

ponent of trees of less commercial value than the species most adaptable to the site. The important point is that both resources have more things in common than in conflict. We intend to follow this positive approach in planning the new look under our multiple use concept.

SOME ASPECT OF FISH AND WILDLIFE MANAGEMENT ON AN ARMY RESERVATION

By

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INTRODUCTION

Long known as the largest infantry training post in the world, Fort Benning Military Reservation, established in 1918, covers 182,000 acres. Of this, 170,000 acres are in Georgia and 12,000 in Alabama. Approximately 160,000 are suitable for fish and wildlife management. Because of impact areas, however, only 140,000 acres can be hunted or fished. Yet this acreage is seldom completely open for hunting and fishing because of troop occupation, range firing, and maneuvers.

Prior to 1961 a fish and game management program for the reservation was in effect. Frequent change of personnel and lack of continuity, however, precluded establishment of a long range fish and game management program.

In January, 1961, the junior author was employed as full time civilian wildlife manager for the reservation. A complete survey of forests, fishing waters and wildlife resources was conducted. Following this, specific management plans were formulated and work was begun on a continuous fish and game management program.

Persons who can hunt and fish on the reservation are military personnel, their families, disabled veterans, retired military personnel, and civilian employees on the post.

No fee for hunting and fishing by military personnel and their dependents is required. The licensee, however, must have a current Georgia or Alabama hunting or fishing license.

Principal species of game for management and hunting include bobwhite quail *Colinus virginianus*, white-tailed deer *Odocoileus virginianus*, cottontail rabbit *Sylvilagus floridanus*, wild turkey *Meleagris gallapavo*, ducks and geese common in the area during migratory season, gray squirrel *Sciurus carolinensis*, and fox squirrel *Sciurus niger*.

RESPONSIBILITIES

Functions pertaining to fish and wildlife management activities involve many staff agencies.

Post Engineer. The Post Engineer is delegated responsibility for planning the development and management, budgetary programming and maintenance of the Fish and Wildlife Conservation Program within the Installation Natural Resources Management Program.

The Post Engineer helps maintain fire lanes, conducts controlled burning and provides seed, fertilizer and special mechanical equipment for the wildlife manager to carry out his program activities. The Post Engineer exercises jurisdiction over the wildlife manager and provides

the manager military personnel to carry out fish and wildlife management activities.

Provost Marshal. Military Police serve as game wardens and regularly check hunters and fishermen on the area and enforce regulations.

Special Service Officer. The special service officer provides shotguns, rods, reels, and boats when available and necessary.

Assistant Chief of Staff, G-3 keeps all personnel informed as to areas open daily for hunting and fishing. A map board denoting no-access areas of the reservation is maintained daily during the hunting season.

Post Surgeon conducts sanitary surveys of areas to determine disease and parasite outbreaks, water pollution, and inspects picnic and outing areas to maintain healthful conditions. The post surgeon checks for rabies in animals secured throughout the reservation.

The Staff Judge Advocate reviews hunting and fishing regulations to insure conformation with federal and state laws.

Post Information Officer publicizes activities on the management program and on hunting and fishing activities. The PIO also assists the wildlife manager in preparing reports.

The Fish and Game Association is a non-appropriated fund agency in contact with hunters and fishermen on the reservation. A civilian, with military aides, collects license fees, rents boats, sells bait, and maintains books on finances. A fish and wildlife conservation board of directors meets regularly to suggest changes in the Association and fish and wildlife activities.

Physical activities in wildlife management are coordinated between the Post forestry section and the wildlife manager.

Since early 1961 close cooperative relationships have been established with the following agencies associated with fish and wildlife activities: Georgia Game and Fish Commission, Alabama Conservation Department, U. S. Bureau of Sport Fisheries and Wildlife, U. S. Forest Service and The Cooperative Extension Service of Auburn University.

DISCUSSION

Fish and wildlife management on the Fort Benning Military Reservation is a complex operation. A prescribed burning program begun in 1961 is being followed. Clear cutting operations have created many openings in forests. Wherever possible, an open area of four to ten acres per "40" is being established. The hardwood timber conducive to food requirements of squirrels, deer and turkey, is primarily left uncut. In forest practices the authorized stand density is a maximum of 70 square feet basal area per acre at time of first cutting.

Sixteen artificial ponds are open to fishing. Total area covered by artificial impoundments is approximately 257 acres. Ponds and acreages are as follows: King's pond, 75 acres; Harp's, 60 acres; Weem's, 40 acres; Averett's, 16 acres; Hedley's, 6 acres; Patterson's, Schley's, and Stephen's, totaling 37 acres; a newly completed unnamed watershed development impoundment, 22 acres; and Russ pond, 1 acre. All but Russ pond have been stocked with largemouth black bass, bluegills, and redears. Russ pond is stocked with rainbow trout and channel catfish annually. Fishing, therefore, is a matter of "put and take." Of the 16 ponds only seven are intensively managed. Weed control is a major management function in all ponds. Trash fish—bullheads, longear sunfish, and green sunfish, etc.—are present in all ponds.

Plantings for game species comprise a great portion of management activities. During 1963, 1,100 acres were cleared, disked, and planted. Of this acreage, 450 acres are in permanent openings, 300 acres are in firebreaks, 250 acres in planted or disked strips. Around 60 miles of strips 50 yards wide have been created with a brush cutter in the sandy scrub oak terrain in the northeast corner of the reservation.

Forty thousand bi-color lespedeza plants were set out in 1963. More than 1,000 patches of bicolor lespedeza were established prior to 1963. Food patches range from $\frac{1}{4}$ to $\frac{1}{2}$ acre and many planted crops have been fertilized with basic slag at the rate of 1,000 pounds per acre.

Crops for game include, in addition to bicolor lespedeza, oats, crimson clover, and abruzzi rye for green fall grazing by deer and turkey; brown-top millet, various varieties of lespedeza, cowpeas, sorghum, and wheat are planted for seed. During the present year over 50 chufa patches were planted for turkey.

Until impoundment of water in the Chattahoochee River by the Walter F. George Dam, there was little incentive for waterfowl management. Creation of shallow water areas on the reservation has attracted waterfowl during the 1963-1964 hunting season. During the 1963-1964 season civilian residents of Columbus, Georgia, and adjacent areas flagrantly violated waterfowl hunting laws. During this period no clarity of jurisdictional authority by either Fort Benning Military Police or Georgia and/or Alabama game wardens for apprehending violators was established. This situation will be alleviated by a conference among responsible agencies before the 1964-1965 waterfowl hunting season.

Predator control is one phase of intensive management. Trapping is conducted only in certain areas to reduce heavy numbers of bobcats, foxes, and stray dogs. If for no other reason, control of stray dogs justifies trapping activities.

The turkey population, for unknown reasons, has suffered a decline the past few years, despite management practices directed toward this species. The senior author collected a number of turkeys from the Alabama side (12,000 acres) of the reservation from 1951 through 1961. Following complete cutting of all river bottom growth in areas now inundated by backwater above the Water F. George Dam, there has been little or no turkey sign on the Alabama reservation territory. Neither has there been reported any significant movement of overflow turkey population into Alabama outside reservation boundaries. One of our forestry officials believes a possible reason for the wild turkey decline may be the killing of turkeys attracted to bait. Baiting, however, should not be a factor because little or no baiting has been observed the past three years. No inception of blackhead or other poultry disease has been noted. Because of the severe penalties exacted by the Provost Marshal, poaching or illegal hunting of turkeys or any upland game species is trivial. This is indicated in that the Military Police game wardens noted no violations in turkey hunting during the 1963-1964 season. Evidence continues to indicate poor recruitment of turkey population; therefore, a spring shooting season of *gobbler only* will be allowed during the 1964-1965 season.

Funds for conducting the fish and game management program are realized from fees collected from voluntary membership in the Fish and Game Association and from appropriated funds, when necessary.

In addition to the normal functions in fish and wildlife management, picnic areas are being established for family use. An archery association is active on the post, and an annual bird dog field trial event is now in effect and actively sponsored by the Fish and Game Association. Personnel of the Fish and Game Association and assistants to the wildlife manager conduct regular classes on wildlife for youth groups on the reservation.

Regulations on hunting and fishing, insofar as possible, are correlated with regulations established by Federal, Georgia, and Alabama authorities.

While there has been no attempt to accurately survey total hours of hunting and fishing each year, there definitely is a tremendous increase in both hunting and fishing activities. In 1962, cards issued for voluntary membership in the Fish and Game Association totaled 4,456; in 1963 more than 6,300 were issued—a 29 per cent increase.

The deer kill has shown a strong upsurge annually the last three years. In the 1963-1964 season deer of either sex were legal game from November 1 through January 1. All deer killed were weighed at the Association headquarters and ages of deer were determined by dentition examination. In Alabama, antlered bucks only could be taken, because of the state law prohibiting shooting of unantlered deer. At first it was thought deer harvest was excessive, but subsequent checks on the Georgia area of the reservation indicate plentiful deer remaining. A routine survey on the Alabama side indicated the area is sustaining a heavy population. The wildlife manager believes over-shooting of deer is better than under-shooting, mainly to keep deer in bounds with their food supply. It is believed that had not the either-sex deer law been established on the portion of the reservation in Georgia, the exploding population of deer would now have destroyed its future supply of food for a decade or longer and there very likely could have been serious outbreaks of diseases and parasites in deer.

Quail hunting has been extremely successful. It is estimated that, in range suitable for quail, there is a covey for every 40 acres. This high population has apparently been maintained because of controlled burning, patch planting and maintenance of open areas for bobwhites.

For several years special crops were planted for mourning dove shoots. However, this practice was abandoned because of (1) confusion among hunters in the interpretation of federal regulations and (2) high cost of establishing "dove fields."

Cottontail rabbit hunting is well substantiated by the number of hunters afield in season with beagle hounds.

It must be remembered that Fort Benning—as well as any other military establishment—will not alter land use appreciably as compared to changes that take place on agricultural areas. Therefore ecology remains substantially the same year after year; however, changes in military tactics may result in slight ecological changes.

Access to hunting areas has limitations. Because of maneuver tactics, firing, etc., certain areas may be closed to hunting and fishing at any time. The hunter, and to a lesser extent the angler, must determine if an area A, K, T, etc., is "open" for use the following day. Range Control, G-3, maintains a daily map board at Range Control headquarters and at Fish and Game Association headquarters denoting areas available for recreation. Certain impact areas, dangerous because of mortar and artillery projectile duds, are forever closed to all individuals.

Accidental firearms accidents are considered below average. In 1963 it is estimated 150,000 man-hours were spent with no reported accidents. Of the 300,000 man-hours spent fishing, only one accident was associated with this activity.

CONCLUSIONS

- (1) Military personnel and others make intensive use of all outdoor recreational facilities available to them on the Fort Benning Reservation.
- (2) Because of tremendous interest in hunting and fishing, there is urgent need for more intensive management of game and fish on the Fort Benning Military Reservation.
- (3) Directives from Department of Defense make it mandatory every step be taken to develop an over-all outdoor recreational program

SUMMARY

Intensive recreational use is made of Fort Benning's 182,000 acres. A full time civilian employee in fish and game activities has resulted in implementation of a long range wildlife management program. Management is a complex matter because of restrictions and limitations to access areas. Military agencies are assigned definite responsibilities in activities associated with outdoor recreation. Sixteen artificial ponds

cover 257 acres. Forestry practices are correlated with game management activities, including control burning. Food plantings for game cover 1,100 acres. Deer population and kill are high, but wild turkeys indicate a decline. Number of persons hunting and fishing on the reservation is increasing annually. Every element of wildlife management is being exploited for outdoor recreation.

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DEER AND TURKEY HARVEST (REPORTED KILL)

TABLE 1

Season	Deer	Turkeys	
1957-58	58	31 (Fall)	13 (Spring)
1958-59	75	27 (Fall)	18 (Spring)
1959-60	102	0 (Fall)	21 (Spring)
1960-61	72	7 (Fall)	19 (Spring)
1961-62	404	15 (Fall)	12 (Spring)
1962-63	529	40 (Fall)	8 (Spring)
1963-64	931	34 (Fall)	9 (Spring)

TABLE 2 (a)
 FISH AND GAME ASSOCIATION BUDGET
 FOR YEAR 1963 - 1964

INCOME	1st Quarter	2d Quarter	3d Quarter	4th Quarter	TOTAL
Memberships	\$2,500.00	\$5,200.00	\$ 300.00	\$7,000.00	\$15,000.00
Commission on License	200.00	400.00	100.00	500.00	1,200.00
Boat Rentals	600.00	200.00	200.00	800.00	1,800.00
Bait Sales	1,000.00	700.00	1,000.00	1,300.00	4,000.00
TOTAL	\$4,300.00	\$6,500.00	\$1,600.00	\$9,600.00	\$22,000.00

TABLE 2 (b)

FISH AND GAME ASSOCIATION BUDGET
FOR YEAR 1963-1964

	1st Quarter	2d Quarter	3d Quarter	4th Quarter	TOTAL
OPERATING EXPENSES					
Repair & Maintenance	\$ 700.00	\$ 400.00	\$ 500.00	\$ 500.00	\$ 2,100.00
Supplies for Field	200.00	200.00	200.00	200.00	800.00
Oil for Equipment	20.00	20.00	20.00	20.00	80.00
Gasoline & Diesel Fuel	250.00	250.00	250.00	250.00	1,000.00
Bait Expense	700.00	400.00	700.00	1,000.00	2,800.00
Salary	700.00	800.00	700.00	800.00	3,000.00
Office Supplies	20.00	20.00	20.00	20.00	80.00
Membership Badges, Etc.	—	—	700.00	—	700.00
Bond & Insurance	45.00	—	—	100.00	145.00
Utilities	75.00	75.00	75.00	75.00	300.00
Postage	8.00	8.00	8.00	8.00	32.00
Misc. Expense	40.00	40.00	40.00	40.00	160.00
TOTAL	\$2,758.00	\$2,213.00	\$3,213.00	\$3,013.00	\$11,197.00
CAPITAL EXPENSES					
POND MANAGEMENT					
Fertilizer	\$1,200.00	\$ 200.00	\$ 600.00	\$1,200.00	\$ 3,200.00
Lime	250.00	60.00	175.00	250.00	735.00
TOTAL	\$1,450.00	\$ 260.00	\$ 775.00	\$1,450.00	\$ 3,935.00

TABLE 2(b)—Continued

GAME MANAGEMENT					
Fertilizer	\$1,000.00	\$ 500.00	\$ 500.00	\$1,500.00	\$ 3,500.00
Lime	700.00	<u>100.00</u>	400.00	<u>250.00</u>	1,100.00
Seed	500.00		600.00		1,450.00
TOTAL	<u>\$2,200.00</u>	<u>\$ 600.00</u>	<u>\$1,500.00</u>	<u>\$1,750.00</u>	<u>\$ 6,050.00</u>
REPLACEMENT OF EQUIPMENT					
TOTAL FOR QUARTER	\$6,408.00	\$3,073.00	\$5,488.00	\$6,213.00	\$ 3,000.00
GRAND TOTAL					<u>\$24,182.00</u>