It is realized that there will be differences of opinion as to the intensity with which the several uses in a multiple-use program should be carried out. There will be differences of opinion as to how each use will fit into the overall picture. Some of these differences can be more easily resolved than others. These differences of opinion, or perhaps disputes, in some cases should be regarded as "growing pains" in the evolution of a logical land management policy for these areas. As Howard Miller, formerly of the U. S. Fish and Wildlife Service and now with the U. S. Forest Service, has said: "In the final analysis, coordination between timber and wildlife—indeed between all forest resources—will be no better or no worse than the thinking and the attitudes of the men who prepare and execute the silvicultural prescriptions."

The key to any multiple-use program is coordination. This is true whether the job is one within a single organization or whether it involves cooperation with other agencies.

We know that adjustments will have to be made. People tend to react differently when confronted with a new problem or situation. At one extreme we have those individuals who build a wall that cannot be broken down. Others accept blindly.

We will need help from biologists and wildlife management specialists to guide us in developing the wildlife facet of a multiple-use program for these lands. We expect to call on our State Wildlife Resources Commission for a large part of this help. We hope to coordinate timber production, wildlife management and other multiple use concepts. Coordination is the hinge on which this multiple-use gate will open.

MULTIPLE USE ON THE NATIONAL FORESTS

By R. J. COSTLEY
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The fact that all National Forest resources are normally available for use is sometimes disturbing to those whose interest in these Federal lands is primarily the recreational opportunities they afford. Usually this is because they are led to believe that non-recreation uses are a hazard to recreational values. On the other hand, those whose principal interest lies with other National Forest uses sometimes become concerned over the "threat" they see in the accelerating use of the National Forests for recreation. These fears are usually groundless. They arise from not understanding—or misunderstanding—the basic precepts guiding the administration of the National Forests; from unfamiliarity with the way in which the various National Forest uses are coordinated.

Many will agree that one has only to consider the resources used and the many users involved; and then contemplate the future increases in both uses and users that are virtually certain, in order to have a fairly clear picture of the complexity of National Forest administration. Unfortunately, there are also many who do not appreciate the complexities involved.

At first glance a Forest Ranger responsible for a 100,000-acre Ranger District doesn't seem to have an overly complicated job of resource use coordination. But if that Ranger District includes the headwaters of a major river feeding a reservoir that supplies water to a specialty paper mill, and also attracts 50,000 or so fishermen, water skiers and speed boat enthusiasts annually, the task of the coordination of uses begins to look somewhat complicated. And if that watershed is also the range of uncounted numbers of wild hogs, and a deer herd that attracts 1,500 hunters every fall, more of the complexities of the job become uncomfortably apparent. Add a traditionally high forest fire hazard, a Boy Scout summer camp, a couple of sawmills depending upon the District for their logs, a dozen overused camp and picnic sites, a designated Scenic Area, 25 summer homes and a couple of commercial resorts under special-use permits, a winter sports area in a zone of uncertain snowfall, a marginal coal mine, 6,000 acres of interior private land and rumors of uranium,

and the picture of the problems of resource coordination confronting the District Ranger looms large indeed.

There are over 800 National Forest Ranger Districts. On some the work load is not as diversified as on the imaginary Ranger District described above On many others it is a great deal more complicated. On all of them the planned coordination of the resource uses is a complex and often extremely difficult task.

Fortunately a tested system of management providing such coordination is in use. It directs the administration of the National Forests and has done so for more than a half century. During that time it has been strengthened and improved but its basic features have changed very little. This concept of land stewardship and resource utilization, this system of wild land management, the Forest Service refers to as MULTIPLE USE.

As a term, Multiple Use is probably not too old. But contrary to public opinion, as a concept supporting a system of wild land management, it is not new. Also even though it is often so ascribed, the concept did not originate with the Forest Service.

There is no doubt that Multiple Use was one accepted philosophy of public land stewardship in 1905 when the responsibility for the administration of the Forest Reserves was transferred to the Secretary of Agriculture and he wrote his now historic letter of instruction to the Chief Forester. In charting the direction that the newly organized Forest Service was to take, this letter opened new horizons. In recognizing that social as well as economic values were involved it expanded the opportunity for all uses of the land. Concern for the future was clearly indicated. One sentence from that letter became the guilding principle in the management of the Reserves—soon to be known as the National Forests. It is:

> "In the management of each Reserve, local questions will be decided upon local grounds; the dominant industry will be considered first, but with as little restriction to minor industries as may be possible; . . . and where conflicting interests must be reconciled, the question will always be decided from the standpoint of the greatest good of the greatest number in the long run."

The intent of the letter, and its prompt implementation demonstrated that Gifford Pinchot, the first Chief of the Forest Service, and President Theodore Roosevelt—the architects of the National Forest System and the Forest Service as an organization—were forceful advocates of the conservation of natural resources through their planned use as opposed to the philosophy of their preservation without use. Today's management of the National Forests strongly supports that same basic principle—conservation through planned use.

The Forest Service's pulling together of more than a half-century of experience in following the charter of the Secretary's letter, its gradual formalization of both the planning and administrative procedures and measures necessary to do this, and the final evidence of public acceptance and approval culminated on June 12, 1960, when the President signed P.L. 86-517, better known as "The Multiple Use-Sustained Yield Act." With this Act the Forest Service has a statutory directive to manage National Forest lands for the sustained yield of all the multiple uses named. No longer *may* it so manage them—now it *must.*

Multiple Use management is not limited to the National Forests. Indeed, it is in successful operation on many other lands—both public and private.

Planning the Multiple Use administration of any area follows a basic precept that the management prescription will be fitted to the specific factors affecting the situation on that area. The management direction charted for one area may differ significantly from that charted for other areas. Still all of the areas may be managed fully within the Multiple Use concept.

Many factors affect the measures called for in Multiple Use prescriptions, the specific objectives of the landowner usually being most important. If the land is privately owned the controlling objective is almost always the making of a profit. If it is publicly owned, the statutory responsibilities of the administrative agency are controlling. Thus, the direction of Multiple Use management set under different ownerships may vary appreciably.

While the needs of those depending upon their resources are highly important in setting over-all objectives for the management of the National Forests, other factors come into play. Some may be of over-riding importance

in one area and of minor significance in others. This is why there is much truth in the cliché that Multiple Use means different things in different places, or different things to different people. And this is why so many have faltered in their efforts to satisfactorily define Multiple Use.

There are many definitions of Multiple Use. Some are illusive literary masterpieces. And some are succinct and legally binding. Almost all of them fit *some* situations. None of them fit *all* situations.

The typical Forest Ranger practices Multiple Use without worrying about definitions. He knows he must make sure that the timber, grass, water, wildlife, fish and other recreation and scenic resources for which he is responsible are used in the best possible combination to meet the needs of all American people—now and in the years to come. He knows it is not necessary for every acre of his District to be used simultaneously for all the possible uses which might be made of it, but rather that somewhere on his District all or most of the resources will be utilized. He knows his planwise coordination of the uses is necessary. He is not surprised when confronted with changing needs that call for changes in plans, and redirection of management based on the changed plans. He also knows that in making his coordinating decisions he must consider both the tangible and the intangible values of all the resources and needs of all of the users, and not necessarily the use or combination of uses that will yield the greatest output or the greatest financial return to either the users or to the Government.

This Ranger knows that to successfully manage his District under the principles of Multiple Use he must:

1. Deliberately and carefully plan the integration of the various uses so they interfere with each other as little as possible and supplement each other as much as possible.
2. Skillfully adjust the land resources and their uses into a pattern of harmonious action to achieve over-all objectives for the area being managed.
3. Coordinate existing and potential uses so that the benefit to the people will be greater than would be the sum of the individual uses were they not so coordinated.

Thus, fundamental to understanding Multiple Use management is the knowledge that (1) it requires conscious planning; (2) it is directed primarily at satisfying the needs and desires of people rather than full development of a resource; (3) its end objective is an increased and harmonious yield of products and services from a given area while maintaining its resource productivity.

Practically all Multiple Use management is dependent upon decisions which involve some facet of the determination of priorities between uses. Recognizing priorities—making sure that equal consideration is given to all resource needs and all resource uses—is really a planning process. And planning is what makes Multiple Use work—*it never just happens.*

The successful Multiple Use decision-maker must have a professional knowledge of the local significance of ecological factors—soil, water, vegetation and climate. He must understand the complex inter-relationship of animal life including people, and the relationship of both their needs and their wants. He must be equally sensitive to economic and to social values. Equating direct and intangible values is commonly necessary. Values subject to mathematical measurement must frequently be weighed against those which are completely subjective. Values which can be seen must frequently be balanced with values which can only be felt. Doing this is solely a judgment process. And that judgment must be based upon an awareness and understanding of the culture in which the planner lives; a sensitivity to both public needs and wants and to the economic and social values people place upon resources and services—not only as the situation now is but as it might be expected in the future.

To back up their training, experience, perception, and other judgment factors, most Multiple Use planners are normally guided in their analyses by a locally prepared checklist of tested criteria which serves as a yardstick against which they can evaluate the alternative decisions they may reach. These criteria vary with local situations, but invariably among them are at least these factors against which a decision can be matched and appraised:

1. Does it comply with the applicable laws and regulations?
2. Does it comply with established goals and programs?

3. Are the uses and developments provided for, compatible with each other, and with the broad objectives set for the area involved?
4. Is the land suitable for the particular use or combination of uses indicated?
5. Will the use enhance or at least permit maintenance of land productivity?
6. Have all the tangible as well as the intangible and the social as well as the economic factors been considered?
7. Have both the current and the future needs and desires for particular resources of the area been considered?
8. Have all feasible opportunities to integrate orderly development of several resources been considered, and has it been done in such a way as to place emphasis in accordance with specific objectives?
9. Has full advantage been taken of professional knowledge, research findings, and experience as it relates to particular resources?
10. Has full consideration been given to local economy, public attitudes, and legislative climate?
11. Have the programs and activities of other agencies and organizations been taken into consideration?

Normally there are other factors relevant to special situations and all must be considered in any situation analysis, but usually only a few are pertinent in particular situations. One criterion is rarely conclusive in itself. Choices are seldom black or white—yes or no—and frequently they offer a range of reasonably acceptable ways of doing things. In the final analysis the one time-tested criterion usually comes into play: will a decision prove best *"from the standpoint of the greatest good of the greatest number in the long run"?*

I know that most of you are primarily interested in how recreational values, and decisions affecting recreation uses, fare in the Forest Service's Multiple Use planning process. The answer is that under the Multiple Use-Sustained Yield Act recreation is established by statute as a co-equal National Forest activity. Hence, recreation use in the planning process is normally treated in exactly the same way other uses are treated. Never is it automatically less important than any of the other uses, and only infrequently is it more important than other uses.

Because the Forest Service considers outdoor recreation of some kind to be part and parcel of the function of all land use, and only infrequently the sole function of a specifically chosen area of land; and since the recently completed National Forest Recreation Survey indicates that there will be sufficient opportunities available to meet most recreation demands in most places as far in the distance as the year 2000, no particularly difficult coordinating decisions are anticipated.

The circumstances prevailing upon a given area necessarily determine whether recreation shall be dominant, equal or subordinate in relation to other forms of use. If such a choice must be made, major timber, grazing or water values are not often modified to favor minor recreation values. On the other hand, major recreation values are never sacrificed to minor timber, grazing or water values. Where recreation and other forms of use seem to be incompatible the first step of coordination is to determine if more careful planning will not secure optimum utilization of one resource with a minimum impact upon the other. For example, in the harvesting of timber, the plan-wise leaving of protective strips along roads, and surrounding parks and campgrounds, may make it posible to utilize practically all the marketable timber without impairing the scenic or recreational values involved. In a like manner protection of a choice camping site from grazing during the summer vacation season may make it possible to graze that same site before camping begins or after it ends, or the installation of special sanitary facilities may remove objections to the recreational use of a municipal watershed.

Fortunately most combinations of National Forest uses—including outdoor recreation—are inherently compatible. Many others can be made compatible, or partially so, through modifications in intensity, place or time of operation. It is the Forest Service's experience that there are relatively few conflicts between resource uses that cannot be reconciled through skillful planning—and the cooperation of users.

If, however, after all possible efforts have been made to prevent a conflict between two forms of use and it cannot be resolved, then that use of the greatest importance takes precedence over the others. Where recreational values

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