

# FOREST SERVICE - U. S. DEPARTMENT OF AGRICULTURE

## PACIFIC SOUTHWEST FOREST AND RANGE EXPERIMENT STATION BERKELEY - CALIFORNIA

## MISCELLANEOUS PAPER

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### WHAT DO PEOPLE KNOW ABOUT FIRE PREVENTION?

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You have to be carefully taught. Although this is the title to a song from a recent stage play and motion picture, it could well be the basis of our forest fire prevention effort. More and more we are finding that education is the key to success in forest fire prevention. But it must be a careful education, and we are finding that half an education may be no better than none. This is because a successful fire prevention campaign is one that does two things --

It teaches why we must be careful with fire.  
It teaches how to be careful with fire.

Simple, isn't it? But the prevention man faces several problems in trying to apply these two easy maxims. The first problem in organizing a prevention campaign is how to divide the total effort between the "why" and the "how."

After this question has been answered, the prevention man faces the problem of what to teach. To catch and hold attention, information must be important, clear, and fresh. If the presentation is too technical, people are confused. Too simple or trivial information, on the other hand, can be boring or downright insulting.

These problems can be solved only if we know what the forest-using public already knows and believes about fire prevention. It becomes obvious that if we are to be good teachers we need to know a great many more facts about the people we are trying to teach.

To supply these facts is the object of research being conducted by the University of Southern California School of Public Administration under a contract with the Pacific Southwest Forest and Range Experiment Station. A recent progress report prepared by the University of Southern California staff offers some interesting reading for those concerned with forest fire prevention. 1/

This report discussed primarily the part of the research which sought to devise various kinds of questions that could be used in future surveys of the fire prevention knowledge and attitudes of various forest-using groups. Secondary aims of the study were to try various methods of administering questionnaires in the field and to develop a program for rapid processing of questionnaire results by electronic computers.

Eight questionnaire forms were tested. Five of these were designed for forest recreationists and three for summer home owners. Some of the forms were used by a trained interview team from the University of Southern California, some by forest fire prevention personnel with the assistance of a trained University interviewer. Still others were used by prevention personnel aided only with written instructions. The next step was the establishment of an analysis program for the IBM 650 computing equipment at the University.

The University of Southern California researchers now have the tools they need, including interview techniques, IBM procedures, and a stockpile of questions for the next phase of the test--a large-scale survey of California hunters that should provide a definite answer to the question "What do people know about fire prevention?" 2/

In addition, an important bonus benefit was obtained from the preliminary tests. The progress report goes to some length to point out that the results of the eight test questionnaires should be accepted with caution. Each of the questionnaires was designed and administered differently. Consequently, the data could not be pooled, and no rigorous statistical treatment was possible. Nevertheless the answers are quite informative. Certain patterns of response run consistently through the whole series. A subjective appraisal of the 2,645 questionnaires that were completed shows some leads that may be of direct benefit to fire prevention program directors.

Men scored consistently better than women in fire prevention knowledge. This is hardly surprising in view of the subject matter.

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1/ Herrmann, W.e.W., 1959. Progress Report on Research Activities Relevant to Human Behavioral Aspects of Forest Fire Prevention. University of Southern California, School of Public Administration. 188 pp. (processed).

2/ A two percent survey of California hunters will be conducted by the University of Southern California School of Public Administration during 1960, using a systematic sample of hunting license records provided by the California Department of Fish and Game. This study is being financed jointly by the U. S. Forest Service and the California State Division of Forestry.

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People in the age bracket from 25 to 50 had the most correct information on fire prevention. Under age 25 the problem seemed to be one of lack of information, and over 50 one of misinformation.

Except among workers in lumbering and forestry, who scored consistently high, knowledge of fire prevention paralleled quite closely general educational and intellectual level as indicated by occupation. One rather disturbing fact is that agricultural occupations, which should be exposed to more fire prevention information than many other classes, scored lower than people in professional, sales, clerical, and service categories. In view of the exceptionally high level of knowledge in the lumber industry, it appears that we have failed to reach the rancher-farmer with our present fire prevention program.

Length of residence in California did not affect the scores, but length of residence in the local area had a very marked effect. This seems to shoot holes in the often expressed idea that it is the newcomers to California who are our biggest fire problem.

Local residents had more fire prevention knowledge than visitors. Local residents who neither hunt nor fish did better on the recreationist questionnaires than did hunters from outside the area. Yet statistics on fire causes show that 60 percent of California's man-caused fires are started by local residents. It would appear that we have a situation where the local resident knows all about fire prevention but doesn't much care, while the city visitors have a very good attitude towards prevention but just don't know what to do to prevent fires.

Perhaps some of the problems implicit in the above paragraph can be explained by an analysis of the sources of information. It was immediately apparent from such an analyses that people get little "how to do it" information from the organized, mass media fire prevention campaigns. This should be accepted as a statement of fact and not an implied criticism of the mass media programs. The primary intent of any large-scale advertising program is to condition attitudes and make people aware of a product or situation, not to impart specific knowledge. In arousing a desire to "prevent forest fires," the mass media campaigns have been outstandingly successful with the audience for which they were designed.

In any event, if we exclude "common sense," an often listed source of both information and misinformation, the analysis shows that more correct and less incorrect information was obtained from talking with other people than from any other source. This seemed to be true regardless of whether the people were our own employees, parents, friends, or the gas station attendant. Written material, such as newspapers, magazines, and signs, occupied an intermediate position, being the source of more correct and less incorrect information than radio and television but less than that obtained through individual contacts.

Looking at the content of individual questions, one fact stood out like a sore thumb. We have apparently failed to get acceptance of the necessity for hazard reduction around buildings. This was in the top five

most commonly missed questions in every questionnaire where it appeared. All of the alternative answers were for clearance requirements less than adequate, and of the residents who answered correctly, half of them merely guessed that the largest clearance listed was the one they ought to put down.

There are two other general areas of misinformation that may be of practical importance. The California burning permit regulations were not well known by local residents. It may be argued that because nearly everyone who missed these questions thought that the requirements were more strict than they actually are, the level of knowledge in this area is no cause for concern. However, it is unlikely that anyone who believes that a burning permit is required for all fires for all 12 months of the year has ever applied for a permit. Therefore, the misinformation about permits probably means that the individuals concerned have either never needed a permit or never bothered to obtain one.

The campfire permit of the Forest Service also appears to be a subject of misinformation. About one-third of the people sampled thought the permit was valid on private as well as public land within a national forest, and 10 percent thought it was a blanket permit, good on any land in the state.

There are other areas that may pose particular prevention problems as indicated by these preliminary surveys, but in most cases the questions need to be revised to give significant guides for action.

The six words, "You have to be carefully taught," were extremely successful for their writers. There is good reason to believe their application, guided by the facts about what people know (or don't know) about fire prevention, will be equally successful for us.