THE LITTLE ROCK DISTRICT, CORPS OF ENGINEERS, AND FISH AND WILDLIFE

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I am pleased to have this opportunity to participate on your program and I sincerely hope that I will be able to make some contribution, however small it may be, toward more effective coordination between the Corps and fish and wildlife interests.

I have been actively engaged in the fields of recreation, fish and wildlife, and soil and forest conservation for almost 25 years. I am at present the *Head* (as well as the foot) of the Biology and Conservation Section of the Operations Division of the Little Rock District Office, Corps of Engineers. I also have occasional assignments with the Planning and Reports Branch in the Engineering Division, relative to coordination of projects in the planning stage with conservation interests. I have maintained membership in the International Association of Game, Fish, and Conservation Commissioners for the past 19 years. However, this is the first opportunity that I have had to attend one of your Regional conferences; and before I start "swinging" at the subject which has been assigned to me, I would like to go on record concerning the importance of these regional meetings. This importance stems from the fact that regional meetings provide opportunities for attendance by technicians from State organizations. These are the men who actually roll up their sleeves, put on their boots, and do the work. They are the people who profit most by interchange of ideas and comparisons of results. Restrictions of travel and shortages of funds prohibit most of these people from attending the major national conferences.

Before I discuss the activities of the Little Rock District of the Corps of Engineers relative to fish and wildlife, I believe it will be in order for me to tell you about the District and the projects now being operated by the District.

The Little Rock District is within the Southwestern Division. It includes the central and north central portions of Arkansas and a rather wide strip of the southern portion of Missouri. We now have 3 reservoir projects in various stages of construction and are operating 5 completed projects. Of these projects now in operation, Norfolk and Bull Shoals are situated partially in Arkansas and partially in Missouri and are operated for flood control and hydroelectric power. The remaining 3 projects—Clearwater, Nimrod, and Blue Mountain—are for flood control. The Vicksburg District, Corps of Engineers, also operates two reservoirs in Arkansas—Ouachita and Lake Greeson.

The development of our rivers has only begun. The pressures of our rapidly increasing population have made us aware of the basic necessity for development and coordinated management of our water resources. This water problem accents the need for cooperative planning and cooperative use of water. All of you are aware of the importance of the recreational use of water. The reservoirs in the Little Rock District have been of almost immeasurable benefit to outdoor recreation, particularly that provided by fishing. Millions of people from several states in this general area visit these Corps projects each year and the number is ever increasing. As a matter of fact, visitation to these 5 projects during 1955 was more than 3,100,000. More than 566,000 of these people fished in these reservoirs and more than 190,000 boat-rental days were recorded. These Corps of Engineer reservoirs together with trout habitat created by cold water releases through the Norfolk and Bull Shoals dams were largely responsible for the fact that in 1955 Arkansas was only exceeded in nonresident fishing license sales by four other states. Three of these states—Minnesota, Wisconsin, and Michigan—are "lake states," and the fourth, Tennessee, has more reservoirs than Arkansas. The fishery benefits of these projects have been incidental for the projects were planned for other primary purposes; but these benefits have not been accidental, for the Corps is always concerned in enhancement of all beneficial aspects of such projects.

The Little Rock District has had an important part in the establishment of policy and operating procedures which have been adapted Corps-wide in the

interest of fish and wildlife benefits. We are proud ot this fact. However, we do not claim that our leadership has been due to a clearer understanding of the many and complex problems, but it was a natural result which stemmed from the fact that the Norfolk Reservoir was one of the very first large reservoirs constructed by the Corps. Some of these beneficial policies, procedures, and fish and wildlife accomplishments were initiated in this District long before the enactment of Act "732", the Coordination Act. All of them are the result of frequent, free, and easy liaison with representatives of fish and wildlife agencies of the States of Arkansas and Missouri and with the Fish and Wildlife Service.

I do not wish to bore you with statistics or detailed data concerning these fish and wildlife accomplishments and with acreages of reservoir lands which have been made available to the states. However, in order for you to realize the importance of these reservoir lands presently being utilized for wildlife purposes, you should have some idea of this program. Reservoir lands totaling over 9,000 acres have been made available to State fish and wildlife agencies of Arkansas and Missouri for wildlife management purposes by formal license agreements. In addition to lands covered by formal license agreements, the Arkansas Game and Fish Commission has been authorized to include an area of about 6,000 acres in the Nimrod Reservoir area in a State Game Refuge, and to develop numerous 1 to 2-acre plots on 3 reservoirs for the benefit of quail. Included in lands under formal license agreement are two outstanding projects on the Nimrod Reservoir area. One of these projects is an area of 1,780 acres, and the other consists of 812 acres which have been developed by the Arkansas Game and Fish Commission for migratory waterfowl. The larger one for ducks and public hunting and the other as a goose refuge. Those of you who can attend the field trip which is scheduled to begin Wednesday afternoon will probably see these projects at that time.

Headquarters buildings for Game and Fish Commission personnel have also been constructed on project lands on the Nimrod and Blue Mountain Reservoir.

So much for that—it is much more important, if this paper is to contribute toward more effective coordination and to facilitate future cooperative actions between the Corps of Engineers and the fish and wildlife agencies and interests, to tell you *how* these actions have been accomplished rather than to detail each individual item of accomplishment.

The key to effective cooperative action is to be found in free, and frequent discussion of mutual problems between you people and the Corps at State, District, and Project levels. Cooperative action and coordination—like prohibition are not obtained by legislation—but by the attitude of people. We must understand your problems so that we can determine if it is possible, within the framework of laws and regulations under which the Corps operates, to offer solutions to them. At the same time, knowledge of the laws and regulations by which the Corps is governed will be most helpful to you in working out some solution to your problems.

To my way of thinking, one of the most important and far-reaching actions beneficial to wildlife development and utilization of reservoir lands was conceived right here in Little Rock at the "shirt sleeve" field level by none other than Arkansas' Trut Holder. I refer to a modification of the Standard Lease Contract form which is used nation-wide by the Corps of Engineers in outleasing reservoir lands for agricultural and grazing purposes. This form was modified on 1 December 1948 so as to include provisions to require lessees of reservoir lands to cooperate with fish and wildlife programs, and to reserve the right for the public to hunt on such lands. I refer specifically to Condition No. 22 of the Standard Lease Form which reads as follows: "That the lessee will cooperate in programs for the management and improvement of fish and wildlife and in furtherance thereof the leased premises will be subject to free public use for fishing and hunting." Mr. Holder discussed this idea with me early in 1947 and the idea was formally presented to the District Engineer in the Commission's letter of 11 March 1947, drafted by Mr. Holder. Subsequent action initiated by this District resulted in the availability of more than 60,000 acres of reservoir lands in this District alone for public hunting and wide spread application of this policy has made many thousands of acres available elsewhere.

This is an outstanding example of the importance of mutual understanding of problems and of the maintenance of close liaison.

The concept of managing reservoir lands, outleased for agricultural and grazing purposes, in accordance with sound land use practices was initiated in this District. Implementation of the idea was made possible through the cooperation of the U. S. Soil Conservation Service, which was obtained at field level. The soil conservation idea was immediately approved by our Southwestern Division and has since become Corps-wide in application. Its benefit to upland game through the elimination of overgrazing is obvious. All planning criterion furnished by the Corps to the Soil Conservation Service emphasizes wildlife values.

Forestry management programs on reservoir lands have also been developed and are carried out with the cooperation of State and Federal forestry agencies. Prevention and suppression of forest fires is an important part of this program and successful action in this phase of forest management has been particularly beneficial to wildlife.

These policies and procedures—and many more accomplishments which have benefitted fish and wildlife—have been made possible and have been placed in effect through close and frequent liaison between the Corps and the agencies mentioned. I would like to point out that maintenance of adequate liaison and coordination requires constant attention from both parties concerned. The same principle expressed in the song: "It Takes Two to Tango" is also applicable in considering our mutual problems. Let me urge each State agency represented here to encourage your fish and wildlife technicians who are concerned with fish and wildlife management or development problems related to Corps of Engineer projects, to contact the Corps at project and District level for coordinated mutual study of these problems. I have heard State fish and wildlife technicians express the idea that the Corps is a big cold-hearted organization, one from which it is almost impossible to obtain consideration for fish and wildlife problems. I have had many personal experiences, representing the Arkansas Game and Fish Commission, and dating back to 1937, which disprove this fallacious idea. I know, first hand, that the Corps was effectively coordinating projects with Arkansas in 1939 for I was pleasantly surprised by the favorable consideration which was given to a recommendation which Arkansas made to the District Engineer at Memphis, relative to levee construction on the lower White River. We told them our problem. They worked out a satisfactory solution to it.

Certain factors have adversely affected coordination in the past. Among these factors are requests for project design or project operations, which are inconsistent with the purpose or purposes for which the project was authorized by the Congress, or which are physically impossible or without sufficient justification. Also, unfair and unwarranted criticism by fish and wildlife interests, and by irresponsible writers, has tended to build up resistance to effective coordination. To some of these writers, truth is much more of a stranger than fiction. Impossible recommendations and ideas cover a wide range, from drawing down the dead storage pool of huge hydro reservoirs for fishery benefits, when it would take 2 years to refill at about $1,000,000 a year in hydro benefits.

Then we have requests from down-stream fishing interests that releases from our flood control reservoirs be scheduled for weekends for the benefit which results to down-stream fishing areas—and of conflicting requests from reservoir fishermen and boat dock operators, who feel that any reduction in lake levels adversely affects fishing. I have copies of two letters in my files which I plan to have framed. One is a letter from a sportsman's organization at Piedmont, Missouri, requesting consideration be given to raising the water level in Clearwater reservoir approximately 12 feet beginning shortly before the opening date of the migratory waterfowl season. The letter was well written and biologically sound, for the requested operation would have materially improved the availability of food on the reservoir. It would also have flooded out several hundred acres of corn which had not been harvested. But the pay-off came the next day when a letter was received from Arkansas interests requesting that water be released from the Clearwater reservoir in sufficient volume to create overbank flooding on the lower Black River in Arkansas to enable the Commission

to flood several hundred acres of public hunting grounds in that area. Neither request gave consideration to conflicting interests or to the important fact that inflow into the reservoir at that particular time was totally insufficient to meet either request. We do not receive many such requests from Arkansas or Missouri. Mutual understanding of mutual problems, which can best be attained by close and continuous coordination at field level, will eliminate these situations.

As for the criticism—some of it has been deserved. But, you will find, if you will take time to learn the details, that much of it has been unfair and unwarranted. There is little that can be done to correct this situation as long as it is standard operating procedure on the part of some of our experts to use a microscope to search for possible fish and wildlife losses which may be caused by Corps projects, and at the same time to ignore or minimize benefits until these benefits finally bowl them over like a steam roller.

Act 732—the Coordination Act—requires coordination between the Corps and the Fish and Wildlife Service, and with the head of the agency exercising administration over the wildlife resources of the State. Coordination with the Fish and Wildlife Service is necessary and desirable. However, for the most part, recommendations made by the Service, other than those involving migratory waterfowl, are concerned with State-owned resources. Therefore, it is evident that a close relationship between the Corps of Engineers and the states concerned is most necessary and most important. For this reason I have repeatedly emphasized state relationship in this paper.

In conclusion, let me say again to the field men as well as to the State Directors—Study our projects—Tell us your views and problems. We'll listen.

NATIONAL FOREST GAME AND TIMBER

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When one thinks of the many species of wildlife and especially big game, he also thinks of the woods or forests. It is also quite natural to think of the related items of forest habitat, cover, and food supplies. In the South, the thought mostly involves hardwoods—whether they are small shrubs or massive oaks. The overall hardwood situation in the South [1] is rather interesting.

THE HARDWOOD SITUATION IN THE SOUTH

There are 178 million acres of commercial forest land in the South or 59% of the land area. 91.5% is private, 5.1% is national forest, and 3.4% is other public.

On the commercial forest land of all ownerships hardwoods predominate on 47%, the mixed oak-pine type on 11%, and softwoods (mostly pine) predominate on 42%.

During the last Forest Survey period of about 20 years the hardwood type increased 13 million acres, mostly at the expense of pine and mixed pine types. In Georgia alone the hardwood type increased by 2.9 million acres from 1935 to 1951. Another example—in east Texas during the last 20 years the number of pine trees increased 19% while hardwood trees increased 64%.

There is 154 billion board feet of hardwood sawtimber in the South or 47% of the total sawtimber. In addition, there is over 51 billion board feet of hardwood cull trees—they have no commercial sawtimber value. Cull hardwood trees of all sizes cover the equivalent of one-fourth of the total forest land area of the South. That condition significantly affects the economy of all the people.

There are 802 million cords of hardwood growing stock or 55% of the total growing stock. There is more hardwood than pine growing stock. There are 315 million cords of oak and 224 million cords of gum.

[1] As used herein the South includes Oklahoma, Arkansas, Tennessee, North Carolina, South Carolina, Florida, Georgia, Alabama, Mississippi, Louisiana, Texas.