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OF AGRICULTURE

**Radio  
Service**

OFFICE OF  
INFORMATION

CHATS WITH THE WEATHER MAN

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ANNOUNCEMENT: Now for our chat with the weather man. At this time every other week, your old friend Ob. Server brings you the results of his talks with the scientists of the United States Weather Bureau. These are the men who not only talk about the weather, but do something about it -----

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Let's talk about forest fire weather today. Or rather let me tell you what Mr. W. R. Stevens, of the United States Weather Bureau, told me about it.

Of course, you know that weather conditions have a lot to do with whether or not fire is likely to get a start in the woods. And if it does, how far it will burn. Even if you never saw a forest fire, you know that dry litter is in bigger danger from fire than damp litter. And from your own experience, you know what a big difference a change of wind may make in fire fighting.

And remember these forest fires are on a big scale --- sometimes on a tremendous scale -- Why, in northern Idaho last summer one bad fire burned 20,000 acres of timber in one day, and spread over 1600 acres an hour for twelve and a half hours. Well, in case of a fire like that, you can't just run around the other side of the fire in a few seconds when the wind changes. It may take hours of travel over rough forest trails carrying fire fighting tools by mule pack to reach the scene of the fire at all. Sometimes hundreds of men must be recruited from distant places, and men and supplies rushed to strategic points from which to fight the fire. Managing a forest fire fighting force reminds you a lot of shifting soldiers and supplies for a big battle. Naturally, the men in charge of fire fighting need all the advance information they can get in making their plans. They need to know when the danger point is reached, when things get so hot and dry as to make fires likely, so they can get the forces ready to move and get supplies located at convenient points. And when fire actually breaks out, it is highly important to know what weather is coming. A change of temperature or a change in the dryness of the air or a change in the wind may mean destruction or safety for large tracts of timber.

That is the reason for the forest fire weather forecast service which the United States Weather Bureau, in cooperation with the United States Forest Service, forestry organizations, and private corporations, has been organizing and improving since 1925. Fire weather forecasts are now made for forested areas in California, Washington, Oregon, Idaho, Montana, Minnesota, Wisconsin, Michigan, the New England States, and the Adirondack Mountains region in eastern New York.

This summer, Mr. Stevens tells me, service will be started in the southern Appalachians from headquarters to be located at Asheville, North Carolina. Of course, the first season's work will be largely in the nature of a survey for the location of the net-work of observation stations throughout the forested regions. In the eastern part of the country, most of the fires come in the spring and fall, while in the West the worst part of the fire season is in midsummer.

During the fire season, each forest fire forecast center gets reports from its net-work of stations giving the temperature and humidity measurements at various points scattered throughout its territory. From these reports, together with the regular reports from all over the country, which are used to make up the regular daily weather forecast map, the fire weather district forecaster makes his own map and forecast.

The working of the fire weather service varies, however, according to conditions in the various forest districts. In the more thickly populated forests of the East, it is little trouble to get observers any place, but in the West the observations are usually taken at forest lookout stations by the forest lookouts. The fire weather forecasters are men not only trained in meteorology but also well grounded in methods of fire fighting in the forests.

In California, the system is a little different from that used in the other fire weather districts. In California, the forecaster has a truck, which is fully equipped as a weather forecast office. Two men, a weather man and a radio man go about from one fire to another in this truck, set up their instruments in the forest, get the measurements of wind and temperature and humidity near the location of the fire itself where they are in close touch with the forces encamped in the forest to fight the fire.

While taking the local measurement of weather conditions, the truck gets the reports from other parts of the country by radio from the Mare Island Naval Station. With this information, the forecaster prepares a regular weather map right there in the truck stopped in the forest. From that map, he quickly makes the forecast to the man directing the fire fighting forces. If a change of direction in the wind is indicated, fire fighters may be sent immediately to the parts of the forest which will be menaced when the change comes.

In valleys and canyons, the wind moves up the valley during the day, and at night reverses and moves down the valley. Just when this change will come depends largely on the steepness of the slope and the width of the valley. The weather man in this case has made a study of such changes on different slopes and can forecast the time the change will come. Knowing the time and the rate at which the fire is advancing, the man directing the fire fighters can better determine where to most effectively attack the fire and where to build back fires to burn a fire-break to check the flames.

The forecaster on the truck is naturally so busy at the fire he is on that he can't look after the forecasting for other fires which may break out in distant parts of the State. In such cases, however, the regular district forecaster makes the forecasts for the other fires, which are sent out by wire in the usual way. If two fires break out at once, the weather office on wheels rushes to the one which seems to be the most menacing. Or in case of two fires of equal importance, the truck riding forecaster is sent to the one which can be reached quickest.

But, as we said before, conditions of the different fire weather districts are different. That applies not only to the ease of recruiting fire fighters and getting them to the scene of action, but also to the nature and cause of the fires themselves. In the Western forests, the fires are more often the spectacular type which get into the tops of the trees and destroy the entire tree, The big problem in the West is to keep the fires on the ground and prevent such crown fires. In the Eastern forests, the fires are more generally the slower moving ground fire type which kills out the young growth.

In the east, the temperature and relative humidity are the things with which the fire weather forecaster is most concerned. In the west, thunderstorms must also be taken into consideration. In Idaho 65 per cent of the fires are started by lightning. In the east, a very small per cent of fires are lightning caused. Railroads are blamed for a number of fires both in east and west. But in all our forests, east and west, one of the big causes of forest fires is the careless smoker and camper.

But that is getting a little off our story. The district fire weather forecaster can't predict when some thoughtless tourist or camper will toss a lighted cigarette butt or a burning match into the litter on the forest floor. But they can and do forecast the weather conditions which make it more likely that a disastrous forest fire will result from such carelessness. In the fire weather service, Mr. Stevens points out, we are developing another important aid in protecting our forests from the increasing menace of fire.

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ANNOUNCEMENT: Two weeks from today we will have another of these chats with the weather man, prepared by the United States Department of Agriculture and presented through Station -----.

# **National Oceanic and Atmospheric Administration**

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