The Perception Which Local Governmental and Private Forestry Related Organizations Have of Their Roles in Forest Fire Prevention.

Andrew Wesley Baird

Louisiana State University and Agricultural & Mechanical College

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The Louisiana State University and
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THE PERCEPTION WHICH LOCAL GOVERNMENTAL AND PRIVATE FORESTRY RELATED ORGANIZATIONS HAVE OF THEIR ROLES IN FOREST FIRE PREVENTION

A Dissertation
Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of
Doctor of Philosophy
in The Department of Sociology

by
Andrew Wesley Baird
B. S., Mississippi State University, 1955
M. S., Mississippi State University, 1957
August, 1976
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The purpose of this study was to identify the organizational factors associated with the effectiveness of forest fire prevention efforts in a South Mississippi county. To meet this objective relevant organizations in the county had to be identified, their fire prevention policies, goals, and programs had to be determined, and an examination made of their interorganizational and intraorganizational structure in relation to their fire prevention responsibilities and activities. A conceptual framework developed by Frederick L. Bates and Alvin L. Bertrand was utilized in the investigation of the research objectives.

Fifteen organizations were identified as having specific or potentially significant functions to perform in the prevention of man-caused forest fires. However, of those fifteen organizations only four recognized or identified forest fire prevention as being one of their major areas of responsibility to the extent of having officially recognized fire prevention goals and formal prevention plans.

Organizational structure, policies, goals, programs and practices of the relevant organizations differed in varying degrees. Those organizations with explicit
responsibilities for forest fire prevention were pointing in the same general direction 
in terms of official fire prevention goals, plans, and efforts, but each in its own 
way and oriented toward its own particular interests.

It was concluded that those organizations with explicit forest fire prevention 
responsibilities were functioning at a less than optimum level in terms of prevention 
efforts. There was evidence that certain organizational factors were associated in 
a way detrimental to effective fire prevention efforts. Those factors included the 
following:

1. A failure on the part of organizational leaders to define 
man-caused fire as a problem in the study area.

2. A failure of key organizations to give a high level of priority 
to fire prevention efforts.

3. A failure of fire prevention personnel to follow through in ac­
tions with well developed, formal plans that were on paper.

4. The perception of key organizational personnel that the most 
important fire control functions were those of detection and 
suppression.

5. Conflicting organizational policies and practices between 
organizations that could adversely affect the forest fire occurrence 
rate.

6. A lack of coordination of fire prevention efforts in the field.

7. The total lack of a coordinating effort between organizations.
CHAPTER 1

THE PROBLEM AND SIGNIFICANCE

1. The Southern Forest Fire Problem

One of the most persistent problems to face forest administrators and others concerned with the development and administration of the forest resources in the South has been to bring about a significant and lasting reduction in the number of man-caused forest fires (Fahnestock, 1964). On the average, the South has accounted for sixty-five per cent of all the nation's forest fires. Approximately ninety-nine per cent of these are caused by man, with a large proportion traditionally assigned an incendiary cause (Davis, 1959:230-234). For the five year period 1968-1972, for example, incendiary fires accounted for thirty-eight per cent of all fires and debris burning accounted for another twenty-eight per cent (1972 Wildfire Statistics).

Tremendous progress has been made in the area of forest fire control. Most of this progress has been focused upon the physical aspects of the fire, however,
and not upon the human behavior behind the causes. This may be illustrated by
the fact that the average size of forest fires has been reduced by almost one-half
since 1945, while the number of fires occurring since that time has remained
essentially unchanged (Fahnestock and Kaufman, 1964). The greatest need in the
area of forest fire control, then, is to reduce the number of fires. Obviously this
is a problem of human behavior.

II. Behavioral Studies of Man-Caused Forest Fires

Although research in the area of behavioral aspects of man-caused forest fires
has been limited until fairly recently, it has not been completely lacking. A
review of some of the most relevant studies and findings from earlier behavioral
science investigations of the problem will provide a sharper focus for the research
reported here.

Early Research

A reduction in the number of man-caused forest fires has long been a stated
objective of forest protection agencies. Behavioral scientists first became involved
in fire prevention research in the late 1930's when the U. S. Forest Service en-
gaged several sociologists and psychologists to learn more about the underlying
reasons for man-caused fires. One of the first studies was conducted by James W.
Curtis (1938), a psychologist who examined the characteristic attitudes of rural
residents toward the forest which they used. Harold F. Kaufman (1939), a rural
sociologist, studied residents of several rural communities in the Missouri Ozarks,
focusing on persons with a reputation for woods-burning. Kaufman's general
conclusion was that behind incendiary fires were unfavorable attitudes created by an imagined or real conflict of the natives' basic economic interest with the reforestation program conducted by the U. S. Forest Service. He recommended that the Forest Service attempt to change the unfavorable attitudes through a program encompassing education, mass propaganda, and law enforcement.

John P. Shea (1939; 1940), a psychologist, concluded that woods-burning was primarily an expression of the social frustrations of an isolated rural population with low incomes. His emphasis was upon the personal pleasure derived from starting fires and watching the woods burn, and he recommended that the Forest Service provide recreational facilities as outlets for the frustration. Other early studies by George H. Weltner (1942; 1943) indicated that long-established customs and unfavorable personal relations of rural residents with forestry agency personnel was highly related to incidence of fire. He recommended improving personal relations, communication, and general cooperation between protection agencies and the rural population.

General conclusions of these early studies were that forest fires were related to the rural culture. Fire entered and remained a part of the rural southern culture largely for economic reasons, but that a complex interplay of social and psychological factors brought about the wide variety of uses of fire and attitudes toward fire. However, no apparent significant action by forest protection agencies resulted from these early findings and recommendations, and fire prevention research by behavioral scientists was stopped in 1942 with the advent of World War II.
Current Research Focus

Interest in behavioral research aimed at investigating the factors contributing to the occurrence of man-caused forest fires was revived again with two studies in the late 1950's and early 1960's. An exploratory study by John B. Morris in 1958 found that the same factors indicated in the earlier efforts were still largely responsible for fire occurrence. Thomas A. Hansbrough (1964), in a study of two Louisiana Parishes in 1961, analyzed fire statistics to determine the patterns of fire occurrence in relation to various causative agents and then measured the association between incidence of fire and related social factors. His general conclusions were that man-caused fire occurrence was both a social and cultural phenomenon. That is, the attitudes of rural residents resulted from cultural differences and conflict situations between forestry agencies on the one hand, and the rural residents on the other.

In 1962, an intensified and comprehensive research effort aimed at the problem of man-caused forest fires in the South was initiated by the Southern Forest Experiment Station of the U. S. Forest Service. The effort was a cooperative one between the Southern Station, various universities in the region, and other relevant agencies and organizations. One of the first efforts of this cooperative undertaking was to delineate the major problem areas in which more focused and detailed studies were needed. This was done jointly by a forester and a sociologist and resulted in six broad problem areas in which behavioral science studies were to be conducted (Fahnestock and Kaufman, 1964): (1) forest fire occurrence rates and trends and socio-economic characteristics; (2) characteristics and activities
of forest publics in fire causation; (3) characteristics and activities of forest fire prevention organizations and related agencies; (4) the communication of forest fire prevention messages; (5) the political and legal aspects of forest fire prevention; and (6) the development and evaluation of fire prevention programs.

The overall design of the forest fire prevention project and a summary of research to date follows. This sets the stage for the research reported here.

III. The Forest Fire Prevention Project

The Overall Design

In any program designed to influence human behavior, change agents bring their message and influence to bear on target groups to produce a desired reaction (Beal, 1964). The diagram below illustrates the general interrelationships of factors in the fire prevention problem.

Figure 1. Design of the Fire Prevention Problem

The dependent factor, the phenomenon to be explained and controlled, is human behavior in relation to woods-burning. Change agents in this instance are
fire prevention and related organizations. The message and influence complex represents activity or content of messages, communication media, laws and law enforcement, and development of coordinated fire prevention programs. Forest publics include all population groups whose acts and attitudes directly influence the rate of forest fire occurrence. The desired reaction is a reduction in the number of man-caused forest fires.

The ultimate objective of the forest fire prevention project is to devise more effective fire prevention measures and programs than those currently in use. This is to be accomplished by (1) identifying and evaluating factors affecting man-caused forest fire occurrence, and (2) assisting forest protection agencies in designing and evaluating fire prevention programs. Most of the research to date has been concerned with identifying and evaluating the factors that affect the occurrence of man-caused forest fires.

A Summary of Relevant Research

The first studies to be conducted on the cooperative forest fire prevention project were concerned with characteristics and activities of rural residents in relation to conservation, forestry, and forest fires. In 1963, sociologists from Mississippi State University conducted a study of rural residents in three Mississippi counties to obtain information about forestry and agricultural practices, opinions on forest management, knowledge of forestry programs, attitudes toward the forest and conservation, and knowledge and attitudes toward forest fires. Findings from this study confirmed the belief that unfavorable attitudes and low
levels of knowledge tend to cluster in the lower socio-economic groups. Although rural residents expressed a high level of consensus of favorable attitudes toward conservation, the forest, and protection from forest fires, there were indications of the existence of a conflict of interests between agriculture and forestry (Baird, 1965; Robinson, 1964).

In a restudy of one of the areas included in Weltner's earlier research, Jones (1964) investigated knowledge and beliefs of rural residents concerning woods-burning. Conclusions from this study were that while many of the same old ideas about burning the woods had persisted for the twenty years since Weltner's study, attitudes were generally more favorable toward the work of the Forest Service.

A study conducted by Doolittle (1967) in 1966 of local communities in a Mississippi county resulted in the formulation of two general hypotheses: (1) fire prevention efforts should be focused upon the social group whose residential locality is most nearly conterminous with forest fire occurrence concentration; and (2) the most permanent successful fire prevention program makes use of certain features of the existing social structure of the group involved. Among these features are its leadership, organizational composition, and intergroup relations.

Cole and Kaufman (1966) conducted a study designed to give an overall picture of socio-economic factors associated with forest fires in all counties in Mississippi for which data were available. A major finding was that forest fire occurrence rates were closely related to both socio-economic factors and forest types, but differences in fire occurrence rates were most pronounced between four socio-economic areas than between contiguous counties. However, marked
differences were found between some contiguous counties in the same area in some cases. The fact that these differences could not be explained by the socio-economic factors studied indicated that certain behavioral factors, such as local contacts, programs of fire prevention and suppression agencies, and attitudes toward various groups should be investigated.

In a study of the history of fire prevention efforts in two Mississippi counties, Shilling and Altobellis (1966) found that fire prevention activity was continuous over a five year period, but that intensity of activity varied considerably by month and season within and between years. Maximum effort occurred during October through April for all years studied, but a lack of coordination was shown in overall efforts.

Griessman (1966) conducted a study of factors related to communication of forest fire prevention messages. Major findings from this study included (1) members of the community with a high rate of fire occurrence, as compared to residents of the community with a low rate of fire occurrence, were characterized by more open range grazing, lower levels of education, an unfavorable evaluation of activities of foresters, and an identification with the lower social classes; (2) the presence of Forest Service and Mississippi Forestry Commission personnel in the communities was known, but acquaintance with them was minimal and quite casual in nature; (3) television, signs, and posters—in contrast to informal methods—were the media by which fire prevention messages were most frequently received, but only about half of the respondents were reached in this manner; and (4) perception and retention of fire prevention messages were related to the respondents'
attitude toward forestry work, which in turn was related positively to high income, high education, and related variables.

A study of opinion leaders and the diffusion of fire prevention messages in a rural Mississippi neighborhood was conducted by Dickerson (1969) in 1967-1968. Findings from this study had a number of implications on the successful communication of fire prevention messages within the local neighborhood. These included (1) to be most effective, a fire prevention message would have to be initiated locally, legitimized locally, and diffused locally; (2) the efficiency of the communication of messages should be improved by utilizing both informal and formal sources of communication; (3) change agents (i.e., forest fire prevention agency personnel) must work closely with local leaders to be most successful in their fire prevention efforts; and (4) change agents must concentrate their efforts on those leaders who can potentially play the role of initiator and legitimizers of messages.

Although other studies are still in varying stages of progress, the general findings and conclusions of studies to date may be summarized as follows: (1) the same rationale and motivations underlie deliberate woods-burning now as thirty years ago; (2) conflict often exists, or is perceived to exist, between the values, norms, and other cultural aspects of rural residents and the policies and operations of forestry organizations; (3) there are indications that conflict may exist between the interest of forestry and agricultural organizations; and (4) while the majority of a given rural population may express generally favorable attitudes toward the forest and forest fires, others may persist in exploiting the forests.
IV. A Study of Fire Prevention Organizations

Research thus far on the forest fire prevention project has been focused primarily on three of the problem areas as delineated. These are (1) forest fire occurrence rates and trends and socio-economic characteristics; (2) characteristics and activities of forest publics in fire causation; and (3) the communication of forest fire prevention messages. Research in these areas has made significant contributions toward a better understanding of the overall problem. However, to have the fullest impact and utility and to be in a better position to make recommendations concerning prevention programs, social scientists must have a better understanding of those organizations responsible for the administration and conduct of fire prevention programs. It is these organizations that are ultimately responsible for a reduction in the number of man-caused forest fires. Such organizations are the focus of the research reported on here.

Scope

Forest fire prevention programs are the responsibility of not a single agency or set of personnel, but of a complicated network of agencies and organizations operating at varying bureaucratic levels. This includes national and state governmental agencies, as well as such non-governmental organizations as forestry associations, industrial groups, and in some instances, civic organizations. Although extensive literature exists dealing with complex organizations and their effective operation, little research of this nature has been done relative to forestry and related agencies. Notable exceptions which bear tangentially on the problem
include the works of Herbert Kaufman (1960), Ashley L. Schiff (1962), and Philip Selznick (1949).

The study locality of the research reported here was Forrest County, Mississippi, in the piney-woods section of South Mississippi. This area is characterized by a number of relevant factors which made it attractive for a study of fire prevention organizations. Through the years it has consistently had one of the highest forest fire rates of any area in the South. Woodland ownership is varied, consisting of the U.S. Forest Service, numerous industries, and individual owners with holdings ranging from several thousand to less than twenty-five acres. Likewise, organizations which do or should have some degree of interest in or specific responsibility for the prevention of forest fires are varied. These include the Mississippi Forestry Commission, the U.S. Forest Service, numerous forest industries, various agricultural agencies, and forestry related voluntary associations.

The degree of responsibility or interest in the prevention of forest fires for the various organizations was not known prior to the research. It was known, however, that two of the organizations had explicit responsibilities in all four areas of fire control—prevention, detection, presuppression, and suppression. All industrial and private holders depend on the Mississippi Forestry Commission or the U.S. Forest Service for detection and for most suppression. The study involved two major levels of investigation: introorganizational and interorganizational analysis.

Objectives

Many factors may affect the ability of an organization to achieve its goals,
all of which were not within the scope of this study. However, because of the na-
ture of the problem under investigation, it was essential that the research proceed
at both the intraorganizational and interorganizational levels. It would have been
impossible to adequately determine the means and degree of interorganizational co-
ordination and cooperation without an understanding of the internal structure and
operations of relevant organizations. The specific objectives of the study were as
follows:

1. To identify those organizations in Forrest County, Mississippi which
are considered by relevant organizational leaders to include forest
fire prevention as a part of their organizational responsibilities or
activities.

2. To enumerate and document the fire prevention policies, goals,
and programs of the above organizations and determine the
extent of agreement or disagreement.

3. To identify and analyze the organizational structure, with
particular reference to fire prevention responsibilities.

4. To relate the formal fire prevention policies, goals, and programs,
to those as planned and actually carried out by organizational members.

5. To determine the means and degree of interorganizational coordina-
tion and cooperation in the prevention of man-caused forest fires.

6. From the above analysis, to delineate the organizational factors
associated with the effectiveness of overall fire prevention efforts
in the study.
CHAPTER II

THE CONCEPTUAL FRAMEWORK AND
METHODOLOGICAL PROCEDURES

1. The Conceptual Framework

The major units of analysis upon which this study was focused were organiz­ations, specifically forest fire prevention and related organizations. One major approach that is often used in organizational analysis utilizes the conceptual framework of social systems analysis. Loomis and Beegle (1950:3) have pointed out that the social systems approach is superior to many frames of reference, par­ticularly for those who use organizational structure as channels of communication to reach people with programs.

Social Systems

In developing the social system concept, Loomis (1960:1) points out that sociology's particular or unique phenomena is

interaction, characterized by patterned social relations that display in their uniformities social elements, articulated by social processes, the dynamics of which account for the emergence, maintenance, and change of social systems.

According to Loomis (1960:3-5), interaction tends to develop certain uniform­ities over time, some of which tend to persist. As these uniformities are orderly and systematic, they can be recognized as social systems. Thus, a social system

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is composed of the patterned interaction of the members of the system. It is constituted of the interaction of a plurality of individual actions whose relations to each other are mutually oriented through the definition and mediation of a pattern of structured and shared symbols and expectations.

In further elaboration, Loomis points out that society is composed of reciprocal activity that is structured and differentiated into a number of systems. All are interlinked in such a manner that it is possible to view different systems according to the perspective taken. Furthermore, whatever system one is viewing, the elements that constitute it as a social system and the processes that articulate it remain the same.

Parsons and Shils (1951) have defined a social system as a system of the actions of individuals, the principal units of which are roles and constellations of roles. It is a system of differentiated actions, organized into a system of differentiated roles (Parsons, 1951).

Thus, such organizations as a ranger district of the U. S. Forest Service or a district office of the Mississippi Forestry Commission, or a local office of a nationally known paper company may be viewed and studied within the context of social systems. They are complex social systems composed of the patterned interactions of a plurality of individual actors whose relations are reciprocally oriented. These actors occupy status-positions in which they are expected to perform roles in terms of "rules of behavior," or norms which have been established by members of groups or society.
Complex Organizations as Social Systems

Social groups are the concrete manifestations of social systems. A group is a social system which may be isolated from other systems for analytical purposes. A complex organization includes a multi-group system with various forms of linkage between its component social groups.

A conceptual framework developed by Frederick L. Bates (1956; 1960) and A. L. Bertrand (1967:142-150; 1968; 1972) is appropriate not only for describing the place of an actor in group structure, but also in a multi-group or complex organization structure. It represents not only a way of looking at social structure in terms of action-centered analysis, but also in terms of analyzing the structure of a group of multi-group systems.

Bates has pointed out that a definition of group must perform four major functions: (1) it must state precisely the kinds of units which comprise groups, (2) it must state clearly what kinds of relationships exist between these units, (3) the definition must include criterion for establishing group boundaries, and (4) the definition must be usable in discussing the ideal structure of groups as well as the real structure and behavior of groups. To meet these requirements, Bates (1957) uses a definition which includes two conditions. His first condition is the requirement that there be "... at least two individuals who interact with each other as the occupants of two positions, each of which contains one role reciprocal to a role in the other positions." This part of the definition of group makes it possible to determine when and how a group comes into existence. His second condition establishes group boundaries, in that "... a group is composed of all individuals"
who occupy positions reciprocal to all other positions in the group structure, and
includes no individuals who do not meet this condition."

Bertrand (1972:109) has specified two additional requirements that must be met
to assure that a genuine social system has come into existence. Thus, the third
condition for a social system to exist is that it "is necessary that role relationships
be in the interest of attaining a goal sought in common by the actors." With a
common goal, group interaction and behavior is likely to be more structured. The
fourth condition requires that "the actors of a group have sufficient time to regu­
larize their activities." When this condition is met, definite norms, roles, and
positions will be established.

Following Bates and Bertrand's conceptual framework, concepts related to the
place of an actor in the structure of a group begin with a norm. A norm defines
the kind of behavior expected of or appropriate to given situations, and represents
a "blueprint" for behavior. A role represents the next highest order, and has been
defined in two ways: (1) in terms of ideal behavior, and (2) in terms of real be­
havior. As ideal behavior, a role consists of a set of norms and as such is a part of
culture. A role as real behavior consists of a set of acts which conform more or less
to the norms prescribing the expected behavior in the performance of a given func­
tion. Next in order is that of social position, which consists of a set of roles as­
signed to a given individual for performance in a given group situation. Within the
structure of any given group, there is one position for each member of the group.
However, in any given group, an individual usually has a number of different func­
tions to perform. Therefore, each position consists of a cluster or system of roles
assigned to the occupant of that position for performing the various functions required of that position (Bates, 1968). Thus, to summarize, norms compose roles, roles form social positions, and social positions in turn are the building blocks for complex organizations.

The concept of social position is defined in such a way that (1) there is one position in a group for each member of that group, and (2) the concept position represents the individual's total participation in a particular group. It is obvious, however, that every individual in society participates in more than one group. For each group membership, the individual occupies a separate and distinct social position consisting of a separate and distinct system of roles organized around different functions performed in the various group settings. Each individual, then, occupies multiple positions, one for each group of which he is a member (Bates, 1968:30).

Likewise, a single group structure consists of several positions with each position occupied by a different actor. By projecting this reasoning to the next higher level, a multi-group system consists of several groups containing many positions occupied by different actors. These positions are organized into group structures that are linked together in various ways to form complex organizations (Bates, 1968:31).

**Intraorganizational Structure.** Bates has distinguished between two types of groups, elemental and interstitial, and utilizing these two types it is possible to move the analysis from the level of a single group to that of multi-group or complex organization. An elemental group exists when every member of a given group has complementary role relationships with every other member of that group. In
other words, each member of a given group interacts or has direct relationships with every other member of the same group. When this occurs, intramural roles are in action. However, when members of two different groups interact as representatives of those groups without involving every member of the two groups in the interaction, then a third group comes into existence. Such a group is called an interstitial group, and exists in order to join together two elemental groups that are part of the structure of the same organization. When this occurs extramural roles come into play. An extramural role is one which requires an individual to leave the boundaries of one group and enter the boundaries of another in order to secure some kind of function, goods, or services needed and then return it to the group in question before the role itself can be performed. Thus, extramural roles serve to link several groups together through the sharing of a common member (Bates, 1968:36-39).

Another concept important to this conceptual framework is that of role reciprocality. According to Bertrand (1972:38), in its most direct definition role reciprocality simply means that "the performance of one role implies and requires the performance of a second role." Three factors are implicit in this definition: (1) certain rights and duties are involved between two roles, (2) these roles are located in separate positions, and (3) the two roles represent specialized aspects of the same functional process. It should be kept in mind, however, that although action may be initiated by one actor and directed toward a second actor with less power or prestige, the second actor still holds certain rights which the first actor must respect. Thus, both actors in an interactional situation have rights and duties in the pursuit of a given function or goal. As an illustration, the "forest fire
control" role which is a part of the area foresters position implies and requires a "forest fire prevention" role from other members of his organization. However, despite the fact that the area forester has a right to expect his recommendations and instructions to be followed, he does not have the right to make excessive and inconsistent demands of other members of his organization. Likewise, the other members should not expect the area forester to provide all the answers to every problem that may arise.

When an individual is required by an extramural role contained in a position in one group to occupy a different position in a totally different group, a relationship is created between two different positions in two different groups. This kind of relationship Bates calls reflexive. In contrast, a different form of relationship exists when two different actors occupy two different positions in the same group. Such a relationship is called bilateral, and exists because different actors are required by their roles to interact with each other (1968:45).

In an organization, then, elemental groups are linked together by a system of interstitial groups to form a single organizational structure. Thus, a complex organization consists of a number of subgroups or subsystems with specialized functions, linked together through bilateral and reflexive role reciprocality, and which are devoted to pursuing common goals (Bertrand, 1967:149-150; 1972:38-40).

Such groups as the U. S. Forest Service or the Mississippi Forestry Commission, then, are complex organizations in that they are multi-group social systems pursuing common goals, and are held together structurally by reflexively reciprocal role relationships. As an illustration, a major responsibility of the U. S. Forest Service
and the Mississippi Forestry Commission is the prevention and control of forest fires. Both of these agencies are complex organizations. The administrative hierarchy of the Mississippi Forestry Commission, for example, ranges down through a complex organization of position levels from the state forester, to district foresters, to area foresters who occupy the lowest position of administrative responsibility in the Commission (McLeskey, 1968). It is the major function of the area forester to activate at the local level the overall policies of the Commission relevant to the particular problems of his area. This is accomplished in varying degrees with personnel ranging from the area forester to part-time, seasonal employees, all of whom are guided in their actions by a set of formally established rules or norms. For each position there is a job description specifying the roles accompanying that position.

To illustrate the distinction between elemental and interstitial groups, a district office of the Mississippi Forestry Commission may be viewed as being composed of several sub-organizations. At the district level, there is a fire control forester, radio technician, timber management forester, an information and educational forester, and several area foresters, all directly responsible to a district forester. At the county or area level, there is a dispatcher, towerman, annual crewleader, yearly crewleader, and special part-time employees, all responsible to an area forester. The district forester's office composes an elemental group, as does the area forester's office, so long as the relationship or interactions are confined within the structure of either the district forester's office or the area forester's office. However, goal achievement by the district office requires some degree of coordination between the district office and the area office.
When, for example, the area forester and the district forester interact together to coordinate their activities in the achievement of an overall goal, then a third group is formed which represents the interstitial group. Furthermore, this represents a situation where a single person (either the area forester or the district forester) occupies two different positions in the structure of two different groups. Thus, the two positions this individual occupies are reflexively reciprocal to each other, as opposed to bilateral reciprocity when the two positions are occupied by different persons.

The above conceptual framework illustrates one way of determining and describing the internal structure of a complex organization, and represents the conceptual framework followed in this study for intraorganizational analysis.

Interorganizational Relations. Sociologists have devoted extensive attention to the study of complex organizations. However, until recently the chief focus of most studies of specific organizations has been on patterns within rather than between organizations. Although interorganizational relations have not been completely overlooked, this aspect of organizational analysis has usually been tangential to the main focus of research. Notable exceptions include the work of Philip Selznick (1949), Herbert Kaufman (1960), Levine and White (1961), Litwak and Hylton (1962), and Aiken and Hage (1968).

A key problem for this study was a frame of reference that was applicable to analyzing interorganizational structure and operations as well as intraorganizational relations. This was done by utilizing Bates' role theory approach and his conception of interstitial groups. Although role theory has produced a voluminous
literature, there have been few efforts to utilize this theory as the central conceptual scheme in studies with organizations as the primary focus (Biddle and Thomas, 1966). This is particularly true of studies of interorganizational relations. Some of the more well known studies related to this problem include the studies of the school superintendency role by Gross, Mason, and McEachern. A major problem of this study was to test hypotheses involving consensus on role definition in complex organizations and in small social systems (Gross, Mason, and McEachern, 1958). Following the theoretical schema developed by Gross and his associates, Mayo (1960) analyzed the organizational role of vocational agriculture teachers. Similarly, Bible and McComas (1963) studied vocational agriculture teachers in terms of role consensus and teacher effectiveness. In a study of a state police organization, Jack J. Priess and Howard J. Ehrlich (1966) tested some of the fundamental problems of role acquisition, role performance, and role conflict. Katz and Kahn (1966) viewed complex organizations as a system of roles and thereby gave the role concept a central place in their theory of organizations.

By extending Bates' notion of role relationships and interstitial groups, it is possible to move the level of analysis from relations within a single organization to relations between two or more different organizations. To do this, however, it is necessary to distinguish between reciprocal and conjunctive role relationships. As pointed out earlier, when two roles are designed to contribute to the production of the same function for the same system or group, a reciprocal role relationship exists. On the other hand, when two roles are designed to produce functions for two different systems, a conjunctive relationship exists (Bertrand, 1972:40-43).
Two types of interstitial groups may result from conjunctive role relationships: (1) coordinative interstitial groups, and (2) exchange interstitial networks. As defined by Bates, "coordinative interstitial groups join together through conjunctive role relationships a number of different organizations or groups with varying interests and objectives, with the function of bringing about coordination in their behavior and the control and elimination of conflict, which might threaten their individual and collective interest" (Dudley, Nix, and Bates, 1966). An exchange network, on the other hand, consists of a number of interstitial groups which are joined together by the presence of a common focal position. It is the function of each interstitial group to bring about the exchange of goods, services, or functions between two separate organizations and to control the potential conflict that might arise out of the conjunctive relationships involved in the exchange. Both types of interstitial groups that result from conjunctive role relationships serve the function of linking together different groups and organizations.

In summary, by employing three basic sets of concepts, it is possible to use the same conceptual scheme to analyze organizational structure and activity for a single organization as well as between several different organizations. The first set of concepts is that of intramural and extramural roles, which provides the source of reflexive and bilateral relationships. An organization is a social system typically composed of several subsystems with specialized functions, linked together through bilateral and reflexive role reciprocality, but which are devoted to a common goal.

A second set of concepts is that of elemental and interstitial groups. The idea of interstitial groups grows out of the conception of reflexive relationships, and
provides a basis for explaining the internal structure and operations of single organiza-
izations as well as providing a basis for determining linkages between organizations.

The third set of concepts is that of reciprocal and conjunctive roles. An organ-
ization is linked together into a single structure by reciprocal relationships and
dedication of roles to a common goal. In contrast, conjunctive roles provide a
means of linking a multitude of different organizations together, through interstitial
groups, by social relationships that are not necessarily directed toward the attain-
ment of all common goals (Bertrand, 1967:149-150; 1968; 1972:37-43).

These three sets of concepts, then, may be viewed as a bridge which makes
possible the study of single organizations as well as the interrelationships between
organizations using a single frame of reference.

II. Methodological Procedures

Prior to this study very little was known about forest fire prevention organiza-
tions or programs, not only in the study locale but elsewhere in the south or the
nation. Systematic studies of these phenomena are non-existent. In such situations
where there is little experience to serve as a guide, researchers have found the in-
tensive study of selected examples to be a particularly fruitful method for stimulat-
ing insights and suggesting hypotheses for future research (Selltiz, Johoda, Deutsch,
and Cook, 1960:59-60). Such was the case for this study.

There are a number of characteristics of the descriptive case study design which
made it particularly suited for this study: (1) the ability of the design to provide a
wide range of detail; (2) the usefulness of the design in discovering latent patterns
of behavior; (3) the ability of the design to allow for the study of relevant processes and patterns of behavior as a whole; and (4) the flexibility the design provides in using various data gathering techniques. On the other hand, as pointed out by Riley, the design also has certain limitations (Riley, 1963:70-75). These include (1) the possibility of unsystematic description rather than measurement, thereby raising the question of reliability; (2) researcher involvement in the group under investigation, and the possibility of bias resulting from this involvement; and (3) limitations on the generality of findings when a single case approach is used. However, controls may be built into the design to offset these limitations. For example, the researcher may use a modification of the usual participant-observer technique to permit less involvement in the case being studied. He may introduce a greater degree of reliability into exploratory studies by supplementing description with other more systematic procedures. And finally, two or more cases may be studied for comparison. To some degree, all of these measures were employed in this study.

Data Collection and Analysis

One of the major advantages of the case study design is the flexibility of data collecting techniques it provides. Techniques utilized in this study included interviewing of organizational members, analysis of organizational records and other relevant documents, and observation of organizational activities. The initial data collection began with those two organizations known to have explicit responsibilities in all four areas of fire control, the Mississippi Forestry Commission and the U. S. Forest Service.
Organizations, Programs, and Actors. Initially, key positional leaders in the
district forester's office and the area forester's office of the Mississippi Forestry
Commission, and the two district ranger's offices of the U. S. Forest Service were
asked to enumerate and describe in detail the forest fire prevention programs or ac­
tivities, as defined by the respondent, in which their organizations had been in­
volved for the two preceding years. This included the names of other members of
their organization and their specific responsibilities and involvement in fire pre­
vention programs.

Those same respondents were then asked to name other organizations or individ­
uals with whom they had been involved in fire prevention programs, or to name
other organizations or individuals they knew to be involved in fire prevention
efforts in any other way. This type of questioning was designed to determine which
organizations and individuals were involved in forest fire prevention efforts, what
these activities consisted of, and the techniques and degree of interorganization
cooperation and coordination.

An interview guide, consisting of questions or statements exemplified below,
was used to obtain information relevant to organizations, programs, and actors.
Questioning ceased when a distinct "snow-balling" occurred, i.e., when the
information obtained became repetitive.

1. During the past two years, what forest fire prevention programs or
activities has your organization carried out that have been aimed
at groups or individuals in this country?
II. Tell all you can about each of these programs or activities. That is, when and how did it get started, who was involved, what did they do, how did they do it, etc.?

1. What were the specific objectives or purposes of each of these programs or activities?

2. To whom were these programs aimed (specific groups or individuals)?

3. Were you personally involved in any of these programs or activities? If so, why and how? Exactly what did you do?

4. What other members of your organization were involved? What was the nature of this involvement?

5. What organizations, groups, or individuals other than your own were involved in each of these activities? What specifically did each organization do and how did it do it? In other words, exactly how did your organization work with other organizations, groups, or individuals in each of these activities?

6. What have been the major results or outcomes of each of these activities? In other words, how successful do you think each of these activities have been?
Organizational Structure, Policy, and Goals. The type of questioning illustrated above determined which organizations were actively involved in forest fire prevention efforts. It indicated the types of prevention programs in operation, and the nature and extent of interorganizational cooperation and coordination present. Those organizations with explicit fire prevention responsibilities named in response to the above questions were then examined to determine their organizational structure, policies and goals in relation to forest fire prevention. Some of the information obtained from the above questioning was also relevant here. However, the bulk of this information was obtained from additional interviews, observations, and formal organizational documents.

The existing positions and the current occupant of each position was determined for each organization with forest fire prevention responsibilities. In addition, for each position occupant, information was obtained relative to tenure, duties and responsibilities, and the relationship and responsibilities of each position occupant to the occupant of every other position. As pointed out earlier, this information was formally defined in the form of job descriptions and other official documents for the U. S. Forest Service and the Mississippi Forestry Commission, as well as for most industrial organizations. This was assumed to represent the ideal or cultural behavior expectations. The same type of information was then obtained through interviews and observations to determine the individual conceptions and real behavioral patterns in the day-to-day operations.

Organizational goals are often utilized in efforts to measure organizational performance or effectiveness. A wide variety of techniques have been used for
purposes of goal definition, including official documents, statements by organizational members, and observations. A combination of these techniques was utilized in this study, which included content analysis of formally written organizational policies, goals, fire prevention plans, diaries, and work records, and from interviews with organizational personnel and observation of organizational activities. However, two major categories of goals were taken into account. These have been described by Perrow (1961:854-866) as "official" and "operative" goals.

Official goals were defined by Perrow as the general purposes of the organization as set forth in such official documents as annual reports and other public records, and authoritative statements by key organizational leaders. Perrow has pointed out, however, that this level of goal analysis is inadequate for a full understanding of organizational behavior. Official goals are often purposely vague and do not take into account two important factors which influence organizational behavior. These two factors are (1) the multitude of decisions that must be made among the alternative ways of achieving official goals and the priority of multiple goals, and (2) the unofficial goals that may be pursued by the organization or groups within the organization. Thus, the term "operative" goal was used by Perrow to designate those objectives sought through the actual operating policies of the organization. Operative goals were established through analysis of relevant organizational records, observation of organizational activities, and detailed interviews and discussions with organizational personnel. In this study the concept of "ideal" or "cultural" goals were used to correspond with Perrow's official goals, and "real" goals were used to correspond with his operative goals.
The following questions or statements are illustrative of those used in determining individual conceptions of organizational policies and practices, and goals, and of the roles accompanying the various organizational positions.

I. As you see it, what is the primary purpose or reason for the existence of your organization?

II. As you see it, exactly what is your organization trying to accomplish? In other words, what are the objectives or goals of your organization?

III. What is your organization attempting to do in terms of forest fire prevention?

IV. In your opinion, to what degree is your organization accomplishing or meeting its goals or activities? (Especially in terms of a reduction in man-caused forest fires.)

V. What does your work for this organization consist of? In other words, exactly what do you do, particularly with reference to forest fire prevention?

VI. Exactly how is the work you do related to what other members of this organization do? Who are you responsible to? Who is responsible to you? How must the work you do be coordinated with the work of others?

VII. Explain as well as you can your organization's overall outlook and policy toward forest fire prevention activities.

VIII. Do you agree with the policy and outlook of your organization? Explain.
IX. Are any of the policies or practices of your organization in conflict with or opposed by any other organization or group in this area? If so, explain in as much detail as possible.

Interorganizational Coordination and Cooperation. Many problems may confront fire prevention efforts at the interorganization level. Earlier research has indicated that interorganizational coordination is often grossly lacking. There is also evidence that indicates at least partial conflict between interorganizational policies and goals (Robinson, 1964:98-99). As contrasted with intraorganizational relations, interorganizational relations stress the study of human behavior under conditions of unstructured authority. Formal authority plays an important role in explaining behavior within an organization. But there is to some extent both conflict and cooperation existing in a situation where formal authority structure is lacking. The conflict is usually not complete, however, because in some areas the conflict may overlap with areas of mutual support. Thus, there is a need to contrast organizational policies, goals, and programs to determine specific areas of conflict and agreement, and to determine the degree and process of coordination.

The analysis of interorganizational relations consisted of (1) looking for organizational personnel who had extramural roles which were tied to the policies, programs and objectives of their respective organizations, (2) through those people examining interorganizational linkages through their interstitial relations, (3) determining what their interstitial functions were, and (4) comparing the organizational goals, policies, and programs of the relevant organizations.
In summary, the theoretical objective of this study was to utilize the conceptual framework outlined in this chapter in the investigation of the research objectives.
CHAPTER III

FIRE PREVENTION ORGANIZATIONS: IDEAL GOALS, STRUCTURE AND POSITIONAL CULTURAL ROLES

I. Organizations Involved in Fire Prevention Efforts

The first priority undertaken in the research process was to identify those organizations in the study area that included forest fire prevention as part of their organizational functions. These organizations were identified and defined as such by key positional organizational leaders. As pointed out previously, questioning started with the two organizations in the area known to have such responsibilities, the U. S. Forest Service and the Mississippi Forestry Commission. The district rangers of the U. S. Forest Service and the area forester of the Mississippi Forestry Commission were asked to name other organizations or individuals with whom they had been involved in forest fire prevention programs, or to name other organizations or individuals that were involved in any way in fire prevention efforts. The individuals or positional leaders of organizations so named were then asked the same type question. This procedure was continued until a snowballing effect occurred. In other words, no new names were being mentioned by respondents.

A major difficulty was encountered in defining or delineating precisely what constituted a fire prevention effort or activity. For example, the original law which created the Mississippi Forestry Commission set forth its powers and duties in
Section 2 of Chapter 156, Laws of 1926.

To take such action and provide and maintain such organized means as may seem necessary and expedient to prevent, control, and extinguish forest fires, including the enforcement of any and all laws pertaining to the protection of forests and woodland (Mississippi Forestry Commission, 1960:2).

Most organizations that have any responsibility in the area of forest fire prevention categorize fire prevention as one part of the larger category of forest fire control. In addition to fire prevention, fire control includes presuppression, detection, and suppression. The U. S. Forest Service (1957:10) has defined fire control as "all activities to protect wild land from fire." In the Fire Control Manual of the U. S. Forest Service (1963:5111.01), fire prevention is described as including "all activities to reduce the number of fires that start, including reduction of fire risks and fuel hazards, public education, personal contacts, forest closures, and regulated use."

The Mississippi Forestry Commission (1966:3-1) was even less explicit in its official statements as to what constituted forest fire prevention. In its section of the manual pertaining to fire prevention, it was stated that "all staff and field personnel will actively participate in programs, formal and informal, to prevent wild fires on timbered and uncultivated lands." Other references were made to fire prevention throughout the manual, but all were vague and general. A better understanding of what fire prevention efforts actually consisted of can be gained from prevention plans, reports of activities, and discussions with organizational personnel. This is discussed in detail in later sections.

The questioning of organizational leaders described above resulted in the
identification of fifteen organizations viewed as either having specific or potentially significant functions in taking an initiative in the prevention of man-caused forest fires. In turn, key positional leaders of those fifteen organizations named thirty-nine organizations they had been in contact with in some way for purposes of forest fire prevention. Those organizations are shown in Table 1.

Organizations identified as having major or potentially significant functions to perform in taking an initiative in forest fire prevention were categorized into four major types: (1) governmental, (2) industrial, (3) coordinating, and (4) voluntary. Of the fifteen organizations with major prevention functions, six were governmental, four were industrial, three were of a coordinating type, and two were voluntary organizations. An examination of Table 1 shows also that those some fifteen organizations were named most frequently as having been contacted for some aspect of fire prevention. For example, the Leaf River Ranger district and the county forestry organization each was named by twelve of the fourteen other major organizations, the Soil Conservation Service by ten, etc. Representatives of each of the fifteen major organizations had been in contact with at least one of the other major organizations for purposes of fire prevention.

Governmental organizations were more involved in fire prevention efforts than any other category of organizations. Not only were those organizations named more frequently as having been in contact with other organizations, they also contacted more organizations themselves than any other category. As noted in Table 1, of the thirty-nine organizations that had been contacted, personnel of the Leaf River Ranger District of the U. S. Forest Service had contacted twenty-five,
Table 1. Organizations Named as Being Involved in Fire Prevention Efforts

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Key Fire Prevention Organizations:
- MFC-Forrest Co.
- Soil Cons. Serv. Coop. Ext. Service
- USFS-Black Creek
- MFC-District Off.
- MFC-Forrest Co.
- USFS-Leaf River
- USFS-Black Creek
- USFS-Leaf River
- MFC-District Off.
- Soil Cons. Serv.
- MFC-Forrest Co.
- MFC-District Off.
the area forester's office of the Mississippi Forestry Commission twenty-four, and
the district office of the Mississippi Forestry Commission twenty-two. Of the total
168 different organizational contacts, 97 or 57 per cent were made by government­
al organizations.

Although a total of thirty-nine organizations were identified as having been
contacted in some way for forest fire prevention efforts, with fifteen of those iden­
tified as having significant or potentially significant functions in taking an initia­
tive in prevention efforts, only four of the organizations recognized or identified
forest fire prevention as being one of their major areas of responsibility to the ex­tent of having officially recognized fire prevention goals and formal prevention
plans. All four of those organizations were governmental agencies.

II. Organizations With Explicit Prevention Functions

The four governmental organizations with explicit and formal fire prevention
functions consisted of the Leaf River and Black Creek Ranger Districts of the U. S.
Forest Service, and the Southeast District Office and the Forrest County Area
Forester's Office of the Mississippi Forestry Commission. Those four organizations
were units of the two larger parent organizations and as such were definitely influ­
enced in terms of their goals, structure, policies, programs, and practices. Ob­
viously, this had to be the case if progress was to be made in meeting the goals of
the parent organizations. However, within the limitations and restrictions imposed
upon them by the parent organizations, the goals, structure, policies, programs,
and practices of the local organizations differed in varying degrees. It is the pur­
pose of this section to examine the four organizations with explicit fire prevention
functions in terms of the above named intraorganizational variables. To provide basic background information, a brief examination will also be made of the two parent organizations.

The Mississippi Forestry Commission

The Mississippi Forestry Commission was established by the Mississippi Legislature in 1926. The Statutory Code of Mississippi states the general purpose of the Mississippi Forestry Commission to be: (1) to prevent, control, and extinguish forest fires; (2) to enforce any and all laws pertaining to protection of the forests; (3) to encourage tree planting and forest management; and (4) to encourage public interest in forestry (McLeskey, 1968:2).

In terms of administrative organization, the Commission is headed by the Governor of the state. In turn, the Governor appoints seven citizens of the state to serve as commissioners, one for each forestry district in the state. The Governor serves as chairman of the Commission, and one member of the Commission serves as vice-chairman. The commissioners and the Governor comprise the policy-making body for the administration of the forestry program in the state. However, the administrative head of the Mississippi Forestry Commission and the person responsible for administration of its overall program is the state forester. He, in turn, delegates various aspects of this responsibility to other positions within the commission for the actual conduct of the Commission's program. In terms of overall organization, there are three administrative levels in the Commission. These three administrative positions are line positions and are held by the state forester, the district forester,
and the area forester. Other positions are staff positions which represent the various functions and areas of responsibility within the Commission. Figure 2 shows the organizational chart of the Commission at the state level and the various staff positions and areas of responsibility to carry out the purposes of the organization (McLeskey, 1968:6-10).

The official or ideal goal of the Mississippi Forestry Commission (1965) has been set forth in the publication *Forest Policy for Mississippi*. In that publication, it is stated:

The Mississippi Forestry Commission is the legally constituted forestry agency in Mississippi. As such, it has declared the goal of forestry in Mississippi to be the maximum sustained contribution from its forests to the greatest social and economic benefits and to the physical and spiritual well-being of all its people—present and future.

In elaboration of the above general goal, fifteen "key" functions were presented which contribute to the accomplishment of the overall goal. These consisted of (1) prevent forest fires; (2) control forest insects and diseases; (3) protect the soil; (4) multiple use for maximum benefits; (5) reforest denuded areas; (6) conserve and improve water supplies; (7) provide opportunities for recreation; (8) improve wild-life habitat; (9) expand and intensify research; (10) keep resource surveys current; (11) assist landowners and processors; (12) utilize available credit; (13) strengthen educational programs; (14) improve utilization and marketing; and (15) cooperate with other conservation workers (Mississippi Forestry Commission, 1965).

To meet the above goal and carry out the fifteen key functions, the overall
Figure 2. Organizational Chart for Mississippi Forestry Commission

MISSISSIPPI FORESTRY COMMISSION
ORGANIZATIONAL CHART

STATE FORESTER

DEPUTY STATE FORESTER

PROPERTY & MAINT. DIRECTOR
PROPERTY CONTROL OFFICER
CONSTRUCTION FOREMAN
SHOP SUPERINTENDENT
CHIEF RADIO TECHNICIAN

BUSINESS MANAGEMENT DIRECTOR
PURCHASING AGENT
ACCOUNTANT
ASSISTANT ACCOUNTANT
SECRETARIES
DATA PROCESSING

1 & E DIRECTOR
INFORMATION SPECIALIST
SAFETY & TRAINING OFFICER

FIRE CONTROL DIRECTOR
FIRE CONTROL FORESTER
DRAFTSMAN

FOREST MANAGEMENT DIRECTOR

CFM FORESTER
PUBLIC LANDS FORESTER
NURSERY SUPERVISOR
INSECT & DISEASE FORESTER
TREE IMPROVEMENT FORESTER
UTILIZATION FORESTER

DISTRICT FORESTER
program of the Mississippi Forestry Commission may be outlined as follows (1965):

I. Forest Land Protection  
   A. Protection from wildfire  
   B. Protection from insects and diseases  
   C. Protecting the soil  
   D. Protection from grazing damage

II. Forest Resource Management  
   A. Timber production  
   B. Conservation of water  
   C. Recreation  
   D. Wildlife management

III. Assistance to Landowners  
   A. Advice  
   B. Credit and insurance  
   C. Taxation

IV. Forestry Education  
   A. College (for the professional)  
   B. College (for other students)  
   C. Education for the general public

V. Utilization and Marketing

In elaboration on the part of the Commission's program concerned with protection from wildfire, which includes forest fire prevention activities, the following recommendations most relevant to fire prevention were made (Mississippi Forestry Commission, 1965).

1. That forest fire prevention programs be greatly intensified.  
   This can be accomplished by cooperation, under the leadership of the Forestry Commission, of all public and private agencies, companies and individuals who are in a position to contribute to such a program.

2. That an all-out war on illegal woods burners be declared.  
   The people of the state should realize that fire maliciously set in woods of another constitutes a felony.
3. That adequate levels of fire protection be established by providing for sufficient personnel and equipment to meet peak requirements.

4. That law enforcement officers, judges, and other public officials become thoroughly familiar with the state’s fire laws so that they will be in a better position to assist in law enforcement.

From the above brief description of the overall organization and program, it may be seen that the functions of the Mississippi Forestry Commission in relation to forestry in the state were varied and complex. Forest fire prevention was only one of many functions which the Commission by law was expected to perform.

The Southeast District Office

For purposes of administration and conduct of the Mississippi Forestry Commission’s program, the state was divided into seven forestry districts. Each district was composed of nine to thirteen counties and was administered by a district forester. The district forester had the responsibility of directing forestry education, timber management, forest fire control, and other necessary forest conservation practices considered by the Commission to be necessary in his district. In essence, it was the responsibility of the district forester to carry out within his district the program of the Mississippi Forestry Commission. As was the case with the state forester, the district forester delegated various aspects of this responsibility to other positions within the district office for the actual conduct of the district’s program. Figure 3 shows the organizational chart of the district and area offices and the various staff positions and areas of responsibility.

The geographic area of this study, Forrest County, was within the Southeast
Figure 3. Organizational Chart of the District and Area Offices, Mississippi Forestry Commission
District. As shown in Table 1, it was one of the key fire prevention organizations in the area. Key personnel in the district office named twenty-two other organizations in the county it had been in contact with for some aspect of fire prevention. In turn, twelve of the other fourteen key prevention organizations had contacted the district office.

Goals and Plan of Work. Each district office received from the state office a copy of the state-wide goals and plan of work of the Mississippi Forestry Commission. District goals and work plans were then based on the state-wide plans. The district forester pointed out that district goals and work plans would never conflict with those of the state, although those of the district might go into greater detail. He also pointed out that district goals and programs of work, as well as for each county, were very similar from year to year. An examination of programs of work over a three-year period revealed only minor revisions, with the most significant being changes in the year-end fire statistics.

Official, or ideal, district goals relating to fire prevention were vague and broad in scope, but fell within two areas of work, information and education, and fire control. Fire prevention related information and education goals, as they appeared in the official District Program of Work, were as follows:

1. Promote timber as the most important crop in the economy of Mississippi and use this theme in conjunction with fire prevention.

2. Promote the use of Mississippi wood and develop interest in further processing locally.

3. Provide information and education and law enforcement training for all Commission personnel within the district.
4. Carry out all Commission programs in line with the state information and education objectives through the use of newspapers, radio, television, talks, personal contacts, slides, and motion pictures.

According to the District Program of Work, job descriptions at the district level called for the above information and education goals pertaining to fire prevention to be met in the following ways:

1. Assist with the development, review, and approve the county information and education plans. Prepare the district information and education plan.

2. Work with area foresters in making contacts with key organizations and individuals.

3. Make specific and purposeful contact with all newspaper editors and radio and television stations in the district.

4. Assist area foresters to plan, prepare, install, and attend fair exhibits.

5. Arrange, schedule and show forestry motion pictures and include a brief talk in each school in the district.

6. Prepare and present talks to groups.

7. Assist area foresters to prepare county forest facts and present to grand juries and circuit judges.

8. Prepare for, attend and participate in coordinating council meetings.

9. Assist area foresters with forestry demonstration plots.

10. Prepare, review and approve news items and articles for publication.

11. Assist with investigation of fire causes.

12. Participate in court cases, serve as witnesses, and work with prosecuting attorney.
13. Participate in settling fire cases by responsible party paying fire suppression cost.

14. Contact local law enforcement officers to secure cooperation in fire investigations.

15. Prepare or assist area foresters to prepare briefs of reports for fires where evidence is sufficient to warrant prosecution in court.

Only two district goals were listed in the Program of Work for fire prevention.

These were:

1. To reduce the number of man-caused fires in the district to no more than 1,950 fires.

2. Conduct a program of promotion, planning, and development of a permanent fire break system that is in line with the state goals.

Specific job descriptions in the Program of Work called for the fire prevention goals to be met in the following ways:

1. Review fire records to determine three year average of fires by causes, months, time of day, day of week, fire danger class, and general problem areas.

2. Review annual county fire prevention plans and integrate action into district work plans.

3. Distribute prevention literature to area foresters.

4. Make key fire prevention contacts as set forth in the information and education program of work.

5. Check and approve crew assistance records on fire lane construction.


The above represented the district's ideal goals relative to fire prevention and job descriptions for achieving those goals. The organizational structure and specific
position cultural roles through which the above was to be accomplished is discussed below.

Organizational Structure. As shown in Figure 3, the southeast district office was composed of five key positions consisting of (1) the district forester, (2) the fire control forester, (3) a radio technician, (4) a timber management forester, and (5) an information and education forester. These positions consisted of sets of norms and roles which served to guide the actions or behavior of the position occupants.

The district forester's office represented a social system in that it was composed of patterned interactions of a plurality of individual actors whose relations were reciprocally oriented. In tracing those reciprocal relationships and determining the place of an individual actor in the structure of the social system, the analysis began with a norm. A norm defines the various kinds of behavior expected of or appropriate to given situations. In turn, norms composed roles. Roles in this study were used at two levels, the cultural and the behavioral. At the cultural level, a role consisted of a set of norms which defined the expected patterns of behavior for a given position. As real behavior, a role consisted of a set of acts which conformed more or less to the norms prescribing the expected behavior in the performance of a given function. In turn, a position consisted of a set of roles assigned to that position to be performed by a given individual occupying the position.

For each position in the Mississippi Forestry Commission (1966) there was a job specification, prepared by top administrators in the Commission, which outlined position requirements, duties, and relationships to other positions in the organization.
Those job specifications were accepted as the cultural roles for each relevant organization and position included in this study. The same conceptual framework as outlined here will be used in presenting the analysis of the structure and roles of the organizations included in this study.

Of the five key positions in the District Forester's office, only three were officially assigned any forest fire control responsibilities. These were the District Forester, the Fire Control Forester, and the Information and Education Forester.

District Forester. The job specifications of the District Forester's position called for duties and responsibilities in the area of plans, timber management, information and education, forest utilization, forest fire control, inspection, and general coordination of the work of this district. Thus, as was the case of all other positions, the position of District Forester was composed of a number of interrelated roles. However, the concern here was with those roles bearing most directly upon the prevention of man-caused forest fires. Two such roles were identified: forest fire control, and that of information and education. The norms comprising those two roles may be summarized as follows:

A. Information and Education

1. Actively participate in the civic and public service activities of the residence community.

2. Exercise leadership in establishing and maintaining and understanding of the importance of good forestry and land management generally to the social and economic well-being of the community, state, and nation.

3. Promote the adoption and practice of sustained yield and multiple use in the management of forested land through personal contact and demonstration to private landowners.
4. Plan and conduct "show me" tours designed to show influential people of the many important phases of the work of the Commission.

5. Prepare news items and maintain an alertness for feature stories, radio, and TV programs.

6. Make talks to civic clubs, PTA, and other groups.

7. Conduct the affairs of the Commission on a high technical plane.

B. Forest Fire Control

1. Plan and maintain an effective forest fire prevention activity and supervise the action requirement.

2. Plan and maintain an effective forest fire preparedness and suppression activity, including emergency action, and give broad and determined supervision to all phases of the plan.

3. Establish county and district acreage burned maximums and maximum forest fire occurrence objectives.

4. Determine forest fire control needs and recommend their acquisition.

5. Supervise necessary training in forest fire control techniques, and approve employment of all seasonal fire control employees.

In terms of relationships to other positions in the organization, the manual specified that the District Forester was to function under the general supervision of the State Forester and his staff, within the limits of broad and overall Commission policies, objectives and long range plans. His work was to be reviewed by the State Forester and staff during the course of their general and functional inspections.

Fire Control Forester. The position of Fire Control Forester was composed of
roles in the area of planning, fire control, equipment, forest utilization, law enforcement, business management, safety, and other general responsibilities such as serving as an assistant to the District Forester in the entire field of forest fire control and maintaining a general knowledge of the Commission's total program for the district. Three roles were identified as being most relevant to fire prevention. These were planning, fire control, and forest utilization.

A. Plans

1. Develop annual and monthly work plans for self.

2. Participate in the direction of the annual and monthly work plans for the district and all other district personnel.

3. Gives supervision to work plan compliance.

B. Forest Fire Control

1. Participate in and provide on-the-ground leadership in forest fire preparedness and suppression.

2. Study fire occurrence and weather records and determine relation of one to the other.

3. Establish crew locations, hours of work and other important phases of fire suppression on basis of study.

4. Determine cooperation needs and solicit such cooperation from organized groups.

5. Plan and direct annual and on-the-job fire control training for all district personnel.

7. Review required fire reports and maintain a district fire occurrence map. Take needed action as indicated by occurrence map.

8. Plan and conduct critiques of fire suppression action.

9. Review county annual fire preparedness plan.

10. Supervise air fire patrol.

11. Provide a dispatching plan for use of dispatcher.

12. Participate in discussions and development of cooperative agreements on fire control activities.

13. Review cooperative agreements annually and recommend any needed revisions or terminations.

C. Forest Utilization

1. Review timber management plans and timber sale plans for fire control action.

2. Review fire safety clauses in timber sale contracts.

3. Provide for timber sale contractor employees to be available for fire suppression duty on and adjacent to sale area.

4. Supervise the organization and training of the sale contractor employees into an effective fire suppression force.

5. Supervise the inspection of the sales operator, fire suppression tools and equipment.

As for relationships to other positions in the organization, the Fire Control Forester was to function as a member of the District Forester's staff and under his general supervision, within the broad limits of Commission policies, objective and long range plans. He was to receive advice and assistance on the more complicated matters from the District Forester or appropriate personnel from the State Forester's
office. The work of the Fire Control Forester was to be reviewed by the District Forester during the course of frequent contacts and during formal inspections.

**Information and Education Forester.** The Information and Education Forester's position was composed of roles in the areas of planning, fire control, forest management, forest utilization, information and education, law enforcement, business management, and other miscellaneous duties as assigned. He served as an assistant to the District Forester in the broad field of information and education. It was also his responsibility to assist and direct the information and education activity of other district personnel, as well as to participate in and supervise the work of others in the law enforcement activity. Further, he was to give guidance in the organization of conservation and related organizations.

The position of Information and Education Forester included three roles most relevant to forest fire prevention. These were in the areas of fire control, information and education, and law enforcement.

A. **Fire Control**

1. Participate in and provide leadership to forest fire prevention activities.

2. Assist others in performing their fire prevention duties.

3. Participate actively in fire suppression, acting as "crew" and "fire boss" as assigned.

4. Search for clues to determine the causes and persons responsible for forest fires and violations of the state's timber laws.

5. Study fire occurrence records and plan fire prevention activities on basis of studies and experience.
6. Develop, establish, and give supervision to contests designed to prevent forest fires through activities of school children and schools.

7. Work closely with all groups and organizations that are interested in forest fire prevention.

8. Prepare special fire prevention programs for the use of schools and other organized groups.

9. Participate actively in cooperation with the U. S. Forest Service, Soil Conservation Service, Agricultural Stabilization and Conservation Service, State Game and Fish Commission and other organizations and forest landowners in planning for and development of an adequate firebreak and maintenance program, and in the development of forest fire prevention activities.

B. Information and Education

1. Effectively plan and carry forward an intensive information and education program designed to provide the general public with facts that prove the importance of wood to the state's economy.

2. Prepare and present talks to organized groups and over radio and television.

3. Develop and maintain an effective press relationship by providing material for the press in usable form.

4. Conduct "show me" trips for the press, television, and radio.

5. Take a leading part in preparing demonstration areas, exhibits, field day programs, and sign and poster placement.

6. Give training and supervision to area foresters and their personnel in information and education and fire prevention work of the district personnel.

C. Law Enforcement

1. Maintain close contact with sheriffs, constables, highway patrolmen, county attorneys, local judges, and district attorneys.
2. Secure cooperation of circuit judges to include the fire laws as a part of their charge to juries.

3. Give training and supervision to area foresters in law enforcement work.

4. Take an active part in investigating forestry law violations, usually with the assistance of county law officers.

The relationship of the Information and Education Forester to other positions in the organization was stated the same as for the Fire Control Forester. That is, he was to function as a member of the District Forester's staff, performing a wide variety of technical and professional activities under the general supervision of the District Forester and within the broad limits of Commission policies, objectives and long range plans. His work was to be reviewed by the District Forester in the course of frequent contacts and during formal inspections.

Forrest County Area Forester's Office

The Forrest County Area Forester's office was one of eleven within the southeast district office. As indicated in Table 1, it was another of the major prevention organizations in the county. Personnel in the area forester's office named twenty-four other organizations in the county it had contacted for some aspect of fire prevention, the second highest number named of all fifteen organizations. Twelve of the other fourteen organizations had in turn contacted the area office.

Each area forester's office was responsible for carrying out the program of the Mississippi Forestry Commission within the geographic boundaries assigned to the area. District objectives and plans, based on the state-wide Commission's program, were distributed to the area offices. Based on the district plans, each area office
then prepared objectives and plans for its area. Goals and work plans for the Forrest County Area Forester's office pertaining to forest fire prevention are discussed below.

Goals and Plan of Work. The only official and formally stated goals for the Forrest County Area Forester's office were found in the fire prevention plans for the county. Three fire prevention ideal goals were stated, one long range and two short range. The long range goal was for a period of three years, and the two short range goals were for one and two-year periods. The long range goal was to reduce the yearly fire occurrence rate for Forrest County by thirty per cent over the following three-year period. The two short range goals were (1) to reduce the yearly fire occurrence rate of incendiary fires in special fire problem areas by ten per cent during the next two-year period, and (2) to reduce the yearly fire occurrence rate of incendiary fires in the general fire problem area by twenty per cent by the end of the current fiscal year.

Fire prevention goals were to be achieved through information and education efforts, and through more specific fire prevention plans. Information and education functions, as they appeared in the official Annual Plan of Work for the Forrest County Area Forester's office, were as follows:

1. Make specific and purposeful contacts with legislators, newspaper editors, radio and television station managers, local ministers, community leaders, and local residents of the county.

2. Secure or design and construct a portable forestry exhibit for use in store windows and public places.
3. Arrange, schedule, and show forestry motion pictures and give brief talks to each school in the county.

4. Arrange for invitations, prepare, and give talks to groups in the county.

5. Prepare county forest facts and present to grand jury and circuit judge.

6. Arrange with county and district attorney for appearance before grand jury.

7. Prepare for, attend and participate in Coordinating Council meetings.

8. Cooperate with vocational agriculture departments and 4-H clubs, setting up management demonstration plots.

9. Prepare weekly news articles for local paper.

10. Investigate all man-caused fires to determine cause and responsible party.

11. Secure cooperation of local law enforcement officials to assist in investigation of fires which warrant this action.

12. Where evidence is sufficient to warrant action, collect fire suppression costs or initiate prosecution.

13. Participate in court cases, serve as a witness when qualified, and work with the prosecuting attorney.

14. Settle fire cases by having the responsible party pay fire suppression costs.

Fire prevention functions, as they appeared in the fire prevention section of the Annual Plan of Work, were as follows:

1. Analyze and revise fire records to determine three-year averages of fires by causes, months, time of day, day of week, fire danger class, and special and general problem areas.

2. Prepare and revise annual fire prevention plan on the basis of the above analysis, and assign personnel to specific tasks.
3. Distribute fire prevention literature on a planned basis.

4. Make fire prevention contacts as outlined in the information and education plans.

5. Plow fire breaks for landowners on a reimbursement basis.

6. Assist the county civil defense director in rural fire prevention work.

The above represented the area forester's office official fire prevention goals and plans for achieving those goals. A comparison of the district and area plans showed that very little difference existed between the two.

The organizational structure and specific position responsibilities through which the above goals and plans were to be accomplished are discussed below.

Organizational Structure. The Forrest County Area Forester's office was composed of six key positions, consisting of (1) the area forester, (2) the dispatcher, (3) a towerman, (4) an annual crewleader, (5) a yearly crewleader, and (6) a seasonal crewleader. As with the district office, the Mississippi Forestry Commission Manual specified position requirements, duties, job descriptions, and relationships to other positions for each position in the area forester's office organization. These were accepted as the cultural roles for each position. All six positions were assigned responsibilities related to forest fire prevention.

Area Forester. The Commission manual specified that the area forester was to serve as the professional forester in his assigned area to carry out the activities of the Mississippi Forestry Commission. This called for him to perform a cycle of specialized and professional work involving a variety of tasks incidental to the development, improvement, protection and utilization of the timber and its
The job specifications and descriptions of the area forester's position called for duties and responsibilities, or roles, in the area of plans, fire control, forest management, information and education, forest utilization, and business management. Two roles were directly concerned with forest fire prevention, information and education, and fire control. The norms comprising those two roles were as follows:

A. Information and Education

1. Organize conservation clubs in the schools and give professional guidance to the club activities.
2. Present forestry literature to the schools and to other public and semi-public institutions.
3. Prepare and present talks to civic clubs, schools, church groups, women's clubs and other groups.
4. Prepare timely news articles and releases to local papers and radio stations.
5. Arrange for showing motion pictures to schools and other child and adult groups.
6. Develop and maintain demonstration plots which emphasize forestry activities.
7. Maintain close contact with the public in general and participate in programs designed for community betterment.

B. Forest Fire Control

1. Serve as head of the area forest fire control activities including prevention, presuppression and suppression.
2. Supervise the work of area fire control personnel.
3. Arrange for and provide the necessary area forest fire control training.
4. Supervise the maintenance of the area forest fire control equipment.

5. Plan fire break systems and supervise their construction and maintenance.


7. Develop fire occurrence records and maps to provide ready data upon which to base fire control and personnel assignment action.

In terms of controls and relationships to other positions, the area forester was to function under the general supervision of the district forester and within the limits of broad, overall Commission policies, objectives and long range plans. He was to plan and independently perform work of a technical and professional nature. However, on the more complicated activities, he was to receive advice and assistance from the district forester and his staff. His work was reviewed by the district forester and his staff in the course of their general and functional inspections.

Dispatcher. The dispatcher's position was composed of roles in the areas of planning, fire control, maintenance, information and education, and reports. Two roles were identified as being directly related to fire prevention, information and education, and fire control. Those two roles were composed of the following norms:

A. Information and Education

1. Maintain a supply of forestry literature in an orderly condition and distribute to fire tower visitors.

2. Maintain an accurate knowledge of the Commission's forestry policies and discuss them intelligently with fire tower visitors.
3. Maintain all signs and posters in a neat and orderly manner within the vicinity of the fire tower.

B. Fire Control

1. Serve as a lookout dispatcher, discover forest fires, receive reports from other lookouts, locate fires, and dispatch suppression crews on the basis of determined fire danger and prearranged plans.

2. Keep in close touch with suppression action and when considered necessary dispatch additional suppression forces.

3. Consider daily the location of suppression crews and arrange for their standby locations in accordance with determined forest fire danger and prearranged plans.

The dispatcher functioned under the general supervision of the area forester within the limits of prepared plans. He was to receive training and guidance at formal meetings at least once each year, and on-the-job training at frequent intervals. His work was to be reviewed each month by the area forester and annually by a team of inspectors from the district forester's office.

Annual Crewleader. The annual crewleader was in charge of a work force in the area which was to perform a series of duties necessary for the protection, development and utilization of the area's forest and associated resources. Again, the two roles most relevant for forest fire prevention were information and education and fire control, composed of the following norms:

A. Information and Education

1. Maintain a general knowledge of Mississippi Forestry Commission policies and by means of personal contact, inform the public of Commission objectives and of the favorable influence forests have upon the state's economy and the details of forest fire losses.
2. Assist in the development of exhibits, signs, erection of posters and other mass media material.

3. Provide area forester with details of structural losses occasioned by forest fires.

B. Forest Fire Control

1. Serve as an annual crewleader in charge of a forest fire suppression crew and, with crew, suppress forest fires.

2. Determine acreage burned, prepare individual fire report and submit to area forester.

3. Assist landowners in planning permanent firebreak systems, construct permanent firebreaks and temporary fire lines on a determined cost reimbursement basis.

4. Serve as a substitute dispatcher on dispatcher's off days.

5. Study fire occurrence records and compile graphs and charts for fire control planning purposes.

6. Look for fire cause clues and report those found to area forester.

The annual crewleader functioned under the general supervision of the area forester and in accordance with developed annual and monthly plans, Commission policies, and objectives. His work was to be reviewed by the area forester a minimum of twice each week, and annually by a team of inspectors from the district forester office.

Yearly Crewleader. The yearly crewleader had the same roles as those presented above for the annual crewleader, with the same norms composing those roles. The two different position titles were used to differentiate between the two positions in areas where there were two fire suppression crews.

Seasonal Crewleader. As with the yearly crewleader, the seasonal crewleader
had the same roles and norms as the annual crewleader. The major distinction between the three crewleaders was that the seasonal crewleader worked only during the five or six months of the year when the danger of forest fires was the greatest.

Towerman. The towerman served as a seasonal forest fire lookout during the five or six months of the year when forest fire danger was the greatest. Of the roles and norms assigned to the position, only those in information and education and fire control were relevant for forest fire prevention.

A. Information and Education

1. Maintain an adequate supply of forestry literature in a neat and orderly condition and distribute as desired to tower visitors.

2. Pass on to the general public the favorable influence forests have on the state's economy and how forest fires injure and handicap the forest economic programs.

3. Keep posters within the tower vicinity clear and fresh by frequent changing.

B. Fire Control

1. Serve as a seasonal lookout at a secondary tower.

2. Discover and report forest fires to the fire dispatcher.

3. Record the reading of all smokes discovered and maintain a daily log and diary.

The U. S. Forest Service

The U. S. Forest Service was created by an act of Congress approved February 1, 1905. With this act, the administration of the public forests, cooperative work with the states and private owners, and research in forestry were grouped together
in one agency (Winters, 1950:168).

According to the Forest Service Manual (1970:1032-1), the basic objective of the Forest Service "is to exercise progressive national leadership in forestry, including dynamic administration of the National Forest System." In elaboration, the manual specified that components of this basic objective included the following:

1. Make all resources of the National Forest System lands as fully productive and of as great a service as necessary for them to supply their share of national requirements in an economy of abundance.

2. Encourage and assist other public owners of forest lands to redeem their forest-land management responsibilities.

3. Through cooperation with the states, encourage and assist private owners of forest lands to participate in a coordinated national effort to improve the nation's forest resources.

As shown by Figure 4, the Forest Service is an agency of the U. S. Department of Agriculture. The Secretary of Agriculture appoints the Chief of the Forest Service, who has the responsibility of directing the highly complex organization. As pointed out by Kaufman (1960:40-47), the chief constitutes the apex of what amounts to two traditional administrative pyramids. One is organized for the administration of the national forests and cooperation with the states, local governments, and private forest owners; it is composed of regional foresters, forest supervisors who manage the national forests, and district rangers who are responsible for managing the various district ranges of each national forest. The second pyramid is organized for research and is composed of directors of experiment stations, research centers, experimental forests and ranges, and other special units.
Figure 4. Organizational Chart, U. S. Forest Service

FOREST SERVICE ORGANIZATION LINE OFFICERS

SECRETARY - U. S. D. A.

- CHIEF
- FOREST SERVICE

1. FOREST EXPERIMENT STATIONS

- DIVISION CHIEFS, OR ASSISTANT DIRECTORS

- RESEARCH PROJECT LEADERS

- NURSERY SUPERINTENDENTS

- DISTRICT RANGERS

- JOB CORPS CENTER DIRECTORS

STATE AND PRIVATE FORESTRY

AREA DIRECTORS

STATE AND PRIVATE FORESTRY

ASSISTANT AREA DIRECTORS

1/ Includes Forest Products Laboratory and Institute of Tropical Forestry

2/ Except Institute of Tropical Forestry
The administrative units responsible for carrying out action programs in forest fire prevention are those organized for the administration of the national forests and cooperation with the states, local governments, and private forest owners. These two administrative units are designated as (1) the National Forest System, and (2) State and Private Forestry. Each unit is directed by a deputy chief, who in turn is directly responsible to the chief. Forest fire control is only one of several major responsibilities.

Each regional office of the U. S. Forest Service is directed by a regional forester. In turn, each regional forester is responsible for all the functions of the Forest Service within his region except research. These functions are divided into ten major areas defined as (1) operations, (2) fiscal control, (3) information and education, (4) personnel management, (5) engineering, (6) fire control, (7) timber management, (8) range and wildlife management, (9) recreation, lands, watershed, and minerals, and (10) state and private forestry. Each of the major functions is under a deputy regional forester, although several of the functions may be combined under one deputy if the workload in those activities is light.

The regions are divided into national forests, which are headed by forest supervisors. In essence, the responsibilities of the forest supervisor include the same functions as the regional forester with the exception of state and private. In turn, each national forest is divided into ranger districts. The ranger district is the smallest geographical subdivision in national forest administration, and the district ranger who directs the work represents the lowest-ranking professional forester directing Forest Service administrative units. The ranger is responsible for all the
basic functions of national forest administration applicable to his district, although various major functions are delegated to staff foresters.

Major areas of responsibility or functions are for the most part, uniform designations through the various administrative levels of the Forest Service. The Washington office establishes forest service-wide policies, goals and plans which serve as guidelines for the regional offices. Based on the national goals and plans, the regional offices establish region-wide goals and plans which serve as guidelines for the state national forests. The same procedure is then followed from the state national forests offices to the various local ranger districts. Thus, specific goals and work plans of the ranger districts are guided and influenced from the national office down through the regional office, and from the regional office to the state national forest office.

Because of the supposedly important influences the state national forests goals and work plans have on the ranger districts, an examination of the goals and plan of work for the Mississippi National Forests should provide important insights into the goals and plan of work for the ranger districts.

Goals and Plan of Work for Mississippi National Forests

The goals and plan of work presented below were taken from the five-year fire prevention plan for Mississippi National Forests for the period 1966-70. It was pointed out in the plan that the high fire occurrence rate on the Mississippi National Forests was a result of a combination of physical and socioeconomic factors. Physical factors included terrain, vegetation, climate, etc. Socioeconomic factors
included a system of roads that made practically every acre of the national forest system accessible, a checkerboard land ownership pattern with many people living in close proximity to national forest land and using fire every day for debris-burning, etc.; the established practice of using intentionally set fires to accomplish many real and imagined benefits such as clearing land, exposing young growth of grass for use by cattle, controlling insect and snake population, and removing underbrush to make woods travel easier; the use of fire as a tool to settle grudges or express resentment against authority; and the still prevalent belief that burning the woods, regardless of ownership, is not wrong. Incendiarism and debris burning were named as the major causes of fires, which, according to statements in the plans, indicated that the primary fire problem was with people living on farms and in small communities located within or adjacent to national forests.

As stated in the plan, the primary fire prevention objective was to hold the number of man-caused fires below an established par of 210 fires and the acreage burned to less than 1800 annually. In addition, a public opinion climate was to be developed that was conducive to strict fire law enforcement, and the reception of fire prevention information.

It was pointed out in the plan that all resource planning and action was to take fire prevention into account. The objective was to operate so as to reduce, or at least not to increase, fire hazards and to minimize risks. More specific fire prevention functions spelled out in the annual fire prevention action plan included the following:
1. Stress fire prevention in all forest activities. This must be given priority and emphasis from above if accomplished.

2. Encourage district rangers to exhibit personal interest and leadership in fire prevention. This must be emphasized in all rangers' meetings, correspondence, personal contact, and example.

3. Encourage high quality prevention planning on districts and executing of plans. Plans must be realistic and workable and then require compliance and posting.

4. Assemble and develop new ideas, distribute, and apply. Publications must be reviewed and ideas assembled from meetings, talks and correspondence. There must be communication up and down the line.

5. Give in-service publicity and incentive awards to prevention accomplishments.

6. Aid district rangers in improving prevention signing.

7. Secure railroad cooperation in reducing right-of-way hazard and equipment risk.

8. Reduce the number of incendiary fires. This is to be accomplished through personal contact with local residents, key individuals, and other groups; through investigation of time of fire and follow-up; law enforcement; and through coordination of prescribed burning with resource management. There must be created a climate conducive to fire prevention and strict law enforcement through personal contact and other media. There must be cooperation with all land management and law enforcement agencies.

9. Reduce the number of debris-burner fires that escape. This should be done by watching for potential violators and informing residents of safe burning times and methods.

10. Provide fire prevention training. Stress fire prevention in all fire training sessions and utilize all contact techniques.

The fire prevention action plan specified that most of the above functions were
to be performed by the fire control staff, although for some, the entire staff was to be involved. For example, of the above named jobs, the fire control staff was specifically assigned to functions three, four, five, six, seven, and ten. For function nine, only district rangers were specifically assigned. The forest supervisor, deputy supervisor, and staff were assigned function two, while the fire control staff and rangers were assigned functions one, eight, and ten.

Parts of two different ranger districts were within the geographic area of this study, the Leaf River and Black Creek Districts. Both of these organizations had formal responsibilities for forest fire prevention, and as shown in Table 1, both organizations were identified and recognized as having significant functions in forest fire prevention.

Leaf River Ranger District

Personnel of the Leaf River Ranger District office named twenty-five other organizations they had contacted for forest fire prevention efforts, more than any other organization. Twelve of the other fourteen organizations with major prevention roles had in turn contacted the Leaf River office.

A summary of the district's fire problem which appeared in the fire prevention action plans stated that the problems were centered around incendiary and smoker fires. The motives for incendiary fires were attributed primarily to range burning, grudges, and amusement. It was further pointed out that although range fires on the district had been on the decline, a larger portion of the fires were set for amusement, grudges, debris burning and campers.
Goals and Plan of Work. The fire prevention ideal goal of the district, as listed in the fire prevention action plan, was to first of all reduce the number of man-caused fires below all established pars. The ultimate long-range goal was the elimination of all preventable fires. To achieve these goals, the prevention work plan included the following five broad functions:

1. General information and education program aimed at alarming the public to the incendiary threat.
2. Secure understanding and support of local residents for the National Forest programs through personal contact with individuals and groups.
3. Thorough investigation and publication of each suspected incendiary fire will be initiated. Cash rewards for information leading to arrest and convictions of deliberate woods burners should be an effective investigative tool.
4. Erect and maintain prevention signs and posters.
5. Stress fire danger and prevention through newspapers, television, and radio.

In elaboration of the above, somewhat more pointed fire prevention functions were delineated as follows:

1. Keep the public aware of the fire danger and damage. This is to be done through writing one newspaper article per month, and through spot announcements, news releases, etc., for radio and television stations.
2. Educate the public in the complexities of prescribed burning. Discuss prescribed burning and show slides with contrast in controlled burning and wildfire.
3. Demonstrate the fire control organizations to key people.
4. Show prevention films and give lectures to local groups in the area communities as requested.
5. Stress forest fire prevention in visits to area schools. Distribute forest fire prevention material and set up film and lecture dates as requested by the schools.

6. Send annual letter to key individuals and rural residents in the vicinity of the district.

7. Prepare fire prevention exhibit for annual county fair.

8. Erect and maintain prevention posters and signs in needed locations.

9. Cooperate with Mississippi Forestry Commission in all prevention activities.

According to the action plan, the district ranger was to perform functions one, two, and six of the above, but he was to be assisted by the foresters on his staff in performing all the other functions.

In addition to the above fire prevention functions, which were specifically designated as fire prevention efforts, other activities planned in other forest service function areas were definitely relevant and could have an important impact on fire prevention. These other activities were in the areas of information and education, and state and private forestry.

Important functions planned in the area of information and education included the following:

1. Cooperate with all educational institutions in the area, including universities, colleges, and local primary and secondary schools.

2. Assist such youth organizations as Boy Scouts, 4-H Clubs, and Future Farmers of America.

3. Cooperate with women's clubs in conservation activities.
4. Promote understanding and acceptance of the multiple use concept and policy.
   a. Maintain a close working relationship and furnish news items for newspapers, radio, and television stations.
   b. Prepare and present exhibits for symposiums, fairs, and conventions.

5. Make contacts with key people.

6. Attend general forestry meetings, such as Forrest County Forestry Association.

7. Organize and conduct a "show me" trip for county supervisors, sheriffs and other officials.

8. Present programs to local groups as requested, such as Lions, Kiwanis, and Jaycee Clubs.

State and private forestry functions included in the work plans which were most relevant for forest fire prevention were as follows:

1. Participate in rural fire defense and radiological activities.

2. Encourage adoption of good forestry practices by local landowners and county officials.

3. Serve as a member of the county ACP committee.

4. Participate in the county rural areas development program.

5. Participate in the activities of the Forrest County Forest Association.

6. Assist the Forrest County Soil Conservation District in technical forestry problems.

7. Cooperate with Mississippi Forestry Commission area foresters in forest management and fire prevention activities.

The above represented the Leaf River Ranger District's official fire prevention goals and plans for achieving those goals. The positions to which the above functions
were formally assigned included those of district ranger, two professional staff forester positions, and the forestry technician position.

The organizational structure and more specific position responsibilities through which the above goals and plans were to be achieved are presented below.

Organizational Structure. The Leaf River Ranger District's office was composed of twenty positions (other than clerks), consisting of (1) the district ranger, (2) two professional staff assistant foresters, (3) one forester (professional), (4) three forestry technicians, (5) five forestry aids, two full-time and three part-time, (6) one lookout-dispatcher, (7) one maintenance work leader, (8) one maintenance worker, (9) one lookout-forest worker, one-half time in each position, (10) two forest workers, and (11) two engineering technicians.

As with the Mississippi Forestry Commission, specific position requirements, duties, job descriptions, and relationships to other positions were specified for each position in the district ranger's office. These were accepted as the cultural roles for each position of the twenty positions in the office. Six were specifically assigned forest fire prevention roles in their job descriptions.

District Ranger. The job description for the position of district ranger specified that the ranger was responsible for the management, protection, development and utilization of all the resources and improvements of the Leaf River Ranger District of the Mississippi National Forests. Thus, the position of district ranger was composed of complex and interrelated multiple roles, one of which was forest fire prevention.

The norms comprising the fire prevention roles were broad and general, but
included the following:

1. Establish and maintain close personal contact and cooperative relations with forest users, permittees, and the local population in obtaining compliance with Forest Service regulations and contractual requirements related to the management, protection and utilization of the forest resources of the district, and in obtaining their understanding, cooperation and support of Forest Service programs and policies with respect to proper management, conservation and utilization of forest lands and resources.

2. To take action as required to correct improper practices by forest users and permittees, and in the prevention of trespass of any nature. The ranger will recommend prosecution of individuals and organizations who wilfully and knowingly trespass upon district lands and make illegal use of the resources and services.

3. Represent the Forest Service in contacts with community leaders, civic groups, representatives of cooperating agencies, and representatives of the State Legislature and various other departments in acquainting them with resource management problems, how they may be resolved, and in obtaining understanding and support of the policies and objectives with respect to the management, protection, development, and utilization of the national forest resources.

4. Participate actively in the civic and public service activities of the community served by the district, and gain the cooperation and support of the community.

5. Exercise leadership in establishing and maintaining an understanding of the importance of good forestry and land management generally to the social and economic well-being of the community, and through personal contact with and demonstrations to private landowners and lumber companies within and adjacent to the area, promote the adoption and practice of sustained yield in the management of privately owned forest and grazing lands.

The district ranger functioned under the general supervision of the National Forest supervisor, and within the limits of broad overall policies and objectives with
respect to the management, protection and utilization of the lands and resources of the Mississippi national forests. Long range plans and technical determinations made by the ranger were to be reviewed by the forest supervisor for technical soundness and for proper correlation and integration with overall programs for the forest. All the work performed by the ranger was reviewed by the forest supervisor and his assistants during the course of functional and general inspections to determine the soundness and validity of decisions made and actions taken with respect to the scientific management and protection of the various resources involved.

**Forester (Staff).** The position of staff forester was composed of roles in planning, directing, and administering professional scientific, and administrative work in the fields of fire control, water, wildlife, range, recreation and land uses on the district. The occupant of the position was to serve as staff specialist and regular alternate to the district ranger.

The fire prevention role was composed of the following norms:

1. Develop annually and maintain prevention and presuppression plans based on study and evaluation of the basic elements of fire control as applied to the district, including (a) fire control organization and financial plan, (b) fire equipment and supply plan, and (c) detection, mobilization plans and manning, and specific action guides.

2. Inspects and reports on prevention, presuppression and suppression activities.

3. Assists the district ranger in carrying out a comprehensive personnel program, and develops and maintains sound public relations in communities within and adjacent to the district.

4. Makes contact with key individuals, civic clubs, and cooperators in the area, and explains to them the objectives and purpose of forest service programs.
The staff forester served as technical assistant to the district ranger, who was to make periodic checks of the work to insure that plans, policies, procedures and standards were being followed. He was to receive training and guidance as needed from the district ranger and the state national forest office staff. It was further stated that he was to use the Forest Service manual and handbook, plus other written material as guides in performance of the various functions for which he was responsible. The district ranger was responsible for reviewing and approving annual work and project plans prepared and submitted by the staff forester.

Forester (Staff). The second position of staff forester was composed of roles in planning, directing, and administering professional, scientific, and administrative work in the field of timber management. The occupant was also to serve as a staff specialist and regular alternate to the district ranger.

Although this position was specifically responsible for timber management, a fire prevention role was included in the position responsibilities. The norms comprising this role were as follows:

1. Represent the district ranger in personal contacts with timber operators, permittees, industrial concerns, and cooperating state and federal organizations to establish cooperative relations in protection of the areas from fire and timber trespass.

2. Share with the district ranger and other district staff officers the responsibility of planning, assigning, and inspecting the work of foresters and forest fire control aids.

The occupant of the position was to serve as technical assistant to the district ranger, who was to make necessary periodic checks of the work to see that plans,
policies, procedures and standards were being followed. He was to use the Forest Service manual and handbook, plus other written material as guides as to how the various jobs were to be done. In addition, he was to receive guidance and training as needed from the district ranger and timber management staff from the forest supervisor's office.

Forester. The roles composing this position called for the occupant to serve as a professional staff specialist to the district ranger to advise and assist with planning and administering the development, protection, improvement, and utilization of the timber and other resources of the district. The fire prevention role and the norms comprising the role were not as explicit and direct as those for the three positions discussed above. However, if performed, they were still most relevant for forest fire prevention.

1. Review of the needs for correlating timber use and operations with other forest uses such as recreation, wildlife management, grazing and watershed management.

2. Review of activities and practices to prevent and control hazards from fire, insects and disease.

The occupant of the above position worked under the general supervision of the district ranger, and participated with him in development of district plans and procedures based on the broad guidelines of forest service policies, regulations and practices. He was to make his own detailed work plans and programs, subject to final review and approval by the district ranger. His work was to be reviewed periodically by the ranger.

Lookout-Forest Worker. The major roles of this position called for the
occupant to serve as an assistant on the range district for the primary purpose of serving as a lookout to detect forest fire. However, during low fire hazard periods, he may be assigned other work incident to the management and development of resources of the district.

A definite fire prevention role was assigned to the position, with the following norms comprising the role.

1. Promote forest fire prevention by explaining the purpose and reasons for forest fire control.

2. Furnish a variety of general information related to fire prevention regulations, the fire control program, routes of travel, areas closed to visitors, and hunting and fishing regulations to people visiting the lookout station.

On-the-job training was provided to interpret and explain specific written instructions. Thereafter, the position occupant was to perform the roles in accordance with standard orders and established operating procedures. Periodic inspection of the lookout station was made by the ranger to insure compliance with instructions.

**Lookout-Dispatcher.** This position was composed of the roles of lookout during the fire season, and a communications dispatcher during the off-fire season. The fire prevention role was minimal, with norms calling for the occupant to make prevention contacts with forest visitors at his lookout station and with local residents.

The position was under the general supervision of the district ranger. The occupant was to perform his assigned responsibilities completely and independently, according to established procedures, and was to refer only emergencies or unusual
problems to the ranger.

Black Creek Ranger District

The Black Creek Ranger District's office was located in a county adjoining the study county. As a result, there were not extensive contacts with the fire prevention organizations in the county. However, a relatively large proportion of Black Creek District lands was in the Southwest corner of the county, an area that traditionally had a high fire rate.

The Black Creek District office had contacted only ten other organizations for forest fire prevention purposes. Five of the other fourteen organizations with major prevention roles had contacted the Black Creek District.

Goals and Plan of Work. Formal statements of the fire problem and fire prevention goals were not as detailed for the Black Creek as for the Leaf River. However, as with the Leaf River, the primary fire problem in the study area was attributed to incendiarism, with range burning, grudges and amusement being the primary motives. To eliminate the fire problem, or to reduce the number of fires to an acceptable level, the fire prevention plan included the following broad functions.

1. Write news articles and inform the public of the fire danger and other pertinent information.

2. Maintain casual contact with forest residents throughout the district. Obtain program support and fire prevention cooperation through goodwill, friendliness, and casual approach.

3. In accordance with sign plan, erect additional fire prevention signs at appropriate locations showing a message that concerns local residents.
4. Make frequent contacts with hunters and other sportsmen.

5. Provide programs for schools, groups, clubs, etc., which are related to fire prevention.

6. Provide open, friendly, courteous answers and service to all residents. Use each opportunity to explain programs and objectives. Show where fire prevention is necessary for the realization of fire prevention goals.

In addition to the above fire prevention functions delineated in the fire prevention plan, other activities relevant for fire prevention were outlined in the annual work plan. These activities were in the areas of state and private forestry information services, and fire control.

Important functions planned in the area of state and private forestry included the following:

1. Cooperate with the following county organizations and groups: (a) rural areas development activities, (b) agricultural coordinating council, (c) ACP committees, and (d) tree farmers.

2. Maintain good relations with private forestry personnel and organizations, consulting foresters, farm foresters, and state forestry organizations.

Functions planned in the area of information services were outlined as follows:

1. Keep all district employees informed of their information and education services.

2. Keep in contact with individuals, groups, and clubs.

3. Cooperate with state, county and other agencies in distributing information.

4. Obtain public understanding and support of Forest Service objectives and programs by establishing close relationships with key people.
5. Make planned visits to homes of forest residents.

6. Solicit invitations to appear at meetings of clubs and groups for purpose of presenting forestry program.

7. Prepare news articles and release to appropriate news media.

8. Assist youth organizations in conservation efforts.

9. Organize and conduct "show me" trips of the district.

Additional fire prevention functions were delineated under the broader area of fire control. These included the following:

1. Coordinate distribution of fire prevention material with Mississippi Forestry Commission.

2. Provide fire prevention articles for local newspapers.

3. Carry out planned contacts with specific local residents.

4. Plan and direct installation of forest fire prevention signs and posters.

5. Provide prevention training for selected district personnel.

6. Make personal contact with hunters during hunting season.

7. Carry out forest patrols during extreme fire danger days for effective prevention work.

As with the Leaf River, the above represented the Black Creek Ranger District's ideal fire prevention goals, and plans for achieving these goals. The key positions to which the above functions were assigned included the district ranger, two professional staff forester positions, and the forest technician. All district personnel were charged with the general responsibility of providing open and friendly service to local residents at all times.
Organizational Structure. The Black Creek District office was organized and staffed essentially the same as the Leaf River, although the Black Creek office was composed of three more positions and some of the position titles were different than the Leaf River. However, the functions to be performed were the same for both districts.

Twenty-three positions made up the Black Creek office, consisting of (1) the district ranger, (2) two professional staff assistant foresters, (3) one forester (professional), (4) one forest technician, (5) one forestry aid, (6) four timber markers, (7) one towerman-dispatcher, (8) one towerman-forest worker, (9) one surveyor, (10) one maintenance worker, and (11) nine forestry laborers.

As with the Leaf River District, specific position requirements, duties, job descriptions, and relationships to other positions were specified for each position in the Black Creek District. However, a comparison of the job descriptions and responsibilities of the positions in the two districts showed them to be essentially the same. Furthermore, the same key positions in the two districts were responsible for forest fire prevention activities. Therefore, the fire prevention cultural role for the Black Creek District will not be described or discussed. The descriptions and discussions for the Leaf River were also applicable and adequate for the Black Creek.

III. Organizations With Implicit Prevention Responsibilities

The four organizations discussed above were all governmental organizations explicitly charged with forest fire control as a part of their organizational functions. Forest fire prevention is one aspect of forest fire control. Therefore, it was the
responsibility of the above named four organizations to take the initiative in planning and carrying out fire prevention programs. As such, the two district ranger's offices of the U. S. Forest Service were formally charged with conducting forest fire prevention programs aimed toward reducing fire occurrence on the national forest lands of the two districts. Similarly, the two Mississippi Forestry Commission organizations were formally charged with carrying out fire control activities on all lands in the study area other than national forest lands. This included all industrial and privately owned land, as well as all other land owned or managed by the state. Thus, the Mississippi Forestry Commission and the U. S. Forest Service were the key organizations officially held responsible for forest fire prevention.

Although the other eleven organizations did not have extensive and formal fire prevention goals and plans, they were considered to have potentially significant functions to perform. A brief description of the organizations and their forestry functions is presented below.

Governmental

Two other governmental organizations in the county identified as having potentially significant functions in fire prevention were the Cooperative Extension Service and the Soil Conservation Service. As shown in Table 1, personnel in the county agent's office named nine other organizations with which it had fire prevention related contacts, while five of the other fourteen key organizations named the county agent's office. The Soil Conservation Service named seven organizations, and ten of the other key fourteen organizations named the Soil Conservation
Although both organizations were involved in forestry programs in varying degrees, neither had explicit goals or programs pertaining to fire prevention. The Extension Service forestry programs consisted primarily of providing forestry information to local residents through the mass media, and in working with 4-H youth through their forestry projects. It was pointed out by the county agent that none of the Extension personnel do any "on the ground forestry work," but instead refer that type of activity to professional foresters.

It was pointed out by Soil Conservation Service officials that, in terms of forestry work, the Soil Conservation Service worked primarily with the individual farmer to help him plan the use of his timberland. It was further pointed out that the proper use and management of timberland involved forest fire prevention. Organizational personnel also from time to time gave demonstrations to the public on the proper construction of fire lanes.

Industrial

Four major industrial organizations were identified as having significant or potentially significant functions in fire prevention efforts: (1) Gulfport Creosote Corporation, (2) International Paper Company, (3) Masonite Corporation, and (4) the Illinois Central Railroad. With the exception of the railroad, each owned and managed a significant amount of timberland in the county and was involved in fire control activities. Although each of the organizations had fire suppression equipment (again with the exception of the railroad), each also depended heavily
upon the area forester's office of the Mississippi Forestry Commission to suppress fires on their lands.

**International Paper Company.** International Paper Company was organized somewhat similarly to the Mississippi Forestry Commission and the U. S. Forest Service in that there were several administrative levels involved in the management of the timberlands. The highest administrative level of concern here was the area office, which in this case comprised seventeen counties. The area office was divided into two districts, with each district further divided into three units. The title of the person responsible for the administration of the area office was Area Forest Superintendent, and Unit Supervisor for the person responsible for each unit. Each Unit Supervisor was a professional forester and was responsible for the total management of the woodland within his unit.

Although the company owned less than 2,000 acres of woodland in the county, and the Unit Supervisor's office was located in an adjoining county, the Area Forest Superintendent's office was located in the study county. The organization was identified as one of the key prevention organizations, naming eight other organizations with which it had prevention related contacts. An equal number of the other fourteen key organizations named International Paper as an organization with which they had fire prevention related contacts.

International Paper had two fire control units located in two adjoining counties, but none in the study county. Fire suppression equipment was brought in from the adjoining counties as needed to suppress fires on company lands. However, the company depended heavily upon the Forrest County Area Forester's
office for fire suppression and fire prevention activities. It was pointed out by organization personnel that the company had no organized fire prevention program in the county. Fire prevention activities consisted primarily of control burning for hazard reduction, and presenting occasional programs and talks to civic clubs and other organizations as requested.

Masonite Corporation. In terms of organizational structure relative to administration and management of Masonite woodlands in the general area, overall management and administration was the responsibility of the woodlands department manager. Other positions directly responsible to this position included those of timberlands manager, chipwood procurement manager, lands and legal counsel, and a staff forester.

Masonite lands were divided into two broad districts, with a timberlands manager responsible for the overall management of the two districts. However, each district also had a district superintendent. Each of the two districts were then divided into seven areas, with an area supervisor responsible for the management of each area. Two or three forest workers were under the supervision of each area supervisor.

The woodlands department manager, the timberlands manager, and the two district superintendents were located in a county adjoining the study county. However, an area supervisor and two forest workers were located in the study county. The area supervisor was responsible for all phases of timber management of Masonite lands in the study area, but in addition, he and his crew might be required to work in other areas as directed by his superiors.
Each area supervisor and his crew were equipped with fire suppression equipment, and were responsible for suppressing fires on company land. However, as with the other industrial organizations, the area forester's office of the Mississippi Forestry Commission was also responsible for fire suppression on the company's land.

The company named seven other organizations in the county with which it had been in contact for fire prevention related purposes. Six of the other fourteen organizations in turn named Masonite as an organization with which they had been in contact for fire prevention related purposes. However, organizational personnel pointed out that the organization had no planned fire prevention program as such.

**Illinois Central Railroad.** The Illinois Central Railroad owned no woodland in the study area. However, because of the work of the forestry agent, the railroad was considered one of the key fire prevention organizations. The organization named sixteen others with which it had forest fire prevention related contacts, although only five of the other fourteen key organizations named the railroad.

The major responsibility of the forestry agent was the development and promotion of forestry in the area, with the primary motive being that the railroad would profit economically by transporting wood products from the area. Forest fire prevention was considered a part of all his promotional work, which included working with groups and individuals through South Mississippi, Southwest Alabama, and Southeast Louisiana. His office was located in the study county, however,
and as shown in Table 1, he was active with other key organizations in the area.

**Gulfport Creosote Corporation.** Gulfport Creosote Corporation owned more than 15,000 acres of timberland in the study county, with most of it located in the section of the county with the highest fire rate. The company had no fire prevention plans or organized prevention programs. Because of its location in the high fire rate area, however, the organization did have contact with other key prevention organizations. The organization named eight others with which it had been in contact for prevention purposes, but only four of the other fourteen key organizations named Gulfport.

The organization had only one employee, not a professional forester, located in the county. He was responsible for the management of Gulfport lands, which included such functions as tree planting, timber marking, select cutting, control burning, and fire control. Fire suppression equipment was available for use on company land, although the organization also depended heavily upon the Forrest County Area Forester's office.

**Coordinating Organizations**

Three coordinating organizations were identified as having potentially important functions in fire prevention efforts, particularly in terms of coordinating the various organizational programs. These three organizations were the Forrest County Coordinating Council, the Forrest County Civil Defense Board, and the Forrest County Technical Action Panel. The core membership of all three organizations was essentially the same, being composed primarily of the key leaders of the
U. S. Department of Agriculture organizations in the county. In addition, other organizations that worked with rural people were invited to attend and participate. Such organizations relevant for this study included the area forester's office and representatives of the industrial forestry organizations. However, attendance and participation by relevant organizations other than those of the U. S. Department of Agriculture was highly inconsistent.

Each of the three coordinating organizations met monthly, with a representative of one of the member organizations being responsible for the program. Programs for all three of the organizations typically consisted of one of the members discussing some aspect of his organization's program. There were no action programs underway that could be considered a joint or cooperative effort of the three organizations.

Voluntary Organizations

The two voluntary organizations identified as having potentially important functions in fire prevention efforts were the Forrest County Forestry Association and the McLaurin Sportsman's Club. Of the two, the Forrest County Forestry Association was viewed as being in a position to make the greatest contribution. Representatives of the association named eight other organizations with which it had been in contact for fire prevention efforts, while it was named by seven of the other fourteen key organizations.

The primary qualifications for membership in the association included an interest in forestry, and the payment of a small membership fee. However, the
membership was composed primarily of representatives of forestry and agricultural organizations, both governmental and industrial, and individual owners of relatively large tracts of woodland. Officers of the association consisted of a president, vice-president, and secretary-treasurer. In addition, there was a board of directors consisting of the three officers and ten other members.

According to the constitution and by-laws, the association had three major purposes: (1) to promote the best possible forest practices throughout Forrest County, (2) to acquaint all of the people of Forrest County with the economic contribution which forestry makes to them, and (3) to encourage the fullest utilization of every forest acre, based on sound management practices and in accordance with the best interests of all Forrest County citizens. Four other major functions spelled out under the program section of the constitution included the following:

1. The Forrest County Forestry Association is unalterably committed to help eradicate uncontrolled fires throughout Forrest County, through the education of farmers and landowners, students in grade and high school, FFA and 4-H Clubs.

2. The association will assist any person, group or organization in organizing meetings for lectures, showing films and distribution of pertinent literature to farmers and landowners throughout the county.

3. The association will help to set up forestry demonstration plots and projects.

4. The association will promote tree planting, fire control and forest management in Forrest County.

The association was quite active in promoting and publicizing forestry the first few years after it was organized. For several years, the association sponsored an annual forestry parade, which involved cooperative efforts of all the key
prevention organizations in the county as well as numerous other business concerns and individuals. The association also contributed funds for a reward for information leading to the arrest and conviction of anyone unlawfully starting a forest fire in the county, and widely publicized the fact that the reward was available. Numerous newspaper articles and radio programs promoting forestry were prepared and presented under the auspices of the association. Regularly scheduled meetings were held at which various aspects of forestry programs were discussed. At the time of this study, however, the association was virtually inactive. No forestry programs were being actively sponsored by the organization.

The other voluntary organization considered to have important or potentially important roles to play in forest fire prevention efforts was the McLaurin Sportsman's Club. The organization was composed primarily of local county residents interested in hunting and fishing. A sixty-acre lake and clubhouse was constructed on leased land. The highlight of the year was the club's annual wildlife supper, with a typical menu consisting of pheasant, wild turkey, quail, deer, squirrel, wild duck, opossum, raccoon, rabbit, fish, and rattlesnake.

Representatives of the organization named five other organizations with which it had been in contact for fire prevention purposes. However, only one of the other fourteen key organizations mentioned the McLaurin Club. Although the organization had no formal fire prevention objectives or plans as such, representatives stated that the organization worked in close cooperation with the State Game and Fish Commission, U. S. Forest Service, Forrest County Area Forester's office, local game wardens and law enforcement officials in aiding and assisting in every
way possible to insure better enforcement of game and fish laws and laws govern-
ing forest fires.

IV. Summary

Of the fifteen organizations identified in the study area as having significant or potentially significant functions in forest fire prevention, only four had officially recognized and formally stated fire prevention goals and plans. All four of the organizations were governmental agencies, and consisted of the southeast district and Forrest County Area Forester's office of the Mississippi Forestry Commission, and the Leaf River and Black Creek Ranger District offices of the U. S. Forest Service.

An examination of the administrative structure showed that all four of those organizations had a rigid hierarchical structure, with each higher administrative level having strong authority and influence over each unit immediately lower in the hierarchy. With the U. S. Forest Service, the line of authority began in the Washington office with the chief of the Forest Service, and extended down through the regional office, the National forest supervisor's office, to the local ranger district administered by the district ranger. The district ranger office was the lowest administrative unit.

The administrative head of the Mississippi Forestry Commission was the state forester. Thus, with the Commission, the line of authority began with the state forester and extended downward through the district forester's office, to the area forester's office, which was the lowest administrative unit in the Mississippi
Forestry Commission. Administratively, then, the U. S. Forest Service and the Mississippi Forestry Commission were organized quite similarly.

Fire prevention goals for organizations of both the U. S. Forest Service and the Mississippi Forestry Commission were strongly influenced at each administrative level by the unit immediately above it in the hierarchy. In general, the official or ideal goals for all four organizations were quite similar in nature with most being vague and broad in scope and generally intangible. Likewise, most work plans and cultural roles for achieving the goals were equally similar and vague.

Each of the four organizations with explicit fire prevention functions was composed of numerous positions, varying in number from twenty-three for the Black Creek Ranger District to five for the southeast district office of the Mississippi Forestry Commission. For each position, there was an official job description or specification which outlined position requirements, duties, and relationships to other positions in the organization. These job specifications were accepted as the cultural roles for each position. Specific fire prevention responsibilities spelled out for each position were then accepted as the norms comprising the fire prevention role.

As with organizational structure and work plans, the norms comprising the fire prevention roles for the various positions in each organization were quite similar. Likewise, most were vague and rather broad in scope and dealt with the generalities of promoting forest fire prevention through individual personal contact, presenting programs at civic club meetings, schools, and meetings of other
organizations, and through release of fire prevention messages and articles through the mass media.

The other organizations with fire prevention interests and objectives included two governmental, four industrial, three coordinating, and two voluntary. However, an examination of their operations showed that none of them carried on formal prevention activities.
CHAPTER IV

THE DIFFERENTIAL BETWEEN IDEAL AND REAL ROLE PERFORMANCE IN FIRE PREVENTION ORGANIZATIONS

I. Introduction

The previous chapter focused on identifying those organizations with major or potentially significant functions in the area of forest fire prevention. Their organizational structure, ideal goals and cultural roles relevant for forest fire prevention were examined. The purpose of this chapter is to examine the behavioral or real roles and the factors affecting the performance of those roles considered most relevant for fire prevention. This was done by using the same conceptual framework employed for the analysis of cultural roles.

At the cultural level, a role consists of a cluster of norms which defines the expected patterns of behavior for the fulfillment of position functions. Role behavior, then, consists of a set of actions organized around the performance of specific functions. As pointed out by Bates (1968:18-21), by using the notion of function it is possible to relate the norms that compose a role to the actual behavior which performs the function. The norms that form the role represent a blueprint for performing a given function. Role behavior, then, consists of the real actions which may conform in varying degrees to the blueprint. Thus, it is possible to examine the norms and compare them to the acts involved in performing given functions.
Behavioral roles and factors affecting them were examined at two levels in this chapter, intraorganizational and interorganizational.

II. Intraorganization Structure: The Nature of Role Perceptions

Perceptions of the Fire Problem

Organizational leaders held differing views toward the fire problem in the area. Of the fifteen key organizations identified, only one, an industrial organization, had a respondent who viewed the problem as very serious. The representatives of three organizations, two governmental and one industrial, considered the problem serious but not as bad as in some other parts of the state. Personnel of four organizations, two governmental, one industrial, and one voluntary considered the problem average. Respondents from three coordinating and one voluntary organization considered the problem below average, while two governmental and one industrial organization perceived no real fire problem in the area.

The perceived seriousness of the fire problem should have considerable influence upon fire prevention programs and the intensity with which the problem is attacked. As noted above, representatives of eleven of the fifteen key prevention organizations perceived the fire problem to be about the state average or below. In actuality, however, the mean fire occurrence rate for the area was eleven times that of the state for the three-year period immediately preceding the time of the study. Nevertheless, the leader of one of the governmental organization with explicit fire prevention roles and functions stated that there was no fire problem on
lands for which he was responsible. As a result, he said his fire prevention program consisted of only routine efforts such as prevention signs and posters, newspaper articles, and talks to school children, civic organizations and other groups as requested. The same individual commented that prevention work was routine for him, because he had been doing it for thirty years. Yet, the organization which this individual headed had the best prevention plans of any of the other organizations.

Differing perceptions of the fire problem were held by different people occupying key positions within the same organization. For example, a key leader of one industrial organization recognized a major fire problem on his company's land, as did the individual responsible for the management of this land. However, the individual responsible for managing the land stated that the large number of fires actually decreased his work load in that the more wildfires there were, the less controlled burning he would have to do. He commented that for that reason he let some wildfires burn rather than suppress them. As a result of this action, however, a conflict developed between the company, the Forrest County Area Forester's office, and one of the U. S. Forest Service ranger districts. The Area Forester's office was responsible for suppressing fires on the company's land, as was the ranger district if the fire was threatening Forest Service land. One or both of these governmental organizations often came to suppress such fires on the company's land when the land manager actually did not want the fire suppressed and had made no such attempts himself.

Obviously, such perceptions and actions as illustrated above could seriously
affect fire prevention efforts. As pointed out earlier, only one organization recog-
nized the fire problem as being very serious and it had no active, on-the-ground
prevention program as such. Instead, most of its fire control efforts were aimed
toward fire suppression.

Hours of Work Planned for Fire Prevention

Although four of the fifteen key prevention organizations had officially recog-
nized fire prevention goals and plans, the primary responsibility for on-the-ground
fire prevention work in the county was with the Area Forester's office and the two
ranger districts. The district office, the fourth key prevention organization with
formal goals and plans, was primarily responsible for planning and coordination of
functions for all the counties in the district.

Each of the three organizations with responsibilities for on-the-ground functions
in fire prevention prepared detailed plans which showed the number of man-hours
the organization was to devote to each major area of responsibility, and to each
function within each of the major areas. An examination and comparison of this
data for the major area of fire control for each of the three organizations should
indicate to some degree the importance and emphasis placed on fire prevention ef-
ferts by the organizations. Tables 2 and 3 summarize this data.

A point of clarification should be made relative to the data in Tables 2 and 3.
Hours of work planned for the Area Forester's office was for all personnel in the
organization. However, for the Leaf River and Black Creek Ranger Districts, hours
of work planned was for the district ranger, the forester responsible for fire control,
and the forest technician. For the latter two organizations, the reason for including only those three members of the organization may have been partially administrative. On the other hand, it may have reflected who the organization actually expected to perform the fire prevention roles. At any rate, for those two organizations, these data did not correspond with the cultural norms and roles discussed earlier.

As shown in Table 2, the Area Forester's office had by far planned the largest proportion of work for fire control. Of the total number of hours planned for all functions, 70 per cent was planned for fire control in Year 1 and almost 67 per cent for Year 2. In contrast, the Leaf River Ranger District had planned approximately 17 per cent of its time for fire control in Year 1 and about 12 per cent for Year 2. The Black Creek District had planned 13.5 per cent and 19 per cent for Year 1 and Year 2, respectively.

In terms of proportion of total hours planned for prevention, the Area Forester's office had the largest percentage of hours planned in Year 1 but the smallest proportion for Year 2, with 6.6 and 2.0 per cent respectively. Both the Area Forester's office and the Leaf River District had decreases from Year 1 to Year 2 in proportion of total hours to be devoted to prevention, while the Black Creek District had an increase from 5.0 to 9.5 per cent.

A comparison of the proportion of total fire control hours to be devoted to prevention perhaps reflected more accurately the importance placed on prevention. As shown in Table 3, the Area Forester's office planned 9.5 per cent of the total fire control hours for prevention in Year 1, and even less in Year 2 with only
Table 2. Proportion of Time Planned for Fire Control and Prevention

<table>
<thead>
<tr>
<th>Function</th>
<th>Area Forester's Office</th>
<th>Leaf River</th>
<th>Black Creek</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 1</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Total hours planned for all areas of work</td>
<td>12,361</td>
<td>100.0</td>
<td>8,649</td>
</tr>
<tr>
<td>Hours planned for fire control</td>
<td>8,558</td>
<td>70.0</td>
<td>5,775</td>
</tr>
<tr>
<td>Hours planned for fire prevention</td>
<td>812</td>
<td>6.6</td>
<td>176</td>
</tr>
<tr>
<td>Total hours planned for fire control</td>
<td>8,558</td>
<td>100.0</td>
<td>5,775</td>
</tr>
<tr>
<td>Hours of fire control planned for prevention</td>
<td>812</td>
<td>9.5</td>
<td>176</td>
</tr>
</tbody>
</table>

Table 3. Proportion of Fire Control Time Planned for Prevention

<table>
<thead>
<tr>
<th>Function</th>
<th>Area Forester's Office</th>
<th>Leaf River</th>
<th>Black Creek</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 1</td>
</tr>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Total hours planned for fire control</td>
<td>8,558</td>
<td>100.0</td>
<td>5,775</td>
</tr>
<tr>
<td>Hours of fire control planned for prevention</td>
<td>812</td>
<td>9.5</td>
<td>176</td>
</tr>
<tr>
<td>Total hours planned for fire control</td>
<td>8,558</td>
<td>100.0</td>
<td>5,775</td>
</tr>
<tr>
<td>Hours of fire control planned for prevention</td>
<td>812</td>
<td>9.5</td>
<td>176</td>
</tr>
</tbody>
</table>
3.1 per cent. In contrast, the Black Creek District planned 37.1 per cent of its total fire control hours for prevention in Year 1 and increased it to 50.7 per cent in Year 2. The Leaf River District was between the two extremes, with 25.6 in Year 1 and 37.1 per cent in Year 2. Thus, these data indicate that of the three organizations, the Area Forester's office placed much greater emphasis on the other three aspects of fire control, namely detection, presuppression, and suppression.

Tables 8, 9 and 10 (see Appendix) indicate the number and percentage of hours designated specifically for forest fire prevention by each of the three organizations, categorized by specific function and position. A comparison of the specific fire prevention functions in Tables 8, 9 and 10 showed that these functions followed only generally the plans presented in the previous chapter. However, these three tables show the specific position occupants that were responsible for performing the functions as well as the amount of time to have been devoted to the various functions.

An examination of the three tables named above showed variations in types of fire prevention functions to be performed by the three organizations as well as variations in amount of time devoted to the various functions by each organization for the two-year period under consideration. For example, in Year 1, the Area Forester's office allocated almost two-thirds of the organization's total prevention hours to investigate all man-caused fires to determine the cause and party responsible. Over half of the Area Forester's prevention time was designated for this function, and 70 per cent of the crew's prevention time was allocated to this function. In contrast for the following year no prevention time per se was allotted
to this function. Instead, the same number of hours for this function was allocated to the broad area of information and education. In comparison, however, neither of the two district ranger offices specified this function as a part of the fire prevention role.

Whereas almost two-thirds of the Area Forester's office fire prevention time was allocated to investigating man-caused fires in Year 1, in Year 2 slightly over one-half was devoted to another single function— that of distributing fire prevention literature on a planned basis. Fifty-eight per cent of the Area Forester's designated fire prevention time and 52 per cent of the crew's time were allocated to that function. In contrast, for the same type function, the Black Creek Ranger District devoted only 17 per cent of its fire prevention hours in Year 1 and 11 per cent in Year 2.

The hours allocated to fire prevention per se by the Leaf River and Black Creek Ranger Districts were more evenly distributed among the various functions than was the case for the Area Forester's office. The largest proportion of time to be devoted to any single function was 41.7 per cent by the Leaf River District in Year 2, and 31.9 per cent by the Black Creek in Year 1. Similarly, the time was more evenly distributed among the various positions in the latter two organizations than was the case for the Area Forester's office.

As indicated above, the amount of time designated specifically for forest fire prevention by each of the three organizations was a very small proportion of the total hours of work planned. However, as pointed out in the previous chapter, fire prevention goals were to be achieved through functions in roles other than fire
prevention per se. This was particularly true for the information and education role, a role applicable to all three organizations. In addition, the state and private role functions of the two ranger districts were relevant for forest fire prevention. Tables 11, 12 and 13 (see Appendix) indicate the number and percentage of hours designated for functions relevant to forest fire prevention in those roles as well as the fire prevention role. These three tables reflect more accurately the proportion of hours actually designated for the forest fire prevention role. Still, as summarized and shown in Table 4, a relatively small proportion of time was devoted to fire prevention.

As shown in Tables 11, 12 and 13, the functions of all three organizations were quite similar. Furthermore, there was not a great deal of variation in proportion of total time allocated to similar functions by the three organizations. The greatest proportion of time allocated to any single prevention function by either of the three organizations was by the Area Forester's office, that of investigation of all man-caused fires to determine cause and party responsible. Forty-five per cent of the time devoted to all prevention functions by the organization was to this one function, both for Year 1 and Year 2. The next largest proportion of time was allocated to the function of making specific and purposeful contacts with local county residents, approximately 11 per cent of all prevention functions. In comparison, the greatest proportion of time allocated to a single function by either of the ranger districts was by the Leaf River Ranger District, 15.7 per cent of the total prevention time for the function of executing the fire prevention action plan,
training personnel in prevention, and participating and supervising prevention tech-
niques. An almost equal proportion of time was allocated by the Black Creek Dis-
trict, 15.6 per cent, for the function of carrying out planned personal contacts with
roups, schools and local permanent residents.

The fire prevention cultural roles and norms comprising those roles were pre-
sented in the previous chapter for the various organizational positions. A compari-
son of those roles and norms for the various organizational positions with the specific
functions and positions shown in Tables 11, 12 and 13 showed considerable variation.
This was particularly true of the Area Forester's office in terms of variations between

Table 4. Proportion of Total Time Allocated to Forest Fire Prevention

<table>
<thead>
<tr>
<th>District</th>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number Per Cent</td>
<td>Number Per Cent</td>
</tr>
<tr>
<td>Area Forester's Office</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Hours</td>
<td>12,361 100.0</td>
<td>8,649 100.0</td>
</tr>
<tr>
<td>Hours for fire prevention</td>
<td>1,172  9.4</td>
<td>1,170  13.5</td>
</tr>
<tr>
<td>Leaf River</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total hours</td>
<td>5,010 100.0</td>
<td>3,613 100.0</td>
</tr>
<tr>
<td>Hours for fire prevention</td>
<td>436  8.7</td>
<td>301  8.3</td>
</tr>
<tr>
<td>Black Creek</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total hours</td>
<td>5,496 100.0</td>
<td>3,678 100.0</td>
</tr>
<tr>
<td>Hours for fire prevention</td>
<td>564  10.3</td>
<td>558  15.2</td>
</tr>
</tbody>
</table>

the cultural norms and the specific fire prevention functions, and for the two district
ranger offices in terms of positions named for fire prevention cultural roles and norms
and those assigned specific prevention functions. For example, a potentially highly significant cultural norm spelled out for the Area Forester's information and education role was that of maintaining close contact with the public in general and participating in programs designed for community betterment. Although making and maintaining contact with the public was specified as an information and education function, participation in community betterment programs was not. Likewise, organization of conservation clubs was spelled out as a cultural norm although this was not named as a behavioral function in Table 11 (see Appendix). Other similar variations were evident between the cultural norms and behavioral functions for the Area Forester's office.

Although some variations were evident between the cultural norms and behavioral functions spelled out for the two ranger districts, some of the more obvious discrepancies appeared between the cultural norms and behavioral functions for various specified positions. For example, as indicated in Tables 12 and 13 (see Appendix) fire prevention functions were specified for only three positions, the district ranger, forester, and forest technician. However, as pointed out in the previous chapter, cultural norms were specified for two other professional forester positions as well as two non-professional positions, those of lookout-forest worker and lookout-dispatcher. On the other hand, the position of forest technician was not designated as having a cultural role in fire prevention for either of the ranger districts but specified behavioral functions were specified for the position by both organizations for Year 1. No behavioral functions were specified for the position by either organization for Year 2.
Although the organizational leaders—the Area Forester and the two District Rangers—were responsible for the conduct of the total program for their respective organizations, specific responsibilities were delegated to other organizational members. However, as shown in Table 5, a significant proportion of the total time assigned to prevention by each organization was allocated to the leaders. For example, 43.8 and 46.8 per cent of the Area Forester's office total time assigned to prevention was allocated to the Area Forester in Year 1 and Year 2 respectively. In comparison, the three crews were allocated 55.2 per cent of the total time in Year 1 and 51.5 per cent in Year 2.

As with the Area Forester's office, a major proportion of the fire prevention time of the two district ranger offices was allocated to the organizational leader—the District Ranger. Forty-five per cent of the Leaf River Ranger District's total fire prevention time was allocated to the District Ranger in both Year 1 and Year 2. An equal proportion of time was allocated to the District Ranger of the Black Creek District in Year 1 and 48 per cent in Year 2.

However, in contrast to the Area Forester's office, another professional forester in each organization was specifically assigned key prevention roles. For the Leaf River District, this forester was allocated 44.5 per cent of the total fire prevention time in Year 1 and 54.8 per cent in Year 2, while for the same position in the Black Creek District, the proportion was 28.9 per cent in Year 1 and 52.3 per cent in Year 2.

In contrast to the professional foresters for the two ranger districts, the forest
Table 5. Proportion of Total Prevention Time by Organizational Positions

<table>
<thead>
<tr>
<th>Organization and Position</th>
<th>Total Number Planned</th>
<th>Per cent of Total by Position</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Year 1</td>
<td>Year 2</td>
</tr>
<tr>
<td>Area Forester's Office</td>
<td>1,172.1</td>
<td>1,170.1</td>
</tr>
<tr>
<td>Area Forester</td>
<td>513.1</td>
<td>547.1</td>
</tr>
<tr>
<td>Dispatcher</td>
<td>11.0</td>
<td>20.0</td>
</tr>
<tr>
<td>Crews</td>
<td>648.0</td>
<td>603.0</td>
</tr>
<tr>
<td>Leaf River District</td>
<td>436.0</td>
<td>301.0</td>
</tr>
<tr>
<td>District Ranger</td>
<td>198.0</td>
<td>136.0</td>
</tr>
<tr>
<td>Forester</td>
<td>194.0</td>
<td>165.0</td>
</tr>
<tr>
<td>Forest technician</td>
<td>44.0</td>
<td>-0-</td>
</tr>
<tr>
<td>Black Creek District</td>
<td>564.0</td>
<td>558.0</td>
</tr>
<tr>
<td>District Ranger</td>
<td>254.0</td>
<td>266.0</td>
</tr>
<tr>
<td>Forester</td>
<td>163.0</td>
<td>292.0</td>
</tr>
<tr>
<td>Forest technician</td>
<td>147.0</td>
<td>-0-</td>
</tr>
</tbody>
</table>

Technicians were considered sub-professionals responsible for coordinating and directing the daily work activities of all the other non-professional members of the two organizations. It was the responsibility of the forest technician to see that the work plans for on-the-ground activities for his organization were carried out and the goals were met. The two forest technicians were long-time employees of their respective organizations and well known by the local residents living in and around the lands comprising the two districts. However, only 10 per cent of the prevention time of the Leaf River District and 26 per cent of the Black Creek District was allocated to the respective forest technicians in Year 1. None was allocated in Year 2.
In summary, if number of hours allocated to fire prevention was an indication of the importance placed on that role, then prevention had a low priority level. Although as much as 70 per cent of the total hours of assigned work was allocated to fire control by the Area Forester's office, the largest proportion of time assigned to prevention was 9.5 per cent by the Black Creek Ranger District. In terms of specific prevention functions, the functions outlined to be done followed generally the prevention plans. However, there were variations in types of prevention functions to be performed by the three organizations as well as variations in the amount of time to be devoted to similar functions. All three organizations allocated a disproportionate amount of prevention time to the organizational leaders.

Specific Prevention Activities

Organizational personnel of the fourteen key prevention organizations located in the county were asked to name and discuss their organization's active prevention program and functions. Responses to those discussions are summarized in Table 6. As shown, the different types of fire prevention functions, as related by organization members, range from no active program to twenty different functions. Personnel of one industrial organization stated their organization was not involved in any fire prevention functions, as contrasted with thirteen different functions named by personnel in two different governmental organizations.

Personnel in the three governmental organizations located in the county with formal fire prevention goals and plans named far more prevention functions than any of the other organizational representatives. Those three organizations—the Leaf
Table 6. Types of Prevention Functions as Stated by Organizational Personnel

<table>
<thead>
<tr>
<th>Prevention Functions</th>
<th>USFS - Leaf River</th>
<th>USFS - Black Creek</th>
<th>MFC - Forrest County</th>
<th>SCS</th>
<th>Int. Paper Company</th>
<th>Illinois Cent. Railroad</th>
<th>Gulfport Crewsore</th>
<th>Forrest County Coor</th>
<th>Council Forests Board</th>
<th>Forrest County Defense Board</th>
<th>Forrest County Forestry Assn</th>
<th>Mcl. Sports Club</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal contact with local residents</td>
<td>x x x x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Present programs to civic clubs</td>
<td>x x x x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Present programs at schools</td>
<td>x x x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Work with Scouts, FFA, 4-H, etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Cooperate with other forestry organizations</td>
<td>x</td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Show-me trips</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Newspaper articles and spots</td>
<td>x x x</td>
<td>x x</td>
<td>x x x x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>TV and radio programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Prevention signs and posters</td>
<td></td>
<td>x x</td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Prescribed burning</td>
<td></td>
<td>x x</td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Investigation and law enforcement</td>
<td></td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Prevention patrol</td>
<td></td>
<td>x x</td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Exhibits at county fairs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Personal contact with sportsmen</td>
<td></td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Fire prevention training school</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Courteous and helpful service to residents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Maintain good public relations</td>
<td></td>
<td>x x</td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Plow fire lines</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Forestry demonstrations</td>
<td></td>
<td></td>
<td>x x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Restrictions on public use of lands</td>
<td></td>
<td>x x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>No prevention functions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL: 13 12 13 2 3 7 6 5 1 1 1 1 4 4
River Ranger District, the Black Creek Ranger District, and the Forrest County Area Forester's Office—together named thirty-eight different functions, as compared to thirty-four functions named by personnel in the other eleven organizations. Each of the three coordinating type organizations named only one function—that of cooperating with other organizations.

The specific type of prevention function named most frequently by the organizations was that of cooperating with other forestry and related organizations. Eight of the fourteen organizations named that as at least one of their fire prevention functions. The second most frequently named function was that of utilizing newspapers for the purpose of transmitting fire prevention messages, with seven different organizations performing that function. Three other specific functions were named by five of the fourteen organizations, with those three functions being (1) personal contact with local residents, (2) presenting programs to civic clubs, and (3) utilizing prescribed or controlled burning.

Thus, the three governmental organizations with explicit fire prevention roles were involved in far more prevention activities than any of the other types of organizations. Likewise, five different specific functions were utilized more frequently than any others by fire prevention organizations. Those five functions, in order of frequency named by organizations, were (1) cooperate with other forestry organizations, (2) utilize newspapers for fire prevention articles and spots, (3) include personal contact approach in fire prevention work with local residents, (4) present fire prevention programs to local civic clubs as requested, and (5) utilize prescribed burning, with one function being that of forest fire prevention. The
remaining fifteen functions were named by from one to four organizations.

The five specific fire prevention functions pointed out above were those named by or included in the records of fire prevention organizations as being the most frequently used. However, a separate study of a sample of rural residents in two neighborhoods in Forrest County showed that those functions most frequently utilized by organizations were not always the most frequent sources of information about forest fire prevention (Griessman and Bertrand, 1967). Respondents were asked, "Have you seen or heard anything about forest fire prevention in the last six months?" If the response was affirmative, the respondent was asked to tell where he had seen or heard about fire prevention. Sixty-four per cent of the sample had seen or heard about forest fire prevention. Sources of fire prevention messages received by the respondents are shown in Table 7.

Table 7. Sources of Fire Prevention Messages

<table>
<thead>
<tr>
<th>Source</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newspaper, local</td>
<td>12.9</td>
</tr>
<tr>
<td>Magazine or non-local paper</td>
<td>2.9</td>
</tr>
<tr>
<td>Radio</td>
<td>8.6</td>
</tr>
<tr>
<td>Television</td>
<td>58.3</td>
</tr>
<tr>
<td>Formal organization meeting</td>
<td>2.4</td>
</tr>
<tr>
<td>Personal contact (friend, official, other)</td>
<td>7.9</td>
</tr>
<tr>
<td>Signs or posters</td>
<td>44.0</td>
</tr>
</tbody>
</table>

Television was the most frequently indicated source of fire prevention messages, with 58.3 per cent reporting having seen such a message within the past six months. Television and radio together accounted for 66.9 per cent. However, as shown in
Table 6, only three organizations utilized television and radio for fire prevention functions. It should also be pointed out, however, that most of the messages seen or heard were "spot" announcements and did not originate from the local organizations.

Signs or posters were the second sources of fire prevention information named most frequently by the sample of rural residents, with 44 per cent reporting having seen messages through that media. Each of the three governmental organizations located in the county reported using signs or posters as a media for communicating fire prevention messages.

Two fire prevention functions frequently reported by organizations located in the county included presenting programs to civic clubs, schools and other formal organizations, and by emphasizing fire prevention through personal contact with local residents. Five organizations reported utilizing personal contact methods, five reported presenting programs to civic clubs, and four reported presenting programs at schools. In contrast, however, rural residents reported personal contact and formal organizational meetings as two of the least frequent sources of fire prevention information. Only 2.4 per cent reported formal organizational meetings and 7.9 per cent reported personal contact.

III. Interorganizational Relations: Coordinating Roles in Fire Prevention Efforts

Following the conceptual scheme utilized in this study, coordinating efforts called for conjunctive role relationships. When two different roles are designed to produce functions for two or more different systems, a conjunctive relationship
exists. This type of structure emerges through interstitial groups. As pointed out earlier, two types of interstitial groups may result from conjunctive role relationships: (1) coordinative interstitial groups, and (2) exchange interstitial groups. Coordinative interstitial groups were evident in the study area in terms of forest fire prevention efforts. Coordinative interstitial groups joined together through conjunctive role relationships a number of different fire prevention and related organizations with multiple interests and objectives, with one stated function being to coordinate their fire prevention efforts.

As an illustration of the above type of interorganizational structure, the Illinois Central Railroad and the Leaf River Ranger District of the U. S. Forest Service were two separate organizations with multiple and widely varying goals. However, the two organizations shared one goal in common, that of prevention of man-caused forest fires. When the District Ranger of the Leaf River Ranger District and the Forestry Agent of the Illinois Central Railroad met together, either formally or informally, to attempt to coordinate their respective fire prevention roles to meet this common goal, their conjunctive role relationships and a coordinative interstitial group emerged. This same type of interorganizational structure existed for all organizations involved in fire prevention coordinating functions.

As indicated in Table 6, the type of fire prevention function recognized most frequently by organizational personnel was "cooperate with other forestry organizations." In actuality these functions were of a coordinating rather than a cooperating nature. Although all of the organizations identified as having significant or potentially significant forest fire prevention functions were involved at one time
or another in varying degrees of coordinative efforts, personnel of only eight of the organizations specifically identified the coordinating function. These eight consisted of two governmental, one industrial, three coordinating, and two voluntary.

Attempts at coordinating forest fire prevention functions did occur. However, as indicated below, these efforts were relatively meaningless insofar as effective, tangible action was concerned.

Efforts toward attempts to coordinate fire prevention activities were most readily evident through five different interstitial groups, consisting of three coordinating and two voluntary type organizations. The three coordinating organizations were the Forrest County Coordinating Council, the Forrest County Civil Defense Board, and the Forrest County Technical Action Panel. The two voluntary organizations were the Forrest County Forestry Association and the McLaurin Sportsman's Club.

The three coordinating organizations relevant for forest fire prevention were all a part of the U. S. Department of Agriculture's organization at the local level. The primary purpose of the Forrest County Coordinating Council was to coordinate at the local level all Department of Agriculture and other relevant programs. The stated purpose of the Forrest County Technical Action Panel was to act as the coordinator between Department of Agriculture and other relevant state agencies, and the local people who seek aid for local rural development. The relevancy of the Forrest County Civil Defense Board was that the Leaf River Ranger District had the responsibility for rural fire defense in the county, with assistance to be provided
by the Area Forester's office of the Mississippi Forestry Commission.

Membership was overlapping in each of the three coordinating organizations, with the core membership being composed of the key leaders of the U. S. Department of Agriculture organizations in the county. Key leaders of other relevant organizations that worked with rural people were also invited to attend and participate. These included the Area Forester's office of the Mississippi Forestry Commission, and representatives of industrial forestry organizations. However, attendance and participation by relevant organizational members other than those of the U. S. Department of Agriculture was highly inconsistent.

Of the two voluntary type organizations concerned with forest fire prevention, the Forrest County Forestry Association was the most relevant and had the greater potential for effectiveness. Membership consisted of key representatives of forestry and agricultural organizations, both governmental and industrial, and individual owners of relatively large tracts of woodland. One of the five stated "aims" of the organization, as written in the constitution and by-laws, was to "work as an organized group toward eradication of uncontrolled forest fires."

The orientation of the second voluntary organization, the McLaurin Sportsman's Club, was entirely different from the other coordinating type organizations. Membership was composed primarily of local county residents interested in hunting and fishing. The majority were of the professional occupational class, such as physicians, lawyers, and bankers. The organization had no formal fire prevention objectives or plans, although representatives of the organization stated they were
interested in aiding and assisting in every way possible to insure better enforcement of game and fish laws and laws governing forest fires.

Thus, it is evident from the above analysis and description that formal structures were existent for coordination of forest fire prevention efforts. However, these structures were not effectively utilized. No active, tangible coordinating efforts were present. This lack of coordination of fire prevention policies and programs was a common criticism expressed by personnel of all relevant organizations. For example, the job description for the two district rangers' position specified a coordinating role. In the job description, it was in effect stated that the District Ranger was to establish or maintain contacts and cooperative relations with local representatives of other government agencies and with leaders in local civic, public service, and industrial activities for the purpose of enlisting their cooperation and support of Forest Service policies and objectives, with the protection of forest resources included. Yet, one of the District Rangers emphatically stated that in reality coordination or cooperation of fire prevention programs was practically nonexistent.

The need for coordination of efforts was, however, recognized by personnel of all the relevant local organizations, particularly with regard to conflicting policies and practices that might contribute to the incendiary fire problem. Illustrations of some of these conflicts, as stated by personnel of various organizations, are as follows:

(1) The U. S. Forest Service policy of permitting fences around land leased to cattlemen for grazing purposes has contributed to malicious burning and vandalism. At times fences have been cut and torn down, and
fires have been set by people practicing open-range grazing.

(2) The U. S. Forest Service Ranger Districts practice closed-range grazing. However, two large industrial organizations permit open-range grazing on their company lands.

(3) One of the U. S. Forest Service Ranger Districts does not charge individuals for fire suppression costs if the individual does his best to control the fire. However, the other Ranger District charges suppression costs regardless.

(4) The U. S. Forest Service Ranger Districts regulate and have certain restrictions on their lands pertaining to hunting. On the other hand, some of the industrial organizations have no hunting restrictions.

(5) There have been instances of conflict or disagreement between the Forest Service Ranger Districts on approaches or techniques to employ in fire suppression.

(6) The two Ranger Districts and the industrial organizations were critical of the Forrest County Forestry Commission for not doing adequate investigative and other law enforcement work.
CHAPTER V

SUMMARY, CONCLUSION, AND IMPLICATIONS

This study was part of a much broader program of research concerned with the sociological factors associated with man-caused forest fires. Considerable research had been done previously in such related problem areas as (1) forest fire occurrence rates and trends, (2) socio-economic characteristics and activities of forest publics in high fire occurrence areas, and (3) the communication of forest fire prevention messages. However, no research had been focused on organizations responsible for the administration and conduct of forest fire prevention programs. Such organizations were the focus of the research reported here.

The overall objective of this research was to delineate some of the organizational factors associated with the effectiveness of forest fire prevention efforts in one county in South Mississippi. To meet this objective, relevant organizations in the county had to be identified, their fire prevention policies, goals, and programs had to be determined, and an examination made of their interorganizational and intraorganizational structure with reference to their fire prevention responsibilities. A conceptual framework developed by Frederick L. Bates and Alvin L. Bertrand was utilized in the investigation of the research objectives.

Fifteen organizations were identified as having specific or potentially significant functions to perform in the prevention of man-caused forest fires. Those
fifteen organizations were categorized into four major types: (1) six governmental, (2) four industrial, (3) three coordinating, and (4) two were of a voluntary type. However, of those fifteen organizations, only four recognized or identified forest fire prevention as being one of their major areas of responsibility to the extent of having officially recognized fire prevention goals and formal prevention plans. All four of those organizations were governmental agencies explicitly charged with forest fire prevention.

The four governmental organizations with explicit and formal fire prevention responsibilities consisted of the Leaf River and Black Creek Ranger Districts of the U.S. Forest Service, and the Southeast District office and the Forrest County Area Forester’s office of the Mississippi Forestry Commission. Those four organizations were units of the two larger parent organizations and as such were definitely influenced in terms of their structure, policies, goals, programs and practices. Obviously, this had to be the case if progress was to be made in meeting the goals of the parent organizations. However, within the limitations and restrictions imposed upon them by the parent organizations, the structure, policies, goals, programs and practices of the local organizations differed in varying degrees.

Organizational leaders held differing views toward the fire problem in the study area. Several leaders, of both governmental and industrial organizations, stated there was no real fire problem in the area, particularly on lands for which they were responsible. Those statements were made despite a mean fire occurrence rate eleven times the state average during the previous three year period.
Obviously, differing perceptions of the fire problem by organizational leaders can influence fire prevention programs and the intensity with which the problem is attacked. For example, one leader of a governmental organization stated that there was no fire problem on lands for which he was responsible, and as a result his fire prevention program consisted of only routine efforts such as signs and posters, newspaper articles, talks to school children, and other groups as requested. The same individual commented that he had been doing fire prevention work for thirty years and it was just routine procedure for him. These comments were made despite the fact that his organization's formally stated fire prevention plans called for complex, extensive activities.

The four organizations with explicit fire prevention responsibilities had formal job descriptions for each position in each organization. Each job description outlined the responsibilities and duties for the occupant of each position. Those job descriptions were accepted as the cultural roles for each position in each organization. At least one member of each organization was specifically responsible for the fire control role, although usually several members had some responsibility for this role, also. Fire control included fire prevention as well as fire detection, pre-suppression, and suppression. In addition to the four areas of fire control, most fire control personnel had other responsibilities, such as "planning, directing, and administering professional, scientific and administrative work in the fields of water, wildlife, range, recreation, and land uses." In the words of one forester, "what happens is that fire prevention gets any time that might be left over from other
areas of responsibility, and much of the time that is left over is spent in preparing well developed prevention plans on paper that are not followed through on with actions."

A somewhat similar situation was found for all four of the U. S. Forest Service and Mississippi Forestry Commission organizations. For example, the Forrest County Area Forester's office was ultimately responsible for the reduction of fires on all lands in the county except national forest lands, and even there it could play a key function in prevention efforts. Except for national forest lands, the Area Forester's office had the primary responsibility of suppressing all fires on all lands in the county whether private, industrial, or public lands. The popular image of the Area Forester's organization was that it was a fire suppression, or "fire fighting" organization. A major obstacle to prevention efforts was that members of the organization had also assumed that image of themselves. They saw their primary function as being fire detection and fire suppression. None of the organizations placed major emphasis on prevention goals or programs.

Another major obstacle to fire prevention efforts was that conflicting organizational policies and practices were found in several areas that could have a bearing on the fire rate. Such conflicts were found within single organizations as well as between two or more different organizations. For example, one employee of a local forest industry expressed opposition toward the deliberate burning of his company's woodland, but another employee of the same organization said that the fires actually saved him work in that he did not have to do as much controlled burning.
Other policy conflicts were found in terms of public use of the forest lands owned or managed by the various organizations in the area. One such illustration was the policy toward cattle grazing, which ranged from no controls by one industrial organization to very strict controls by U. S. Forest Service organizations.

The research revealed many situations that required coordination for effective fire prevention programs, both between forestry organizations and between forestry and non-forestry organizations. This needed coordination ranged from a minimum of reciprocal communications between the two U. S. Forest Service organizations and the two Mississippi Forestry Commission organizations, to a maximum of all organizations channeling all their fire prevention resources into a single concentrated program.

Those organizations with explicit responsibilities for forest fire prevention were pointing in the same general direction in terms of official fire prevention goals, plans, and efforts, but each in its own unique way and oriented toward its own particular interests. There was general agreement by organizational members that their efforts should be complementary at the local level. The basic structure for coordination was present in the form of interstitial groups consisting of coordinating councils, voluntary organizations, and various other types of joint forestry meetings and programs. A sincere desire for cooperation and coordination of efforts was usually expressed by organizational members. However, there was little tangible evidence of any real cooperation and coordination in the field. This is a basic necessity if significant and lasting progress is to be made in a reduction of man-caused forest fires.
It can be concluded that those organizations with explicit forest fire prevention responsibilities were functioning at a less than optimum level in terms of prevention efforts. There was evidence that certain organizational factors were associated in a way detrimental to effective fire prevention efforts in the study area. Those factors included the following:

1. A failure on the part of organizational leaders to define man-caused fire as a problem in the study area.

2. A failure of key organizations to give a high level of priority to fire prevention efforts.

3. A failure of fire prevention personnel to follow through in actions with well developed, formal plans that were on paper.

4. The conception of key organizational personnel that the most important fire control functions were those of detection and suppression.

5. Conflicting organizational policies and practices between organizations that could adversely affect the forest fire occurrence rate.

6. A lack of coordination of fire prevention efforts in the field between prevention organizations.

7. The total lack of a coordinating effort between organizations.

Thus, even though complex organizations may be highly structured to accomplish well developed plans and objectives, they do not always do so. Problems may arise from policy ambiguities or from the policy itself; they may arise when official responsibility or actual behavior is incongruent with policy ideals; or they may arise within the broad spectrum of human elements involved in the process of attempting to fulfill policy. All such complexities compound the overall problems in the prevention of man-caused forest fires (Bertrand and Baird, 1975).
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Curtis, James W.

Davis, Kenneth P.

Dickerson, Ben Edward

Division of Cooperative Forest Fire Control

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Dudley, Charles J., Harold L. Nix, and Frederick Bates
Fahnestock, George F.

Fahnestock, George F. and Harold F. Kaufman

Griessman, Benjamin E.

Griessman, Benjamin E. and Alvin L. Bertrand

Gross, Neal, Ward S. Mason, and Alexander W. McEachern

Hansbrough, Thomas A.

Jones, Arthur R.

Katz, Daniel and Robert L. Kahn

Kaufman, Harold F.

Kaufman, Herbert
Levine, Sol and Paul E. White  

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U. S. Forest Service


<table>
<thead>
<tr>
<th>Year</th>
<th>Author/Editor</th>
<th>Title</th>
<th>Publisher</th>
</tr>
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</table>
Table 8. Proportion of Planned Fire Prevention Hours Devoted to Specific Functions, Forrest County Area Forester’s Office

<table>
<thead>
<tr>
<th>Function</th>
<th>Total Hrs.</th>
<th>Area Forester</th>
<th>Dispatcher Crews</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.  %</td>
<td>No.  %</td>
<td>No.  %</td>
</tr>
<tr>
<td></td>
<td>Planned</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyze and revise fire records to determine 3-year averages of fires by causes, months, time of day, day of week, fire danger class, problem and general problem areas.</td>
<td>8.0 1.0 4.0 1.6 4.0 100.0</td>
<td>-- --</td>
<td></td>
</tr>
<tr>
<td>Prepare and revise annual fire prevention plan on basis of analysis, assigning personnel to specific tasks.</td>
<td>8.0 4.5 4.0 9.3 4.0 50.0</td>
<td>-- --</td>
<td></td>
</tr>
<tr>
<td>Distribute fire prevention literature on a planned basis.</td>
<td>90.0 11.0 25.0 9.7</td>
<td>-- 65.0 11.8</td>
<td></td>
</tr>
<tr>
<td>Plow fire breaks for landowners on reimbursement basis.</td>
<td>70.0 8.6 10.0 3.9</td>
<td>-- 60.0 10.9</td>
<td></td>
</tr>
<tr>
<td>Investigate all man-caused fires to determine cause and party responsible.</td>
<td>525.0 64.1 140.0 54.3</td>
<td>-- 385.0 70.0</td>
<td></td>
</tr>
<tr>
<td>Secure cooperation of local law enforcement officials to assist in investigation of fires which warrant this action.</td>
<td>15.0 1.8 15.0 5.8</td>
<td>-- --</td>
<td></td>
</tr>
<tr>
<td>Prepare FC-9 reports for all fires where evidence is sufficient to warrant action, either suppression cost collection or prosecution.</td>
<td>7.0 .9 7.0 2.7</td>
<td>-- --</td>
<td></td>
</tr>
</tbody>
</table>
Table 8. (Continued)

<table>
<thead>
<tr>
<th>Function</th>
<th>Year</th>
<th>Total Hrs.</th>
<th>Area Forester</th>
<th>Dispatcher</th>
<th>Crews</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Planned No. %</td>
<td>Planned No. %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participate in court cases, serve as a witness when qualified, work with prosecuting attorney.</td>
<td>1</td>
<td>9.0 1.1</td>
<td>9.0 3.5</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>-- --</td>
<td>-- --</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Settle fire cases by responsible party paying suppression cost.</td>
<td>1</td>
<td>80.0 9.9</td>
<td>40.0 15.5</td>
<td>--</td>
<td>40.0 7.3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>-- --</td>
<td>-- --</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Assist Co. Civil Defense Director in rural fire prevention work.</td>
<td>1</td>
<td>-- --</td>
<td>-- --</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>-- --</td>
<td>-- --</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>812 100.0</td>
<td>258 100.0</td>
<td>4</td>
<td>100.0 550 100.0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>176 100.0</td>
<td>43 100.0</td>
<td>8</td>
<td>100.0 125 100.0</td>
</tr>
</tbody>
</table>
Table 9. Percent of Planned Fire Prevention Hours Devoted to Specific Functions, Leaf River Ranger District

<table>
<thead>
<tr>
<th>Function</th>
<th>Year</th>
<th>Total Hrs. Planned</th>
<th>District Ranger</th>
<th>Forester</th>
<th>Forest Technician</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>1. Execute fire prevention plan. Include plan action, train personnel in</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>prevention, participate and supervise prevention techniques.</td>
<td>1</td>
<td>68</td>
<td>31.8</td>
<td>40</td>
<td>50.0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>28</td>
<td>24.3</td>
<td>8</td>
<td>30.8</td>
</tr>
<tr>
<td>2. Prepare trespass reports and participate in settlement action.</td>
<td>1</td>
<td>56</td>
<td>26.2</td>
<td>16</td>
<td>20.0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>48</td>
<td>41.7</td>
<td>8</td>
<td>30.8</td>
</tr>
<tr>
<td>3. Make special personal contacts - hunters, landowners and others.</td>
<td>1</td>
<td>24</td>
<td>11.2</td>
<td>4</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>--</td>
<td>----</td>
<td>--</td>
<td>----</td>
</tr>
<tr>
<td>4. Prepare news articles on fire prevention and related subjects.</td>
<td>1</td>
<td>12</td>
<td>5.6</td>
<td>4</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>8</td>
<td>7.0</td>
<td>4</td>
<td>15.4</td>
</tr>
<tr>
<td>5. Arrange for news media coverage during periods of high fire danger.</td>
<td>1</td>
<td>6</td>
<td>2.8</td>
<td>--</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>4</td>
<td>3.5</td>
<td>--</td>
<td>----</td>
</tr>
<tr>
<td>6. Cooperate with Southern Forest Exp. Station in prevention Study Project</td>
<td>1</td>
<td>48</td>
<td>22.4</td>
<td>16</td>
<td>20.0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>27</td>
<td>23.5</td>
<td>6</td>
<td>23.0</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>214</td>
<td>100.0</td>
<td>80</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>115</td>
<td>100.0</td>
<td>26</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 10. Percent of Planned Fire Prevention Hours Devoted to Specific Functions, Black Creek Ranger District

<table>
<thead>
<tr>
<th>Functions</th>
<th>Year</th>
<th>Total Hrs. Planned</th>
<th>District Ranger No.</th>
<th>Forest Ranger %</th>
<th>Forest Forester No.</th>
<th>Forest Technician %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review, Revise, bring-up-to-date Fire Prevention Plans</td>
<td>1</td>
<td>48</td>
<td>8</td>
<td>3.1</td>
<td>16</td>
<td>9.8</td>
</tr>
<tr>
<td>Distribute prevention material to schools, communities and groups</td>
<td>2</td>
<td>12</td>
<td>8</td>
<td>3.0</td>
<td>4</td>
<td>1.4</td>
</tr>
<tr>
<td>Provide Fire Prevention articles for newspaper</td>
<td>1</td>
<td>8</td>
<td>8</td>
<td>3.1</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Schedule and carry out planned personal contacts with groups, schools and especially local permanent residents</td>
<td>2</td>
<td>10</td>
<td>6</td>
<td>2.3</td>
<td>4</td>
<td>1.4</td>
</tr>
<tr>
<td>Plan, direct installation of posters and fire prevention signs</td>
<td>1</td>
<td>16</td>
<td>4</td>
<td>1.6</td>
<td>4</td>
<td>2.5</td>
</tr>
<tr>
<td>Provide prevention training for selected personnel</td>
<td>2</td>
<td>8</td>
<td>4</td>
<td>1.4</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>Carry out personal contacts in field during hunting season</td>
<td>1</td>
<td>12</td>
<td>6</td>
<td>2.4</td>
<td>3</td>
<td>1.8</td>
</tr>
<tr>
<td>Schedule and carry out Forest Patrols during extreme danger days for prevention work</td>
<td>2</td>
<td>24</td>
<td>8</td>
<td>3.0</td>
<td>16</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>8</td>
<td>4</td>
<td>1.6</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>40</td>
<td>16</td>
<td>6.0</td>
<td>24</td>
<td>8.2</td>
</tr>
</tbody>
</table>
Table 10. Continued

<table>
<thead>
<tr>
<th>Functions</th>
<th>Year</th>
<th>Total Hrs.</th>
<th>District Ranger</th>
<th>Forester</th>
<th>Forest Technician</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Planned No.</td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>9. Participate in prevention phase of current research project.</td>
<td>1</td>
<td>20</td>
<td>7.3</td>
<td>8</td>
<td>9.6</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>24</td>
<td>6.9</td>
<td>16</td>
<td>10.7</td>
</tr>
<tr>
<td>10. Perform I &amp; E, include information that all Fires will be investigated.</td>
<td>1</td>
<td>12</td>
<td>4.3</td>
<td>8</td>
<td>9.3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>60</td>
<td>17.1</td>
<td>24</td>
<td>16.0</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>276</td>
<td>100.0</td>
<td>86</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>350</td>
<td>100.0</td>
<td>150</td>
<td>100.0</td>
</tr>
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</table>
Table 11. Hours Planned for Forest Fire Prevention, by Functions and Positions, Forrest County Area Forester's Office

<table>
<thead>
<tr>
<th>Functions</th>
<th>Year</th>
<th>Total Hrs. Planned</th>
<th>Area Forester</th>
<th>Dispatcher</th>
<th>Crews</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Information &amp; Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop and maintain annual I &amp; E plan for area</td>
<td>1</td>
<td>8.0</td>
<td>.7</td>
<td>6.0</td>
<td>1.2</td>
</tr>
<tr>
<td>Make contacts with school administrators, principals, teachers and classes</td>
<td>1</td>
<td>12.0</td>
<td>1.0</td>
<td>12.0</td>
<td>2.3</td>
</tr>
<tr>
<td>Make contacts with key individuals as outlined in Fire Prevention Plan</td>
<td>1</td>
<td>64.0</td>
<td>5.5</td>
<td>40.0</td>
<td>7.8</td>
</tr>
<tr>
<td>Make specific and purposeful contacts with newspaper editors</td>
<td>1</td>
<td>20.0</td>
<td>1.7</td>
<td>20.0</td>
<td>3.9</td>
</tr>
<tr>
<td>Make specific and purposeful contacts with program managers of radio stations</td>
<td>1</td>
<td>7.5</td>
<td>.6</td>
<td>7.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Prepare weekly news article for local paper</td>
<td>1</td>
<td>13.0</td>
<td>1.1</td>
<td>13.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Make specific and purposeful contacts with local residents of county</td>
<td>1</td>
<td>125.0</td>
<td>10.7</td>
<td>50.0</td>
<td>9.7</td>
</tr>
<tr>
<td>Secure or design and construct a portable exhibit for use in store windows and public places</td>
<td>1</td>
<td>8.0</td>
<td>.7</td>
<td>4.0</td>
<td>.8</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>8.0</td>
<td>.7</td>
<td>4.0</td>
<td>.7</td>
</tr>
</tbody>
</table>
Table 11. Continued

<table>
<thead>
<tr>
<th>Functions</th>
<th>Year</th>
<th>Total Hrs. Planned</th>
<th>Area Forester</th>
<th>Dispatcher</th>
<th>Crews</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
</tr>
<tr>
<td>Procure suitable motion picture films for showing in each school</td>
<td>1</td>
<td>12.0 1.0</td>
<td>12.0 2.3</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>12.0 1.0</td>
<td>12.0 2.2</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Arrange, schedule and show motion pictures in each school, including brief talk</td>
<td>1</td>
<td>12.0 1.0</td>
<td>12.0 2.3</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>12.0 1.0</td>
<td>12.0 2.2</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Arrange for invitations to give talks and schedule</td>
<td>1</td>
<td>4.0 .3</td>
<td>4.0 .8</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>4.0 .3</td>
<td>4.0 .7</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Prepare and present talks to groups</td>
<td>1</td>
<td>8.0 .7</td>
<td>8.0 1.6</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>8.0 .7</td>
<td>8.0 1.5</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Prepare county forest facts and present to grand jury and circuit judge</td>
<td>1</td>
<td>8.0 .7</td>
<td>8.0 1.6</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>8.0 .7</td>
<td>8.0 1.5</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Arrange with county and district attorney for appearance before grand jury</td>
<td>1</td>
<td>2.0 .2</td>
<td>2.0 .4</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>2.0 .2</td>
<td>2.0 .4</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Arrange for and appear before circuit judge</td>
<td>1</td>
<td>2.0 .2</td>
<td>2.0 .4</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>-----</td>
<td>-----</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Prepare for, attend and participate in coordinating council meetings</td>
<td>1</td>
<td>24.0 2.0</td>
<td>24.0 4.7</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>24.0 2.1</td>
<td>24.0 4.4</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Cooperate with Vo-Ag. Dept. and 4-H Clubs, setting up Management Demonstration Plots</td>
<td>1</td>
<td>24.0 2.0</td>
<td>24.0 4.7</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>24.0 2.1</td>
<td>24.0 4.4</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>
Table 11. Continued

<table>
<thead>
<tr>
<th>Functions</th>
<th>Year</th>
<th>Total Hrs. Planned</th>
<th>Area Forester</th>
<th>Dispatcher</th>
<th>Crews</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>Assist with design of signs for Forestry Practice Plots</td>
<td>1</td>
<td>6.4</td>
<td>.5</td>
<td>6.4</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>6.4</td>
<td>.5</td>
<td>6.4</td>
<td>1.2</td>
</tr>
<tr>
<td>Prevention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investigate all man-caused fires to determine cause and party responsible</td>
<td>1</td>
<td>525.0</td>
<td>44.8</td>
<td>140.0</td>
<td>27.3</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>525.0</td>
<td>44.8</td>
<td>140.0</td>
<td>25.6</td>
</tr>
<tr>
<td>Secure cooperation of local law enforcement officials to assist in investigation of fires which warrant this action</td>
<td>1</td>
<td>15.0</td>
<td>1.3</td>
<td>15.0</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>15.0</td>
<td>1.3</td>
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<td>Settling fire cases by responsible part paying suppression cost</td>
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<td>Prepare FC-9 reports for all fires where evidence is sufficient to warrant action, either suppression cost collection or prosecution</td>
<td>1</td>
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<td>.6</td>
<td>7.2</td>
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<td>.6</td>
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<td>1.3</td>
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<tr>
<td>Participate in court cases, serve as a witness when qualified, work with cases prosecuting attorney</td>
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<td>.8</td>
<td>9.0</td>
<td>1.7</td>
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<td>.8</td>
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<td>1.6</td>
</tr>
<tr>
<td>Analyze and revise fire records to determine 3-year averages of fires by causes, months, time of day, day of week, fire danger class, problem and general problem areas</td>
<td>1</td>
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Table 11. Continued

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<th>Area Forester</th>
<th>Dispatcher</th>
<th>Crews</th>
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<td>No.</td>
<td>%</td>
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<td>%</td>
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<tr>
<td>Prepare and revise annual fire prevention plan on basis of analysis, assigning personnel to specific tasks</td>
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<td>Plow fire breaks for landowners on reimbursement basis (Inc. contact agreement collection, and reports)</td>
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<td>70.0</td>
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<td>Distribute fire prevention literature on a planned basis</td>
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Table 12. Hours Planned for Forest Fire Prevention, by Functions and Positions, Leaf River Ranger District

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<tr>
<th>Functions</th>
<th>Year</th>
<th>Total Hrs.</th>
<th>District Ranger</th>
<th>Forester</th>
<th>Forest Technician</th>
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<td>Planned No.</td>
<td>No. %</td>
<td>No. %</td>
<td>No. %</td>
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<td>Execute fire prevention plan. Include plan action,</td>
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<td>68</td>
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<td>train personnel in prevention, participate and</td>
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<td>28</td>
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<td>supervise prevention techniques</td>
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<td>Prepare trespass reports and participate in</td>
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<td>56</td>
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<td>settlement action</td>
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<td>Make special personal contacts - hunters,</td>
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<td>Prepare news articles on fire prevention and related</td>
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<td>Arrange for news media coverage during periods of</td>
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<td>Total Hrs. Planned</td>
<td>District Ranger</td>
<td>Forester</td>
<td>Forest Technician</td>
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<td><strong>State &amp; Private Forestry</strong></td>
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<td>Participate in rural fire defense and radiological monitoring activities</td>
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<tr>
<td>Encourage adoption of good forestry practices by local landowners and county officials</td>
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<tr>
<td>Serve as member of ACP County Committee of Forrest and Perry Counties</td>
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<td>Participate in RAD program of Perry and Forrest Co.</td>
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<td>Participate in activities of Forrest County Forestry Association</td>
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<td>Assist Three Rivers and Forrest County Soil Conservation District in Tech. For. problem</td>
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<td>Cooperate with Miss. For. Comm. Area Forester in Forest Man. and Fire Prevention activities</td>
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Table 12. Continued

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<tr>
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<th>District Ranger</th>
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<th>Forest Technician</th>
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<tr>
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<td><strong>Information Services</strong></td>
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<td>Prepare district annual I &amp; E analysis and action plan,</td>
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<td>participate in revision and maintenance of MNFI &amp; E plan</td>
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<td>9 4.6</td>
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<tr>
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<td>16 5.3</td>
<td>8 5.9</td>
<td>8 4.8</td>
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<tr>
<td>Cooperate with educational institutions (talk, movies, show-me trips,</td>
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<td>etc. including USM, Wm. Carey Coll, local primary and secondary schools</td>
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<td>21 4.8</td>
<td>5 2.5</td>
<td>16 8.2</td>
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<td>12 4.0</td>
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<td>8 4.8</td>
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<tr>
<td>Assist youth organizations, BSA, 4-H, FFA</td>
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<td>8 4.1</td>
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<td>12 4.0</td>
<td>4 2.9</td>
<td>8 4.8</td>
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<td>Cooperate with Women's Clubs in Conservation activities (show-me trips)</td>
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<td>--</td>
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<tr>
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<td>4 1.3</td>
<td>4 2.9</td>
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<tr>
<td>Promote understanding and acceptance of multiple use concepts and policy</td>
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<tr>
<td>a. Maintain close working relationship &amp; furnish news items to</td>
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<td>newspapers</td>
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<td>4 2.9</td>
<td>4 2.4</td>
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<td>b. Contact radio &amp; TV stations, furnish news releases, and appear on</td>
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<td>programs</td>
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<td>4 2.9</td>
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Table 12. Continued

<table>
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<tr>
<th>Functions</th>
<th>Year</th>
<th>Total Hrs. Planned</th>
<th>District Ranger</th>
<th>Forester</th>
<th>Forest Technician</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
<td>%</td>
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<tr>
<td>c. Prepare and present exhibits for symposiums, fairs, conventions</td>
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<td>21</td>
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<tr>
<td></td>
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<td>17</td>
<td>5.6</td>
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<td>d. Obtain photographs for use in general I &amp; E activities and assist in retakes of permanent stations, arrange office photo display and rework photo album</td>
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<td>10</td>
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<td>Make contacts with key people and revise key-man list</td>
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<td>2.0</td>
<td>4</td>
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<tr>
<td>Attend general meetings such as Forrest Co. Forestry Assn., SAF, etc.</td>
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<td>2.8</td>
<td>4</td>
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<td>2.7</td>
<td>4</td>
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<tr>
<td>Organize and conduct a show-me trip for Forrest Co. Supervisors Sheriffs and other officials</td>
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<td>1.8</td>
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<td>8</td>
<td>2.7</td>
<td>8</td>
<td>5.9</td>
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<tr>
<td>Present programs to local groups as requested (Breakfast, Optimist, Lions, Kiwanis, Jaycees)</td>
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<td>8</td>
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<tr>
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<td>Train three districts' foresters in I &amp; E work.</td>
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Table 12. Continued

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<th>Total Hrs.</th>
<th>District Ranger</th>
<th>Forester</th>
<th>Forest Technician</th>
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<td>No. %</td>
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<td>Miscellaneous routine information service jobs as required</td>
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Table 13. Hours Planned for Forest Fire Prevention, by Functions and Positions, Black Creek Ranger District

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<tr>
<th>Functions</th>
<th>Year</th>
<th>Total Hrs. Planned</th>
<th>District Ranger</th>
<th>Forester</th>
<th>Forest Technician</th>
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<tbody>
<tr>
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<td>%</td>
<td>No.  %</td>
<td>No.  %</td>
<td>No.  %</td>
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<tr>
<td>1. Review, revise, bring up-to-date Fire Prevention Plans.</td>
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<td>17.4</td>
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<tr>
<td>2. Distribute CFFP Material to schools, communities, and groups.</td>
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<td>3. Provide Fire Prevention articles for local newspaper.</td>
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<tr>
<td>4. Schedule and carry out planned personal contacts with groups, schools, and especially local permanent residents.</td>
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<td>88</td>
<td>31.9</td>
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<td>5. Plan, direct installation of posters and fire prevention signs.</td>
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<td>6. Provide prevention training for selected personnel.</td>
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<td>7. Carry out personal contacts during hunting season.</td>
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<td>8. Schedule and carry out Forest Patrol during extreme danger days for prevention work.</td>
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<th>District Ranger No.</th>
<th>Forester No.</th>
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<td>a. RAD activities</td>
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<td>b. Coordinating Council</td>
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<td>c. ACP Comm.</td>
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<td>d. Tree farms</td>
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<td>e. So. Miss. Forestry Field day</td>
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<td>Information Service</td>
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<td>Review, revise I &amp; E plan. Keep key people list current</td>
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<td>District Ranger</td>
<td>Forester</td>
<td>Forest Technician</td>
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<td>Solicit invitations to appear at club or other group meetings for</td>
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Table 13. Continued

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<th>Functions</th>
<th>Year</th>
<th>Planned Hrs.</th>
<th>District Ranger</th>
<th>Forester</th>
<th>Forest Technician</th>
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<td>Organize, arrange and conduct show-me trips</td>
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<td>Perform misc. routine I &amp; E jobs, services, order</td>
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<td>material, distribute, maintain board, library, etc.</td>
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<td>Develop demonstration area on Hwy. (coordinate with</td>
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<td>Biloxi and/or L/R)</td>
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<tr>
<td>Cooperate with SFES and branch stations in new and</td>
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<td>Visit Harrison Exp. Station and Forest Pest Laboratory</td>
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</table>
The author was born October 26, 1929, in Houston, Mississippi. He was graduated from Houston High School in 1948. In September, 1948, he began his undergraduate studies at Mississippi State University. His studies were interrupted with two years of military duty, serving with the 24th Infantry Division in Korea from 1951 to 1953.

After his marriage to the former Maxine Foster of Houston, Mississippi, he resumed his studies at Mississippi State and received his Bachelor of Science degree in Agricultural Economics in 1955. His Master of Science degree in Sociology was received from Mississippi State University in January, 1957.

From February, 1957 through August, 1960, the author was an assistant sociologist with the Department of Sociology, Mississippi State University. From September, 1960 through January, 1963, he was an assistant professor of sociology with Glenville State College, West Virginia. Since February, 1963 he has been an assistant professor of sociology at Mississippi State University engaged in teaching, research, and administration. He is now a candidate for the degree of Doctor of Philosophy in Sociology at Louisiana State University.
Candidate: Andrew Wesley Baird

Major Field: Sociology

Title of Thesis: The Perception Which Local Government and Private Forestry Related Organizations Have of Their Roles in Forest Fire Prevention

Approved:

[Signature]
Major Professor and Chairman

[Signature]
Dean of the Graduate School

EXAMINING COMMITTEE:

[Signature]

[Signature]

[Signature]

Date of Examination:

July 19, 1976