are clearly of minor importance they may be disregarded or suppressed but where recreational values are dominant they are over-riding and this is reflected in the resulting management prescription.

To this point I have talked only about what Multiple Use means to the Forest Service and about some of the basic factors involved in our practicing of it. I have said nothing that could be interpreted as an effort to sell it. To do so to a group such as this would be presumptuous.

There are two basic reasons for this: first, you are practical people and Multiple Use is practical. It serves more people in the long run.

Secondly, you appreciate efficiency. And in terms of both the optimum harvesting of total resource benefits and the cost of resource use administration, Multiple Use is efficient. It is efficient because under Multiple Use it is axiomatic that to the extent possible the various uses are administered so as to be mutually complementary. In planning practices to benefit one resource, careful consideration is given to their possible effect upon other resources. In many cases it is possible to direct them at enhancing one resource in such a way that the result will be indirectly beneficial to one or several others. The same is true in planning the utilization of the resources. If one resource can be made accessible in such a way that others will also be more accessible, road and trail plans are prepared accordingly. If the utilization of one resource can be carried out so that another resource can benefit indirectly, again it is so planned.

But despite the fact that Multiple Use management will make it possible to make the optimum use of our National Forest resources and services—both now and in the future—we must be realistic. Large as the National Forests are, they simply cannot hope to meet all demands within the terms wanted by all users and all user groups. I am convinced, however, that only through their Multiple Use management will the National Forests be able to reasonably meet the demands of the most groups—that only through Multiple Use management will they be able to make their optimum contribution to the Nation's social and economic needs.

OUTDOOR RECREATION AND ITS DEPENDENCY UPON MULTIPLE USE

By C. A. Brown

You are very kind to invite me to participate on your program. I am delighted to be here and discuss with you the subject, "Outdoor Recreation and Its Dependency upon Multiple Use."

In recent years, a great deal has been written and said about expanding populations, growing demands for outdoor recreation, more wood for future use, land withdrawals for single purpose use, etc., so I won't bother you with material with which you are already familiar.

This afternoon, I would like to discuss with you multiple use and outdoor recreation from the point of view of an industrial forester. An industrial forester, in developing a forest management program, must keep uppermost in his mind the objective of the timberland owner. In the case of forest industries, this objective is the economic production of successive timber crops. Fortunately, there are many points in forest land management that are fully compatible with other management objectives and land use.

The modern-day forester can no more afford practices contributing to soil deterioration or erosion than a farmer. He must consider all factors affecting timber production, soil and water relationships and wildlife habitat conditions in developing his management plans. This is the type of forest management that we are committed to at International Paper. We call it "multiple use." Our primary objective, of course, is the production of timber, but we recognize that our lands, in addition to being managed for timber harvests, can also be managed for watershed protection, wildlife protection and for recreation.

I have some slides I brought with me today and I would like to take you on a quick trip across some of our Tree Farms and other properties in the

Southern Kraft Division. This will show you how our concept of multiple-use management is making recreational opportunities possible for the public.

We operate over a large area. Our woodlands extend from the Atlantic Coast of the Carolinas to the edge of the piney woods in East Texas, a distance of approximately 1,500 miles. In all, over four million acres of timberlands are being managed to support our ten southern mills.

These lands are managed for economical crops of timber, not just pulpwood. We harvest sawtimber, poles and piling, many of which are sold to other forest-based industries.

In order to manage these lands properly we must have a good system of roads and trails. They serve a number of purposes, but they are used chiefly for access to the timber at harvest time and for fire protection.

These same roads that are maintained to adequately manage our Tree Farms make the forest accessible to the outdoor enthusiast.

Many management activities help improve the habitat for certain species of game. For example, in young plantations of pines the natural grasses and legumes are abundant due to soil scarification and the opening of the land to light. This makes an ideal situation for quail.

Fire, when properly used, is a valuable silvicultural tool. It is also a recognized tool of game management and is particularly conducive to quail and turkey habitat improvement.

These hunters are enjoying a day with their dog in a longleaf stand of pine on IP land in Georgia.

Our Southlands Experiment Forest is located near Bainbridge, Georgia. One of their major areas of study is game management. Carroll Perkins, whom many of you know, is assigned to this field. Since 1958, the Georgia Game and Fish Commission and IP have been conducting deer management studies on a cooperative basis. Much of the data for this study is collected through controlled public hunts. To illustrate, various types of hunts are conducted: still hunting versus hunting with dogs; and bucks only versus hunter's choice. The condition of the herd is carefully checked by analyzing the various organs of the slain deer.

Another interesting study is being carried on in a natural longleaf pine stand. Here game food strips have been established throughout the stand. This greatly increases the carrying capacity of the area for quail, without interfering with timber production. This is a relatively inexpensive operation and is successful when grazing by livestock is prohibited.

Let's leave Southlands and go down to Baldwin County, Alabama. Here work began in early 1962 to establish game food plots largely to improve the habitat for turkey. Approximately 58 acres of food plots have been fenced and planted on a 37,000-acre tract of Company lands. A nominal fee will be charged for permits to hunt on these improved areas, while other Company lands in Baldwin County will remain open free of charge to the public. This is being conducted as an experiment on a trial basis and we are very interested to see the outcome of this project.

One of our most successful arrangements so far has been the cooperative game management agreements we have with the Game and Fish Commissions of the various states in which we operate. We have agreements with eight southern states, covering some 407,083 acres. Essentially these agreements are simple—we grow and harvest timber while the Commissions manage the wildlife and control the hunting.

Hunters and sportsmen are not the only ones who enjoy outings on Company properties. In addition, groups such as Boy Scouts and FFA Chapters have access to these lands. In other areas, 20 to 40 acres of Company lands have been leased to schools and dedicated as school forests. These are used as outdoor classrooms.

Through the forest run literally thousands of miles of rivers and streams. These shores are the favorite of outdoor recreationists, and access to many of these areas is gained through IP timberlands and roads.

These same rivers and streams, used by fishermen and water enthusiasts, are the lifeblood of our industry. In some places, fresh water must be stored to safeguard against shortages of water during periods of drought. This water must ultimately be returned to the streams; therefore waste water is treated before it is discharged.

This is Bussey Brake, a 2,200-acre fresh water reservoir for our Bastrop and Louisiana Mills. Its primary use is to furnish water to these mills, but it is also an excellent place to fish.

In 1959, the Louisiana Wild Life and Fisheries Commission stocked Bussey Brake with more than two million fingerlings. To provide the best possible fishing in the future, the Company entered into a fisheries management contract with the Commission. The lake was opened to the public in April, 1960, and according to a report recently released, the two-year results have been amazing. Over 115,000 fishermen have caught nearly one million fish, which weighed close to 430,000 pounds—quite a record for any lake.

This is Lake Erling, another fresh water reservoir and probably the best known of IP's public recreation areas. It is located in Lafayette County, Arkansas, just three miles north of our Springhill, Louisiana mill. Opened to the public, extensive recreational facilities have been established there.

Wham Brake, a 5,500-acre reservoir, was built as an impoundment basin for controlling waste water from our two mills in Bastrop, Louisiana. It is an excellent waterfowl shooting area and is open to the public with minimum restrictions.

Natural lakes also attract fishermen as well as campers, water skiers and countless others. Silver Lake, on our property in Georgia, is an excellent example of our fresh water fishing sites. It is open to public fishing but permits are required. Although this is only one example, there are many such lakes on IP lands available to the public for fishing.

One of the favorite outdoor pastimes is family and group picnicking. So far the Company has built, either independently or in cooperation with local groups such as 4-H clubs, 31 roadside parks on its lands in the South. These installations are not elaborate, but they do have the necessary facilities for comfortable picnicking. Some of them have running water, lights, and rest rooms. Naturally, we see that they are well maintained and kept clean.

This should give you a good idea how outdoor recreation has been incorporated in our forest management program. Unfortunately, however, not every one appreciates the welcome sign on Company constructed park facilities. We have had instances of vandals smashing concrete tables, benches and grills, tearing out electric lights and breaking or stealing toilet bowls and seats. They use our signs for target practice and more than once the tires of our tractors and motor graders have been riddled. Some of our "guests," and I use the term loosely, even take property belonging to the logging crews. Others are careless with matches and campfires or even themselves, thus exposing us to loss and liability.

As one of our Regional Managers has said, "While none of this is colossal, it does occur in a rather consistent, steady flow. If we had more elaborate facilities, we would, no doubt, have more elaborate vandalism."

But for every one of these, there are hundreds of others who come, relax, enjoy themselves, and exercise due care. When they go, they take nothing but photographs or their legal limit of game and leave nothing but footprints and a good impression on the forester and landowner. These are the recreationists we enjoy having on our land.

In brief review, then, the forest industry definitely has a role in the over-all effort to provide recreational opportunities for our growing population. The ultimate success of this program depends not only upon the industries, but also upon the combined cooperation and participation of all landowners, both large and small, as well as the recreationists and legislators.

Most forest industry lands are available to the public for various recreational activities. This is well documented by a survey conducted by AFPI in 1960. I have copies of this survey with me if you would like one. Recently, the states of New York, Maine, New Hampshire and Pennsylvania enacted legislation limiting the liability of landowners who grant public access to their lands for recreational purposes. Similar legislation, if enacted by other states, should encourage more privately owned lands to be opened to the public.

It will take good, far-sighted planning to meet our country's future demands for wood and wood products and at the same time manage our forest acres to provide watersheds, game habitats, mineral production, and all various phases of recreation.

Every one of these needs is important. Each has its value, some direct and tangible and some intangible but just as real. To meet them, we must keep pace with the diverting of forest lands to purposes such as urban development, wilderness areas and reservoir construction, urging all landowners to put their idle acres to work in Tree Farms and to manage more efficiently the forest already in existence.

The greatest hope for success lies in proper forest management, based on true conservation which provides for the full utilization of all our natural resources.

WILDLIFE AS A MULTIPLE LAND USE IN FARMING OPERATIONS

By WILLIAM W. NEELY
Biologist
Soil Conservation Service

Members of this panel represent lands of the Federal and State forests, other public lands, and the large areas owned by the pulp and paper industry. These all have a valuable potential for outdoor recreation as an associated land use. But greatly exceeding these in vastness and interspersion, are the farm lands in private ownership. These are the lands that have provided most of the hunting for the public in the past. They are the lands which now have—and will continue to have in the future—the potential of supplying a large share of the hunting and fishing for the public as a multiple land use in farming operations, or as a primary land use. But, according to the present trend, the degree to which this potential will be realized will be the acceptance of outdoor recreation as *an income-producing land use* for the individual farmer. It is unreal thinking to assume he will personally undertake the cost, effort, and inconvenience to provide an outdoor recreational facility for free use by the public.

Reduced to utmost simplicity, any famland in the Southeast—even if misused—might be considered as "wildlife land" and thus having a multiple use for outdoor recreation. Depending upon the acreage and vegetation, there might be an occasional covey of bobwhite, a squirrel, a rabbit, or some other species which might be of a sportsman's interest. However, it is rare that such populations would merit consideration in meeting even present demands for hunting. If acceptable wildlife populations are to be produced as a multiple land use, planning and application of definite practices are required.

During the past 25 years, the Soil Conservation Service has developed a surprising number of techniques and practices designed to produce crops of fish and wildlife in conjunction with normal economical and good conservation farming activities. In addition, the SCS has developed other techniques for management of lands primarily for wildlife.

The results of recently completed SCS field trials in peach orchards is a good example of multiple land use practices to benefit wildlife. It is a standard practice to plant an annual cover crop on the sloping Piedmont lands in peach orchards to protect them from erosion. Why not use a cover crop that also produces a choice dove food? We tried it. From the experience so far, browntop millet is a satisfactory cover crop from the peach growers' standpoint. At the same time, the millet seed feeds large numbers of doves during the fall and winter. Some of the seeds have hard seed-coats which resist deterioration and these furnish dove food the year 'round. The peach trees contribute to sporting dove shooting during the open season.

A long-standing example of multiple land use in crop fields to favor bobwhites has been the use of food plantings along field borders. The edges of a field adjacent to woods does not profitably produce crops because of the shading and sapping effect of the trees. However, choice quail foods as bicolor lespedeza and tickclovers are tolerant to these edge conditions. A strip 15 feet wide and 400 feet long can easily furnish enough food for a covey of bobwhites.

Although grazing has often been considered as detrimental to the welfare of most kinds of wildlife, actually certain types of grazing can be used to benefit