of costs and losses are:

1. Is it possible successfully to protect these forests from excessive loss by fire?

2. What steps can and should be taken to prevent a recurrence?

In answer to the first question it may be helpful to consider the record of previous similar years. In 1910, the worst year of record, costs and losses in Idaho totaled $17,700,000 and 78 persons were burned to death. In 1919, another peak year, costs and losses aggregated $5,098,000. For 1926, costs and losses are $1,803,800. Each of the earlier peak years was followed by a substantial strengthening of the protection forces.

The figures, supported by the observations and experience of many fire-control men indicate that it probably is within the scope of human possibility to prevent heavy fire losses in the Idaho Forests. The same sources of information indicate clearly that success has not yet been attained. There is a wide margin in which a further increased outlay in fire control forces may reasonably be expected to pay a handsome return. Prominent lumbermen and other public spirited citizens of Idaho have already urged upon our representatives in Congress and upon the Bureau of the Budget this pressing need. The request is not necessarily one for more

money but is rather for more flexibility in the use of funds to make it possible to put out a larger protection force with a view to preventing fires from becoming large. An ultimate saving should result.

If there is an answer to the lightning fire problem it is "more men in the woods when fires start and higher efficiency among those men." There is no known or promised way to prevent the occurrence of lightning fires.

With so many large fires and such enormous suppression costs it is quite natural that attention should turn toward more efficient means than hand labor for the construction of fire trenches. That is a laudable and encouraging tendency. The elimination of waste is always desirable. Horses, plows, and pumps have all been introduced and all given promise of being of some value in the construction or holding of fire trench on large fires. While these improvements in method are worthy of further development it must be borne in mind that the real answer lies in another direction. Each large fire is in itself a monument to failure, even though it may be ever so well handled. The only real way to the practice of forestry in Idaho is through the squelching of fires before they ever become large, costly, and destructive. That way only promises true success.

During 1926 fire research work was continued, a fire weather specialist was assigned to the north Idaho region by the U. S. Weather Bureau, and aerial forest patrol in co-operation with the U. S. Army was continued. All of these are promising lines of forest protection in which work is but well begun.

## IDAHO FOREST SCHOOL EXPANDS ITS NURSERY

The lease of a twenty-seven acre tract gives the School of Forestry about forty acres for its forest nursery and arboretum. The most of this area will eventually be used for forest nursery purposes, and when fully developed the School will have one of the largest state controlled forest nurseries in the west.

The newly acquired leasehold adjoins the city limits of Moscow on the south and the university campus on the east. In point of situation, soil and topography the tract is splendidly adapted to forest nursery purposes. Being adjacent to the campus, it will be an inexpensive matter to supply this tract with water from the university system.

The tract will be used primarily to grow planting stock for the establishment of farm woodlots, shelterbelts and windbreaks under a cooperative agreement between the School of Forestry and the U. S. Forest Service according to the terms of the federal law known as the Clarke-McNary act. This agreement will make it possible for the School to supply the farmers of the state with planting material at very nominal prices.

Since all the tract will not be needed at once to grow nursery stock a part of it will be used meanwhile to demonstrate methods of establishing and growing type woodlots and windbreaks.

Aside from black locust, only a limited supply of stock suitable for woodlot and windbreak planting is available for the season of 1927. A large supply will be ready for 1928, and after that, it is expected that enough will be on hand to supply the demand. The School has a large stock of fine ornamentals ready for shipment in season.

A price list of both woodlot and ornamental stock may be had on application to the School of Forestry, University of Idaho, Moscow.