

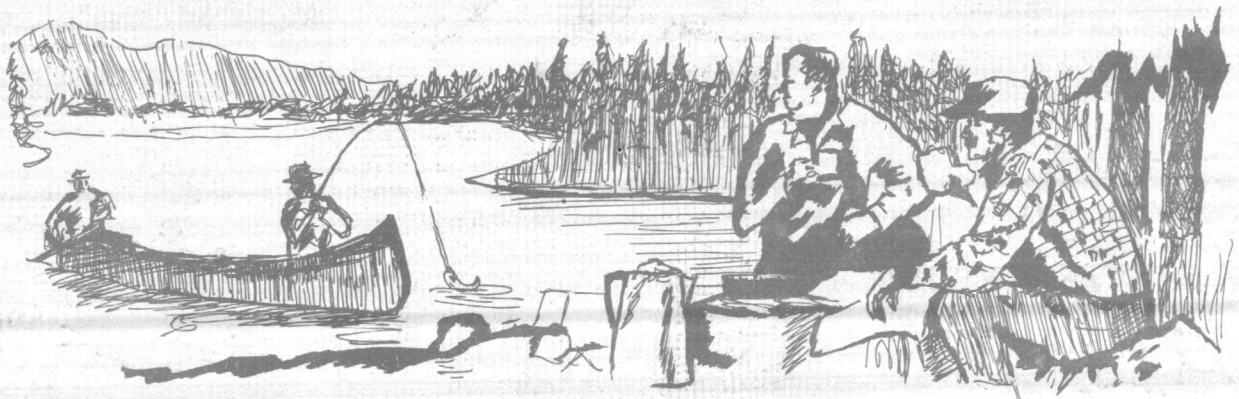


1970

CONSERVATION



NOMINATION AWARD REPORT



MARINE CORPS BASE CAMP LEJEUNE, N. C.



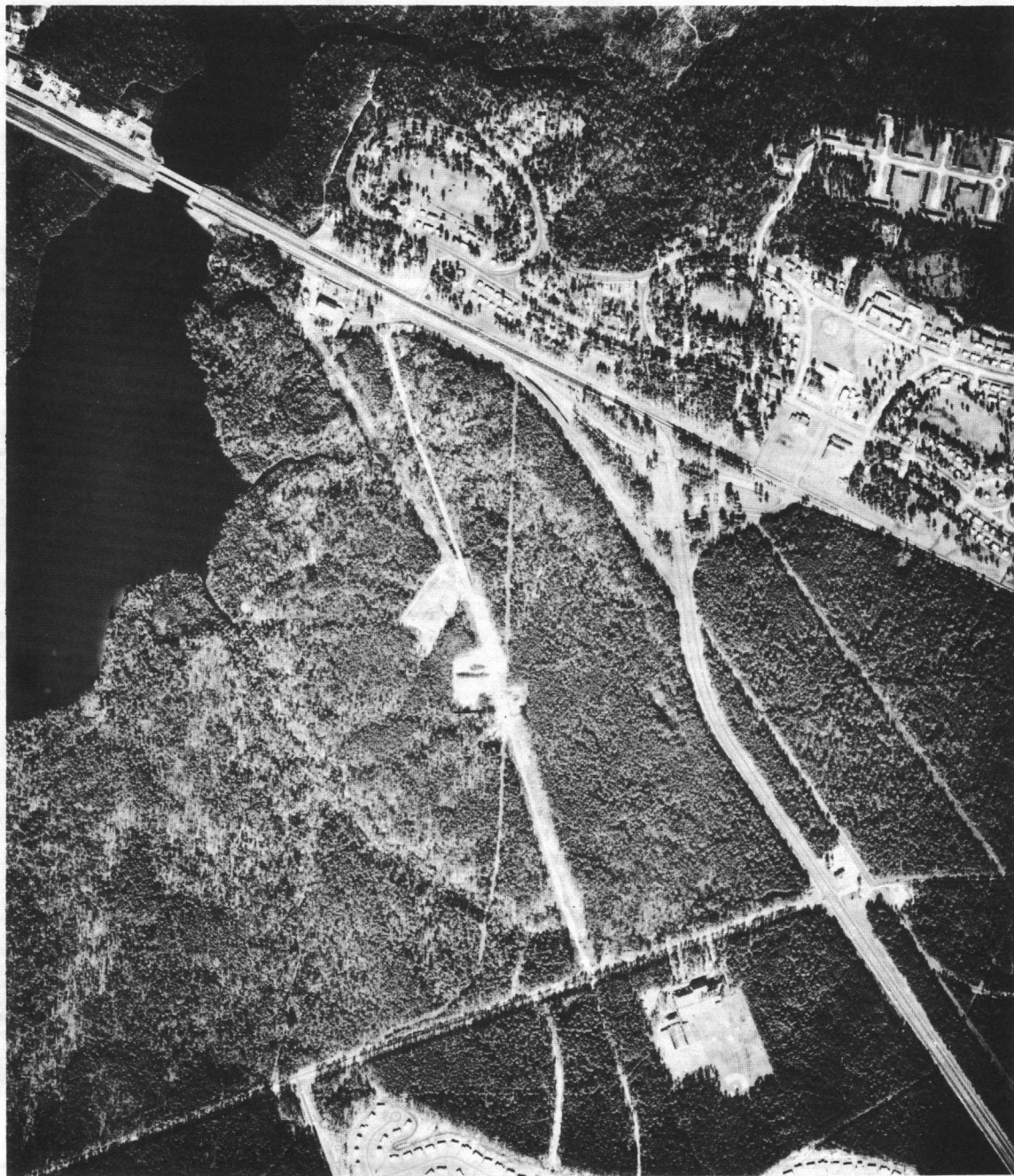


Conservation Pledge

I GIVE MY
PLEDGE AS AN AMERICAN
TO SAVE AND FAITHFULLY TO
DEFEND FROM WASTE THE
NATURAL RESOURCES OF
MY COUNTRY — ITS SOIL
AND MINERALS, ITS
FORESTS, WATERS,
AND WILDLIFE



TAKING A LOOK AT CAMP LEJEUNE'S
CONSERVATION PROGRAM



AERIAL VIEW OF ENTRANCE TO
MARINE CORPS BASE, CAMP LEJEUNE

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Excerpts from Base Order 1719.20B dated 6 Oct 1969
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MISSION

Marine Corps Base, Camp Lejeune, was established in 1941 and was named in honor of Lieutenant General John A. Lejeune. Camp Lejeune, the world's most complete Amphibious Training Base, houses three Marine Commands and two Navy Commands: Marine Corps Base; Force Troops, FMF, Atlantic; 2d Marine Division, FMF; Naval Hospital; and Naval Medical Field Research Laboratory.

The mission of Marine Corps Base, Camp Lejeune, is:

- a. To provide housing, training facilities, logistic support and certain administrative support for Fleet Marine Force units and other units assigned.
- b. To conduct specialized schools and other training as directed.
- c. To receive and process personnel as assigned and conduct individual combat training as directed.

Twelve miles of open coastline make Camp Lejeune eminently suitable for training Marine Corps elements of the operating forces. In addition to providing these facilities, Marine Corps Base also maintains and operates formal schools for engineer and support personnel.



TRAINING
INDIVIDUALS
FOR A
TEAM
EFFORT



PREFACE

Area Description

This section is concerned with the location and acreage analysis of Camp Lejeune. The topography, soils, climate, vegetation, and wildlife resources are briefly described.

Conservation Policy

This section defines the Base's official conservation policy. Federal and State coordination and cooperation with the Base are also covered. Objectives, as well as present and future plans, are outlined.

Committee for Conservation of Natural Resources

This section describes the membership and responsibilities of the subject committee.

Wildlife Management

Base wildlife resources, the objectives of wildlife management, and management techniques are discussed in this section. Wildlife openings, food plots, small game strips, dove plantings, the green-tree impoundment, the deer herd study, wild turkey research and management, hunting regulations, collection of scientific information, deer-auto accidents, and the wildlife management program evaluation are discussed in some detail.

Fish Management

This section describes fish resources, fish management, objectives, and management techniques currently in use aboard the Base. Pond reclamation, pond fertilization,

channel catfish feeding, stocking, shoreline development, seine sample analysis, and water chemistry studies are examined in this section.

Forest Management

Forestry management objectives and management techniques are discussed in this section. Timber harvest, Southern pine beetle control, Red Cockaded Woodpecker protection, site preparation, prescribed burning, and access road construction are described in some detail.

Multiple Use

The multiple use concept and its application aboard the Base are evaluated in this section. Hunting and fishing participation and harvest data, Rod and Gun Club activities, timber harvest, scouting activities, nature study, and the Base Special Services outdoor recreational program are discussed.

Clean Land - Clean Water

This section is concerned with the Base's anti-littering and cleanup campaign and the water pollution control system.

Conservation Education

This section deals with the Base's program of educating both military and civilian populations in the area of good conservation practices. Discussed are gun safety, water safety, the school conservation program, project transition, and National Wildlife Week 1969.

Achievement

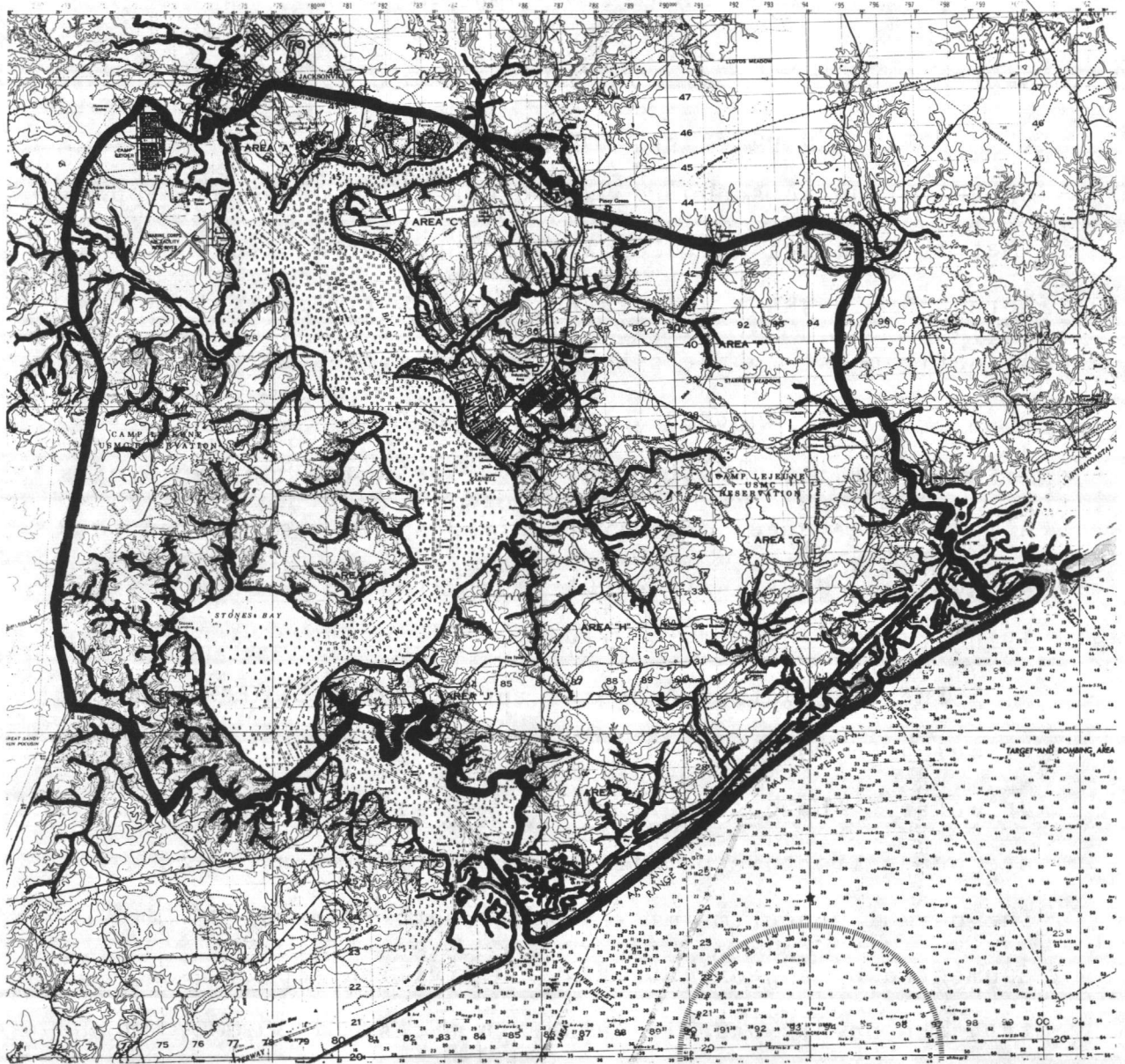
The Achievement Section describes three of the awards or commendations received by the Base and its conservation personnel in 1969. The Secretary of Defense Conservation Award, the North Carolina Wildlife Federation Award and the Base Forester Commendation are discussed.

Community Relations

In this section are described the reasons for the excellent community relations found in the area. Public access to the Base is outlined.



NATURAL BEAUTY...To the delight of the outdoorsman much of the Base has been left in its natural state.



CAMP LEJEUNE DRAINAGE MAP
Base boundary is indicated by heavy black line.

AREA DESCRIPTION-CAMP LEJEUNE

General

Marine Corps Base, Camp Lejeune, North Carolina, is on the Atlantic seaboard, south of Cape Lookout and approximately 50 miles north of Wilmington, North Carolina.

Irregular in shape, it extends some 15-1/2 miles from the Atlantic coast to the city of Jacksonville, North Carolina, on a Northwest-Southeast axis and approximately the same distance at its widest point on a Northeast-Southwest axis. A main water area, New River, divides the reservation into two unequal parts with about two-thirds of the land area lying to the east of the river.

The reservation contains approximately 110,000 acres of which 85,000 acres are hard land and 25,000 acres swamp or water. The base perimeter is 68 miles of which 12 miles are ocean frontage paralleled by the intracoastal waterway. The normal peacetime military strength is about 35,000 augmented by approximately 4,000 civilian employees. Military dependents usually number in excess of 30,000, on and off base.

Topography

Surface relief ranges from flat (marsh areas immediately adjacent to tidal creeks) to slightly rolling. The land is laced with deep wooded forests on the better upland range to inaccessible bottomland swamps and pocosins.

The terrain adjacent to the numerous small ponds and marsh areas is flat and woodlands extend to the very edge of ponds and marshes. The highest ridges are generally located through the central portion of the area. Principal watershed drainage areas are New River, Northeast Creek, Southwest Creek, French Creek, Bear Creek, and Duck Creek.

Soils

There are 21 different soil formations of varying structures ranging from sandy loams to fine sands and muck on the base, but the soil type of this "coastal plain" country is generally classified as sandy loam. Some of the soil is low in organic matter and fertility, but most of the land produces abundant crops of timber and food for wildlife.

In 1965, the Soil Conservation Service conducted a low-intensity soil suitability survey of woodlands on the reservation. That agency's staff wildlife biologist also rated the soils in this survey as to their game potential and fisheries possibilities. It is now possible to compare present timber stands with the appropriate soils-suitability map to determine optimum management. This plan is a valuable advisory in establishing vegetative cover programs and improved drainage as relates to requirements for improved fish and wildlife programs.

Climate

The climate ranges from long hot summers to mild winters. Average monthly precipitation and temperatures are illustrated in Figure 1. The average annual precipitation is approximately 47 inches. The average yearly temperature is 61 degrees, and the growing season is approximately 230 days. At times, severe tropical storms move up the coast and cause varying amounts of damage to vegetation and wildlife.

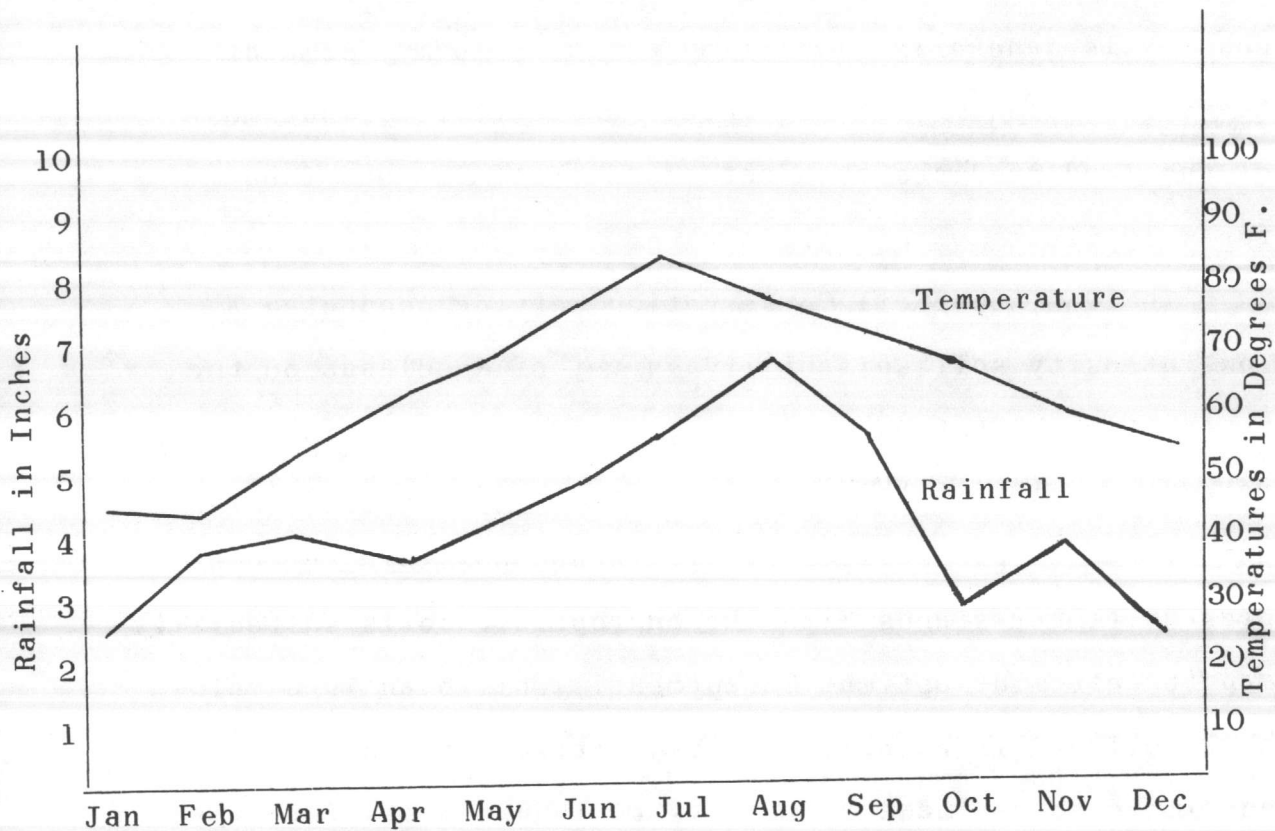


Figure 1. Average Monthly Temperature and Rainfall

Vegetation

The vegetation on the Base ranges from mixed and relatively pure stands of hardwoods and conifers (Photo 1) to extensive acreage of typical salt water and fresh water marshes (Photo 2). In 1969 approximately 60,000 acres were under forestry management (Figure 2). For a listing of some native plants common to Camp Lejeune that are useful to wildlife, see Appendix A.

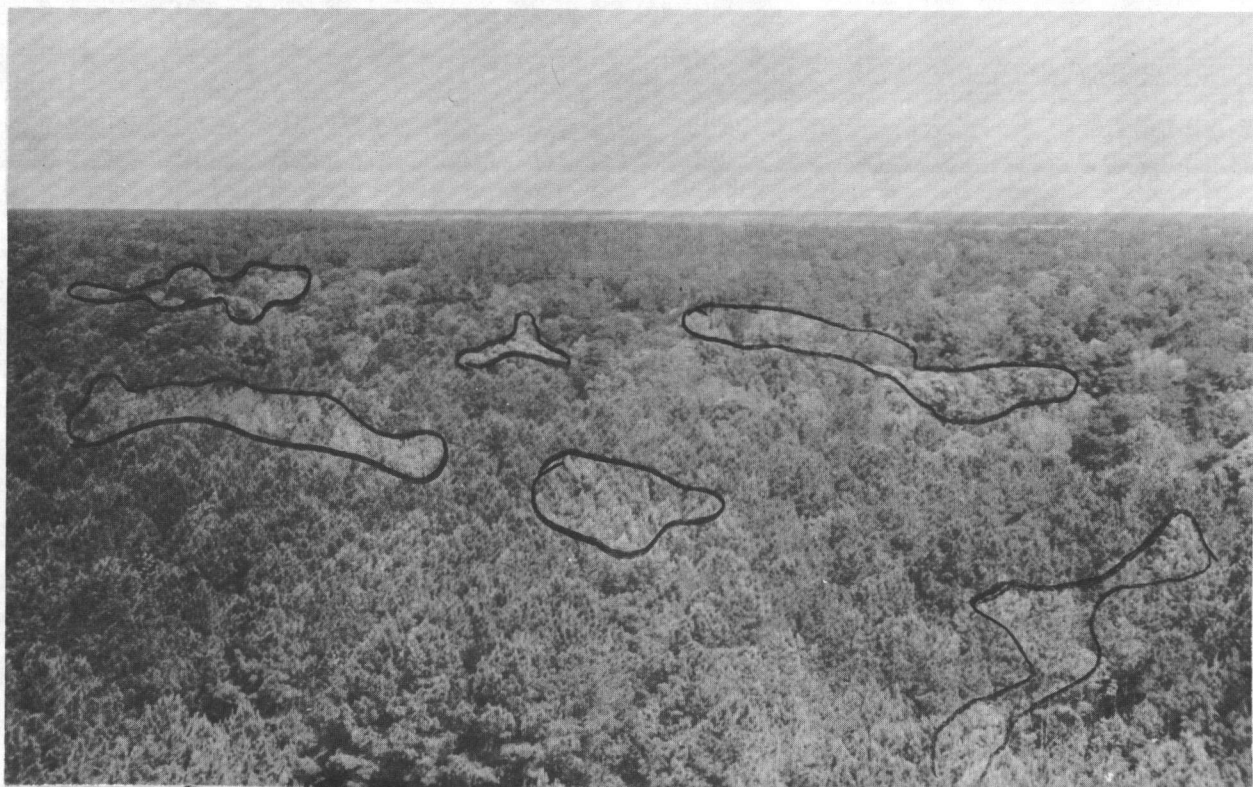


PHOTO 1. AERIAL VIEW...An area of old field pine with interspersed areas of hardwood. Very productive wildlife and timber area. Hardwood areas are encircled.

PHOTO 2. SALT WATER MARSH...Camp Lejeune abounds in highly productive estuary areas.



Wildlife Resources

Almost 95,000 acres of the reservation are currently under fish and wildlife management (Figure 2). This is considered the maximum number of manageable acreage due to housing, other buildings and firing ranges not available for management. The emphasis is not placed on increasing management acreage, but rather on increasing the quality of management on existing management areas. A listing of the wildlife species most common to Camp Lejeune is in Appendix B.

PRODUCTIVE ECOTONE....Highly productive border area between marsh and forest.



Approximately 16 acres of fresh water ponds (Photo (3)) and 14-1/2 miles of fresh water streams are available for fishing. New River is considered salt water and is the portion of the Intracoastal Water traversing the reservation in the rear of Onslow Beach. Seven miles of this 12 mile stretch of the Intracoastal Waterway are available for fishing. The banks of New River offer about 35 miles of shore area from which to fish. Appendix B contains a listing of some common game and nongame fish on the reservation.

ACRES UNDER MANAGEMENT

Under Management For	Acres
Fish and Wildlife	95,000*
Forestry	60,877
Soil and Water	110,000
*Approximately 25,000 acres of water or marsh	

Figure 2. Analysis of Acreage

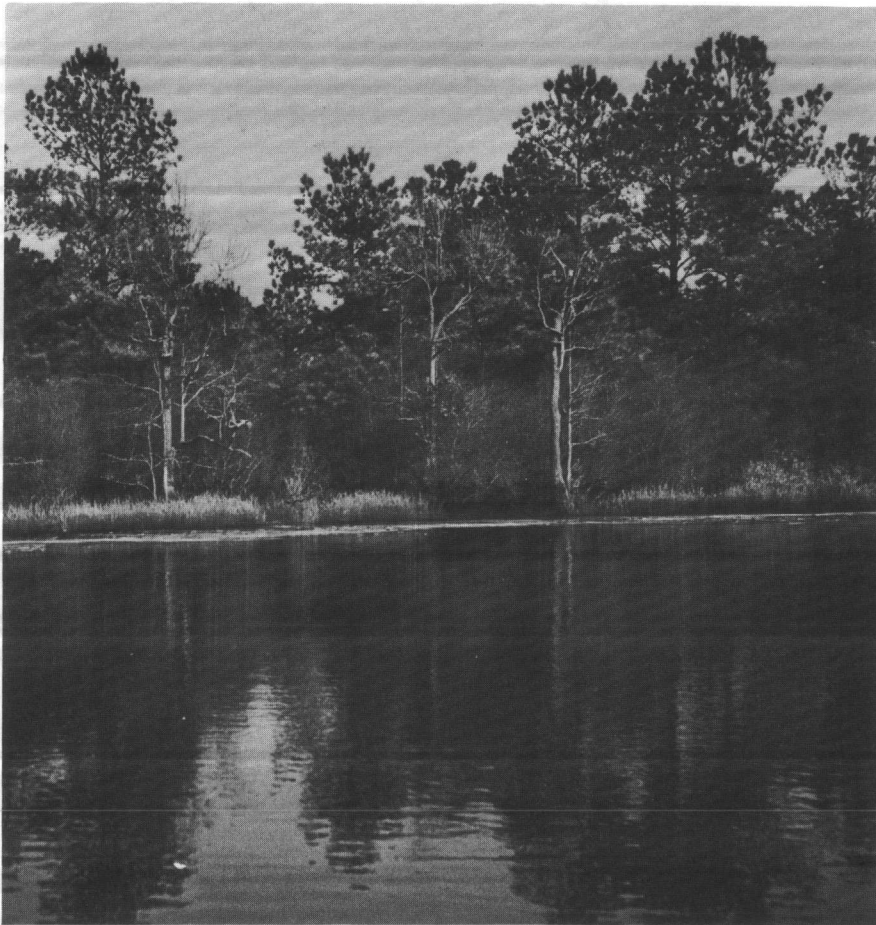


PHOTO 3. CEDAR POINT POND..... One of the fresh water ponds aboard the Base. These ponds are under intensive fish management.

CONSERVATION POLICY

General

It is the continuing policy of this command to restore, improve, and preserve the fish and wildlife resources of the land and waters of this Base to the maximum extent possible in the public, as well as the military interest; to encourage and give incentive to fish and wildlife activities of the Base; and to provide within manageable quotas, the control of public access to the fish and wildlife resources of the Base on a first-come, first-served basis when such can be accomplished without impairment of the military mission. Additionally, it is a command policy to work in close coordination with state and federal authorities in planning, developing, maintaining, and coordinating wildlife, fish and game conservation, forestry management, and rehabilitation on the Base.

Coordination and Cooperation

In 1963, Marine Corps Base officials executed a Cooperative Plan with the Department of the Interior (Bureau of Sport Fisheries and Wildlife, U. S. Fish and Wildlife Service) and the State of North Carolina (Wildlife Resources Commission) for the conservation and development of fish and wildlife. Representatives of these agencies have made a number of visits to Camp Lejeune during the past year rendering considerable assistance and greatly enhancing the conservation program.

Even closer liaison is maintained with state game law enforcement officials. In addition, a cooperative fire-suppression agreement has been established with the North Carolina Department of Conservation and Development. This agreement is a part of the fire plan for the state.



COOPERATION IN ACTION...Department of Interior delivers fish to stock a fresh water pond on the Base.

Objectives

The management and conservation effort on the Base is directed toward the accomplishment of the following objectives to the maximum extent consistent with funding priorities and military requirements:

- a. Protection and preservation of wildlife, soil, beneficial forest and timber growth, and beneficial vegetative cover.
- b. Utilization and care of the natural resources in the manner best suited for the present and future military requirements, and the use of military personnel and the public.
- c. Provision for maximum multiple use and optimum ecological development of land and water areas and access thereto.
- d. The continued development and harvest of timber stands, consistent with wildlife management and military requirements.
- e. Improvement of forest and water areas for recreational purposes.
- f. The improvement of the aesthetic value of streams and woodlands.
- g. Achievement of effective water pollution control.

Present and Future Plans

The basic conservation plan encompasses the following:

- a. Continued conservation and improvement of natural resources.

b. Development and maintenance of artificial wildlife habitats required to support the available natural resources.

c. Development and maintenance of projects for the control of predators.

d. Development and supervision of plans for the harvesting of fish and wildlife species which will preclude over-population or extermination of any species.

e. Development and supervision of projects for introduction of new fish and wildlife species and to supplement or replace natural species, when it is in the best interest of conservation.

f. Development and supervision of plans to ensure compliance with local, state, and federal laws and regulations pertaining to the conservation and harvesting of fish and wildlife.

g. Establishment and maintenance of a green tree waterfowl impoundment.

Within the framework of the above, certain projects, such as controlled burning, brush clearing and elimination of poor, old trees, have been programmed for accomplishment in annual increments. Other projects, such as establishment of food plots, pond clearing, treatment and stocking, require reevaluation and annual incrementation for achievement of long-range objectives in an orderly manner, within means available.



1969 Annual Conservation Meeting with N.C. and Federal Wildlife Officials

1st Row:(L toR) Mr. F. Richardson, Fishery Mgt Biologist, Atlanta; MajGen R. McC. Tompkins, Commanding General, MCB; Col F. O. Olson, ACofS, Facilities, Chairman, MCB Committee for Conservation of Natural Resources. 2dRow:(L toR) SgtMaj J. C. Kull, MCB SgtMaj; Col C. H. Sullivan, Chairman, Sportsman Promotion Committee; Mr. H. E. Sides, N.C. Wildlife Supervisor; Mr. C. D. Peterson, Base Wildlife Tech; Mr. G. L. Barnes, N.C. Wildlife Biologist; Mr. J. Larimer, Wildlife Enhancement Specialist, Atlanta. 3d Row: (L to R) LtCol L. E. Keown, Base Conservation Officer; Mr. C. Russell, Base Forester; Lt T. W. Foster, Force Troops Representative; LtCol W. J. Welch, USAF, Base Veterinarian; Mr. R. C. Beam, Staff Forester, Atlantic Div., Naval Facilities Engineering Command; LtCol L. M. Duffy, Base Maintenance Officer; Col L. J. Bradley, 2d Marine Division Representative; LtCol J. C. Klinedinst, Base Training Facilities Officer; Mr. Paul S. Metters, N.C. Wildlife Patrolman; Mr. T. R. Mitchell, N.C. Game Division; Maj J. R. Gardner, Chairman Fish & Wildlife Committee

COMMITTEE FOR CONSERVATION OF NATURAL RESOURCES

General

The Committee for Conservation of Natural Resources was established in 1962 to assist and advise the Commanding General in implementing the Department of Defense and the Secretary of the Navy's instructions on conservation and management of natural resources.

Organization

The committee was reorganized as of December 1968. This reorganization updated and improved the effectiveness of conservation management and coordination.

Responsibilities

The responsibilities of the committee encompass general cognizance over any phase or facet of the Natural Resources Conservation Program with recommendations to the Commanding General for implementation, instructions, procedures, regulations, and programs. For a detailed description of these responsibilities, see Appendix C.

Colonel FREDRIC O. OLSON
1969 Chairman
Committee for the
Conservation of Natural Resources



ORGANIZATION

**Committee for Conservation of
Natural Resources, Camp Lejeune**

Chairman:
Assistant Chief of Staff, Facilities

Members:
Base Special Services Officer
Base Training Facilities Officer
Base Conservation Officer
Base Security Officer
Base Maintenance Officer
Base Veterinarian
Base Forester
Base Sergeant Major
Base Wildlife Technician
Representative, 2d Marine Division, FMF
Representative, Force Troops, FMFLant
President, Rod and Gun Club

**Committee on
Fish and Wildlife**

Chairman:
Base Security Officer

Members:
Rep, 2dMarDiv, FMF
Base Wildlife Technician
Base Veterinarian

**Committee on
Sportsman Promotion**

Chairman:
Base Special Services
Officer

Members:
Base Sergeant Major
President, Rod & Gun Club

**Committee on Forestry,
Soils, and Habitat
Improvement**

Chairman:
Base Maintenance Officer

Members:
Base Forester
Rep, Force Troops, FMFLant
Base Training Facilities Officer

**Committee for Conservation
Nomination Award**

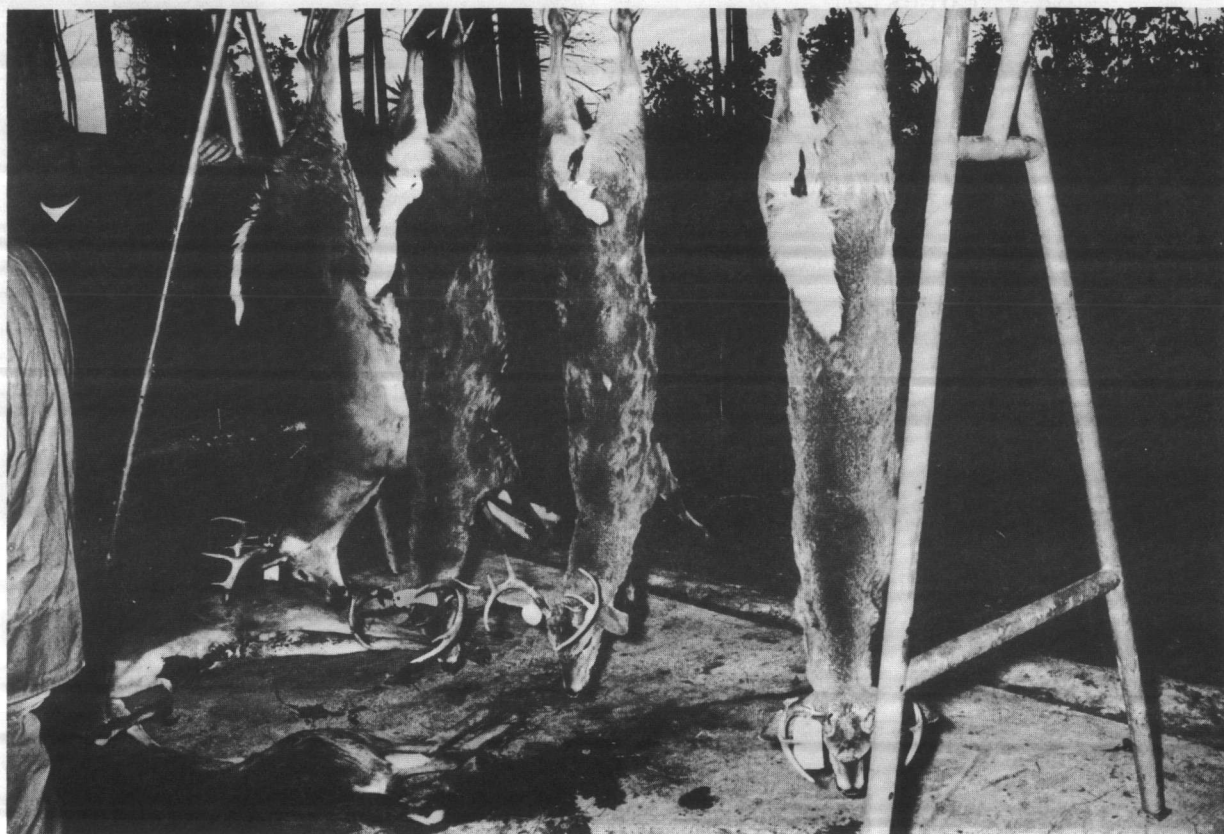
Chairman:
Base Conservation Officer

Members:
Chmn, Committee on Fish
and Wildlife
Chmn, Committee on Forestry
Soils and Habitat
Improvement
Chmn, Committee on Sportsman
Promotion

WILDLIFE MANAGEMENT

Objectives

Wildlife management practices are programmed to regulate the present lands in such a manner as to provide optimum conditions for wildlife and related recreational benefits which will assure continued production and use of these valuable game resources.



MANAGEMENT GOAL...When deer like these can be hunted year after year, the management goal has been attained.

Wildlife Resources

A listing of the wildlife species most common to Camp Lejeune, their scientific names, and their estimated population sizes is found in Appendix B.

Management Techniques

State, Federal, and Base hunting laws are adopted to regulate the taking of all wildlife. Management assistance and recommendations are provided by the State Wildlife Resources Commission, the U. S. Fish and Wildlife Service, and the U. S. Soil Conservation Service. All phases of the annual increment of FY-69 and the long range wildlife plan were accomplished except Wallace Creek Dam construction which is awaiting the necessary financing.

Wildlife Openings:

Twenty nonagricultural openings (approximately one acre each) were created on old field sites with the use of rotary mowers. These openings are being utilized by wildlife for lounging, feeding, and nesting purposes. Maintenance consists of mowing at three-year intervals to prevent woody succession.

TURKEY NEST...This nest was built in a food plot
that was left fallow.

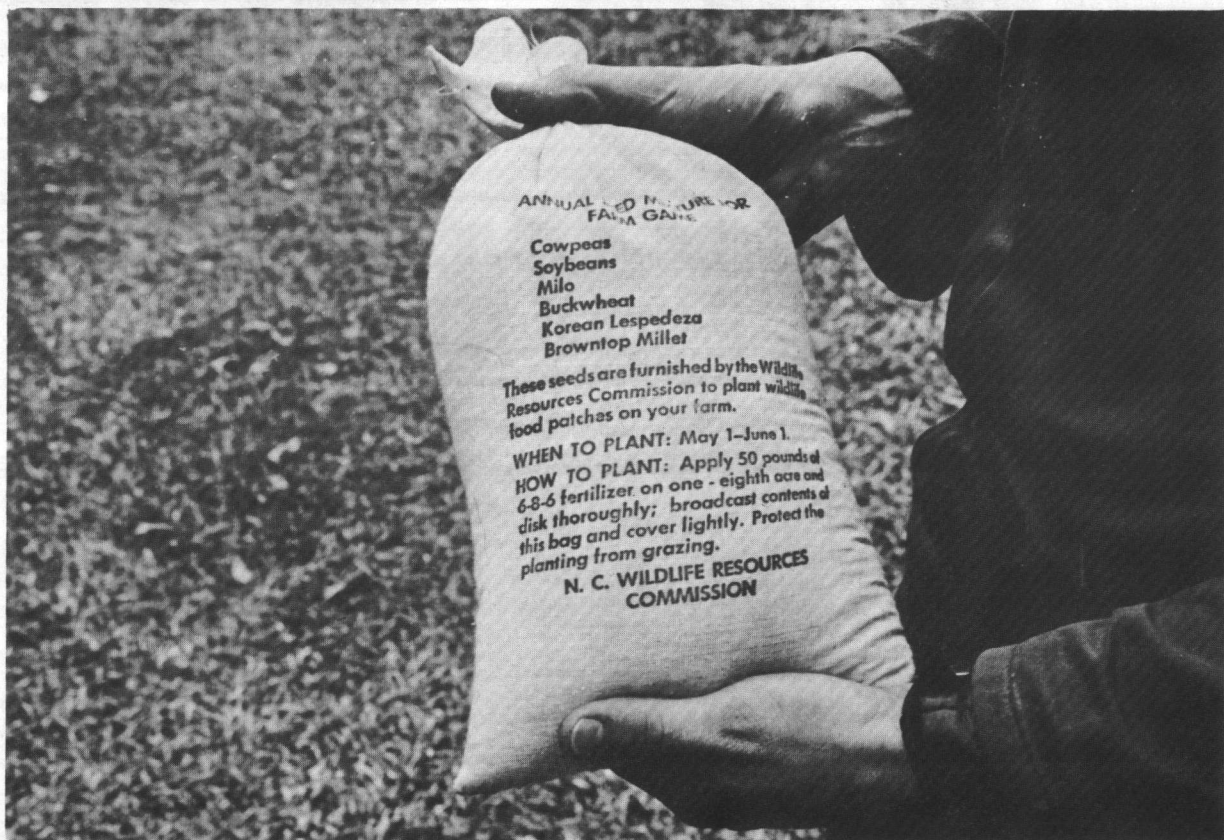


Food Plots:

Fifty-two food plots are under cultivation. There are 63 sites with a total of 250 acres. One-half of each plot is planted to summer greens in the spring, and the other half to winter greens in the fall to provide succulent green and dry grazing during the winter months. Plantings are not plowed under until the following year's seedbeds are prepared allowing these areas to be used for nesting purposes.

Small Game Strips:

Fifteen strips were planted with an annual seed mixture and shrub lespedeza for small game. Each strip established is one-quarter acre in size and is being heavily utilized by quail and wild turkey.



SMALL GAME STRIP PLANTING... These mixtures are designed to provide food and cover for most small game species.

DOVE FOOD PLOT...Hunters benefit greatly from these plantings.



Dove Plantings:

Small grain plantings for doves were established on five sites of five acres each. These plantings were heavily utilized, providing one of the best dove hunting seasons in recent years.

Green-Tree Impoundment:

The annual management of a green-tree impoundment consists of fall flooding and a spring draw-down to enhance waterfowl habitat. Twelve wood duck nesting boxes were periodically inspected and maintained to increase wood duck production.



WOOD DUCK NEST...Nests, such as these, have been constructed in the green-tree impoundment. The inverted funnel serves to keep predators from the nest.

Deer Herd Study:

Deer killed during the 1968 and 1969 hunting seasons were used to collect information concerning the Base deer herd. Body weights and measurements were recorded, and jaw bones (for age determination) and female reproductive tracts were collected. These were used to compile information concerning body size and weight, reproductive biology, population size, and effectiveness of management program on the deer herd. Appendix D (Age Ratio Analysis) is a report of a portion of this study.



DATA COLLECTION...Ovaries are removed to provide reproductive data.

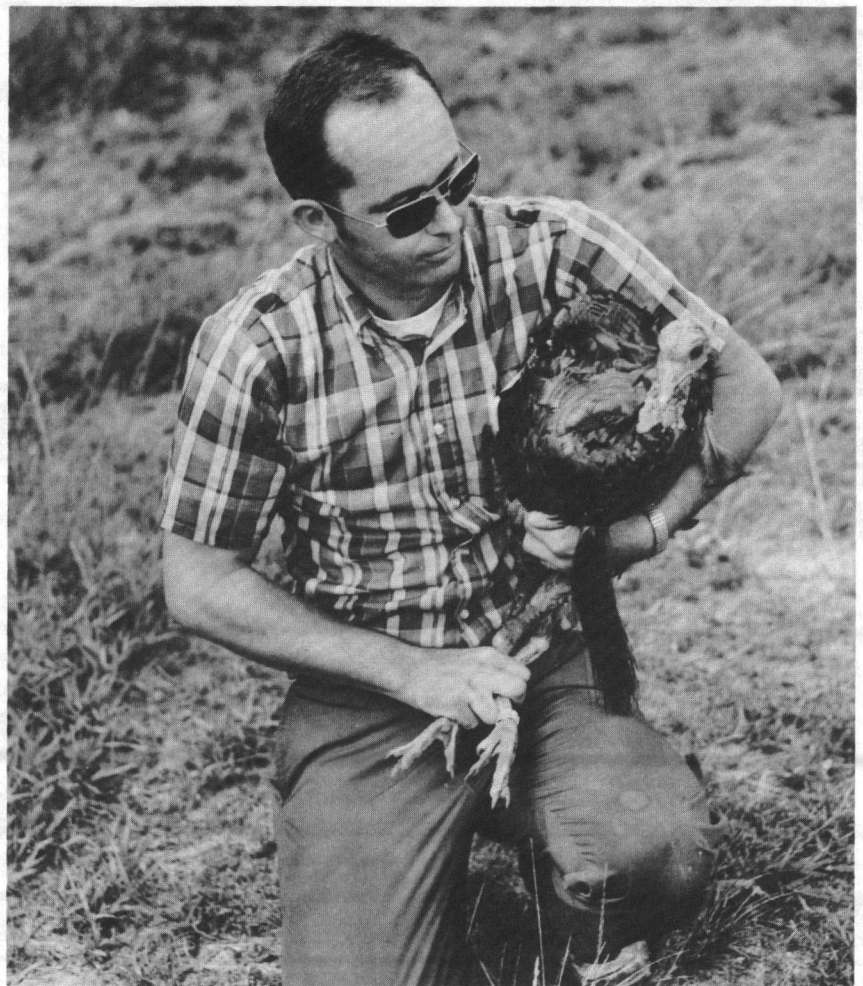
Wild Turkey Research and Management:

Mr. Thad Cherry, State Turkey Biologist, has made several visits to Camp Lejeune in the past year to provide technical assistance in the Base's turkey management program. Mr. Cherry, using cannon nets, has collected information concerning body weights and measurements. Wing tips, crop and stomach contents were collected from hunter kills for a more detailed analysis which has not been completed. Experimental plantings of hawthorn, runner oak, yellow crabapple, bush honeysuckle, autumn olive, and Florida chinquapin for wild turkey were established in cooperation with the U. S. Soil Conservation Service.

TEMPORARILY

RESTRAINED..

Mr. Cherry bands
a turkey for
movement
information.



Hunting Regulations:

Perhaps the best management tool available to wildlife management is the regulation of season dates, bag limits, and manner of taking game. By the proper use of hunting regulations, limited species can be protected and abundant species can be properly harvested. Appendix E contains portions of Base Order 1710.20B, and Base Bulletin 1710, which are pertinent to hunting regulations aboard the Base.

Collection of Scientific Information:

An improved system for collection of vital information for sound scientific management of wildlife was put into effect in 1969. Hunters were required to check-in and check-out through a centrally located checking station where game was inspected and information collected. As a result, more reliable harvest information was compiled for all species hunted.

Deer Can Cause Casualties

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By SSGT.-DALE FLICKINGER
The screaming of brakes, a dull thud of flesh hitting a car, possible injury or even death to the driver or passengers in the car! Yes, it happens throughout our country.

Numerous times each year, wild animals such as deer are hit by moving vehicles on the highways. So far this year, 58 deer have been killed by vehicles on Camp Lejeune alone.

What can be done to prevent most of these accidents? Well, the main thing is to be familiar with the habits of deer, especially at night when most traffic accidents involving deer happen.

When you see one deer standing alone, more than likely there are other deer nearby. If one bolts across your vehicle's path, be a defensive driver in case other deer follow. Too many drivers watch out only for the first animal.

Experts in traffic safety believe the shadow behind the animal created by the car lights startles the deer when he moves and then he bolts out into the path of oncoming vehicles. According to wildlife experts, when deer become this startled, they will usually retreat in the direction from which they came rather than the path in front of them.

But sometimes at the last moment, a deer will leap onto the highway.

Traffic signs at Camp Lejeune as with most State Highway signs, warn the motorists of deer crossing areas. It is up to the driver to heed these warnings and drive at a safe speed.

If the driver is aware of the potential danger of an animal dashing in front of his path, his chances of this type of accident will be considerably less.

When a driver notices the reflection of eyes along a highway, he should slow down, sound his horn and be prepared for animals leaping in front of his vehicle as much as possible.

So drive with care everywhere and don't let these innocent-looking animals turn you into a casualty.

Deer-Auto Accidents Expensive

In 1968, automobiles struck and killed 62 deer aboard this Base. During October 1969, 11 deer were killed in vehicle-deer accidents at Camp Lejeune, causing considerable damage to privately-owned vehicles.

The majority of these accidents occurred on Holcomb Boulevard and Sneads Ferry Road.

Normally, one car is involved and the result is a smashed grille and radiator, crumpled fenders and one dead deer — sometimes causing personal injury. Almost all vehicle-deer accidents occur at night.

Ask anyone who strikes a deer with his vehicle. He has quite a story to tell — especially about the force of the impact.

To avoid these accidents, Colonel H. P. Williamson, Base Provost Marshal, urges all drivers to "keep your speed down and watch for and obey all deer crossing signs. Be on your guard for all animals at night, especially in open country area."

Whenever you see an animal ahead slow down until you can safely pass — remember, they are unpredictable!

Deer-Auto Accident Publicity:

Approximately 75 deer were killed aboard the Base in 1969 in deer-auto accidents. The Base newspaper, Globe, has printed several articles throughout the year in an effort to reduce this type of accident, which accounts for about one-sixth of the total deer harvest each year. The deer killed by automobiles are donated to various welfare agencies in the Base vicinity.

Wildlife Management Program Evaluation

In March 1969, Mr. Edward J. Larimer, Enhancement Biologist, U. S. Department of the Interior, Fish and Wildlife Service, Bureau of Sport Fisheries and Wildlife, inspected the Base's wildlife management program. A copy of his report is in Appendix F. He reported that the management on the Base is excellent in most respects. It should be noted that all five of his recommendations have already been acted on.



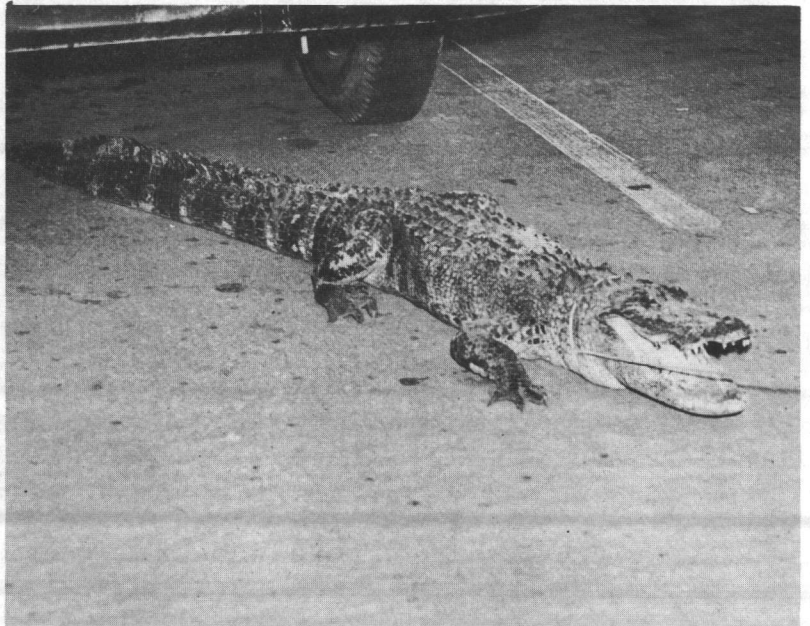
NESTING OSPREY...In recent years, this bird of prey has been on the decline in most of its range.



NOT SO SLY!..Trapping is used in certain areas to control loss due to predators during the spring breeding season.

BLOCKING TRAFFIC..

Since all alligators aboard the Base are protected, this "critter" was hauled back to his swampy retreat.



FISH MANAGEMENT

Objectives

Fish management practices at Camp Lejeune are programmed to ensure continued harvests of game and other desirable fish species for the sports fisherman.

Fish Resources

A wide variety of fresh and salt water species inhabit the fresh water streams and ponds, salt water bays, and the Atlantic Ocean adjoining the Base. Principal fresh water game species are large mouth bass, bluegill, robin, red-ear sunfish, warmouth, pumpkinseed, yellow perch, redbin pickerel, jack pickerel and channel catfish. Appendix B contains the scientific names of fresh water fish common on the Base. Salt water species include flounder, weakfish, bluefish, spot, crocker, whiting, drum, tarpon, marlin, and sailfish.

Management Techniques

Nine fresh water ponds with a total of 16 acres are currently under management. These ponds were of poor

quality when they were first reclaimed, but most of them are now producing catchable fish.



HICKORY POND...Interested group hears how the Base's ponds are managed.

Pond Fertilization:

Commercial pond fertilizers are applied at the rate of 40 pounds per surface acre to produce a "bloom" of plankton algae that prevents the development of filamentous algae and shades out submerged aquatic vegetation.

The microscopic "bloom" consists of organisms that are eaten by insect larvae which form the main food supply for small fish, thereby increasing the food-producing capacity of the pond. Appendix G contains additional fertilization information.

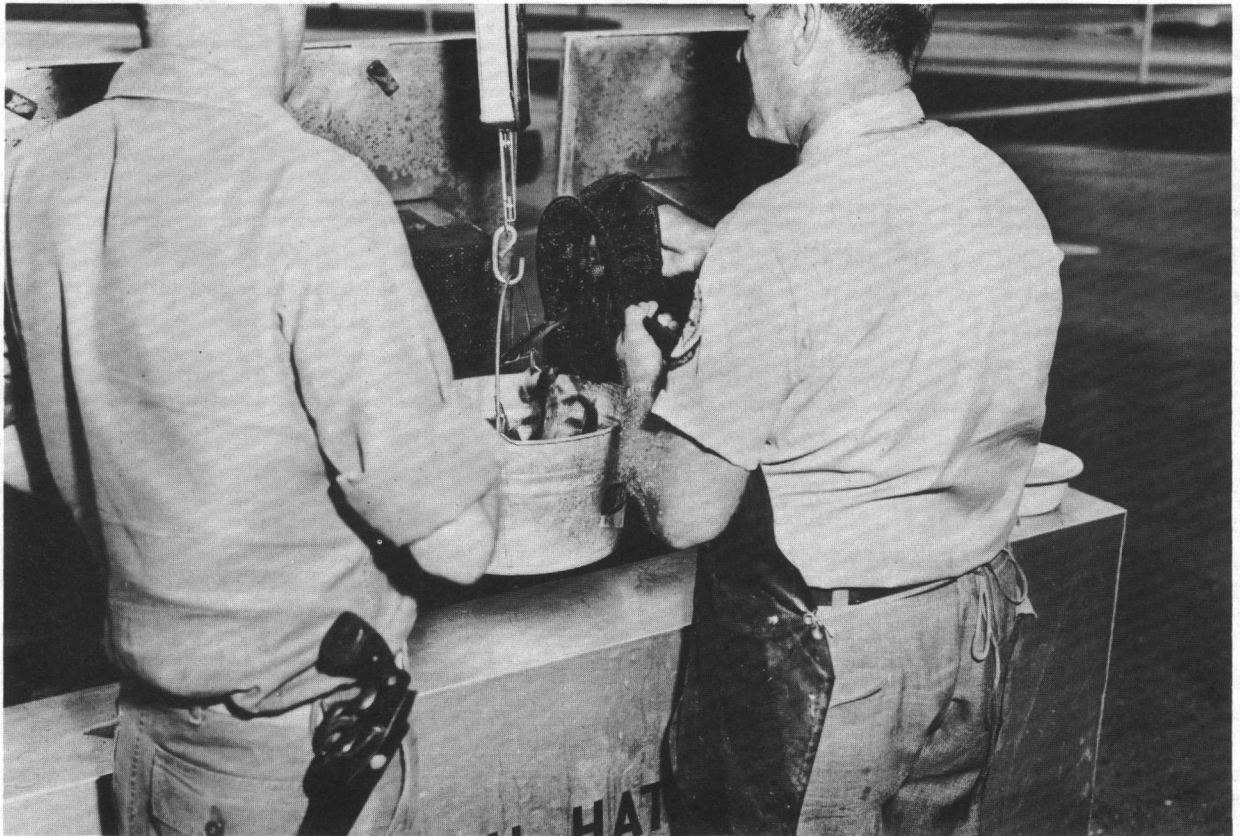
Feeding:

Channel catfish are stocked in three fresh water ponds and are on feeding schedules. These schedules are determined by water temperature and the average fish weight. Commercial catfish chows are used for feeding. For more detailed information on feeding, see Appendix H.

Stocking:

Initial stocking of the fresh water ponds aboard the reservation was 150 bass and 1,500 bluegill fingerlings per surface acre. Initial stocking of channel catfish was 2,000 fingerlings per surface acre. Additional stocking rates are determined by seine and creel sample analysis.

FUTURE WHOPPERS!!
In a few years these may fill a frying pan.



Fish Stocking Program 1969

<u>Species</u>	<u>Number Stocked</u>	<u>Source</u>
Channel Catfish	2,000	Fish and Wildlife Service
Largemouth Bass	1,400	N.C. Wildlife Commission
Bluegill	7,000	N.C. Wildlife Commission

Shoreline Development:

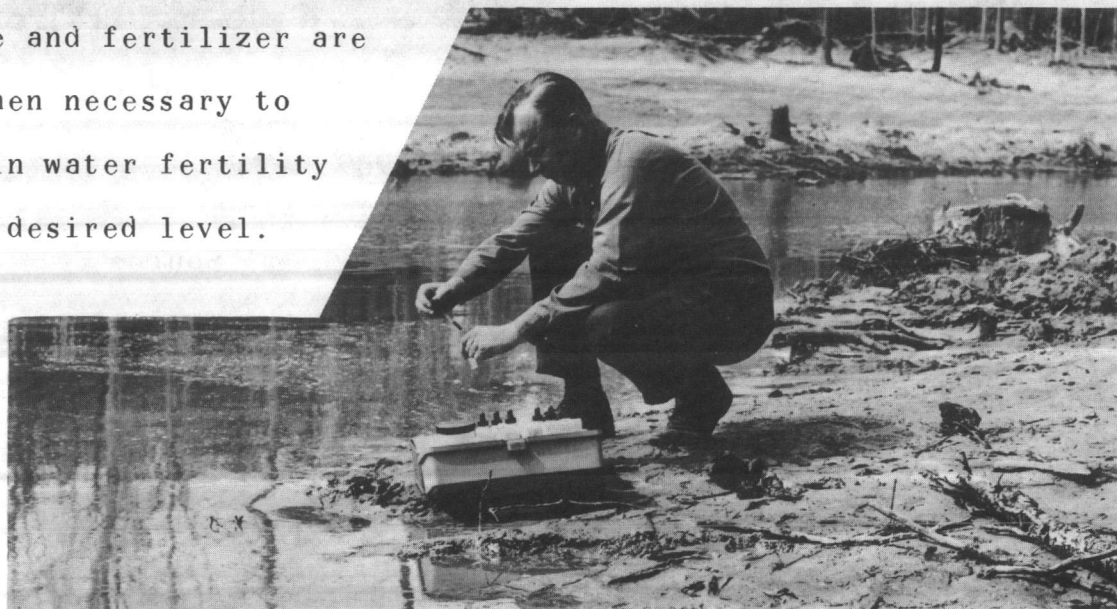
Shoreline maintenance consists of chemical spraying and mechanical removal of brush to permit access for fishermen and management work.

Seine Sample Analysis:

Hand seines and gill nets are used regularly to determine fish weights, reproduction data, and population size of catchable fish.

Water Chemistry Studies:

All ponds are sampled periodically to determine pH, dissolved oxygen and carbon dioxide content, and total hardness. Applications of lime and fertilizer are made when necessary to maintain water fertility at the desired level.



Conclusion

There are more personnel participating in fishing than hunting aboard the Base. With continued intensive fish management of fresh water ponds and the addition of fresh water pond acreage, this outdoor recreational activity should increase in the future.



PROPOSED WALLACE CREEK DAM...When completed the lake created will be the largest fresh water lake aboard the Base.

Fishing On Base 'Better Than Ever'

By SGTMAJ. JOHN C. KULL

Fishing aboard the Base and surrounding areas was spotty the past weekend. Blues have disappeared from the surf but the King Mackerel have been hitting good, especially from the piers of Topsail Beach. For those interested in trying for mackerel, I recommend using small live blues for bait and a bobbler. These piers are crowded on the weekends, so for those lucky enough to get a few hours off through the week, give it a try. By the way, Warrant Officer Jones, H&S Bn., MCB, caught a 32 pounder last weekend. Talked to fisherman who fished Southwest and Wallace Creeks. Although each caught several bass, it was slow fishing. I fished the White Oak River below the Haywards Landing Saturday and although we had numerous strikes, only 3 fish were boated. I have had numerous inquiries about how to get to Haywards Landing. Take Route 17 to Maysville, turn right at the stoplight on Route 58 going towards Morehead City. Six miles by your speedometer is a 3 x 4 sign on the left side of the road which reads "Haywards Landing State Access Area." Turn right and follow the shale road to the landing about 2 miles. There is a boat ramp, small pier, and for

those interested, a small but adequate camping area. Fish downstream if it is calm and upstream if it is windy. The heavy timber upstream breaks the wind.

In last week's column, I mentioned that a state or city fishing license was required to fish in fresh water. For those using natural bait, worms, crickets, frogs and minnows, no license is required. However, if you use artificial lures, a license is required.

Now, how can a Marine living in the barracks enjoy some of this fishing? It's easy! Check out some fishing gear from your Special Services; check out a canoe from the Wallace Creek Boathouse. They also have a few car-top carriers and head for the White Oak River or Southwest Creek. You can launch a canoe or small boat on Southwest Creek just below the bridge on Route 17, just past Camp Geiger. Or, get a cane pole and some worms and fish Wallace Creek above Holcomb Boulevard. Almost guarantee you will be catching some nice bream and maybe a bass.

Just a reminder, the Rod and Gun Club meets at 7 p.m., Thursday, May 29. A good dinner and refreshments for \$1.00.

LET'S

GO

FISHING!



SERGEANT JAMES BARTON, assigned to the Fish and Wildlife Section for training, releases fingerlings into Hickory Pond on Base.

Fishing Ponds

Camp Lejeune now sports nine fishing ponds aboard base, four of which are presently open to military personnel and their dependants. They include: Cedar Point, Mile Hammock, Ward and Hogpen ponds.

Regulations governing the use of these ponds prohibit the taking of fish by any means other than with hook and line, rod and reel or by casting. Trot lines and set hooks may not be used. Finally, the daily limit and size restrictions are eight bass and catfish of at least 10 inches in length apiece.

Hickory Pond Stocked For Next Year's Anglers

Hickory Pond was stocked last week with 5,500 bluegill-shell-cracker combination. The fingerlings were supplied by the Fish and Wildlife Service through its federal hatchery at Harrison Lake, Virginia.

Bass fingerlings will be stocked in June and channel catfish will be stocked in September.

Hickory Pond will be opened to fishing next year after the bass spawn.

Establishment of this pond was realized through the joint efforts of the Base Conservation Committee, Fish and Wildlife Section, and various troop commands.

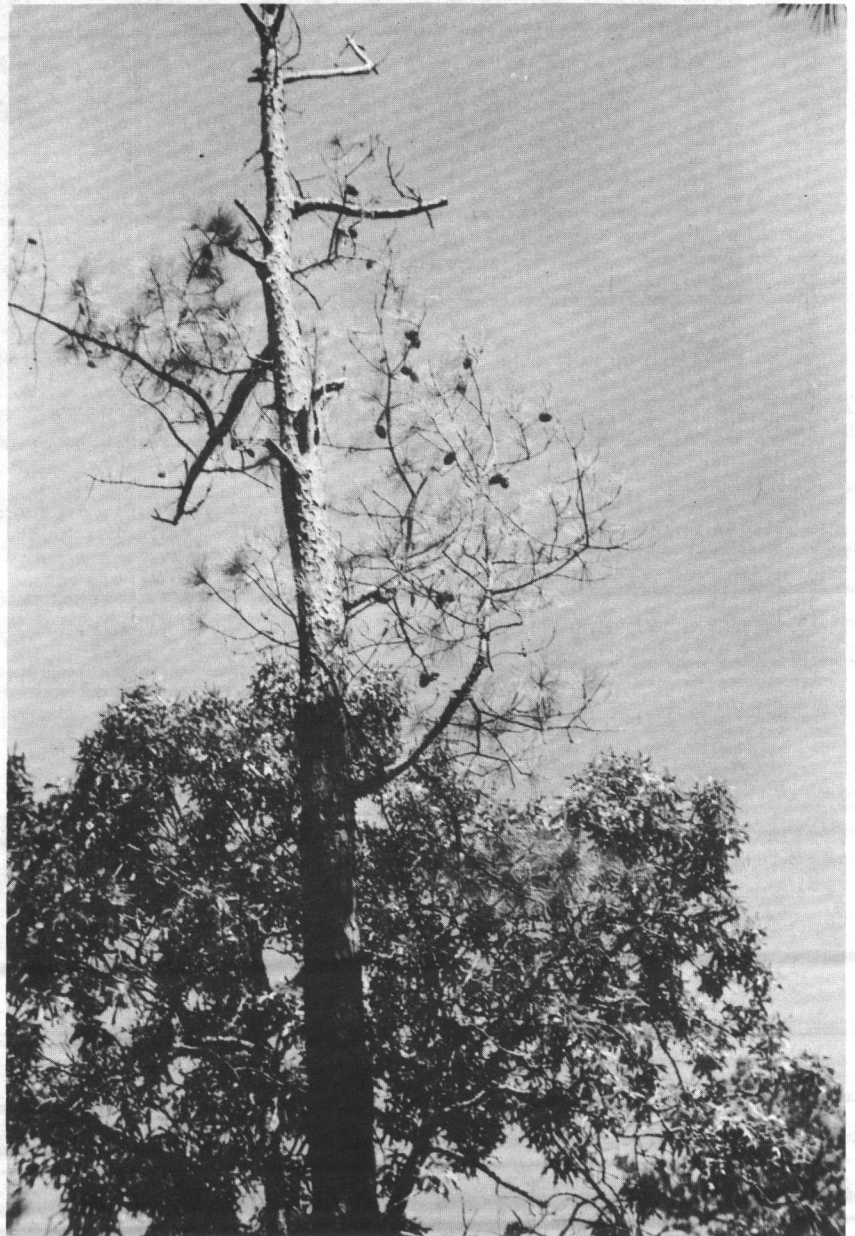
The dam and spillway was constructed as a troop training project by the 2d Engineer Battalion, 2d Marine Division and by 8th Engineer Battalion, Force Troops with Captain S.R. Bray, Jr. as Project Officer.

FOREST MANAGEMENT

Objectives

Forest management on the Base is directed toward ensuring a continuing supply of harvestable timber and pulpwood. The Forestry Section works in conjunction with other departments in phases of its conservation program to implement the multiple use concept of the acreage being managed.

A DYING TREE...
Trees, like any other plant, grow old and die if not harvested when maturity is reached. Depending on the environmental condition, the tree may be large or small when old age overtakes it.



Management Techniques

Timber Harvest:

Timber harvested in 1969 was marked, tallied and volume computed by the Forestry Section. Harvest was completed by 31 December 1969.



LUMBERMAN'S
PARADISE...
Logging
operation
aboard the
Base.

The volumes and value of this timber are as follows:

	<u>Amount</u>	<u>Gross Income</u>
Pine Sawtimber	2,834,600 bd.ft.	\$136,141.00
Pine Pulpwood	3,374 cords	20,525.00
Hardwood Sawtimber	55,100 bd.ft.	1,102.00
Hardwood Pulpwood	733 cords	1,092.00
	Income	<u>\$158,860.00</u>
Pine Pulpwood (salvaged)	1,794 cords	10,318.00
	Total Income	<u>\$169,178.00</u>

Southern Pine Beetle Control:

The Southern pine beetle infestation subsided in 1969 to a point that it was no longer a major problem. Small infestations still occurred throughout the Base during the summer. Control was effected by salvaging the infested trees by timber contractors and by chemicals where infested areas were too small for salvage or inaccessible. Forestry personnel spent approximately 180 man-days on chemical control as compared to 400 man-days in the summer of 1968.

There were 1,794 cords of pulpwood salvaged from beetle infestations for a value of \$10,318.00. This was 80 percent less than the amount salvaged in 1968.

INSECT CONTROL...
Examining a loblolly
pine for Southern
pine beetle infesta-
tion.





FIELD SURVEY...

Scientific
management
requires
accurate
records.

Rare Species Protection:

At the present time, the Red Cockaded Woodpecker is considered a rare species. This woodpecker is considered valuable since much of its diet consists of the Southern pine beetle. The main reason for this bird's rarity is the disappearance of virgin timber which the woodpecker uses for nesting and roosting. As a part of the Forestry Section's management program, certain virgin trees are left untouched instead of being harvested. This preservation of virgin timber is an important step in the enhancement of the Red Cockaded Woodpecker.

Site Preparation:

Site preparation was completed on 240 acres using a tractor and heavy disk for the purpose of regenerating pine. Ninety acres were planted in pine seedlings.



FUTURE LUMBER...Slash pine seedling during first season growth. The area from fingers to top grew during first six weeks of growing season. The soil and climate aboard Camp Lejeune are very conducive to rapid tree growth.

Prescribed Burning:

Approximately 8,000 acres were prescribed burned. The purpose of this burning was to reduce the roughage, thereby reducing the fire hazard in critical fire weather and improvement of wildlife habitat by increasing the growth of herbaceous plants.

'Prescribed Burning' Reduces Fire Hazards

By PFC DON ABOOD
Base foresters "prescribe burning" to save Camp Lejeune woodlands.

For six years foresters have used a controlled fire program, known as "prescribed burning," to reduce the threat of fire hazards, increase wild game habitats, reduce insect populations and control woody growth.

According to Assistant Base Forester Terrence Cooper, the program "has cut fire incidents down to less than half of what they were before we started."

Cooper said the base contains about 60,000 acres of "usable woodland" divided for the forester's purposes into 1,000 acre blocks.

The foresters burn between 7,000 and 8,000 acres annually. Each year a different section is burned. After five years the entire 60,000 acres will have been burned by the foresters. Then they cycle begins again. "Prescribed burning" lowers the threat of a forest fire because it eliminates the fuel, the dried leaves, scrub brush and extraneous vegetation around the trees.

The technique also kills insects, particularly wood ticks, a nuisance Marines training in the boondocks are glad to be free of.

Controlled fires also spark a rejuvenation of the woodland and promote new growth and food for wildlife.



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Construction of Access Roads:

During 1969, the Forestry Section constructed seven miles of access roads. Roads into many formerly inaccessible areas on the reservation have been provided by the Forestry Section's access roads. These roads not only benefit the outdoorsmen and lumbermen, but also provide fire breaks and openings for wildlife.



ACCESS ROADS..are constructed by the Forestry Section to facilitate timber removal and aid in sportsman access.



WHAT MORE CAN WE SAY
SUCCESS SPEAKS FOR ITSELF

MULTIPLE USE

General

The multiple use concept involves the management of our natural resources in such a manner as to provide maximum benefits for all interests. This concept is the basis of Camp Lejeune's conservation program. Resource management on the Base is directed to not only providing benefits for the hunter, fisherman, and lumberman, but also providing the facilities for activities such as camping, picnicking, hiking, riding, bird watching, boating, swimming, sightseeing, and nature study.

Hunting and Fishing

In 1969, military personnel utilized the reservation for hunting a total of 13,582 man-days, while civilian hunting man-days totaled 1,959. Both of these figures represent increases over previous years. The wildlife harvest figures are listed below. No fish harvest figures are available, although the salt water sport fishing for speckled trout was considered the best in 25 years during the fall.

<u>Species</u>	<u>1969 Harvest</u>
Whitetail Deer	373
Bear	Closed season
Wild Turkey	3
Squirrel	1640
Rabbit	175
Raccoon	82
Quail	210
Dove	316
Rail	112
Woodcock	57
Waterfowl	416
Grey Fox	22
Bobcat	3

Rod and Gun Club

The purpose of the Rod and Gun Club is to assist the Commanding General in the conservation, restoration, and development of fish and other wildlife and their habitats at Camp Lejeune; to obtain better fishing and hunting for personnel serving here; to cooperate in obtaining proper fellowship among sportsmen by instructive and demonstrative measures; and to promote interest among non-sportsmen where such interests are conducive to better sportsmanship.

Participation:

During the period covered by this report the Rod and Gun Club participated in the following activities:

Stimulated interest in Base fishing by sponsoring a Base fishing tournament and by tagging and distributing fish in Base fresh water ponds and streams.

Sponsored deep-sea fishing trips for members, their families, and guests aboard the Base Special Services deep-sea fishing boat.

Sponsored a Rod and Gun Club member to attend the North Carolina Wildlife Federation Convention conducted in Raleigh, North Carolina.

Sponsored and conducted an oyster roast and steak fry for club members, their families, and guests.

Conducted a TV show, wildlife store window display, displayed posters and passed out wildlife literature during National Wildlife Week.

ORGANIZED DEER HUNT...These hunts are made possible by
Rod and Gun Club members.



Invited Base and Federal Fish and Wildlife Officials to address the membership of the club.

Hosted a luncheon for Officials of the Department of Defense Committee for Conservation, Base Committee for Conservation, and visiting dignitaries.

Constructed one new duck blind and renovated old blinds.

Provided personnel for brush and scrub removal on the Wallace Creek Dam restoration project.

Procured and showed movie films on wildlife, fishing, and conservation to club members at bi-monthly meetings.

Conducted hunter safety classes and administered hunter safety examinations for club members.

Continued to acquire numerous books, magazines, pamphlets, and other literature from Federal, State, local, and independent agencies on conservation, hunting, and fishing.

Provided assistance and advice to local civilian and other military installations in the organization of similar Rod and Gun Clubs.

Promoted military and civilian harmony by hosting unaffiliated civilian personnel on organized deer hunts conducted at Camp Lejeune during the 1969 hunting season.

Made recommendations to the Commanding General for changes to the Base Regulations on hunting and fishing.

Provided the huntmaster and assistant, and supervised three organized deer hunts weekly during the 1969 season.

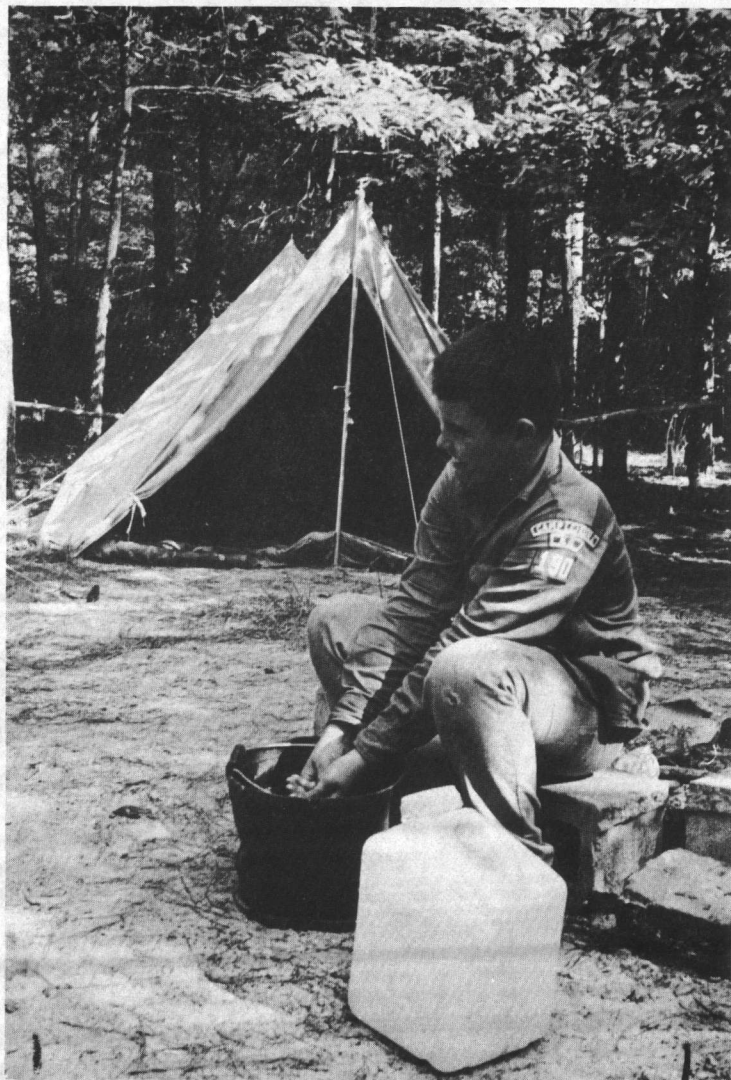
Timber Removal

Timber removal is a profitable and important aspect of the multiple use concept. The Forest Management Section of this report discusses the timber harvest in detail. Not only do lumber and pulpwood bring in revenue, but cutting operations also result in access road construction, fire protection, and wildlife enhancement through forest clearing.

Boy Scouts

Activities at the Base offer programs from the Cub Scout through Explorer Scout level. There are approximately 450 Boy Scouts and Cub Scouts in the Camp Lejeune Scout Program. In the past year, the local troops were hosts to 725 scouts from various parts of North Carolina for camporees during January and October. The Base camping area is used by local troops throughout the year. The scouting area is

a favorite retreat for visiting and local scouts because of its beautiful setting on the shore of Northeast Creek. The scouts have contributed to the conservation program by building houses for wood duck, feeding and caring for the ducks and preventing predators from infesting the nesting areas. Special attention has been given to the propagation of wild fowl in the scout camping area. One troop has built birdhouses in the area, and has an established feeding program to prevent large scale starvation of the birds in the



event of sustained freezing weather. Many of the Scouts have assisted the Rod and Gun Club in planting and harvesting wildlife food plots. A continuing program of clearing underbrush, forestry management and road repair, and upkeep is conducted by the Scouts in their Camping Area. Education in woodsmanship and conservation of natural resources is stressed in all activities.

WHAT A LIFE!

Scouts often "get away from it all."



BROWNIES AT PLAY..
Each summer Scouts
from local and Base
troops enjoy Day
Camp at the Scout
Camping Area.

Girl Scouts

There are approximately 400 Girl Scouts and Brownies in the Camp Lejeune Girl Scout Program. The Girl Scouts are often hosts to visiting troops. The girls have taken on the responsibility of policing the Base's picnic areas as well as cleaning up the trailer park areas.

REST TIME...
Girl Scouts
enjoy hiking
through the
woods at Camp
Lejeune, but
they appear to
like the rest
periods most of
all.





BIRD WATCHERS..Nature study is becoming an exceedingly popular pastime aboard the Base.

Nature Study

Hiking, bird watching, and general nature study are important aspects of multiple use at Camp Lejeune. With the exception of a few swampy areas, most of the reservation is accessible to permit participation in these activities. A wildlife refuge of approximately 220 acres has been specifically set aside for nature study. This area is especially popular with scouts and school students.

Base Special Services

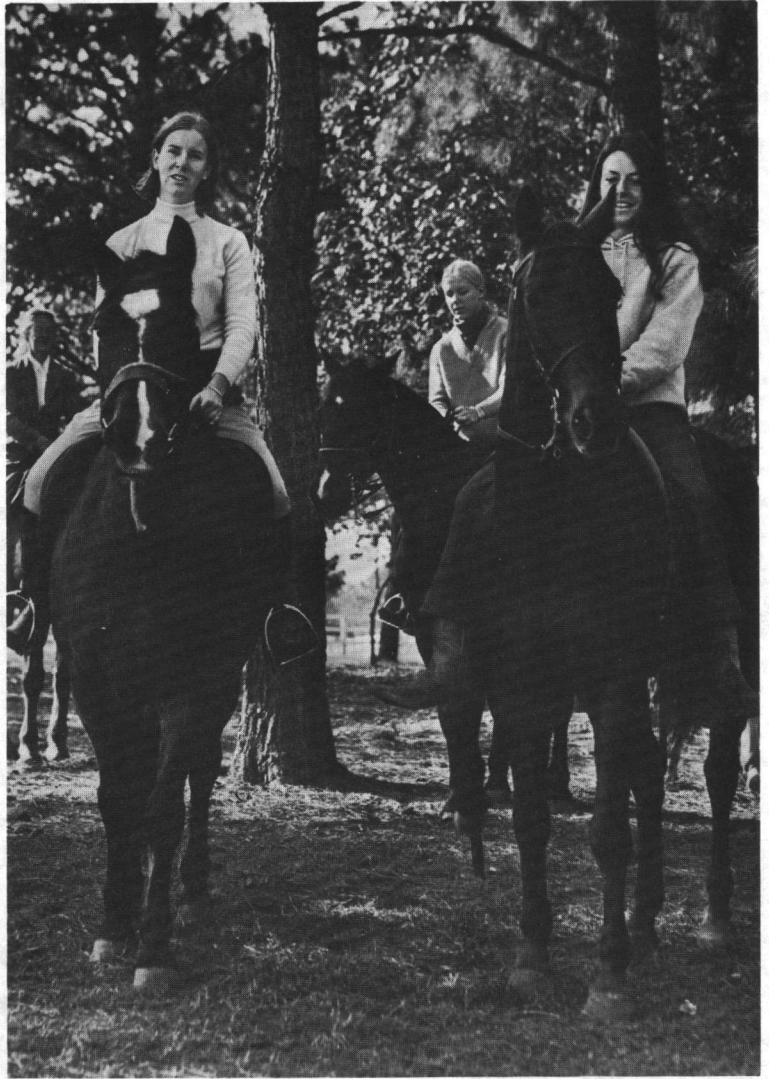
The Recreation Section of Base Special Services provides a large portion of the equipment and facilities needed to enable personnel to utilize and enjoy natural resources.

The boathouse, located on Wallace Creek, a tributary of New River, keeps 25 motor boats, 16 sailboats, 40 canoes, water ski equipment, and facilities to berth privately-owned craft. Qualified persons may utilize this equipment for a very nominal fee. Classes are offered to qualify them to use this equipment. Each year a summer youth program is conducted and small craft operation plus water ski instruction plays a major role in this program. Trailer-mounted boats and motors are also available for use in other areas both on and off the Base. Boating facilities on a smaller scale are also located in the Courthouse Bay area.



WALLACE CREEK BOATHOUSE

MOUNT UP...The stable area is always full of activity. Once a month many people, such as these ladies, enjoy a "breakfast ride." The ride lasts approximately three hours and the riders are treated to a breakfast of steak and eggs.



The base stables are located in close proximity to approximately 22 miles of wooded bridle trails. Mounts, as well as facilities to board privately-owned horses, are provided for a nominal fee.

The skeet and trap ranges cater to many shotgun enthusiasts, both recreational and competitive. The field archery range is also heavily utilized.



ONSLow BEACH...A popular spot in the summer.



THE MONTEZUMA

Approximately a mile and a half of ocean beach is open during the summer months for bathing and surfing, plus another six or seven miles that are enjoyed by surf fishermen. Personnel are assigned to Base Special Services each summer for the operation of these beach facilities, which are utilized by thousands.

Base Special Services maintains 35 tent-type camping trailers available for use by the troops and their families. These trailers may be used on and off Base.

During the summer months, a sixty-five foot, twin diesel deep-sea fishing boat, the Montezuma, operates daily. There is offered a day's deep-sea fishing, including rods and reels, to military personnel and their dependents for just \$2.00 each.

Skin and scuba diving equipment is provided for those who are qualified to use it, and the close proximity of several shipwrecks make this an enjoyable recreation opportunity.

Base Special Services strives to keep up-to-date. As desires for different equipment and facilities are made known, they are evaluated and if found feasible are organized and put into effect.

HIGH PERCH...
Camp Lejeune
archers go all
out to get a
good shot.



A RARE SIGHT! Seldom is Camp Lejeune's golf course
so deserted.

Campers Available

Does the lure of the mountains, a weekend at the shore, or just a chance to get away from it all have a special appeal for you? If so, then Base Special Services has the answer --a portable camper.

For only \$1.50 a day, you can transport yourself to Nirvana for an extended stay of up to 15 days with leave papers. Individuals who aren't planning leave can still check out a camper for as many as four days.

Special Services currently has over 30 of these trailers available for lease. They consist of a large canvas folded over the trailer bed that converts into a spacious tent, large enough to handle a full family.

The normal rules for leave govern the limits that the camper may be taken. Individuals are required to carry liability insurance on their automobile that covers pulling a trailer. Furthermore, the prospective "escapee to nature" must furnish his own trailer hitch or tow-bar. The final stop is a routine safety check by the M.P.'s, and then you're on your way.

Special Services is now taking reservations in the Reservation Office of the Field House, Bldg.

Muzzle Loader Match Scheduled

The Camp Lejeune Rifle and Pistol Club will hold its first "Black Powder" Muzzle loader Match on Nov. 16 at the Base Rifle Range.

Club president, Lieutenant Colonel James H. Landers, said the competition is open to anyone having a muzzle loading weapon and wishing to shoot.

This is the first time that the Camp Lejeune club has sponsored a muzzle loader match, but if enough interest is shown in the sport, matches might be expanded to include shooting from 100 yards and held on a quarterly basis.

Admission fee is 50 cents per match. Further information may be obtained by telephoning base extension 7141.

761. These can be made Monday through Friday from 8 a.m. until 4:30 p.m., up to a month in advance of departure.

Lejeune Hosts Golf Tourney

Camp Lejeune will host the East Coast Golf Championships Aug. 4-8 and the All-Marine Golf Tournament Aug. 11-15.

The tournaments will be played over Paradise Point's No. 1 course.

The Base athletic office reports that over 40 entries have been filed for the East Coast tournament. Top competitors in this event will join forces to

represent the East in the All-Marine championships.

A handicap of six or less is necessary to qualify for the open division in the East Coast tourney. A handicap of eight or less is needed for the seniors division.

The top six performers in the open division and the top four in the seniors will make up the East's contingent for the All-Marine.



SOARING 30 FEET ABOVE THE WATER, a skier prepares for his re-entry in the acrobatic segment of the annual water festival.

Archers To Conduct Club Championships

By CAPT. J.L. BATES

The Camp Lejeune Archers will conduct a Club Championship Tournament October 10 and 11.

Friday's meet will begin at 1 p.m. and will consist of 28 field targets. Saturday's shooting will begin at 10 a.m. and will consist of 28 hunting targets.

The entire tournament will be shot under the NFAA handicap system. Trophies will be awarded for first, second, and third place in freestyle and bare bow for men, women and youth.

The trophies will be presented at a club banquet on Sunday afternoon following the meeting. There will be no target fee for members, but the banquet will be prorated among all participants.

The Archery Club will hold a regular meeting Tuesday, October 7 at 7:30 p.m. in Building No. 1308. The main order of business will concern last-minute details for the tourney.

The handicap system under which the tournament will be conducted allows any archer to come out on top.

CLEAN LAND - CLEAN WATER

Base Cleanup Campaign

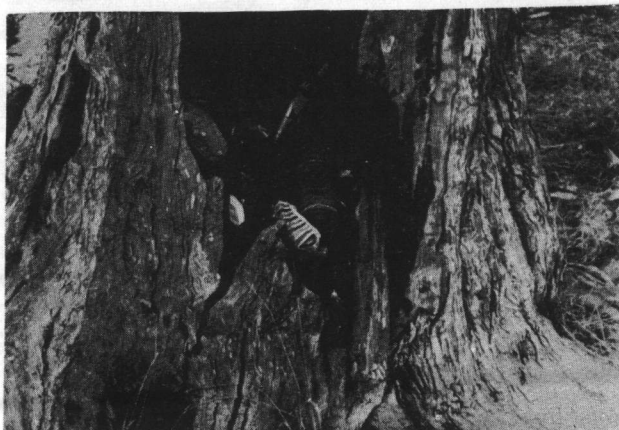
Throughout the year, Camp Lejeune conducts a continuing cleanup program. As with the rest of the country, littering is a problem on the Base. Through official correspondence, anti-littering publicity, and maintenance procedures, the Base is combating the litter program. The problem is far from solved, but few people would disagree that Camp Lejeune is one of the most beautiful and best kept bases in the country.



A PROBLEM EXISTS...Littering often spreads from the land
into the waterways.



THE SIGN tells all, Corporal Alfred C. Beatty prepares to remove the litter. (Photo by SSgt. Jack Carey)



DEMPSTER DUMPSTER? Hardly! But apparently some Marines mistake this tree trunk for a convenient spot to dump their garbage. Is this the way to keep Camp Lejeune clean? All Marines are strongly urged to use the receptacles provided for the disposal of trash. (Photo By LCpl. Andy Byrnes)

Camp Lejeune: Green And Clean

Have you driven the barren, forsaken stretch of desert between 29 Palms, California and Barstow lately; or

Taken a trip between Camp San Marguerita and Las Pulgas at Pendleton? Or driven to any one of several "removed" bases world-round?

If you answer yes to any of the above, you qualify to read on. (If not, you can't make a true comparison that shocks some people literally to their heels).

(For the others - you who are not first termers or who have been to other military installations - listen, read and heed. For those who haven't been anywhere except Camp Lejeune and are fortunate enough to have never been stuck in their car in the dry, hot, sandy desert, you might get something out of this anyway.....)

Camp Lejeune is acclaimed to be one of the most scenic mili-

tary installations in the United States. That's right, (Put aside this morning's PFT, or the classroom GMSPT you suffered with all day and look around you.)

Did you know, for instance that more than 200,000 azalea plants adorn our base? Or that the base itself covers some 173 square miles of North Carolina coast? And that trees have been planted here purposely to beautify the base? Does it compare to the desert? Sure, like an oasis to a man dying of thirst.

Not too many people, other than maybe the personnel of Buildings and Grounds know that more than 1,500 trees (maple, live oak, cherry and holly) are flourishing here, as well as more than 5,000 assorted camellia plants.

You may wonder what all this leads up to. Well, we've all heard the expression "keep American green." Can we do less

than keep our part of America (Lejeune) green and clean.

Spring is sprung as the expression goes and it's high time we spring into action. Thousands - or many more - people are justifiably proud of the beauty of this installation and it behooves us to do our part in keeping it that way.

Almost any time of day now, one or two cars can be seen on a main road pulled off to the side. Well, if it's an emergency, ok. But if not, that six inch deep, 25-foot rut you just placed in the once green shoulder of the road is just another scar in the breaking face of Camp Lejeune. How many scars does it take before one can't face it? Sure ruins it for camera bugs!

The same thing happens when haste places waste out the window, caution and cans are thrown to the wind . . . net result . . . trash . . . and the marks of its owner left for the rest of us to live with.

One way for people to feel a bit prouder is to "clean up their own back yard." Try it. You may learn to like it.

Water Pollution Control

In the near future, Camp Lejeune will have one of the country's most modern sewage treatment systems in operation. By the end of 1969, there were six plants in the final stages of completion.

At the present time, 55% of the foreign matter is removed from the effluent. When these plants, representing an investment of almost three million dollars, are in operation, at least 90% of the foreign matter will be removed. Ninety percent removal is considered excellent and is far above most sewage treatment systems in the country. If the municipalities upstream from Camp Lejeune would even approach the Base's sewage treatment efficiency, New River could be returned to its former unpolluted state.



CONSERVATION EDUCATION

General

Education in resource management and regulations is accomplished through various programs sponsored by the Rod & Gun Club; the Base newspaper, the Globe; Camp Lejeune Dependents' Schools; Base Regulations, and the Committee for Conservation of Natural Resources. Federal and State officials periodically visit and meet with the Conservation Committee to provide basic information and technical advice. Through the Rod & Gun Club, a continuous program of education in resource management and regulations is presented to the Club membership.

Gun Safety

Gun safety is continually stressed at Camp Lejeune. Prior to each hunting season, several presentations, including films, are made by the Rod & Gun Club, not only to its members, but to the general public as well. The Base newspaper publishes feature stories on gun safety. Other groups, such as skeet teams and the Rifle and Pistol Club have a continual gun safety program. The Base Wildlife Section administers a hunter safety examination prior to issuing Base hunter permits to each applicant.

Water Safety

This installation has one of the finest recreational, small craft, and general water facilities found anywhere

(boats, canoes, sailboats, outboards, five pools, and an ocean beach).

The Camp Lejeune Water Safety Program has essentially three facets:

a. The large and well-organized teaching program during the summer youth activity program.

b. Training of military personnel to serve as lifeguards and instructor/trainers.

c. Assistance, at the unit level, in teaching required Marine Corps swimming skills.

The high point of the 1969 water safety program was the all day 4th of July Water and Boat Show, which was sponsored jointly by Base Special Services and the American Red Cross. The demonstration included rowboats, canoes, and basic rules for the handling of small craft. The program demonstrated the need for water sports participants to know all the rules and skills of safe water sports.

The Base sponsors scuba diving and water skiing clubs to train participants in correct and safe methods of pursuing and enjoying these sports.

Classes are held year-round by Red Cross water safety instructors.

School Conservation Program

An area in close proximity to three elementary schools, Camp Lejeune High School, and the Scout Camping area has been set aside as a Wildlife Refuge/Nature Study area. This

area of approximately 220 acres contains six miles of nature trails and one food plot, and is maintained largely by school students and Scouts. The area is not suitable for troop training, hunting or fishing, but proves highly beneficial as an outdoor classroom for wildlife and conservation education for the younger people. In 1969, Mr. Russell, the Base Forester, gave assistance to the Science Club of Camp Lejeune High School in establishing a nature study trail by identifying various trees, shrubs, and wild flowers along the trail. Wildlife conservation programs were presented to Base schools, clubs, and scout organizations by personnel of the Wildlife Conservation Section. Personnel of the section accompanied students on nature study field trips and provided assistance in marking trails and boundary of the nature study area. Educational programs and news releases were presented via television, radio, and newspapers.



NATURE STUDY... One of the best ways for students to study nature is through field trips.



PROJECT TRANSITION...The Base Wildlife Technician instructs a trainee on the use of deer teeth as a criterion of age.



NATIONAL WILDLIFE WEEK 1969...The Rod & Gun Club erected this display in the window at the Marine Corps Exchange. 67

Project Transition

Through Project Transition it is possible for Navy and Marine Corps personnel to receive on-the-job training in both forestry and wildlife management. In 1969, sixteen Marines received training totaling approximately 400 man-days with the Forestry Section. This training involved timber marking, timber sale supervision, prescribed burning, pest control, and the broad field of conservation in general. Many of these men plan to continue their work in the field of forestry or other natural sciences. Two college students also worked for the Forestry Section during the summer. They are seeking degrees in the field of natural sciences and this summer's work gave them valuable practical experience.

Eighteen Navy and Marine Corps personnel were temporarily assigned to the Wildlife Section for training in wildlife management. Since leaving the military service, several of these men have been employed by state wildlife agencies.

National Wildlife Week 1969

March 16-22 was designated as National Wildlife Week by the National Wildlife Federation. The purpose of this designation was to create public interest in wildlife conservation. During the week a display was put in the Marine Corps Exchange window; a television show, "Eagle, Globe and Anchor", featured the Base's conservation program; and the Base newspaper, the Globe, printed articles concerning the wildlife program.

Provide Habitat Theme for '69

National Wildlife Week

By LCPL DON ABOOD

The week of March 16-22 has been designated by the National Wildlife Federation as National Wildlife Week 1969. This year's slogan is "Provide Habitat" for wildlife to live.

"The purpose of National Wildlife Week," Base Wildlife Technician Charles D. Peterson remarked, "is to create public interest and support for wildlife conservation."

While wildlife week is being observed at Camp Lejeune, Peterson noted that wildlife conservation and management is "a year-round thing" aboard the base.

Each year over 300 acres of "wildlife food plots" are planted and nine fresh water ponds plus several streams are under management.

The Camp Lejeune Fish Management and Wildlife Management programs follow guidelines and regulations used by the North Carolina Wildlife Resources Commission.

Base wildlife personnel will meet with the state wildlife agencies on March 20 to review plans and progress made in 1968, Peterson said.

The National Wildlife Federation urges those interested in preserving wildlife to:

— Learn about wildlife and discover what it needs for food, water, protection and living space.

— Encourage everyone involved with land management to manage their lands without destroying wildlife areas.

— Assist wildlife groups in carrying out wildlife habitat programs.

— Erect bird nesting boxes and build shelter piles of brush in

woodlots to provide small game cover.

— Work to prevent or halt the wasteful drainage of vital marshes and swamps that are among the most productive habitats.

Wildlife is one of America's

most important resources. Conservation and protection of those resources is "a year-round thing" at Camp Lejeune. During National Wildlife Week make it a point to make conservation your thing too.



PROVIDE HABITAT is the title of this poster commemorating National Wildlife Week 1969. Sponsored by the National Wildlife Federation, this week will kick off a program of conservation designed to protect the areas inhabited by our wildlife.

AWARD WINNING WATERFOWL DISPLAY



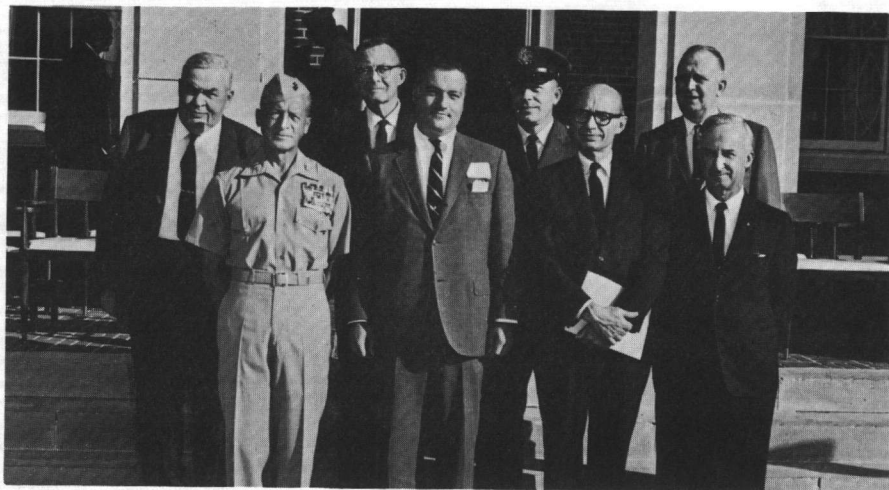
Elizabeth Rhoads, daughter of Roy F. Rhoads, Naval Medical Field Research Laboratory Photo Technician, recently won an award for this display at an 8th Grade Science Show.

ACHIEVEMENTS

SECRETARY OF DEFENSE CONSERVATION AWARD

Camp Lejeune is always a conservationist's showplace but in June 1969 it took on special significance. The Secretary of Defense Conservation Award was presented to Major General R. McC. Tompkins, Commanding General, for the Base's conservation program which was judged the best of the 241 military installation conservation programs examined. Camp Lejeune was the first Marine Corps installation to receive this honor.

The prize is bestowed annually on the armed forces installation which has organized the best program for conservation and preservation of natural resources. The program must be designed to ensure multiple use of military property and be consistent with military objectives of the Base.



SECRETARY OF DEFENSE CONSERVATION AWARD COMMITTEE
INSPECTS MCB AS A FINALIST IN ANNUAL COMPETITION

1stRow: (L-R) MajGen R. McC. Tompkins, Commanding General; Mr. Charles G. Carothers, Dept. Asst. Secy., Fish and Wildlife and Parks and Marine Resources, U. S. Dept of the Interior; Mr. Joseph M. Robertson, Asst. Secy. for Administration, U. S. Dept. of Agriculture; Mr. Chester F. Phelps, Executive Director, Virginia Commission of Game and Inland Fisheries. 2dRow: (L-R) Dr. Ira N. Gabrielson, President, Wildlife Management Institute; Mr. Joseph W. Penfold, Chairman, Natural Resources Council of America; Major Richard H. Wagner, Staff Director, Natural Resources Management Div, Dept. of Defense; Dr. W. Mason Lawrence, President, International Association of Game, Fish and Conservation Commission

Conservation Group Evaluates Lejeune

Members of the Secretary of Defense Conservation Award Selection Committee recently toured Camp Lejeune to evaluate the base's conservation advancements.

The committee came aboard the base to observe progress in conservation efforts at Camp Lejeune, in determining the base's status in contention for the 1968 Secretary of Defense Conservation Award.

Camp Lejeune has been selected as one of three finalists from a total of 241 military installations competing for the annual award.

Choice of the winner is based on the greatest progress evident in conservation of natural re-

sources. Competition for the award is designed to promote better development in the natural resources, conservation programs on military bases.

A briefing on Camp Lejeune's natural resources management programs included discussion of development and usage of land, forest, water, and wildlife, recreational participation, and water and sewage treatment plans.

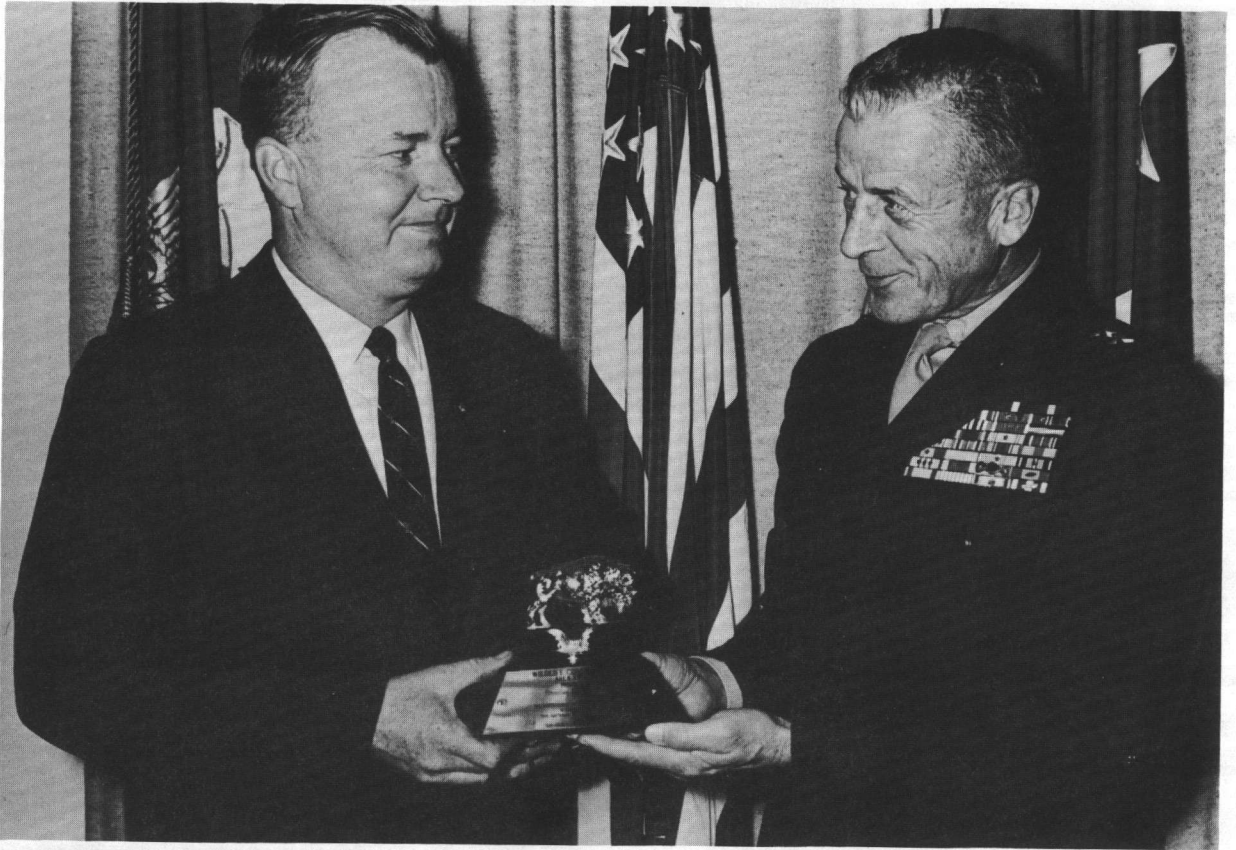
After a tour of Camp Lejeune, a Defense spokesman said the Committee was pleased with the progress in the conservation program at Camp Lejeune, and impressed by the dedication and enthusiasm of the base's conservation personnel.



DOD'S FINEST

The Secretary of Defense Conservation Award is presented to Major General R. McC. Tompkins, Marine Corps Base Commanding General, by Mr. Edward J. Sheridan (center), Deputy Assistant Secretary of Defense (Installations and Logistics). The Secretary of Defense award is presented annually to the military base that has shown the greatest amount of conservation progress with natural resources available. Also present are U. S. Senators Sam J. Ervin (right) and Everett Jordan (left).

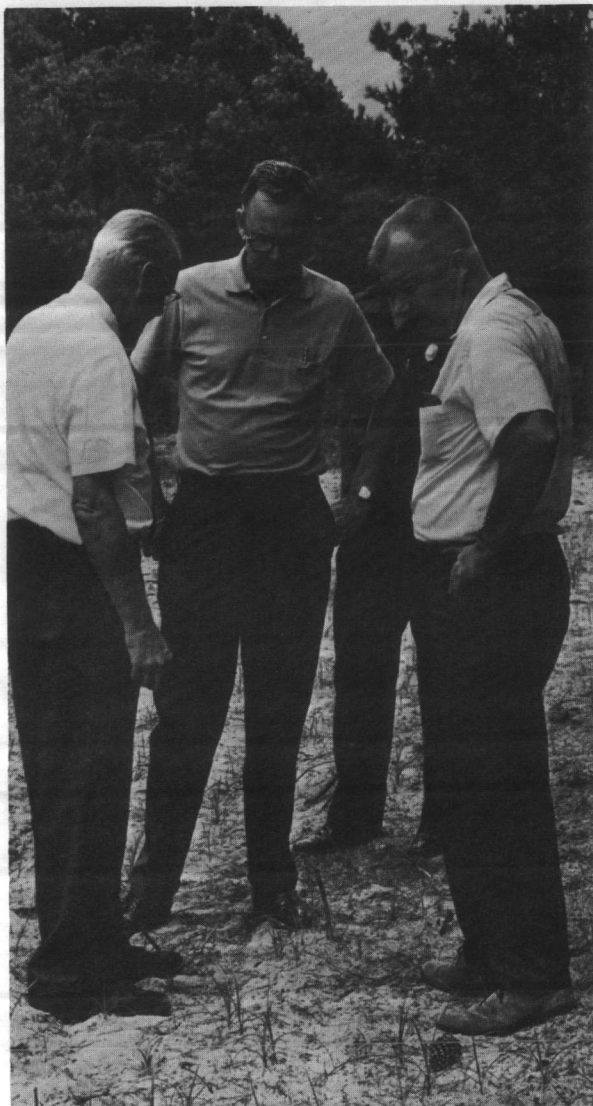
NORTH CAROLINA WILDLIFE FEDERATION AWARD



Mr. Charles D. Peterson (left), Base Wildlife Technician, is congratulated by Major General R. McC. Tompkins, Commanding General, Marine Corps Base, for receiving the Eastern Area Wildlife Conservation Award at the Governor's Achievement Banquet of the North Carolina Wildlife Federation for his contribution to the big game management program in eastern North Carolina. As U. S. Congressional Representative Nick Galifianakis stated in a letter to Mr. Peterson, "Such a distinction could only have been earned by much hard work and an intense dedication to your field."

BASE FORESTER COMMENDED

Mr. Carroll Russell, Base Forester, was commended by the Division of Forest Pest Control, Forest Service Southeastern Area for his work controlling a recent Southern pine beetle outbreak on the reservation. U. S. Forest Service personnel made a bark beetle detection survey in 1969 and stated, "The Base Forester did an excellent job of bringing the 1968 outbreak under control. This was accomplished by harvesting more than three quarter million board feet and 4,000 cords of beetle infested timber."



MR. CARROLL RUSSELL
(center) ON THE JOB.

COMMUNITY RELATIONS

General

Marine Corps Base, Camp Lejeune, strives continuously to improve the already fine community relations. Especially harmonious relations prevail between the Base and civilian communities within a radius of approximately 50 miles. With the exception of areas one normally expects to find restricted on a military reservation, the Base is open to the public. School classes, church groups, Boy and Girl Scouts, and clubs are welcomed and given demonstrations and guided tours. Large groups, such as the North Carolina State Legislature, have been entertained on occasion. Facilities for an overnight stay and meals have been provided Boy Scout Troops passing through or visiting the area. Many visitors are attracted by the extensive recreational facilities and sports competitions. The Base is particularly beautiful in the spring when thousands of colorful azalea plants and dogwood trees are in bloom. This attracts many visitors for sightseeing.

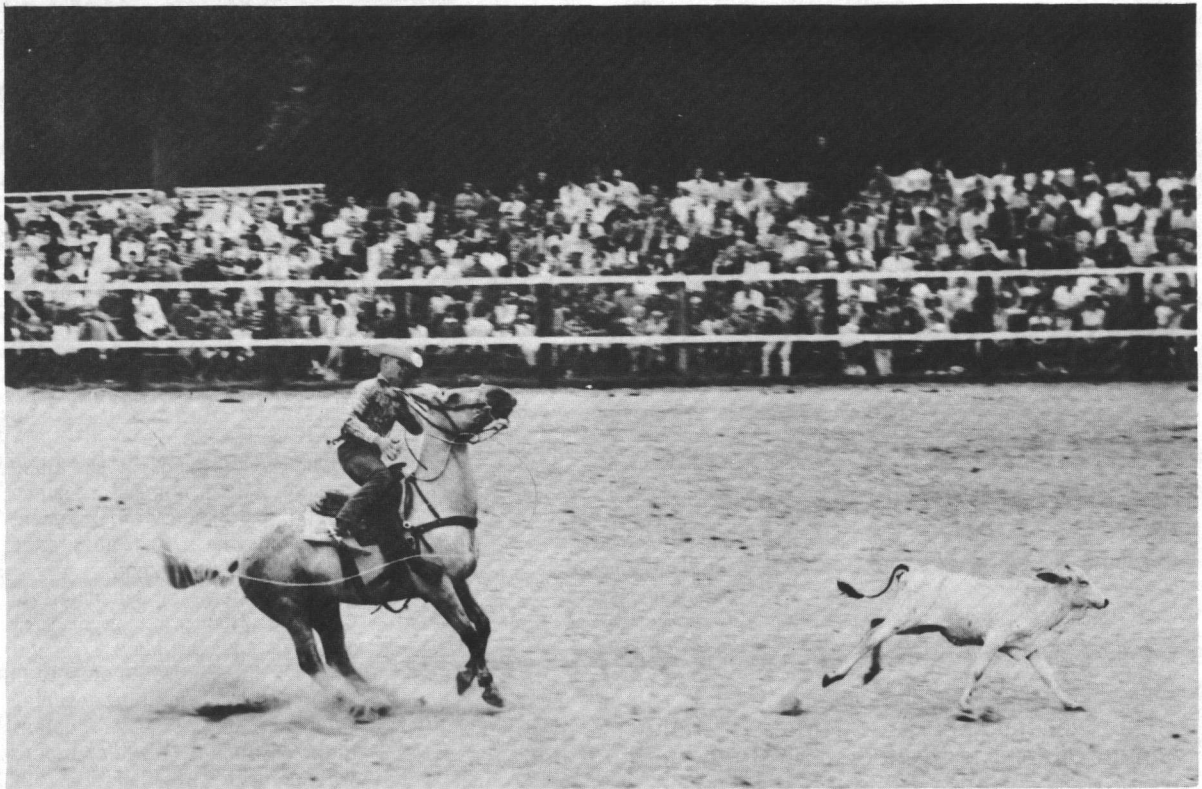
Public Access

In addition to military personnel and their dependents, retired military personnel residing in the locality, guests of personnel stationed at the Base, and properly authorized civilians are permitted to hunt and fish on the reservation. Commercial fishing is authorized in New River, subject to coordination with training activities for safety purposes. North Carolina State Highway Number 172 traverses the reservation near the coast, and is open for public use except on rare occasions when traffic must be rerouted for safety reasons due to firing live ordnance in the vicinity.



CIVILIAN TURKEY HUNTER...This civilian is enjoying one of the benefits of living near Camp Lejeune.

GET ALONG LITTLE DOGIE...Everyone looks forward to the annual Labor Day Rodeo.



Other types of public access are:

a. General visiting, wherein people drive through the Base for sightseeing purposes.

b. All athletic events are open to the public, and attendance is encouraged through use of Base and local news media.

c. School and scout groups visited the Base throughout the year. These groups were given guided tours and appropriate demonstrations of equipment, activities, and facilities.

d. Large crowds turned out for the annual 4th of

July water show and fireworks display.

e. The annual circus, performed in the Field House by the Polack Brothers Circus, was open to the public and drew a number of visitors.

f. The Labor Day Rodeo, open to the public, was the largest ever and was enjoyed by many civilian guests.

g. The Base Public Affairs Office provides speakers for various organizations in the civilian community.

Rodeo Slated For Labor Day

This weekend Camp Lejeune will hold its Fifth Annual Labor Day Rodeo, to be staged in the rodeo arena at the Base Stables.

This rodeo has been held for the last four years, and has enjoyed increasing success with each year. Hundreds of people aboard base and in the area "play it safe" each year rather than buck the holiday traffic which never fails to cause so many senseless deaths. They are never disappointed.

The rodeo runs events such as calf roping, bronc riding, steer wrestling, and bull riding. For the ladies, there is also a goat tying event. A bit more tame, but enjoyable nonetheless.

The rodeo will be held Sunday at 7:30 p.m. and Monday at 5:00 p.m. Admission is free and the public is cordially invited. So "play it safe" this year, and have an enjoyable and memorable weekend.

THE PUBLIC IS INVITED..Articles like these appear in the Base newspaper throughout the year. Radio and television are also used to inform the public.

Stables Set

Horse Show

The rodeo arena at the Base Stables will become the scene of Camp Lejeune's 3rd Annual Horse Show, to be held over Memorial Day weekend.

Competition is scheduled to begin at 2:00 p.m. on May 31 and June 1. On May 31, the English classes will compete in 16 riding and jumping events. Following the English contestants on June 1, Western riders will compete in 19 riding and gymkhana events.

The public is cordially invited to attend and participate in any of these events. An entry fee of \$1.50 is required, and Base Stables' horses will be provided at a charge of \$.50 for each event. English mounts will be drawn by number between 9:00 a.m. and 12 noon on May 17, and Western mounts will be drawn by number between 9:00 a.m. and 12 noon on May 24.

Admission is free, and a trophy and ribbon will be awarded to the first place winner in each event, and a ribbon to the 2d, 3d, 4th, and 5th place winners of each event.

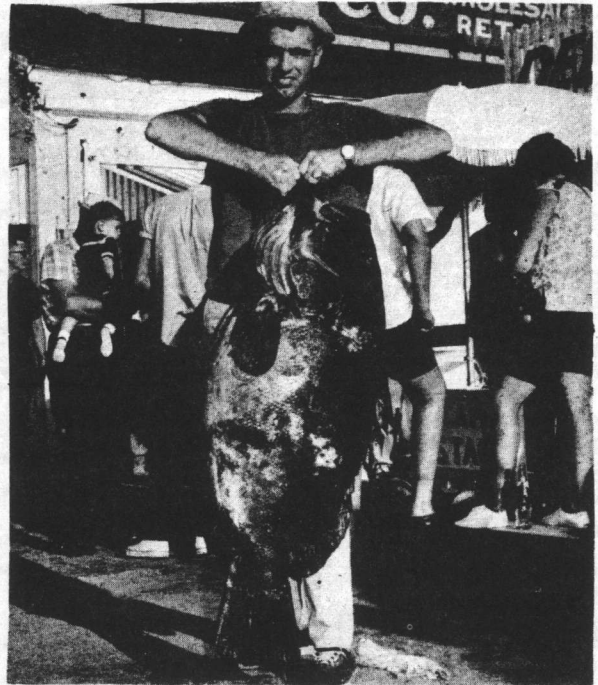
Both English and Western events will consist of riding and handling skills, and jumping events for the more advanced equestrians.

For more information concerning the show or any events, call Camp Lejeune Base Stables. The Stables are located on Stone Street between Stone Street School and Berkley Manor.

FISHERMAN'S PARADISE

Many people enjoy fishing
on and around Camp
Lejeune.

SSGT Jim Brand of Camp Lejeune fishing off the Continental shelf on the head boat "Capt. Stacy" hauled in this big fellow a 77-lb. Warsaw Grouper. This is one of the larger species of Sea Bass.



CIVILIAN EMPLOYEE FISHING CONTEST - 1969

The 14th annual fishing contest, sponsored by the Recreation and Welfare Association, will begin at 0001, 1 May, and end at 2400, 30 November 1969. The geographical limits for the contest are the entire state of North Carolina. All U. S. Civil Service personnel, Nonappropriated Fund civilian personnel, and uniformed Red Cross personnel employed in a full-time with pay status at Marine Corps Base, Marine Corps Air Station (Helicopter), and Naval Hospital are eligible to compete.

The contest will be divided into two categories--SALT WATER and FRESH WATER. The species eligible for entry and the minimum weight requirements for each are as follows:

SALT WATER

Species	Min. Wt.	Species	Min. Wt.
Albacore	10 lbs	Mackerel(Span)	2 lbs
Amberjack	10 lbs	Marlin(All var)	10 lbs
Bluefish	1 lb	Pompano	1 lb
Bonita	2 lbs	Rockfish	5 lbs
Cobia	5 lbs	Sailfish	10 lbs
Croaker	12 ozs	Sea Mullet	12 ozs
Dolphin	4 lbs	Sheepshead	2 lbs
Drum (Black)	2 lbs	Spot	10 ozs
Drum (Red)	5 lbs	Tarpon	10 lbs
Flounder	2 lbs	Trout	1 1/2 lbs
Mackerel (King)	5 lbs	Red Snapper	5 lbs

FRESH WATER

Black Bass	2 lbs	Crappie	1 lb
Blue Gill	9 ozs	Jack (East Pick)	2 lbs
Bream (All var)	9 ozs	Red Breast	8 ozs
Catfish	3 lbs	Trout	1 lb

Weighing of fish can be accomplished at any authorized weighing station, fishing pier or by a party

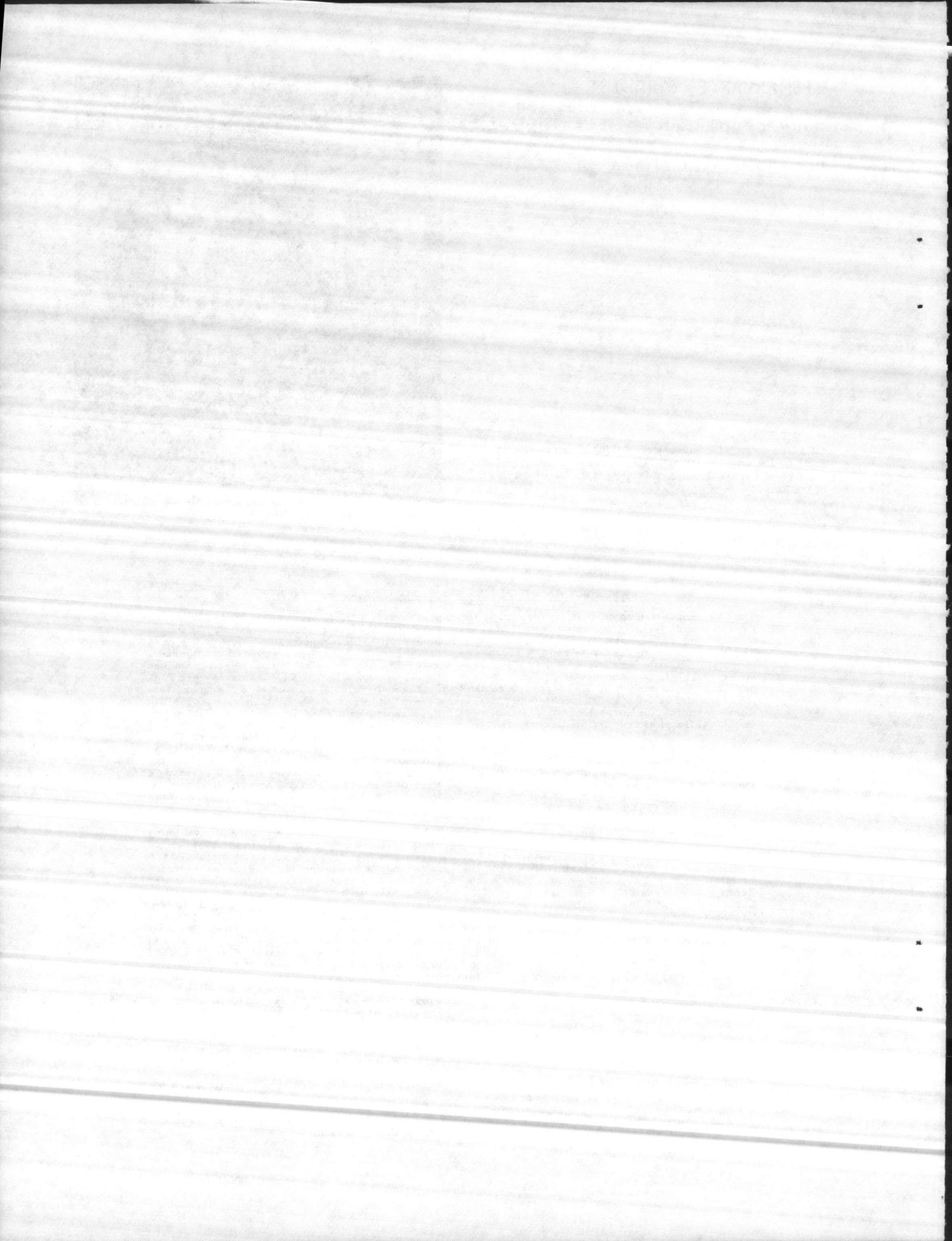
PRIZES - Monthly winners in each category will receive a \$5.00 prize and will compete for the annual prize. Annual winners in each category will receive an additional award.

boat captain. In the event any of these places are not available, a Notary Public may verify the weight. In addition to the foregoing, the following business establishments have been designated as authorized weighing stations: Whaley's Superette, Onslow Drive, Jacksonville, N. C.; Grams Hanchey General Store, Wallace, N. C.; M. E. Jarman Bros. General Store, Route 2, Richlands, N. C.; Mills Bros. General Store and Service Station, Belgrade, N. C.; Capps Superette, Sneads Ferry, N. C.; Hurst Bros. Grocery Store, Swansboro, N. C.; Ike Parker Service Station, Verona, N. C.; Wiggins Hardware, Richlands, N. C.; Neuse Sporting Goods, Highway 70-E, Kinston, N. C.; Triangle Variety Store, Junction 258 and 17, Jacksonville, N. C.; and Marshburn's Store, Route 2, Gum Branch Road, Jacksonville, N. C.

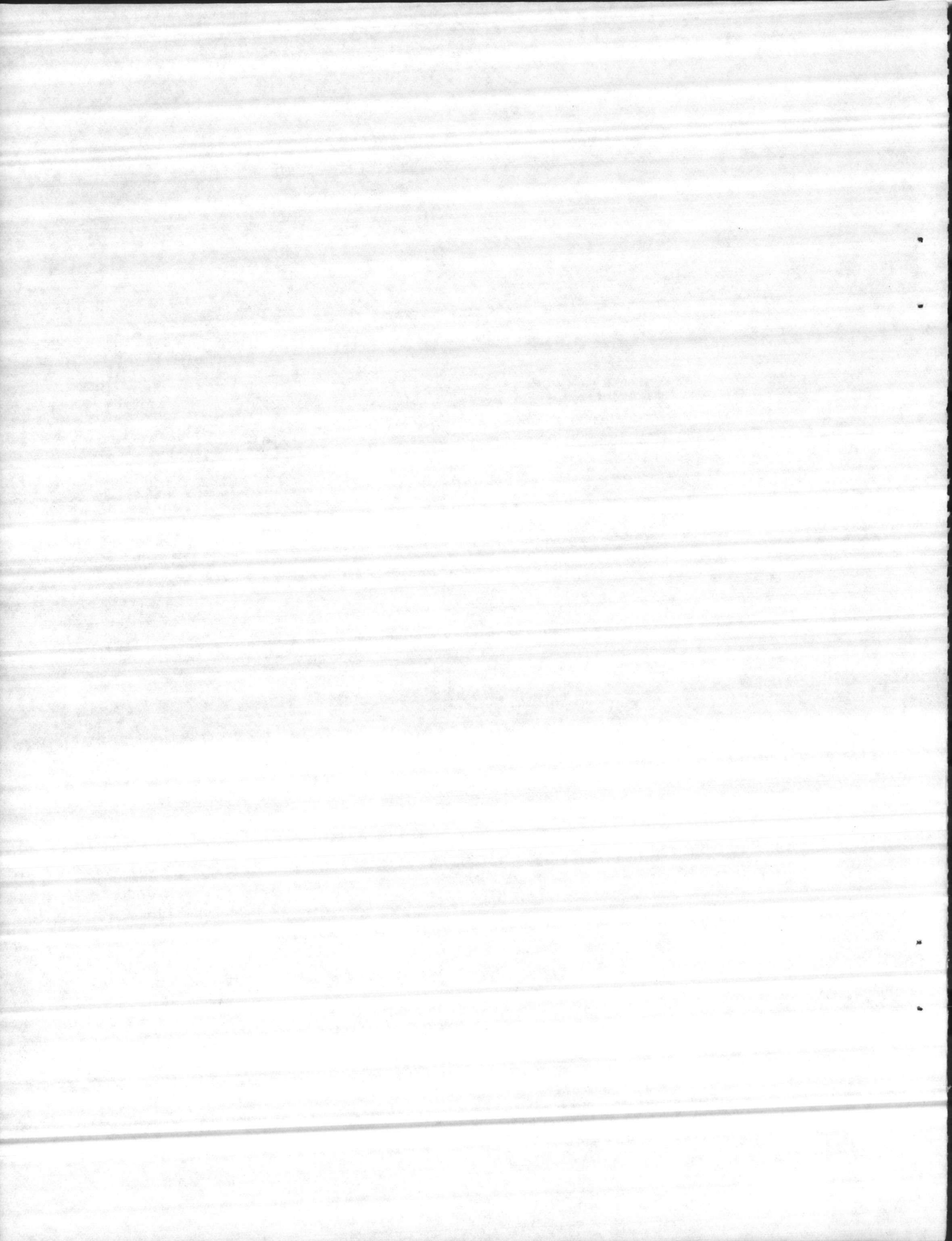
All entries will be submitted on the official entry blank designed for the contest. In the event an official entry blank is not available, a plain sheet of paper may be used, provided the necessary information on the entry blank is included. Entry blanks will be available in each unit personnel office, all fire houses, the CPO Training Office, Building 1403, the Civilian Personnel Office, and at designated weighing stations. All entries must be signed by an authorized weighing official and the person submitting the entry. Entries must be fully completed. Any fish caught during a particular month must be entered by 2400 of the 4th day of the following month in order to be eligible for a prize. Entries should be submitted to the following address:

CIVILIAN PERSONNEL OFFICE, Bldg. 33
For: Camp Lejeune Civilian Recreation and
Welfare Association (Fishing Committee)

Entries will be recorded as of the date and time received at the above address.



APPENDIX A
VEGETATION



VEGETATION

Native plants common to Camp Lejeune that are useful to wildlife are listed below:

Trees

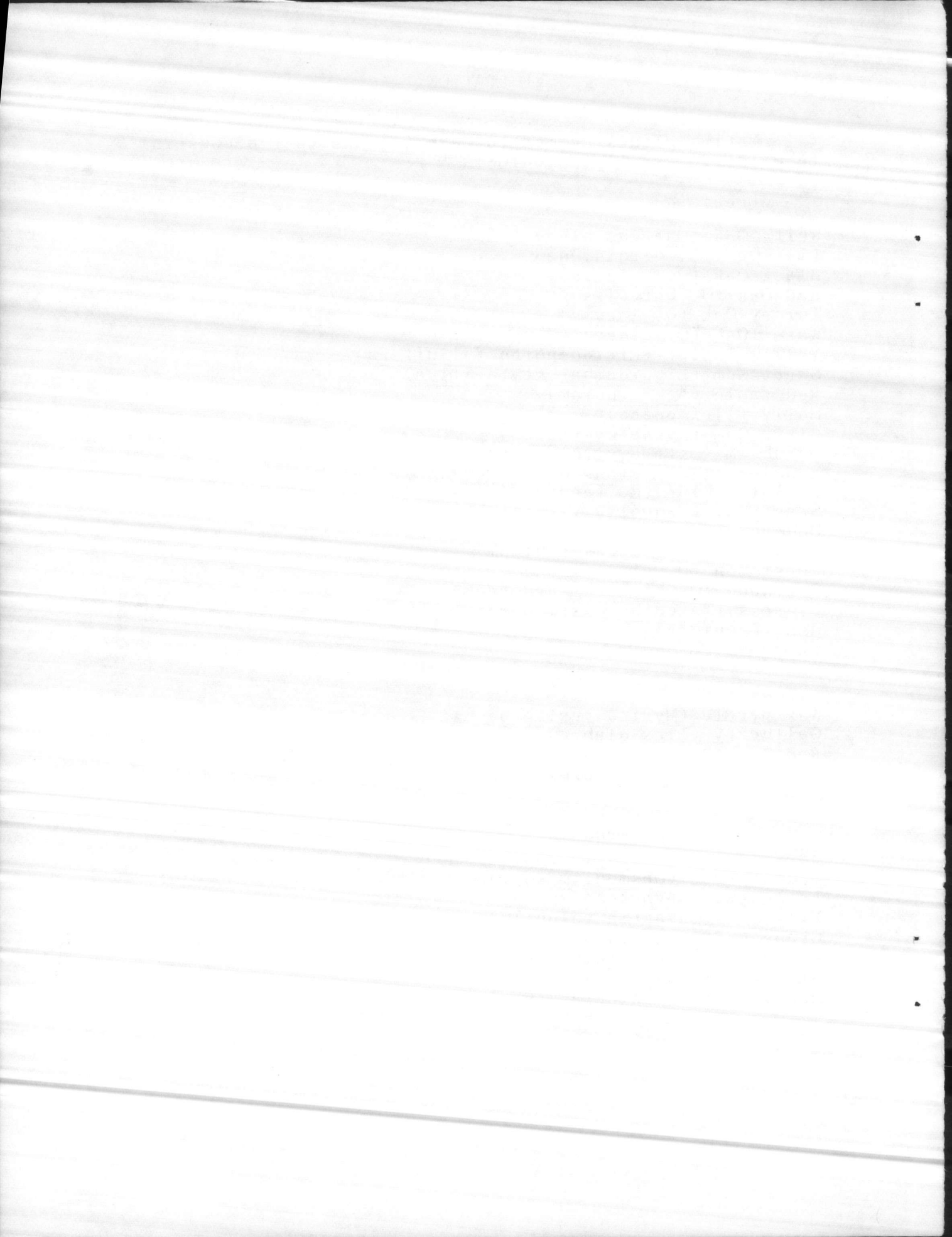
White Oak (Quercus alba)
Live Oak (Q. virginiana)
Black Oak (Q. velutina)
Red Oak (Q. borealis)
Turkey Oak (Q. laevis)
Water Oak (Q. nigra)
Yellow Poplar (Liriodendron tulipifera)
Sweet Gum (Liquidambar styraciflua)
Red Maple (Acer rubrum)
Holly (Ilex opaca)
Black Gum (Nyssa sylvatica)
Hornbeam (Ostrya virginiana)
Longleaf Pine (Pinus palustris)
Loblolly Pine (P. taeda)
Sweet Bay (Magnolia virginiana)
Dogwood (Cornus florida)
Sassafras (Sassafras albidum)
Persimmon (D. virginiana)
Sourwood (Oxyolendrum arboreum)
Cypress (Taxodium distichum)
Ash (F. nigra)

Shrubs

Wax Myrtle (Myrica cerifera)
Gallberry (Ilex glabra)
Red Bay (Persea pubescens)
Cyrilla (Cyrilla racemiflora)

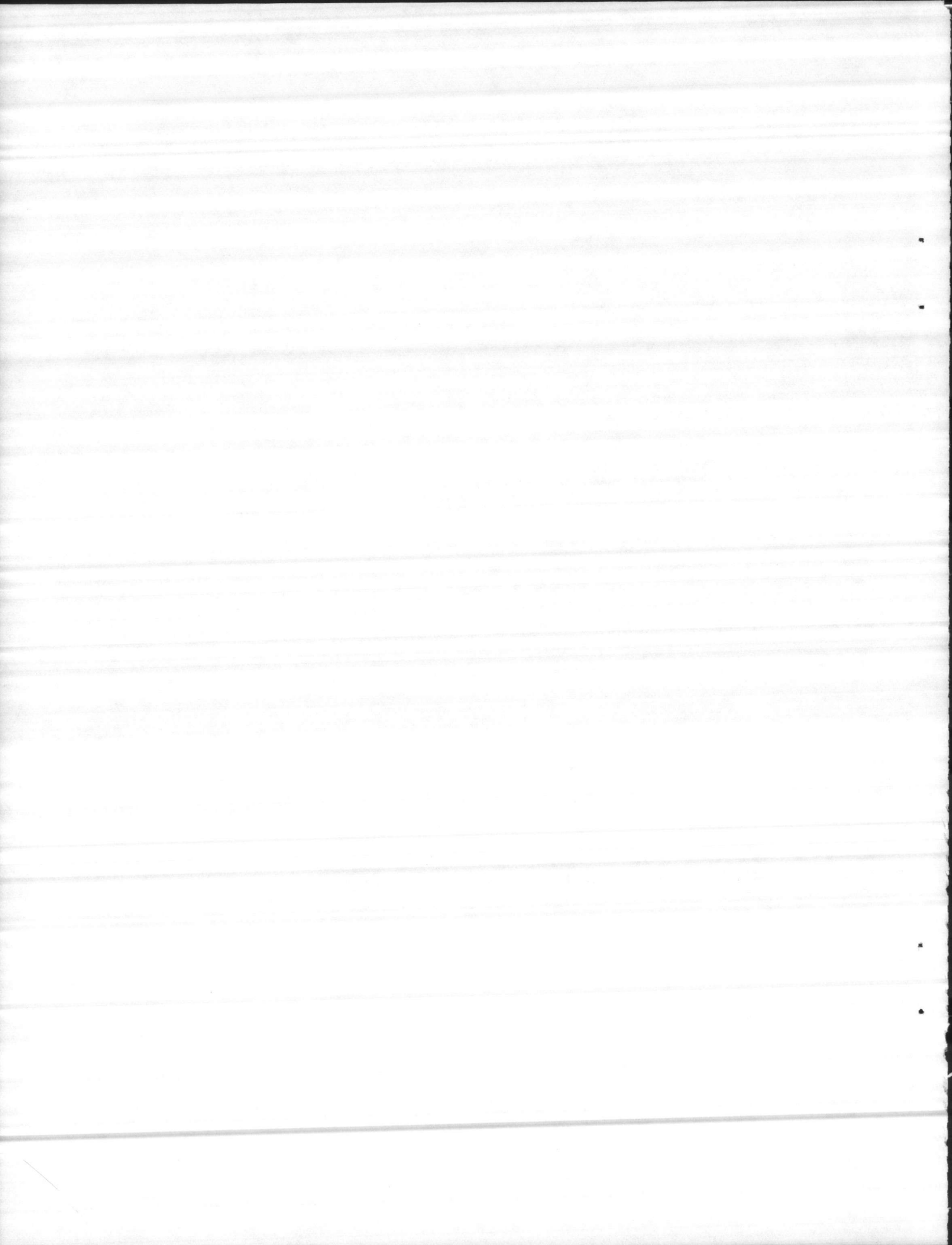
Vines and Herbs

Partridge Pea (Cassia spp.)
Beggur Lice (Desmodium spp.)
Lespedeza (Lespedeza spp.)
Milk Pea (Galactia volubile)
Grape (Vitis spp.)
Blueberries (Vaccinium spp.)
Smilax (Smilax spp.)
Honeysuckle (Lonicera japonica)



APPENDIX B

WILDLIFE RESOURCES



WILDLIFE RESOURCES

Wildlife species most common to Camp Lejeune, their population size estimate, and their relative range condition are listed below:

Species	Population (Estimated)	Range Condition
<u>Game Birds and Animals:</u>		
Whitetail Deer (<u>Odocoileus virginianus</u>)	2,800	Good
Black Bear (<u>Ursus americanus</u>)	30	Fair
Squirrel (<u>Sciurus spp.</u>)	9,500	Good
Rabbit (<u>Sylvilagus spp.</u>)	3,000	Fair
Gray Fox (<u>Urocyon cinereoargenteus</u>)	600	Excellent
Quail (<u>Colinus virginianus</u>)	5,000	Fair
Turkey (<u>Meleagris gallopavo</u>)	600	Good
<u>Fur-Bearing Animals:</u>		
Mink (<u>Mustela vison</u>)	200	Excellent
Otter (<u>Lutra canadensis</u>)	200	Excellent
Muskrat (<u>Ondatra zibethicus</u>)	500	Fair
Skunk (<u>Mephitis mephitis</u>)	*	Excellent
Raccoon (<u>Procyon lotor</u>)	*	Excellent
Opossum (<u>Didelphis marsupialis</u>)	*	Excellent
Bobcat (<u>Lynx rufus</u>)	150	Excellent
<u>Migratory Game Birds:</u>		
Dove (<u>Zenaidura macroura</u>)	2,500	Fair
Woodcock (<u>Philohela minor</u>)	800	Good
Rail (<u>Rallus longirostris</u>)	2,500	Excellent

*Estimate not available.

Waterfowl: On 31 December 1969 Base and State wildlife officials estimated the total waterfowl population aboard the Base to be 14,000.

Wood Duck (Aix sponsa)
Black Duck (Anas rubripes)
Canada Goose (Branta canadensis)
Mallard (Anas platyrhynchos)
Green-winged Teal (Anas carolinensis)
Ruddy Duck (Oxyura jamaicensis)
Hooded Merganser (Lophodytes cucullatus)
American Merganser (Mergus merganser americanus)
Red-breasted Merganser (Mergus serrator)
Canvasback (Aythya valisineria)
Bufflehead (Bucephala albeola)
Lesser Scaup (Aythya affinis)
Pintail (Anas acuta)
Greater Scaup (Aythya marila)
Ring-neck Duck (Aythya collaris)
Coot (Fulica americana)

Game Fish

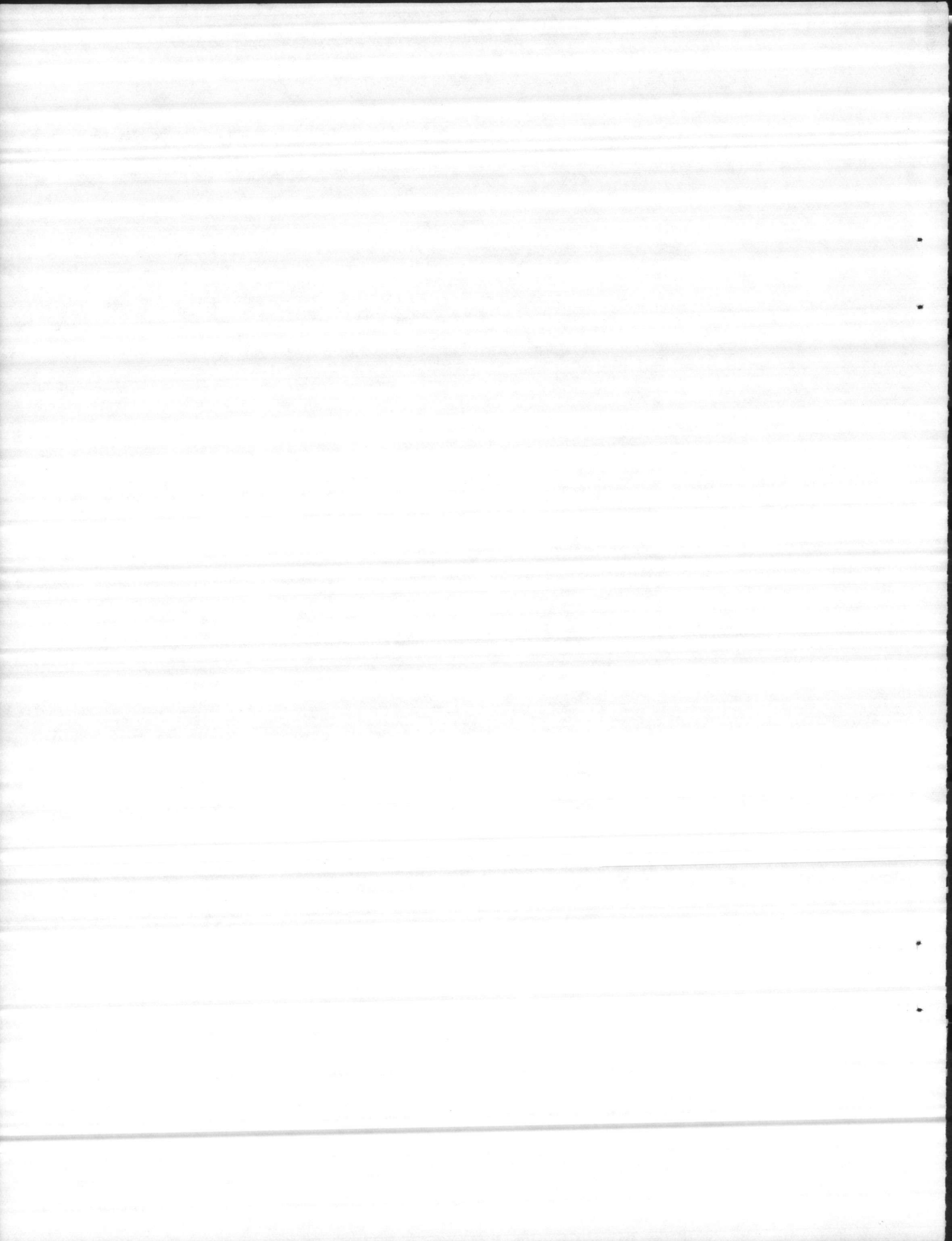
Largemouth bass (Micropterus salmoides)
Bluegill (Lepomis macrochirus)
Redbreast (Lepomis auritus)
Pickerel (Esox spp.)
Redear (Lepomis microlophus)
Warmouth (Chaenobryttus gulosus)
Black crappie (Pomoxis nigromaculatus)
Yellow perch (Perca flavescens)
Pumpkinseed (Lepomis gibbosus)
Flier (Centrarchus macropterus)
Stripped bass (Roccus saxatilis)

Nongame Fish

Carp (Cyprinus carpio)
Bowfin (Amia calva)
Shad (Dorosoma cepedianum)
Catfish (Ictalurus spp.)
Longnose gar (Lepisosteus osseus)

APPENDIX C

RESPONSIBILITIES OF THE COMMITTEE FOR
CONSERVATION OF NATURAL RESOURCES



RESPONSIBILITIES OF THE COMMITTEE FOR
CONSERVATION OF NATURAL RESOURCES

1. Conduct annually a comprehensive review of the base hunting, fishing, and boating regulations and make recommendations to the Commanding General regarding changes, additions or deletions required.
2. Review recommendations submitted by the Rod and Gun Club regarding organized deer and bear hunts and make appropriate recommendations to the Commanding General regarding same.
3. Prepare annually for the Commanding General's approval a schedule and procedures for the conduct of organized and controlled hunts for all type wildlife.
4. Prepare annually for the Commanding General's approval a schedule for open seasons, bag and creel limits, in consonance with current federal, state and county laws and regulations.
5. After consultation with federal, state and county fish and wildlife authorities and officially chartered conservation agencies, make recommendations to the Commanding General regarding annual harvest of fish and wildlife on the base.
6. Provide command liaison and establish procedures for scheduling and conducting frequent meetings between representatives of federal, state and county fish and wildlife agencies and officially chartered conservation organizations. The committee will take the initiative to seek out help and to work effectively and in harmony with the above agencies and/or organizations. A full report of such meetings will be included in the minutes of the committee.
7. Ensure, when feasible, that local sportsmen groups are invited to attend meetings of the committee as guests. The importance of establishing, maintaining, and improving base-community relations cannot be overemphasized.
8. Review annually the cooperative plan between the Base; the Regional Director of the U. S. Fish and Wildlife Service; and the Executive Director, North Carolina Wildlife Resources Commission; and make recommendations to the Commanding General for any desirable changes in the Wildlife Management Plan.

9. Monitor and make frequent reports to the Commanding General concerning all aspects of the Base Wildlife Food Plot Program.

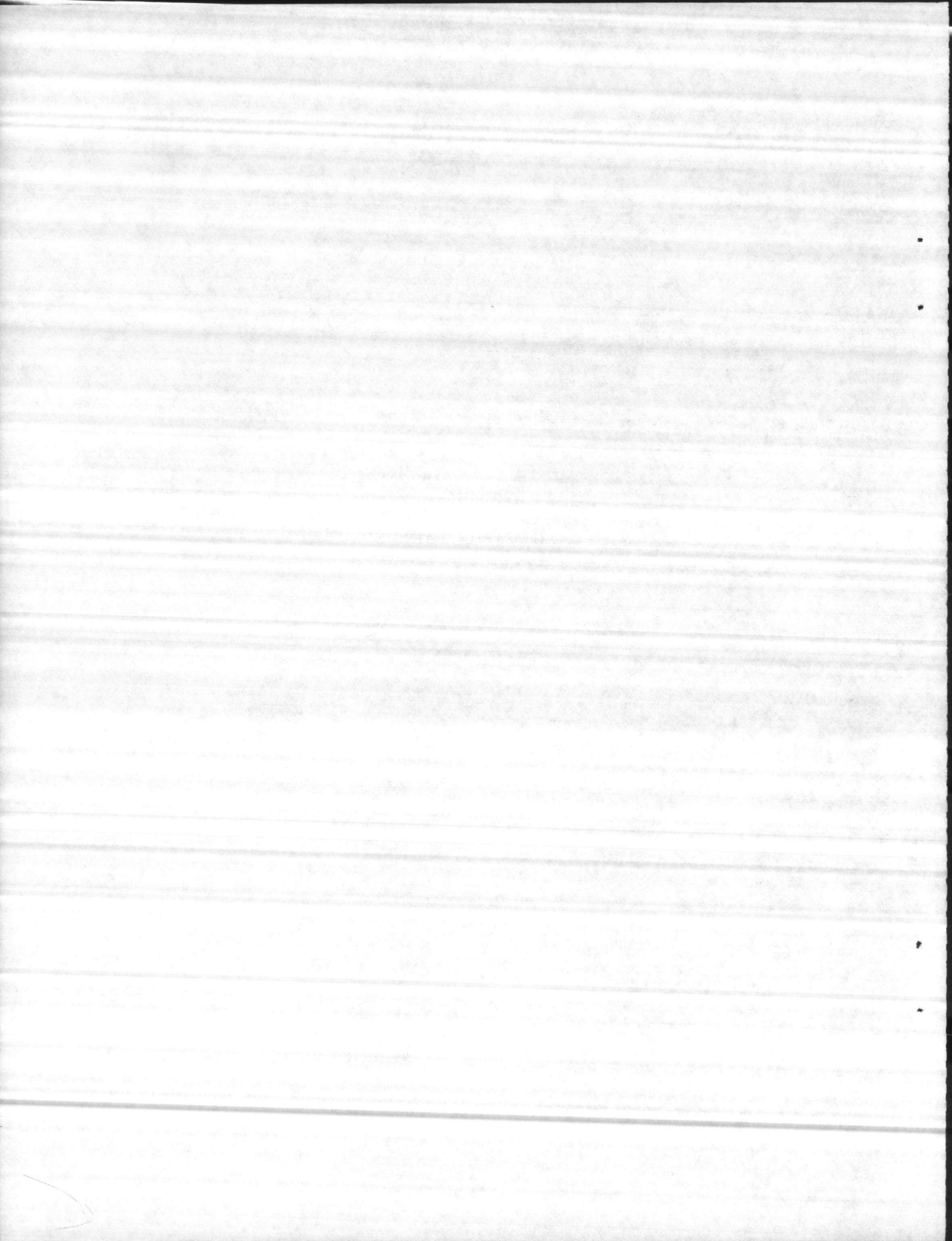
10. Act as command representatives for any inspecting individual or group visiting the Base in connection with the Natural Resources Conservation Program.

11. Establish and maintain procedures for accumulating reporting information and prepare all reports for the Commanding General regarding the Base Natural Resources Conservation Program, as required.

12. Develop for promulgation a continuing informational program designed to inform military and civilian persons alike of philosophies, principles, and policies of the Secretary of the Navy as related to the conservation program.

13. Recommend to the Commanding General supplementary instructions, procedures, regulations, etc., regarding any phase or facet of the Natural Resources Conservation Program, as required.

APPENDIX D
AGE RATIO ANALYSIS



AGE RATIO ANALYSIS

Purpose

This project is a phase of the continuing deer herd study at Marine Corps Base, Camp Lejeune, North Carolina. The age ratio analysis can be used to identify segments of the white-tail deer population that require more intensive management.

Procedures

In the fall of 1968 the lower jaw bones were collected from 64 female deer killed during an antlerless deer hunt. Forty-seven lower jaw bones were collected from antlered males killed during the 1969 fall deer season. The teeth eruption and wear were used to age these specimens according to a procedure in the 3rd edition of Wildlife Management Techniques (pp. 388-389), published by The Wildlife Society, Washington, D. C. The North Carolina Wildlife Resources Commission provided an analysis of the female specimens, and the male specimens were analyzed by the research division of the Fish and Wildlife Section at Camp Lejeune.

Results

Age Class (yrs.)	Females (1968)*		Antlered Males (1969)	
	Sample	Percentage	Sample	Percentage
Fawns	20	31	0	0
1-1/2	7	11	15	32
2-1/2	11	17	13	28
3-1/2	14	22	8	17
4-1/2	5	8	7	15
5-1/2 and older	7	11	4	8
Total	64	100	47	100

*Age determination of females made by Andrew J. Weber, Leader, State-wide Game Surveys and Investigations, North Carolina Wildlife Resources Commission

Discussion of Results

From the above ratios, it appears that there are abnormally low percentages of female yearlings (1-1/2 yrs.) and two-and-one-half year does. The male age ratios are as expected. Three possible explanations for the apparent

deficiency of the one-and-one-half and two-and-one-half year females in the population are: (1) poor reproductive rates during the 1966 and 1967 fawning seasons, (2) low survival rates for young deer from the 1966 and 1967 fawning seasons to the 1968 fawning season, and (3) a generalized low survival rate for the one-half to two-and-one-half year life span indicating that the above age ratios are not unusual for the Base deer herd.

The first possibility concerning a low fawn crop in 1966 and 1967 does not appear to be valid since the male age analysis does not indicate a deficiency of males in the one-and-one-half and two-and-one-half year classes. It is not likely that there was a differential survival rate for male and female fawns during these two fawning seasons only.

Antlerless deer hunts were held on the reservation in 1966 but not in 1967. Since the 1967 female fawns were not hunted prior to the 1968 season, there does not appear to be a reason why the one-and-one-half year class is deficient when the male one-and-one-half year class, which also was not vulnerable to the 1967 antlered deer hunt, appears to be normal.

Fawns and yearlings are generally considered to be especially vulnerable to hunting mortality. Again the lack of a 1967 doe hunt and the apparently normal one-and-one-half and two-and-one-half year class buck distribution are evidence against a generalized low survival rate for the one-half to two-and-one-half age class. There does not appear to be a reasonable ecological justification for the under-representation of female yearlings and two-and-one-half year olds in the Base deer herd. There is always the possibility that due to the complexity of population analysis, there are unknown ecological factors that caused the abnormality.

The main assumption in this analysis is that the deer examined were randomly collected. Two possible biases are the tendency to shoot the largest deer in a herd (especially applicable in antlerless hunts) and the trophy hunter who shoots only deer with large racks. Another possible experimental error is the assumption that all deer collected had the same food habits assuring a uniform rate of tooth wear for all specimens. The assumptions utilized in this project are probably reasonably valid, but the possibility of experimental error causing biased results must always be considered.

Conclusions and Recommendations

Antlered deer mortality appears to be within normal limits since the percentages of deer in each age class decrease steadily with increasing age indicating no excessive mortality for any particular age class. No statements can be made concerning male recruitment due to no male fawns being collected in this study. The present management is considered effective in maintaining the proper ratio of antlered deer age classes.

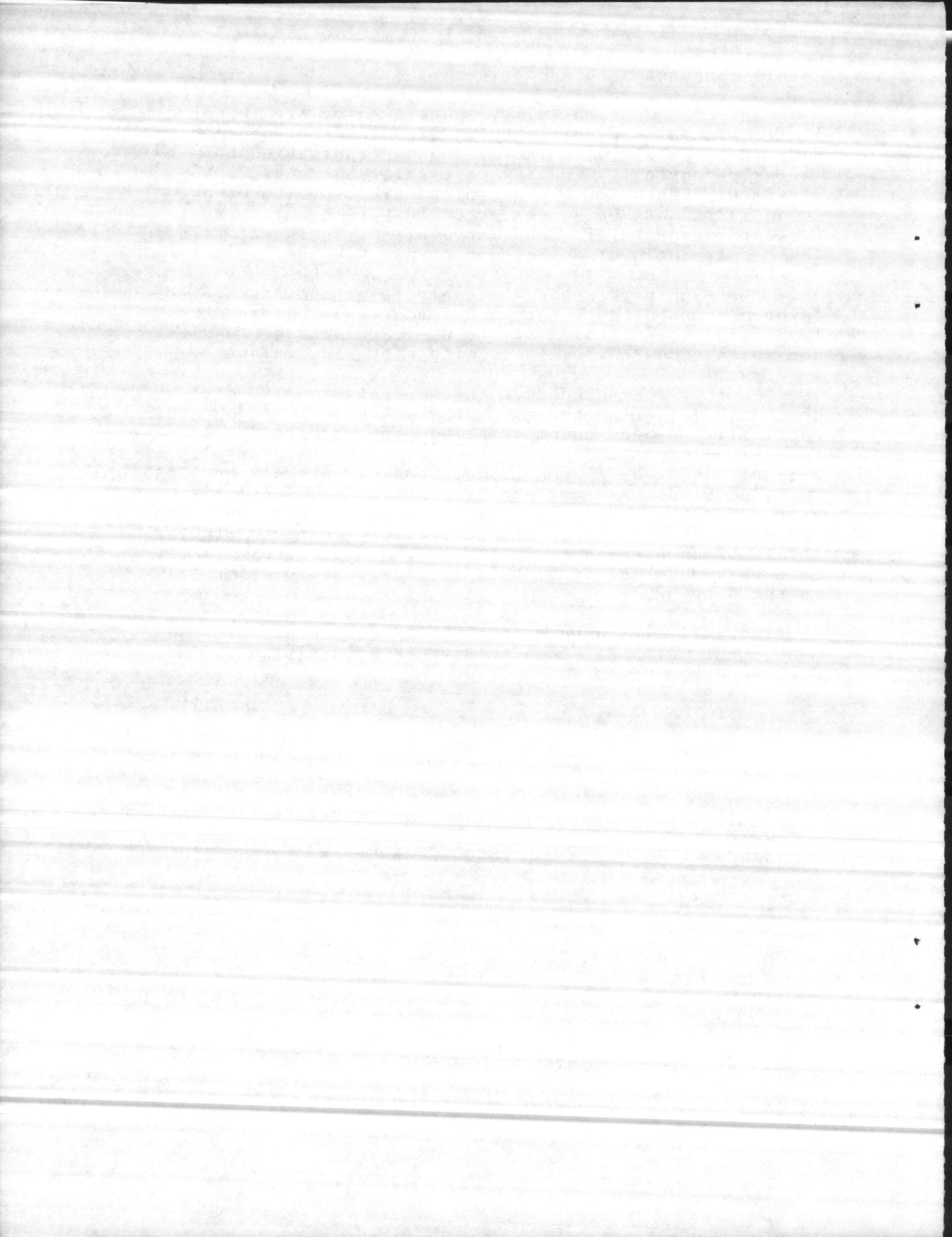
The high percentage of female fawns indicates a favorable recruitment rate. A former study showed the 1968 herd reproductive rate to be 1.20 fawns per adult doe which compares favorably with statewide values.

It is recommended that the age ratio analysis study be continued during the 1970 deer season. To reduce the possibility of nonrandom sampling, the samples should be taken from organized hunts where the hunters generally kill all legal deer seen rather than selectively hunt as some individual hunters prefer. If the 1970 analysis also indicates a deficiency in one-and-one-half and two-and-one-half year class females, a more complete study should be undertaken to determine remedial steps to correct this abnormality as this is considered detrimental to the deer herd.

Overall, it appears that the present deer herd management policies are effective in maintaining proper deer herd age group composition.

Charles D. Peterson
Wildlife Technician
Marine Corps Base
Camp Lejeune, N. C.

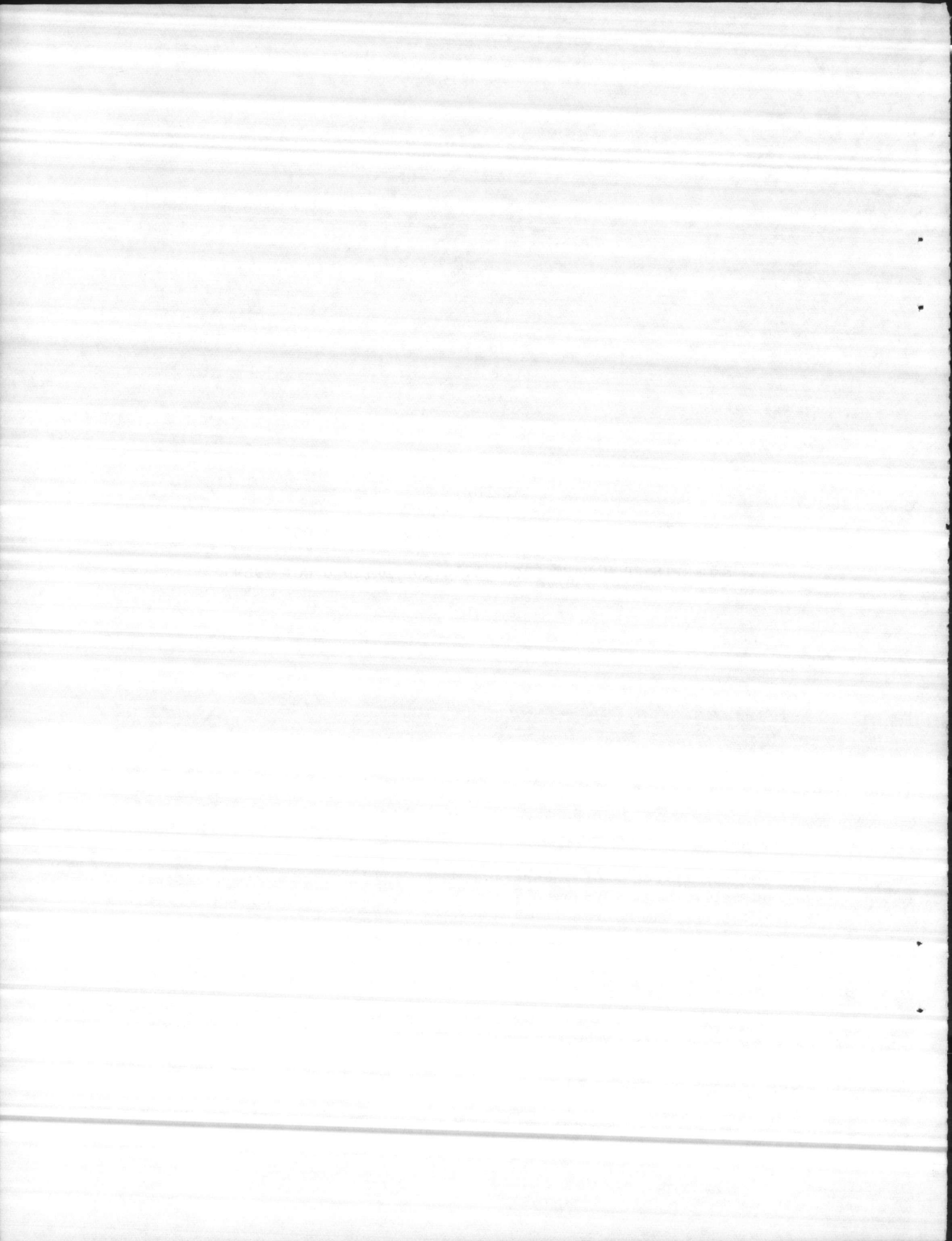
22 December 1969



APPENDIX E

EXCERPTS FROM BASE BULLETIN 1710 DATED 6 OCT 1969

EXCERPTS FROM BASE ORDER 1710.20B DATED 6 OCT 1969



HEADQUARTERS, MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

BBul 1710
27/CP/efm
6 Oct 1969

BASE BULLETIN 1710

From: Commanding General
To: Distribution List

Subj: 1969-1970 Hunting Season

Ref: (a) BO 1710.20
(b) 1969-1970 N. C. Hunting and Trapping Regulations

Encl: (1) Base Hunting Areas
(2) Open Seasons and Bag Limits
(3) N. C. Migratory Game Regulations
(4) Assignment of Huntmasters, Assistant Huntmasters, and Dates of Organized Deer Hunts
(5) Request to Participate in Organized Deer Hunts

1. Purpose. To publish information on the 1969-1970 hunting season for the base and to implement and amplify certain provisions of references (a) and (b).

2. Base Hunting Permits

a. Base hunting permits are issued and accounted for by the Base Game Protector.

b. All applicants for base hunting permits or area hunting passes must successfully pass the hunter safety examination which is conducted at building 4000, Midway Park.

c. Reference (a) requires applicants for base hunting permits to also sign certificates of understanding to indicate they are familiar with and will comply with base, county, state, and federal hunting regulations and the basic principles of hunting safety. A valid North Carolina State or Onslow County hunting license must be presented as well as a Special North Carolina State Big Game Permit if the applicant intends to hunt deer or turkey.

d. All civilians, including dependents and civilian guests of military personnel, will execute a certificate indicating they release the government from all responsibility in case of an accident or injury while hunting.

3. Clearance for Hunting

a. Each hunter must receive area clearance from the Base Game Protector, building 4000, prior to going into the field to individually hunt. A one-day area hunting pass will be issued beginning one hour before sunrise upon presentation of a valid Rod and Gun Club membership card or base hunting permit. This pass must be in the hunter's possession while actually hunting and will be returned to the Base Game Protector immediately upon completion of hunting. Failure to return the pass no later than one hour after sunset on the day of issuance will result in suspension of hunting privileges for 30 days.

b. Areas in which hunting is permitted are shown in enclosure (1) with no change in present training area designations. The apportionment of the base are divided into three major hunting areas:

(1) Area 1 is composed of training areas R, F, G, and Q excluding all built-up areas, impact areas and ammunition storage areas.

(2) Area 2 is composed of areas H, I, and J excluding all built-up areas, demolition ranges at Courthouse Bay and Base Magazine Area.

(3) Area 3 is composed of training areas M, K, and L excluding the Rifle Range, K-2 Impact Area, Verona ASSP, messhall areas, and other areas designated by the Area Commander, Camp Geiger.

c. No hunting shall be permitted in areas being utilized for field firing ranges; impact areas, the School Nature Study Area; within 200 yards of any inhabited camp, barracks, quarters, housing, primary roads, landing fields, stables, schools, storerooms, supply or storage area, athletic field, golf course or utility facility; or in areas where troops are engaged in maneuvers, exercises, or training.

d. Only organized hunts may be conducted with special approval of the Chief of Staff, Marine Corps Base, in "no hunting", "exclusion", or "bow hunting" areas.

4. Duck Blinds. Duck blinds capable of accommodating two hunters each are provided in New River. They are available on a first-come, first-served basis and will not be assigned.

5. Bow and Arrow Hunting. Bow and arrow hunting will be in accordance with enclosure (1) to reference (a).

a. Training areas A, B, C, and D are designated as bow hunting areas. Individual and organized bow hunts are authorized, and area assignments will be made by the Base Game Protector.

b. The use of firearms or dogs is prohibited.

c. When special hunts are authorized by the Commanding General in a designated bow area or areas, bow hunting will not be permitted.

6. Organized/Individual Deer Hunts

a. Organized deer hunts will have a huntmaster and assistant huntmaster approved by the Commanding General. See enclosure (4).

b. The huntmaster and his assistant will:

(1) Be designated by the Provost Marshal as Assistant Deputy Game Protectors.

(2) Be responsible for the organization and proper conduct of their hunting party.

(3) Verify that each hunter in the party is eligible to hunt in accordance with existing regulations.

(4) Determine the number of persons that may safely participate in their party.

(5) Maintain appropriate records of participation and game harvest statistics to be reported to the Base Game Protector within 48 hours following an organized hunt.

c. Participation in organized hunts will be by reservation using enclosure (5).

d. A huntmaster has the option to secure his hunt when there are ten or less hunters, and members may be assigned to another hunt of their choice.

e. It is permissible to hire not more than six dog handlers with dogs for each organized party. Dogs may be released in "no hunting" or "firing" areas adjoining an area being hunted; however, extreme caution will be exercised to insure that there is no violation of regulations which prohibit firing within 200 yards of such area. Dog handlers will not enter impact areas being utilized for field firing nor will they enter any area after daylight hours without approval of the Base Game Protector's office to retrieve their dogs.

f. The three major hunting areas will be rotated among the individual hunters and organized hunting parties contingent upon availability and training providing an equal opportunity for hunting the more productive areas. Organized parties will be assigned one area and individuals will be assigned two areas on organized hunting dates.

g. When an area is reserved for organized deer hunts, only members of the organized parties will be permitted to hunt within the assigned area, and no other person or unit other than law enforcement personnel

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may enter the area except in using primary roads in regular passage or in case of emergency.

h. Military personnel, active and retired, and civilian employees of the base will be given priority in participating in organized deer hunts.

i. No persons under 16 years old will be allowed to participate in organized deer hunts unless specifically authorized by the huntmaster.

j. Dog handlers are required to execute enclosures (3) and (4) of reference (a).

k. Only 10 to 20 gauge shotguns and commercial loads therefor will be used (bow and arrow hunts excepted). Under no circumstances will the military brass case load be used, and the altering of any ammunition is prohibited. The individual hunter is responsible that his weapon is serviceable and in safe working condition.

l. Only male deer with visible antlers may be taken except when a special season for taking antlerless deer is authorized by the Commanding General.

m. Individual hunters will not be permitted to use dogs while hunting deer, but dogs are allowed while hunting other game.

n. Hunters are not permitted in any area one hour after sunset except when participating in night hunts as authorized in reference (a).

o. Individual deer hunting will be in accordance with subparagraphs g. and k. through n. above.

7. Weighing Station. The Base Game Protector will maintain a weighing station at building 4000.

8. Game Reports. Open seasons and bag limits are specified in enclosures (2) and (3). To provide information for the further development of the Base Wildlife Conservation Program, all game taken will be physically reported to the Base Game Protector for inspection. Game which is accidentally taken or destroyed will be reported to the Base Game Protector utilizing the format in enclosure (6) to reference (a). Forms may be obtained from the Base Game Protector or Base Desk Sergeant.

9. General

a. All shotguns used in hunting which are capable of holding more than three shells must have the magazine plugged with a one-piece metal or wooden filler so that not more than three shells may be accommodated at one time in the magazine and chamber combined. The plug shall be incapable of being removed through the loading end of the magazine.

b. No rifles, over and under rifle and shotgun combination, or side-arms of any type will be carried or used in hunting. Buck shot and shotgun slugs may be used for hunting deer only. Shotgun slugs may only be chambered in the weapon when the hunter is on a fixed installation positioned eight feet above the ground.

c. Hunters will wear RED, INTERNATIONAL ORANGE, or YELLOW distinct markings on their clothing visible at least 200 yards in any direction. Duck hunters utilizing blinds off-shore and bow and arrow hunters in organized hunting parties are excepted from this requirement.

d. Alligators and sea turtles will not be destroyed, taken, or trapped.

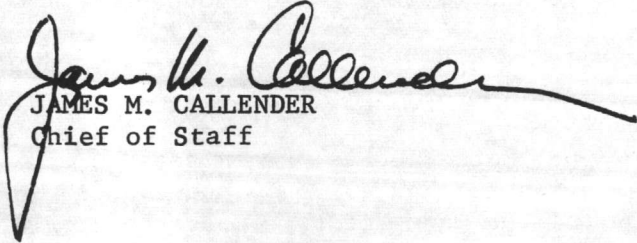
e. The taking of bear is prohibited.

f. Migratory waterfowl hunters must possess a valid Federal Migratory Bird Stamp.

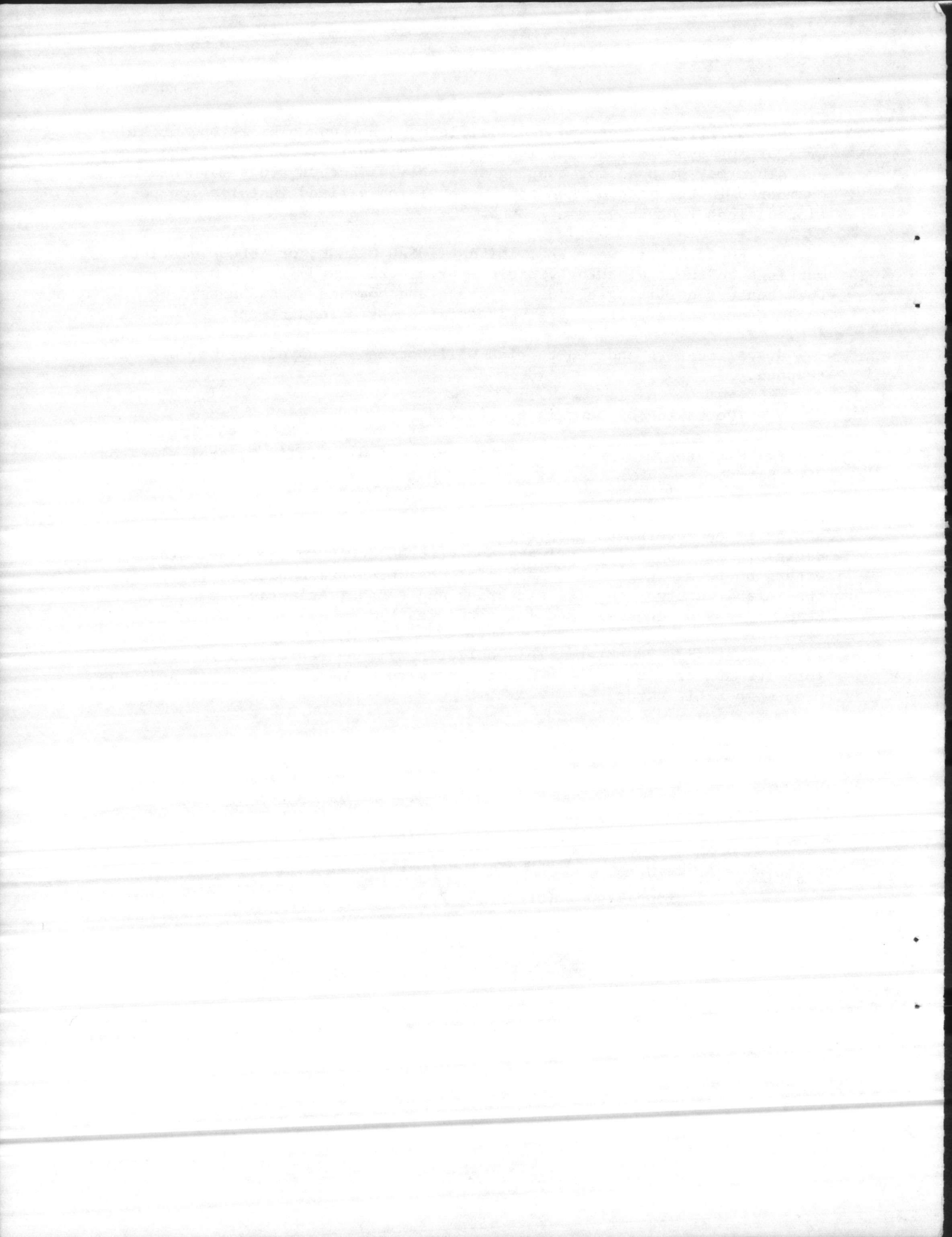
g. Individual hunting will be permitted on Sunday providing the hunter is on government property and does not fire over North Carolina navigable waters or into private property adjacent to the base. (All waters up to the high water mark are considered state waters, including the Inland Waterway and its estuaries and sounds, Atlantic Ocean, and Bear Creek and New River and its estuaries.)

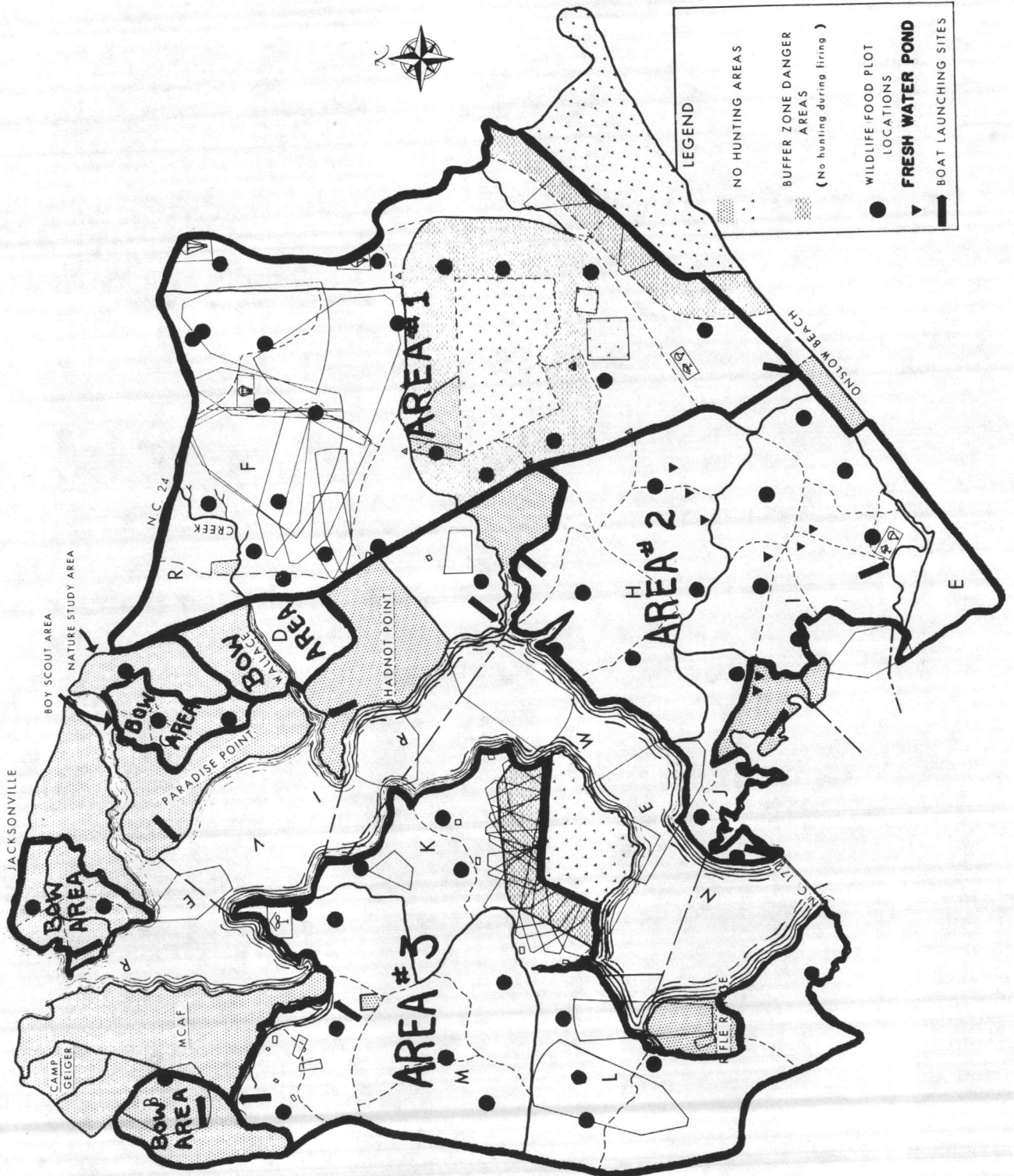
10. Pocket-size Pamphlet. This bulletin will be reproduced in pamphlet form for hunters issued base hunting permits or Camp Lejeune Rod and Gun Club membership cards.

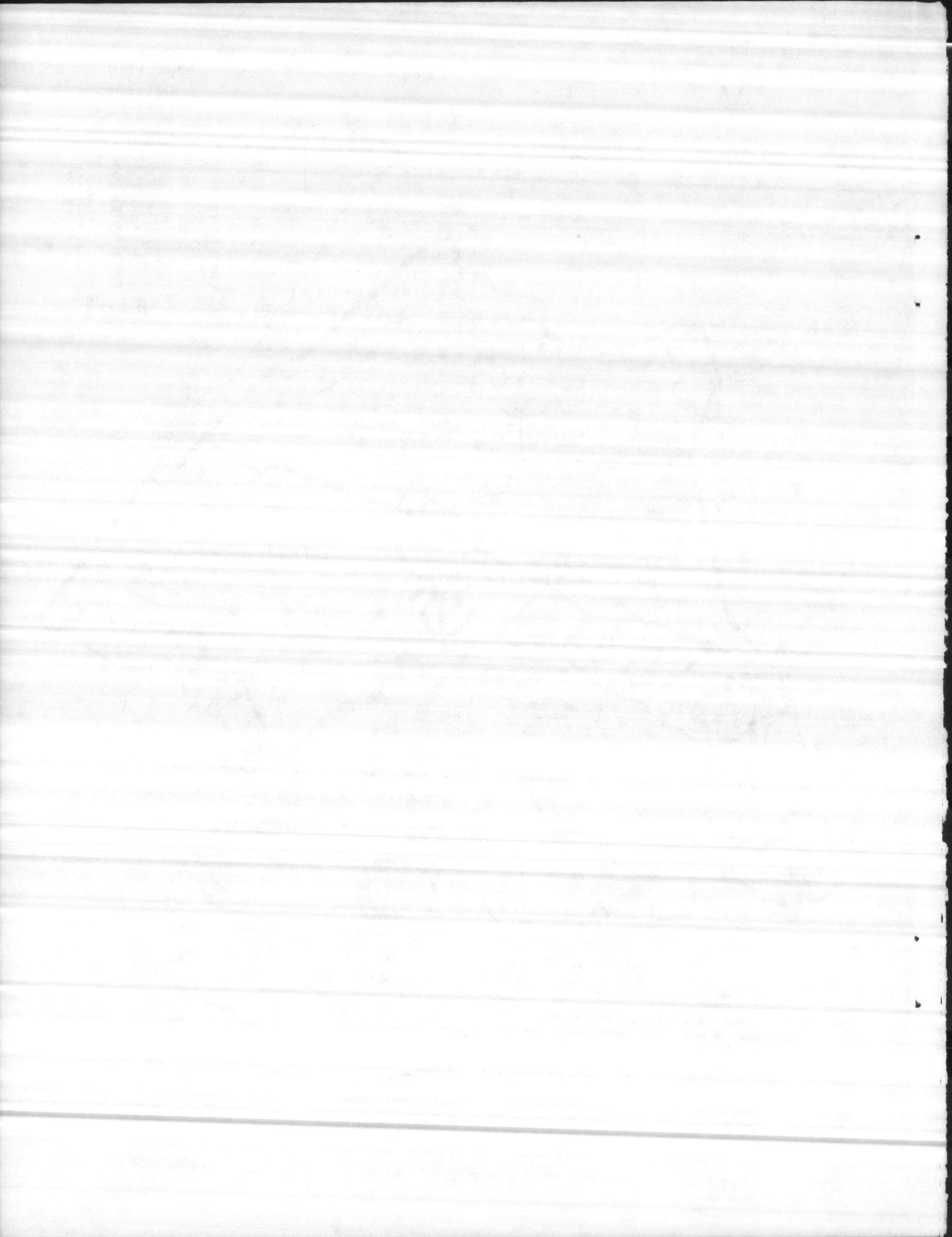
11. Self-cancellation. 15 April 1970.


JAMES M. CALLENDER
Chief of Staff

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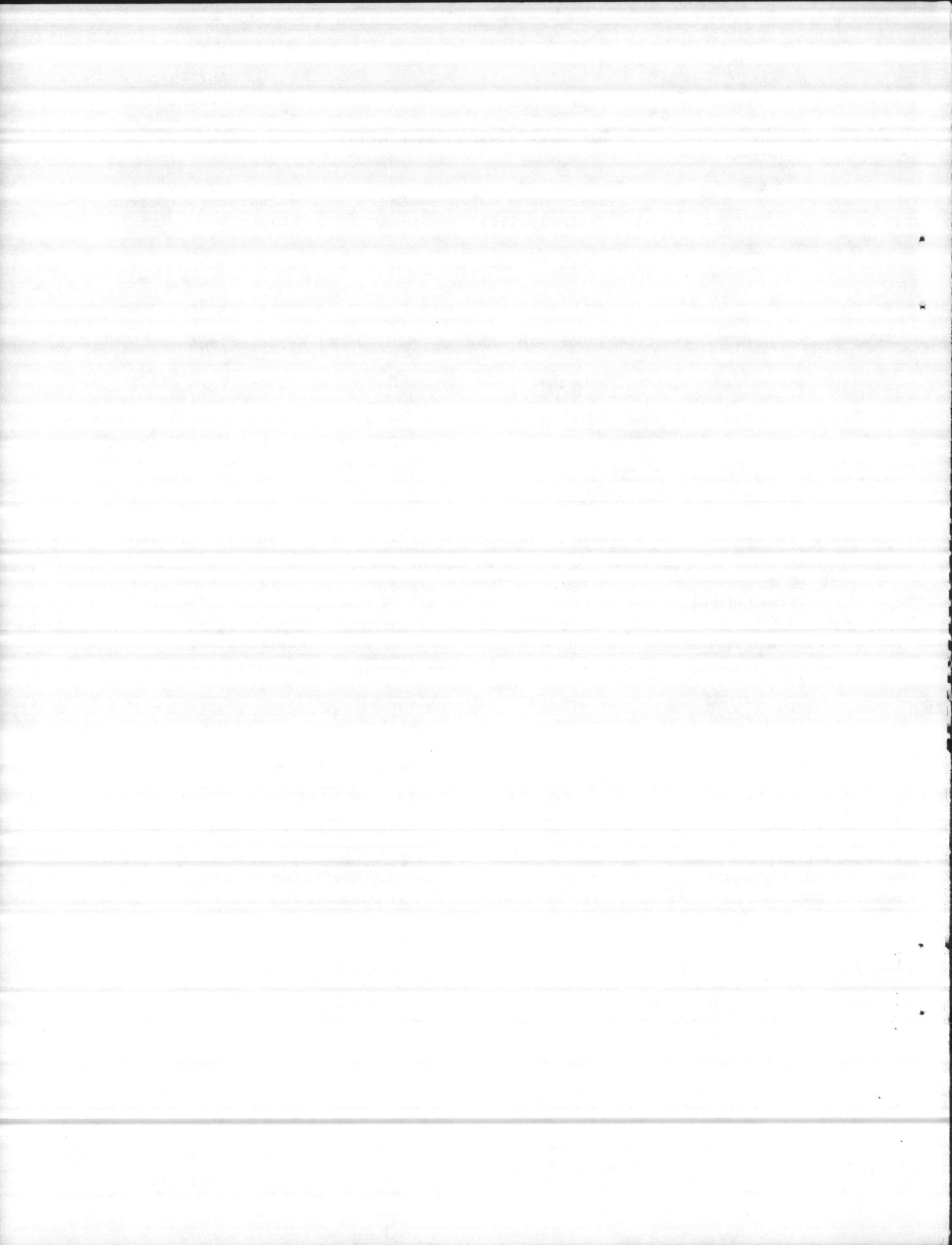




OPEN SEASONS AND BAG LIMITS

Game	1969-70 Open Dates (Inclusive)	Bag Limit	Possession Limit	Season Limit
Deer	*13 Oct - 1 Jan	1	2	2
Raccoon	13 Oct -28 Feb		No Restrictions	
Opposum	13 Oct -28 Feb		No Restrictions	
Squirrel	13 Oct - 1 Jan	8	16	75
			Above limits may include two fox squirrel per day; four in possession and ten per season.	
Rabbit	15 Nov -28 Feb	5	10	75
Quail	15 Nov -28 Feb	8	16	100
Wild Turkey (Bearded turkey only)	13 Apr - 2 May	1	2	2
Fox (Red and Grey)	Taken with guns when season is open for any other bird or animal		No Restrictions	

* Special Bow and Arrow Season for Deer - 19 September through 11 October



N. C. MIGRATORY GAME REGULATIONS 1969-70

Species	Open Seasons Dates Inclusive	Shooting Hours	Daily Bag	Possession
Dove	1 Sep-11 Oct 18 Dec-15 Jan	12:00 Noon to Sunset	18	36
King & Clapper Rails	1 Sep- 8 Nov	1/2 hour before Sunrise to Sunset	15	30
Sora & Virginia Rails	1 Sep- 8 Nov	1/2 hour before Sunrise to Sunset	25	25
Woodcock	28 Nov-31 Jan	1/2 hour before Sunrise to Sunset	5	10
Wilson's Snipe	13 Dec-31 Jan	1/2 hour before Sunrise to Sunset	8	16
Geese ⁽¹⁾	20 Nov- 8 Jan	1/2 hour before Sunrise to Sunset	1	2
Brant	20 Nov-15 Jan	1/2 hour before Sunrise to Sunset	6	6
Ducks ⁽⁶⁾	20 Nov-15 Jan	1/2 hour before Sunrise to Sunset	3 ⁽²⁾ (6)	6 ⁽³⁾ (6)
Coot	20 Nov-15 Jan	1/2 hour before Sunrise to Sunset	10	20
Gallinule	1 Sep- 8 Nov	1/2 hour before Sunrise to Sunset	15	30
Hooded, American or Red Breasted Merganser	20 Nov-15 Jan	1/2 hour before Sunrise to Sunset	5 ⁽⁴⁾	10 ⁽⁵⁾
Scoter, Eiders and Old Squaws	20 Nov-15 Jan	1/2 hour before Sunrise to Sunset	7	14

- (1) Closed season on snow geese.
 (2) May not include more than: (a) 2 wood ducks; (b) 1 canvasback or 1 redhead; (c) 1 black duck.
 (3) May not include more than: (a) 4 wood ducks; (b) 1 canvasback or 1 redhead; (c) 2 black ducks.

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- (4) May not include more than 1 hooded merganser.
- (5) May not include more than 2 hooded mergansers.
- (6) A special bonus bag on scaup ducks shall be allowed during the period 20 November 1969 through 15 January 1970 with a daily bag limit of 2 and possession limit of 4, in addition to the regular bag limit on ducks. This bonus bag limit, however, shall apply only in coastal waters designated as commercial fishing waters east of U. S. Highway No. 17; except that this special season shall not be allowed in Core Sound between Drum Inlet and Harkers Island, nor in Pamlico River upstream and west of a line between Pungo River and Goose Creek, nor in Currituck Sound north of U. S. Highway No. 158.

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BASE HUNTING, FISHING, AND BOATING REGULATIONS1. General

a. Enforcement. The Base Game Protector in the Base Provost Marshal's office is responsible for the enforcement of all hunting, fishing, and boating regulations, issuing of base hunting and/or fishing permits, and other administrative details associated therewith. He will be assisted in the performance of his duties by such other persons as may be designated or appointed by competent authority.

b. Disposition of Violators. Persons who violate federal, state, county, or base hunting, fishing, or boating regulations will be subject to disciplinary and/or administrative action as is deemed necessary and appropriate.

c. Authorized Personnel. The following persons are authorized to hunt, fish, or boat:

(1) Military personnel, including retired, and their dependents.

(2) Civilians assigned to or employed on the base or living in base housing.

(3) House, BOQ, hostess house, guest house, and barracks guests of persons listed in categories (1) and (2) above when accompanied by their adult host. Hosts of such persons are responsible for the proper conduct of their guests.

(4) Authorized civilians not previously listed in (1), (2), or (3) above in accordance with existing directives on an impartial basis.

(5) Participation in organized hunts will be by reservation with priority as listed above. An annual Base Bulletin will be published regarding authorization, check in, check out, and cancellations.

(6) Hired dog handlers of organized hunts will be required to execute enclosures (3) and (4).

d. Publication of Information. It will be the responsibility of the Committee for the Conservation of Natural Resources, with the assistance of the Base Game Protector, to prepare for publication an annual Base Bulletin to implement the current year's hunting and fishing regulations, including seasons, bag limits, huntmasters, assistant huntmasters, and dates for organized deer and bear hunts. A reference map showing authorized hunting, fishing, and boating areas and boat launching sites will be published as an enclosure thereto.

e. Licensing and Identification Requirements

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*

(1) All persons authorized to hunt and/or fish shall have in their possession a valid North Carolina or Onslow County hunting and/or fishing license. A Big Game Permit as prescribed in references (a) and (b) is required to hunt deer, bear, and turkey unless excepted by reference (b). All persons except holders of valid Camp Lejeune Rod and Gun Club membership cards must, additionally, apply to the Base Game Protector for a base hunting permit. Permits will be issued to active and retired military personnel and their dependents without charge. Persons under 16 years of age will be permitted to hunt on the permit of a parent or guardian and must be in the company of said parent or guardian while hunting.

(2) All persons hunting migratory birds shall have in their possession valid Federal Migratory Bird Stamps.

(3) All persons authorized to fish must, additionally, apply to the Base Game Protector for a base fishing permit if they intend to fish from any land extension into inland fishing waters. (Inland fishing waters are all fresh water ponds and streams and certain tributaries of New River as prescribed in reference (d).) Persons under 16 years of age allowed access may fish without a permit.

(4) All persons while hunting, fishing, and/or boating will have appropriate license, base permit, and identification in their possession and will display same on request to any person authorized to enforce these laws and regulations referred to and/or prescribed in this order. No base permit is required to engage in boating on the navigable waters provided persons not authorized access do not trespass on the land areas.

f. Area Clearance for Hunting

(1) Each person, to include those sponsoring guests and hunt-masters for organized hunts, shall be responsible for obtaining clearance from the Base Game Protector, building 4000, prior to going into the field to hunt.

*

(2) Individual hunters will be issued hunting area passes beginning one hour before sunrise upon presentation of a valid Camp Lejeune Rod and Gun Club membership card or base hunting permit. This pass must be in the hunter's possession while actually hunting and will be returned to the Base Game Protector immediately upon completion of hunting. Failure to return the pass no later than one hour after sunset on the day of issuance will result in suspension of hunting privileges for 30 days.

(3) Hunting areas will be assigned as to availability in accordance with existing training requirements. Determination as to areas available for hunting which lie within the boundaries of maneuver areas, danger areas, and field firing ranges is the responsibility of the Base Training Facilities Officer who will inform the Base Game Protector of areas available for hunting on a daily basis throughout the hunting season. Coordination of available hunting areas will be as follows:

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(a) The Base Training Facilities Office will provide the Base Game Protector with a copy of each published firing notice.

(b) The Base Game Protector will daily call the Training Facilities Office during the hunting season to determine the training areas available for individual hunting the following day. On Wednesdays he will call to determine the areas which may be used for scheduled organized hunts.

(c) The Training Facilities Office will notify the Base Game Protector immediately of changes in scheduled range assignments or maneuver areas in which the presence of hunters would result in a training conflict.

g. Trapping. Only box trapping in accordance with reference (a) is permitted. Other trapping is not permitted on this base except by the Base Game Protector in the control of predators and persons authorized in writing by the Commanding General. This authorization will normally be granted only to federal and state fish and wildlife conservation officials and officially charged fish and wildlife conservation agencies desiring to trap fish and wildlife for restocking purposes.

2. Hunting. Persons are considered to be hunting when they are hunting on any land, or extensions thereof, under the jurisdiction of the Commanding General. Firing at game into or across any area under the jurisdiction of the Commanding General from areas outside base boundaries by any person not authorized to hunt thereon is prohibited.

a. General Weapon and Firearm Regulations and Safety Precautions

(1) Hunting is permitted only with shotguns of 10 gauge or smaller or bows and arrows. It is prohibited to hunt using nets, snares, fire, salt-licks or any other baits, poisons, etc.

* (2) No rifles, over and under rifle and shotgun combination, or sidearms of any type will be carried or used in hunting. Buckshot and shotgun slugs may be used to hunt deer and bear only. Shotgun slugs may only be chambered and used when on a fixed installation positioned eight feet above the ground.

(3) All automatic-loading or hand-operated repeating shotguns used in hunting which are capable of holding more than three shells must have the magazine plugged with a one-piece metal or wooden filler so that not more than three shells may be accommodated at one time in the magazine and chamber combined. The plug shall be incapable of being removed through the loading end of the magazine.

(4) No person shall have in his possession while hunting a shotgun with a silencer or other device designed to muffle or minimize the report thereof, whether attached to or separate from the shotgun.

(5) The introduction, possession, or use of any firearm must comply with Base Order 5500.1_.

(6) All persons hunting are strictly accountable for the observance of all reasonable and necessary safety precautions in the use of shotguns and/or bows and arrows and will be familiar with the handling and functioning of the weapons they are using. The TEN COMMANDMENTS OF SHOOTING SAFETY in enclosure (5) will be observed at all times while hunting.

(7) All individuals, except those hunting waterfowl from blinds off-shore, must wear RED, YELLOW, or INTERNATIONAL ORANGE clothing or articles of RED, YELLOW, or INTERNATIONAL ORANGE visible at least 200 yards in any direction.

b. Bow and Arrow Hunting

(1) Bow and arrow hunting will be in accordance with reference (a) and the provisions of this order.

(2) Licensing and identification requirements applicable to other hunting apply to bow and arrow hunting.

(3) Hunting with bow and arrow is permitted during the open season for legal game.

(4) The use of poisonous, explosive, or barbed arrows is prohibited. A barbed arrow within the meaning of these regulations is defined as an arrow which has points or barbs which protrude backwards from the head or point of the arrow in such a manner that they may hook or keep the arrow from being pulled out through the point of penetration without tearing the flesh of the animal or bird.

(5) The minimum broadhead width of all arrows and the rated pull of bows will be in accordance with reference (a).

(6) No type of firearm will be carried while bow and arrow hunting.

(7) The use of cross-bow for hunting is prohibited.

c. Raccoon and Opossum Hunting

(1) All hunting of raccoon and opossum between the hours of sunset and sunrise will be by organized hunting parties only. Each party will be limited to one shotgun and no shot larger than #4 shall be used. The use of dogs and artificial light in hunting these animals is authorized.

(2) The huntmaster of each organized hunt will be a person thoroughly familiar with the confines of the base and will be responsible

for the organization, conduct, and control of the hunt and compliance by all members thereof with these regulations. He will check out and in with the Base Game Protector or, in his absence, the Base Desk Sergeant (5151) immediately prior to commencement and no later than two hours after securing the hunt giving his name, base permit number, a roster of personnel with their names, ranks, and organizations (home addresses of authorized civilians), and the area where the hunt will be held.

d. Deer and Bear Hunting

(1) The regulations for the hunting of deer by organized hunting parties and individual hunters will be published in an annual Base Bulletin.

(2) Deer and bear may be hunted only as specified in the Base Bulletin establishing the hunt dates, limits, and times.

(3) No one shall at any time take any deer while it is swimming or in water to its knees. The taking of deer through the use of any boat or other floating device is prohibited.

(4) It is prohibited to allow dogs to run after or chase deer, even though not hunting, during the closed season.

(5) When the hunting of bear is authorized, the following additional instructions apply:

(a) It is prohibited to kill a female bear with a cub or cubs at her side or to kill a cub bear. A cub bear is defined as any bear weighing less than 50 lbs.

(b) Bear may be killed on the spot when inflicting or attempting to inflict injury to the person or property of anyone.

e. Migratory Birds

(1) Information on migratory birds which may be hunted and regulations governing such hunting are set forth in current federal and North Carolina game regulations.

(2) Current North Carolina Migratory Game Regulations will be published in the annual Base Bulletin.

f. Game Reports. To provide information for the further development of the Base Game Program, all game taken will be physically reported to the Base Game Protector by individual hunters upon completion of hunting. Huntmasters will be responsible for reporting all game taken on organized hunts to the Base Game Protector within 48 hours. Accidentally killed game will be reported to the Base Game Protector utilizing the form in enclosure (6).

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g. Unprotected Game. Unprotected birds and animals may be taken at other times than during the authorized hunting season by obtaining authorization from the Base Game Protector; however, all other license and regulatory requirements will apply.

h. Disposal of Illegally or Accidentally Killed Deer, Turkey, or Bear

(1) Any person accidentally killing deer, turkey, or bear by hitting them with an automobile, etc., will immediately surrender the animal or bird to the Base Game Protector or his representative and will give a written statement of the circumstances thereof to the Base Game Protector.

(2) All birds and animals seized by or surrendered to the Base Game Protector will be tagged for identification and disposed of in accordance with current North Carolina regulations.

i. Miscellaneous

(1) Hunting is prohibited in any area within 200 yards of any inhabited camp, barracks, quarters, housing, primary roadway, landing field, stables, schools, storeroom, supply or storage area, athletic field, or golf course except on special hunts as prescribed by separate directives. Hunters will not enter an area in which organized bodies of troops are engaged in any maneuver, exercise, or training.

(2) All hunting and training of dogs is prohibited within the boundaries of the School Nature Study Area. This area is bounded on the north by Northeast Creek; on the west by a creek, power lines, and secondary road as marked and running from coordinates 843451 to 848434; on the south by the utility line running from coordinate 848434 to Holcomb Boulevard; on the east by Holcomb Boulevard.

(3) The hunting, killing, or trapping of alligators and sea turtles is prohibited.

(4) Duck blinds capable of accommodating two hunters each are provided in New River. They are available on a first-come, first-served basis and will not be assigned.

(5) Persons desiring to hunt or fish within the Marine Corps Air Station (Helo), New River, must abide by such regulations as are promulgated by the Commanding Officer, Marine Corps Air Station (Helo), New River.

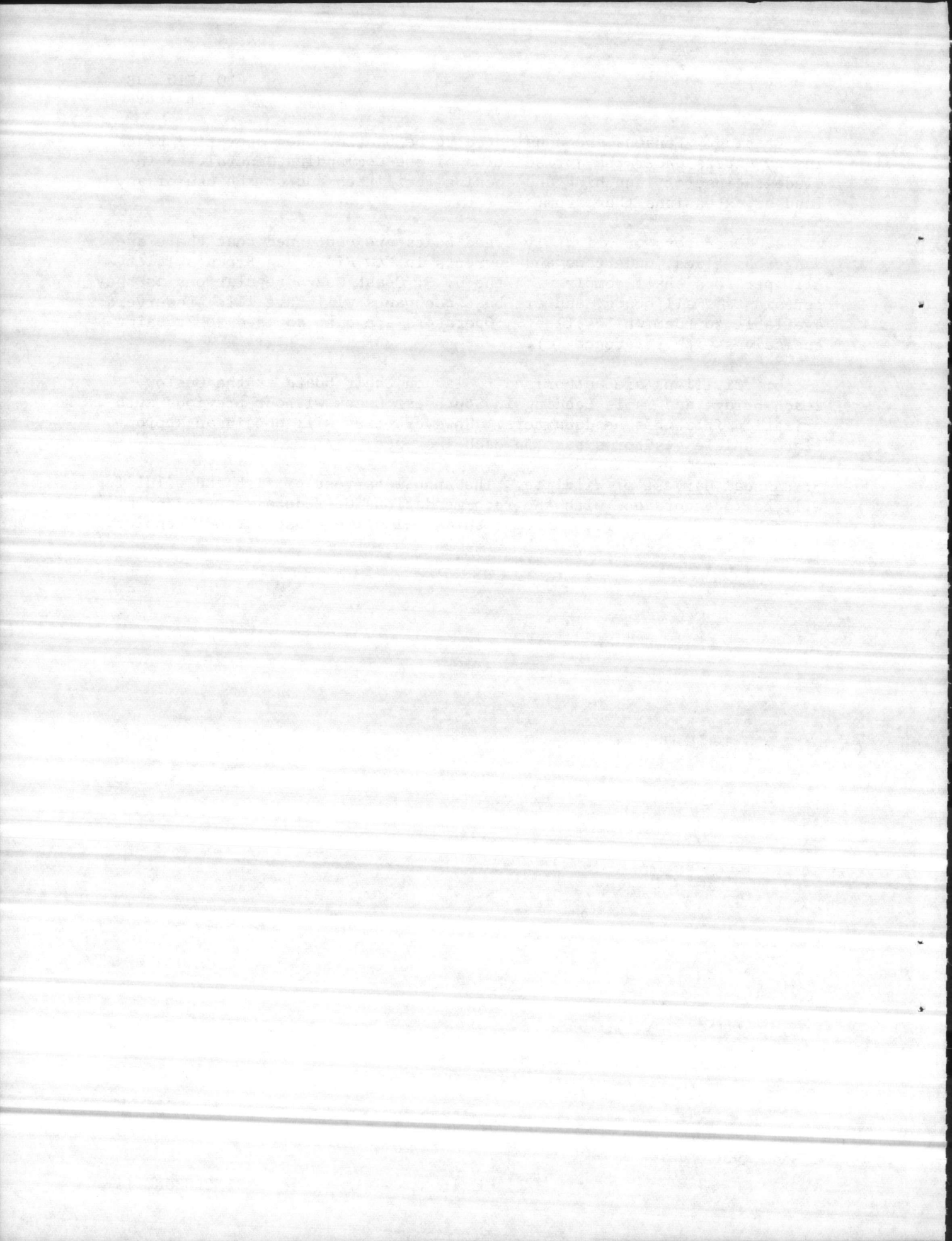
3. Fishing. Persons are considered to be fishing when they are fishing from any land, or extension therefrom, under the jurisdiction of the Commanding General and even though they are fishing into waters not under the jurisdiction of the Commanding General.

4. Boating. Persons are considered to be boating when operating boats in any waters under the jurisdiction of the Commanding General, to include the use of launching and docking facilities and/or the use of any land or extensions therefrom.

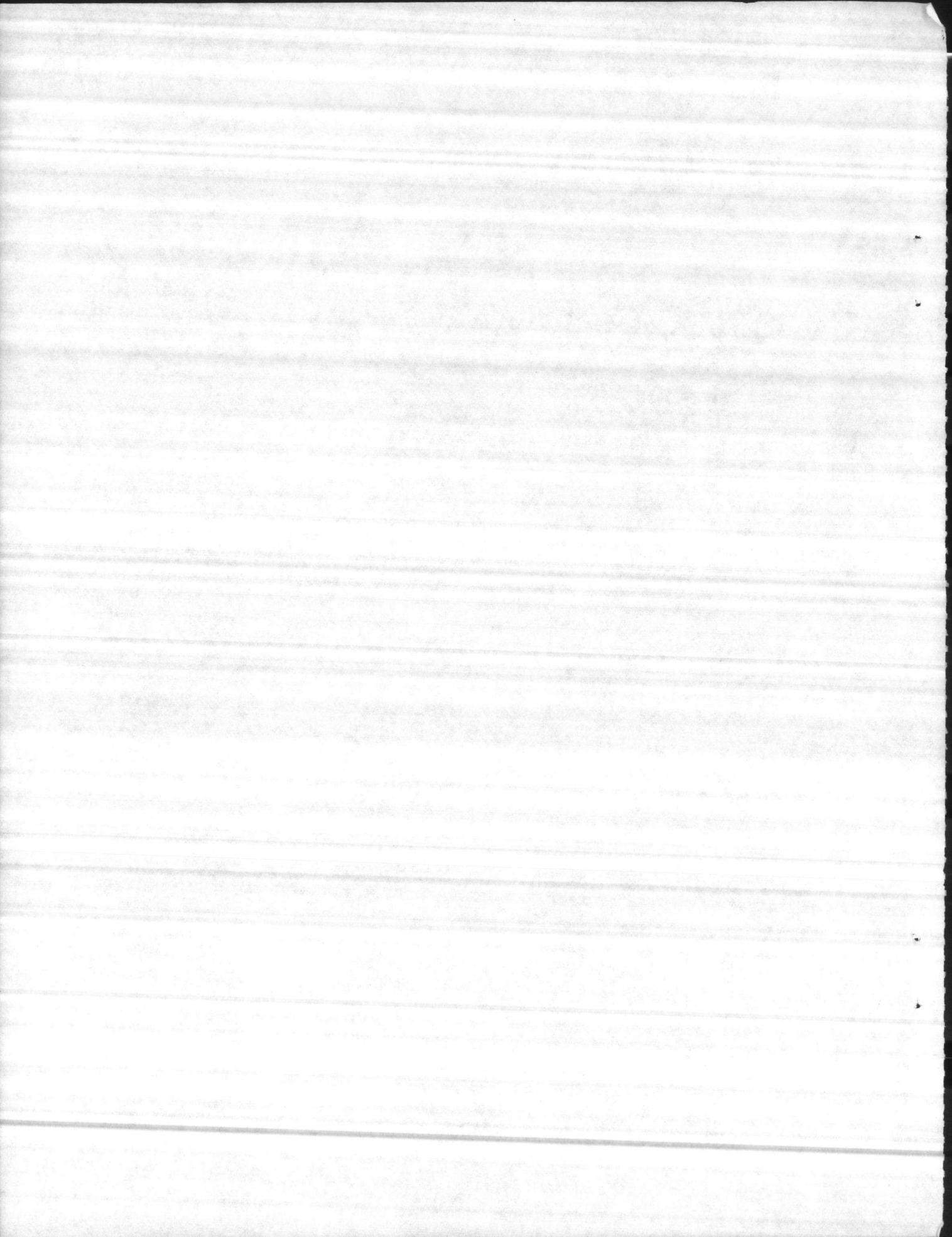
a. Operators of privately-owned boats are cautioned that there are dangerous tides, undertows and currents in New River and Brown's Inlet. All operators shall comply with the U. S. Coast Guard regulations as they pertain to small boats, and all boat occupants will have life preservers available to them while afloat. Operators are also advised to acquaint themselves with reference (c).

b. Civilians are authorized to launch their boats at the Onslow Beach bridge and Maple Landing in Southwest Creek without previous authorization from this headquarters. However, they will obtain an appropriate vehicle visitor's pass in each instance.

5. Annual Harvest of Wildlife. The annual harvest of fish and wildlife will be in accordance with the recommendations of federal, state, county, and other officially recognized fish and wildlife conservation agencies.



APPENDIX F
FIELD TRIP REPORT



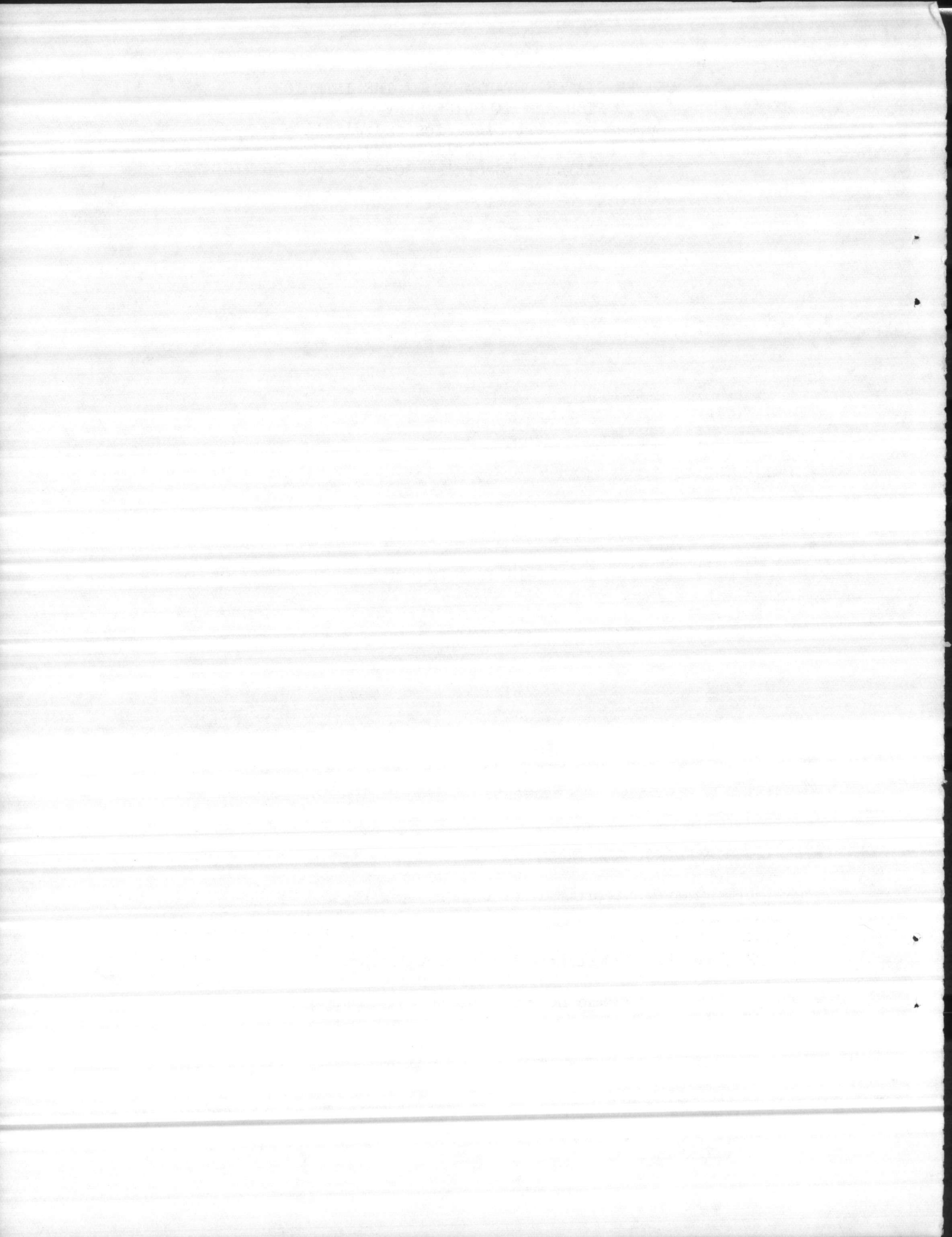
UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Bureau of Sport Fisheries and Wildlife
Division of Wildlife Services
Atlanta, Georgia 30323

Field Trip Report

Wildlife Management Program
Marine Corps Base
Camp Lejeune, North Carolina

March 19-20, 1969

F-1



INTRODUCTION

In accordance with the cooperative agreement between Camp Lejeune, the State Wildlife Resources Commission, and this Bureau, an inspection of the wildlife management program on the Marine Corps Base was made by Enhancement Biologist Larimer, Division of Wildlife Services, on March 19-20, 1969. Mr. Charles D. Peterson, the Base Wildlife Technician, guided a tour of the Base and reviewed and discussed the Station wildlife program on March 19. The inspection ended with the annual conservation meeting and following field trip on March 20. Colonel Olson chaired this meeting.

DISCUSSION

Marine Corps Base, Camp Lejeune, North Carolina, is located near the city of Jacksonville on the Atlantic Coast of eastern North Carolina. Military personnel, civilian workers, and military dependents total 65,000-68,000 people. The Base encompasses a total of about 110,000 acres, including 26,000 acres in water and swamp. Approximately 95,000 acres are available for hunting and fishing. The topography is typical of the lower coastal plain. Relief varies from gentle slopes to flat. Mixed stands of pines and hardwoods are found on the higher elevations; pure hardwood stands in the bottoms. The soils and the basic carrying capacity for wildlife on the Station are relatively poor. The 21 identified soils include fine sands, sandy loams, and muck. Sandy loams low in organic material are characteristic.

The inspection revealed a typical scarcity of openings and clearings and attendant "edge" effects essential to good wildlife habitat. Base personnel recognize this need and have tried to solve the problem by preserving existing openings, creating new clearings, and utilizing firebreaks, access roads, and powerlines. However, Lejeune, like most military installations, has been faced by the fact that natural vegetative succession since the Base was established in 1941 has closed in more openings than have been cleared. Good wildlife management calls for approximately 25 percent of the area suited to wildlife to be in cover types other than woodland.

The timber management program is the primary factor in determining the type and quality of wildlife habitat over much of the Station. Timber management is inseparable from wildlife management as it will affect a far greater acreage than will the most ambitious wildlife planting plan.

We understand that the current Camp Lejeune forestry management plan was developed in 1964. A resume of 1968 work included clearing 18 acres, harvesting 1,700 acres, reforesting 140 acres, and burning 7,300 acres by prescription. A combination of selective cutting and clear cuts is employed with the emphasis on selected cutting. There is a 10-year cutting cycle. Six of the sixty 1,000-acre compartments were cut in 1968. An additional 25,000 acres lie within impact areas and are not managed.

Our inspections indicate that the timber management program has given less consideration to wildlife needs than is acceptable. Spot checks indicated that, in effect, TSI work converted mixed stands of hardwoods and pines to pinelands. Additionally, hardwood harvests along a creek on Town Point has created unsightly litter and some erosion on the steep banks.

The problem at Lejeune is a common one. The capable Station Forester and his assistants are skilled professionals in pulp and timber production. These men understandably measure their success in cords of pulpwood, board feet of timber, and dollar sales. Unfortunately, management for optimum timber production is not compatible with optimum wildlife populations in the Southeast. The hardwoods, including many unmerchantable species of hardwoods, are of much greater value to wildlife than pines. Production of pines, however, is more profitable than that for hardwood. If multiple use rather than pine production is an objective on Camp Lejeune, limitations must be placed on pine production. Acceptable parameters for wildlife must include the following: (a) that bottom lands and lower slopes suited to hardwoods or mixed hardwood-pine stands be managed for hardwoods; (b) that the much greater acreage of drier, higher sites best suited to pine production be managed for pines but with restrictions to assure that minimum number of mast-producing hardwoods will be preserved on these sites. Acceptable approaches would include either a strip-type management, whereby 4- to 5-chain-wide strips managed intensively for pines were separated by 2- to 3-chain-wide strips where the hardwood-pine mixture was preserved, or a system whereby a minimum basal area of hardwoods--possibly 4-5 square feet of the larger and most consistent mast producers, plus all good den trees--were left on each acre. Clear cutting, again in relatively small blocks, is generally preferable to selective cutting.

Plans call for prescribed or controlled burning over 7,000-9,000 acres annually. An inspection of a recent prescribed burn on Town Point indicated that some 1,400 acres were covered in one treatment. Controlled burning is an approved and effective wildlife management tool as well as good forestry management. It should, however, be confined to the period mid-December to mid-February in order to minimize losses of nesting wildlife. In addition, it should be done either in narrow strips not exceeding 4-5 chains in width on a checkerboarded-type pattern with the treated blocks not exceeding 50-100 acres in size.

The planting program for wildlife is well planned and not excessively ambitious. It consists basically of about 63 sites covering 250 acres. At a given time, about 50 of these plots are cultivated for food or cover. Plantings are routinely fertilized and limed. Both annuals and perennials are planted. Species used include annual lespedeza, part-ridge pea, beggar-lice, bicolor lespedeza, browntop millet, milo, soybean, buckwheat, and cowpeas. Experimental plantings of about 15 acres of chufas for turkey feed were made last year. Clovers and fescus are planted for permanent pasture; rye, oats, and wheat for winter grazing. Comparatively few permanent clover-grass pastures have been planted, however, because of difficulties in doing the necessary maintenance by mowing and fertilization. Available equipment is hard pressed to keep road sides and cantonment areas mowed during the summer.

Funding for the wildlife program has been adequate. Permit sales, supplemented by small amounts of non-appropriated funds, have covered seed, fertilizer, and similar needs. Manpower and organization have been less satisfactory--a fact recognized by Base authorities. The Wildlife Coordinator works out of the Provost Marshall's office with direct assistance of a small number of transient marines. The Base Forester works out of the Roads and Grounds Section. The Forester has a professional assistant as well as a small staff of six civilian aids. Through no fault of those concerned, there is inadequate coordination between the two functions. Equipment could be better used. In addition, this organization does not lend itself to solving conflicts of interest between forestry and wildlife. The Wildlife Coordinator should occupy a position parallel to that of the Forester, and there should be a coordinator trained in both fields to resolve conflicts and use the total equipment and manpower to best advantage. We are pleased to note that such action is being considered by Camp Lejeune.

A new cooperative agreement for the Base was completed in early 1969. There is also a long-range wildlife management plan. The plan could be more comprehensive and specific, but it is serving the purpose at present. The Camp Lejeune policy is to provide, within manageable quotas, for controlled access to fish and wildlife on a first-come, first-served basis. Within these parameters, the Base provided 14,275 man-days of hunting in 1968. Civilians hunted 1,590 man-days; the remainder was by military personnel. The allied sports of archery and skeet and trap provided 7,700 man-days of recreation.

We were pleased to find solid progress in clearing up stream pollution. Construction of six secondary sewage treatment plants began in 1968 and is scheduled to be finished in 1969. The predator control program is basically sound. It should, however, emphasize control of feral dogs and limit control of wild animals to problem individuals or situations.

A commendable program of gathering game harvest information and statistics and data on the deer herd has been initiated.

Deer

Considerable progress has been made toward satisfactory management of the deer herd. In 1968, some 440 deer of either sex were harvested. Two separate doe hunts were used to control the size of the herd. The estimated Base population is 2,400 animals, and attempts are being made to gather the scientific data essential to sound herd management with the cooperation of North Carolina Wildlife Resources Commission biologists. Ovaries and lower jawbones were removed from deer harvested in 1968 and the animals were weighed.

Our most recent inspection indicated that overbrowsing to the point of range damage still exists in some sectors. Apparently it is less prevalent than in the past. If the deer population estimate is reasonably accurate, it would appear that a harvest of 600-800 animals could be sustained and that a further increase in the kill would be beneficial to the herd and to the range.

Turkeys

Camp Lejeune is justly proud of its turkey management program. Quality turkey hunting was provided in 1968 through a spring gobbler season. In addition, the Base has provided a surplus for restocking in other parts of the State during past years. The estimated population of 425 turkeys is, of course, modest. However, military activities on the Base may preclude extremely large populations. The present turkey management program appears to be realistic and sound.

Doves

In contrast to many military reservations, dove management has not been emphasized at Camp Lejeune and does not provide much recreation. This has resulted in part from the fact that good dove hunting is available off the reservation and in part from limitations in equipment. We believe that a more intensive dove management program would be productive and popular. A modest beginning would involve creating two to four dove management fields. These fields should be larger than 15 acres in size and should not be hunted more frequently than once or twice weekly. The Georgia Game and Fish Commission pamphlet entitled "How to Have Small Game on Your Land" contains what we believe to be an excellent approach to dove management. This approach is adaptable to the farming equipment available at the Base. Seedings can be done by broadcasting and the necessary open ground created by subsequent disking at spaced intervals.

Waterfowl

Camp Lejeune winters a good number of ducks and provides fair to good hunting. In 1968, one fresh water impoundment creating some additional waterfowl habitat was built. Existing waterfowl habitat was improved by erecting 12 new nesting boxes for wood duck and adding predator guards to older boxes. Plans to construct a 260-acre lake on Wallace Creek for fish and waterfowl were finalized. Several of the duck blinds on New River were repaired. Lejeune personnel continued to cooperate with the State and Federal wildlife agencies in a duck banding program. A salt water marsh was selected as the site for a future impoundment designed to provide food and resting areas for ducks as well as additional hunting opportunities. The greentree reservoir was flooded in mid- to late September and drawn down in late March. That it provided less duck use than in 1967, the first year of operation, was attributed to a lower wood duck population in eastern North Carolina.

Other Game

The Base continued to support fair to excellent populations of squirrels, rabbits, quail, and rails and to provide hunting for all of these species. These species are almost certainly underharvested and could provide additional recreation. There are notable opportunities for quail management. If there is sufficient demand, a modest quail management program covering 500-1,000 acres could be initiated without excessive cost. Key tools in such a program would include a very heavy timber thinning operation and a stepped-up program of controlled burning--probably around small protected islands of heavy escape cover. Creation of food plots might also be necessary.

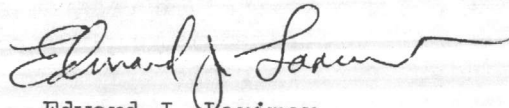
CONCLUSIONS AND RECOMMENDATIONS

Camp Lejeune has an excellent wildlife program as well as notable opportunities, problems, and needs. A few of several highly commendable Base policies and practices should be mentioned. These include (a) providing better than adequate access to hunting and fishing; (b) the recently initiated policy of collecting harvest and population statistics essential to sound, scientific, wildlife management; (c) the well-managed spring gobbler hunts; (d) the excellent cooperation and coordination with State and Federal wildlife agencies; (e) the increasingly effective deer herd management; and (f) the planned waterfowl program. In addition, Camp Lejeune has a worthy wildlife food and cover planting program of long standing.

The following recommendations are designed to supplement, modify, and further improve the excellent, existing program. We suggest:

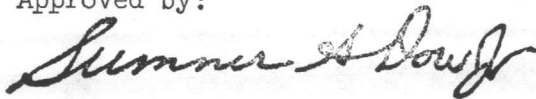
1. That an attempt be made to better coordinate the wildlife and forestry management on Lejeune, giving the two functions equal rank, housing them together, pooling equipment and manpower, and placing them under a joint wildlife and forestry coordinator with training in both fields.
2. That hardwoods be given a higher priority in forestry management and that steps be taken to insure a balance between hardwoods and pines compatible with good wildlife management.
3. That increasing the area in small clearings, openings, and non-forested types to an ultimate total of 25 percent of the hard lands be a long-range objective of forestry and wildlife management.
4. That the deer harvest be increased to the point where the quality of the range will improve.
5. That small-scale, intensive dove and quail management aimed at providing quality hunting be initiated. These could be pilot programs for more ambitious management in the future.

Prepared by:



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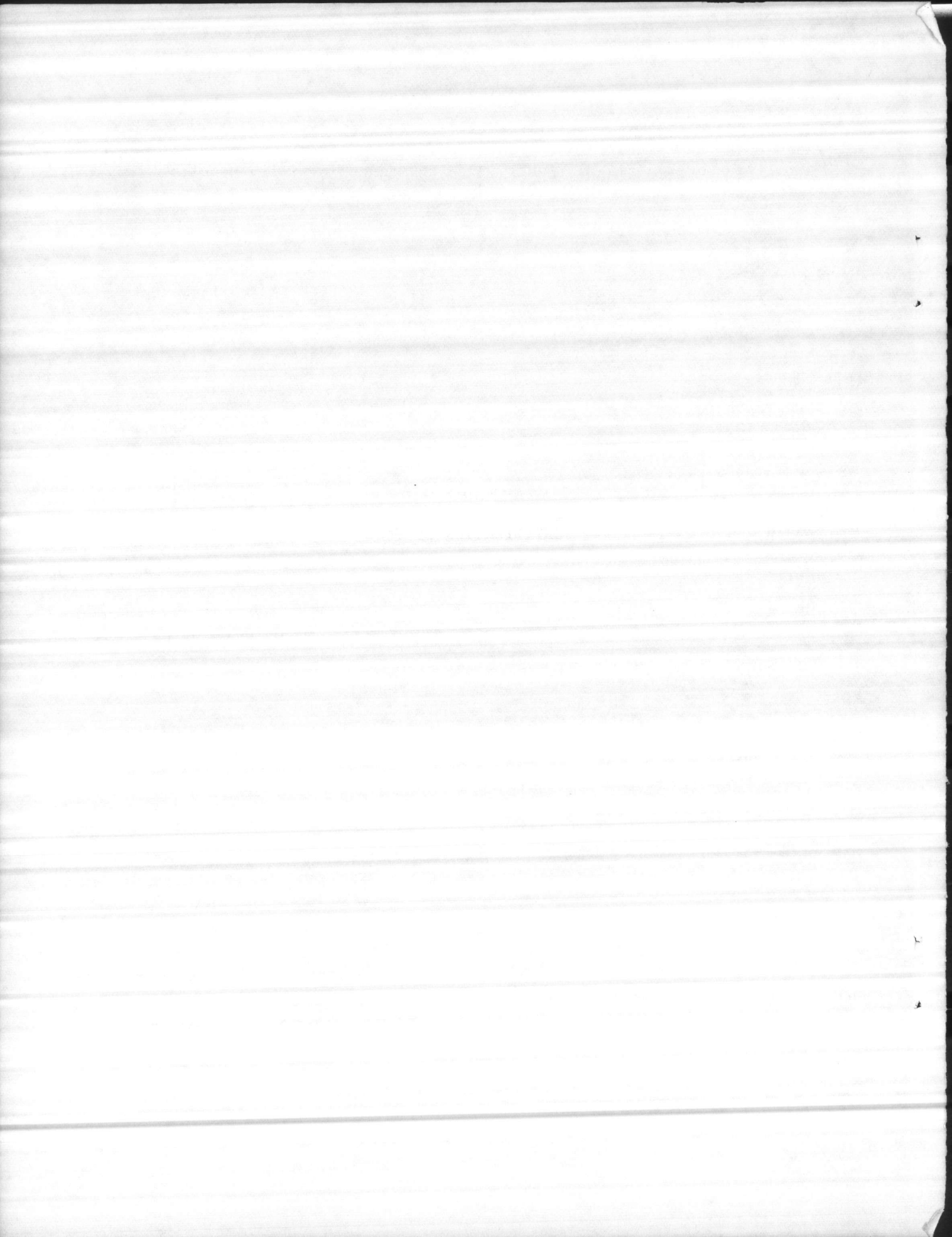


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Attachment
Pamphlet entitled "How to Have Small Game on Your Land"

APPENDIX G
FERTILIZATION OF PONDS



FERTILIZATION OF PONDS

1. General. Adequate fertilization increases the production of fresh water ponds and gives them a greater poundage of fish. Fish do not eat the fertilizer but benefit indirectly when the added fertility results in a greatly increased production of fish food organisms. A pond with excessive overflow or one which stays muddy cannot be economically fertilized, and the following benefits are realized by proper fertilization:

a. A fertilized pond will not only support more pounds of fish, but more fish can be caught. Experiments have shown that the carrying capacity of a pond is increased from four to six times by fertilization, but the harvest is usually increased eight to ten times.

b. A fertilized pond can be properly stocked. The carrying capacity of properly fertilized waters is about 400 pounds per acre whereas the carrying capacity of unfertilized waters varies from 35 to 200 pounds per acre. Because this figure is relatively constant in fertilized waters, the biologists can determine how to stock them to bring about a balanced population of fish.

c. Aquatic weeds are controlled in a fertilized pond. The color obtained in fertilized water prevents the growth of aquatic plants in water deeper than 12 to 18 inches.

d. The addition of fertilizers will clear certain types of muagay waters.

e. Mosquito control is facilitated by fertilization. In properly fertilized ponds, fish are able to control the mosquito larvae since the larvae are not protected by weeds.

2. Fertilizers

a. Experiments have proven that an 8-8-2 (a fertilizer containing 8% available nitrogen, 8% available phosphoric acid, P_2O_5 , and 2% available potash, K_2O) is suitable for ponds in this area. If an 8-8-2 is not available, the following are equivalents:

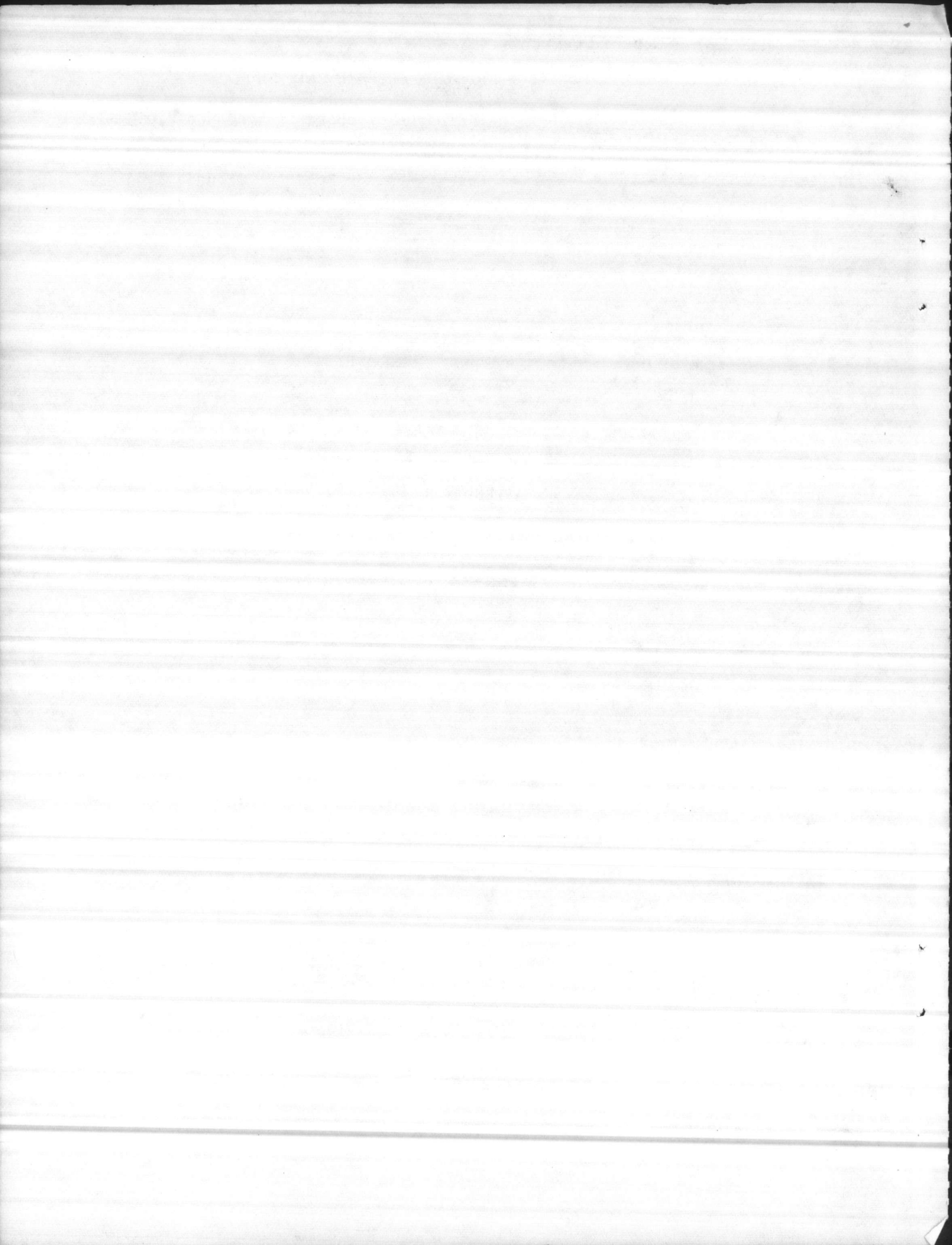
Rate of fertilization per acre for each application:

- (1) 100 pounds of 8-8-4
- (2) 100 pounds of 6-8-4 plus 20 pounds of nitrate of soda
- (3) 100 pounds of 6-8-6 plus 20 pounds of nitrate of soda
- (4) Any mixture that will give approximately 8 pounds nitrogen, 8 pounds phosphoric acid, and 2 pounds potash.
- (5) 40 pounds of 20-20-5
- (6) 50 pounds of 15-15-15

b. Organic fertilizers, such as manures, are not suitable for use in fish ponds. They are low in fertility and tend to encourage the growth of undesirable filamentous algae.

APPENDIX H

SUPPLEMENTAL FEEDING OF CHANNEL CATFISH



SUPPLEMENTAL FEEDING OF CHANNEL CATFISH

1. Basis for Supplemental Feeding. The below chart is based on 2,000 fish in a one acre pond and a food conversion of 2.0.

<u>Date of Feeding</u>	<u>No. of Fish Per Pound</u>	<u>Total Lbs of Fish</u>	<u>Pounds Food Per Day (3%)</u>	<u>Pounds Food Per Period</u>
April	12.5	159	-	-
1-15	10.4	192	5	65
16-30	8.7	231	6	78
May				
1-15	7.2	277	7	91
16-31	6.0	333	8	112
June				
1-15	5.0	398	10	130
16-30	4.2	476	12	156
July				
1-15	3.5	567	14	182
16-31	2.9	686	17	238
August				
1-15	2.4	823	21	273
16-31	2.0	998	25	350
September				
1-15	1.7	1,161	25	325
16-30	1.5	1,324	25	325
October				
1-15	1.3	1,487	25	325

2. Feeding Time

a. When surface temperature reached 60°F in the spring and until the water temperature drops below 60° in the fall.

b. 0800, six days each week.

3. Method of Feeding

a. One to three areas, approximately 400 square feet, depending upon the pond size in 3-4 feet of water.

b. Broadcast by hand the same area each time.

4. Amount

a. Feed 3% of total weight of fish in the pond.

b. Do not exceed 25 pounds of feed per acre per day regardless of the weight of the fish.

