

NATURAL RESOURCES AND ENVIRONMENTAL AFFAIRS

Marine Corps Base
Camp Lejeune, North Carolina 28542

9-19-84

Date

From: Director

To:

Peter Black

Subj:

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Biological Opinion for RCW.
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United States Department of the Interior

FISH AND WILDLIFE SERVICE

P. O. BOX 95067

ATLANTA, GEORGIA 30347

APR 3 1979

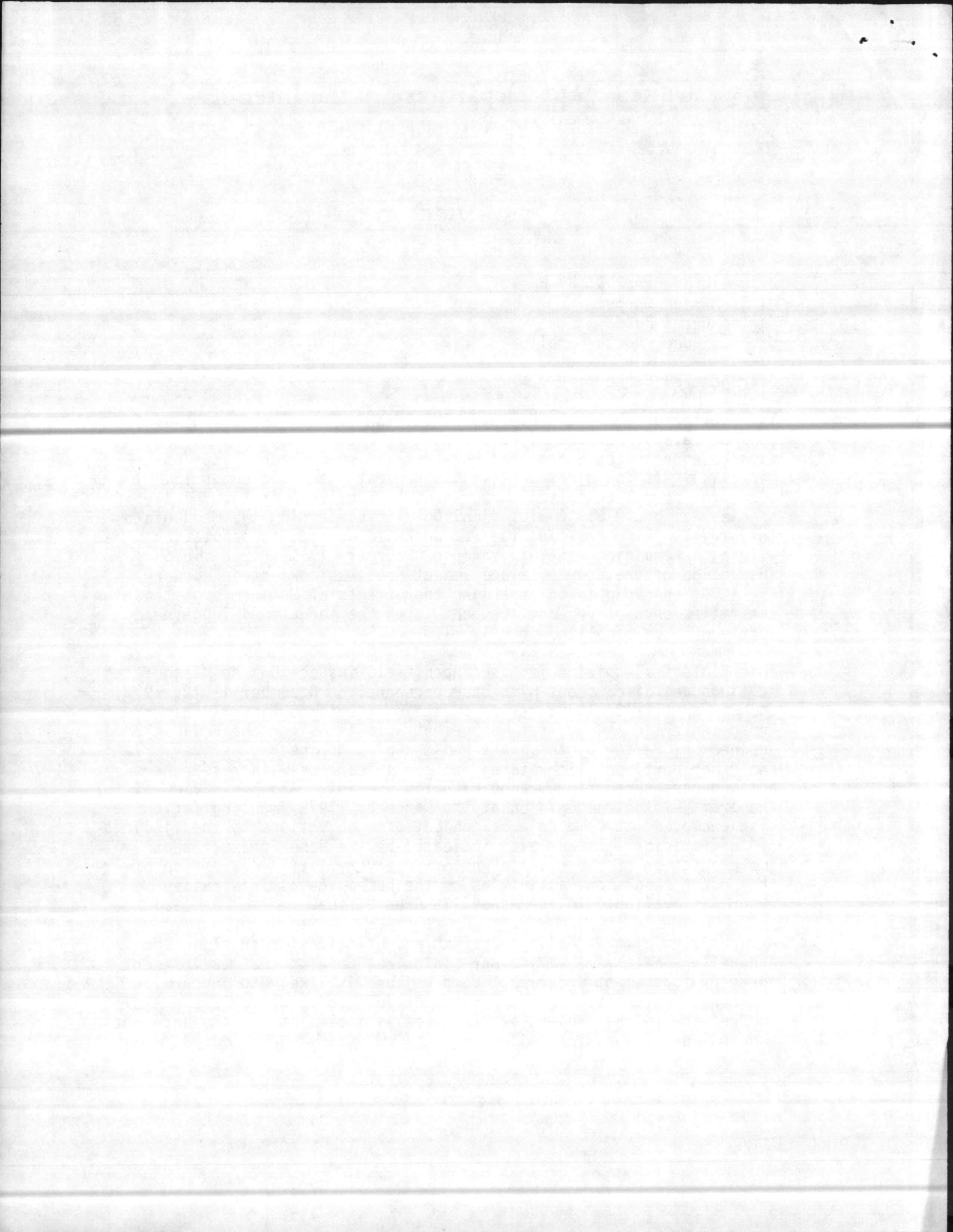
Brigadier General D. B. Barker
U. S. Marine Corps
Marine Corps Base
Camp Lejeune, North Carolina 28542

Dear General Barker:

This letter presents the Biological Opinion of the Fish and Wildlife Service relative to the effects of the forestry management program at Camp Lejeune on the endangered red-cockaded woodpecker (Picoides borealis). It is in response to the request dated September 13, 1978, for formal consultation pursuant to Section 7 of the Endangered Species Act of 1973. A Biological Opinion concerning the Mechanized Infantry Training Area and the red-cockaded woodpecker population within the training area was rendered February 1, 1979. A field inspection of the Browns Island Impact Area was conducted February 27, 1979; and an opinion regarding the effects of Marine Corps training activities on Camp Lejeune's beaches upon the threatened loggerhead turtle will be finalized shortly.

This Biological Opinion is based upon field inspections and associated meetings and discussions with Base personnel on December 11-12, 1978, and January 11-12, 1979; review of the Camp Lejeune Natural Resource Management Plan and Habitat Management Guidelines for the Red-Cockaded Woodpecker; review of the draft Red-Cockaded Woodpecker Recovery Plan and other pertinent literature; and communications with researchers and managers currently working with the species. Also, a review of the draft Biological Opinion at the March 22, 1979, meeting (attendee list enclosed) at Camp Lejeune indicated no objections to the findings of this opinion. It was also indicated by the Base Forester that implementation of the opinion would cause very little disruption of the forest management activities on the Base. An administrative record is available in the Asheville Area Office.

After review of the findings by Fish and Wildlife personnel in the Asheville Area Office, it is our Biological Opinion that the present forestry management program at Camp Lejeune is likely to jeopardize the continued existence of the red-cockaded woodpecker unless one of the reasonable and prudent alternatives is implemented. The information supporting this opinion follows.



The present guidelines for habitat management of the red-cockaded woodpecker on Camp Lejeune follow guidelines set forth in an early draft of the recovery plan. These recovery plan guidelines have been changed slightly by the latest recovery plan draft. The major change is an increase in the size of the support stand provided for each colony from 100 to 200 acres. This change is based upon the approximate average home range of the species of 200-250 acres. Actually these new guidelines work out to be the same as present Camp Lejeune guidelines when analyzed. Camp Lejeune guidelines call for 100-acre support stands 40 years old or older. Where rotations are 80 years old this would equal 200 acres with an even distribution of all age classes, i.e., 100 acres over 40 years old and 100 acres under 40 years old. There is presently a conflict in Camp Lejeune guidelines in that rotations are established for the support stands but the support stands must be 40 years old or older; therefore, no regeneration is possible, and rotations are thus meaningless.

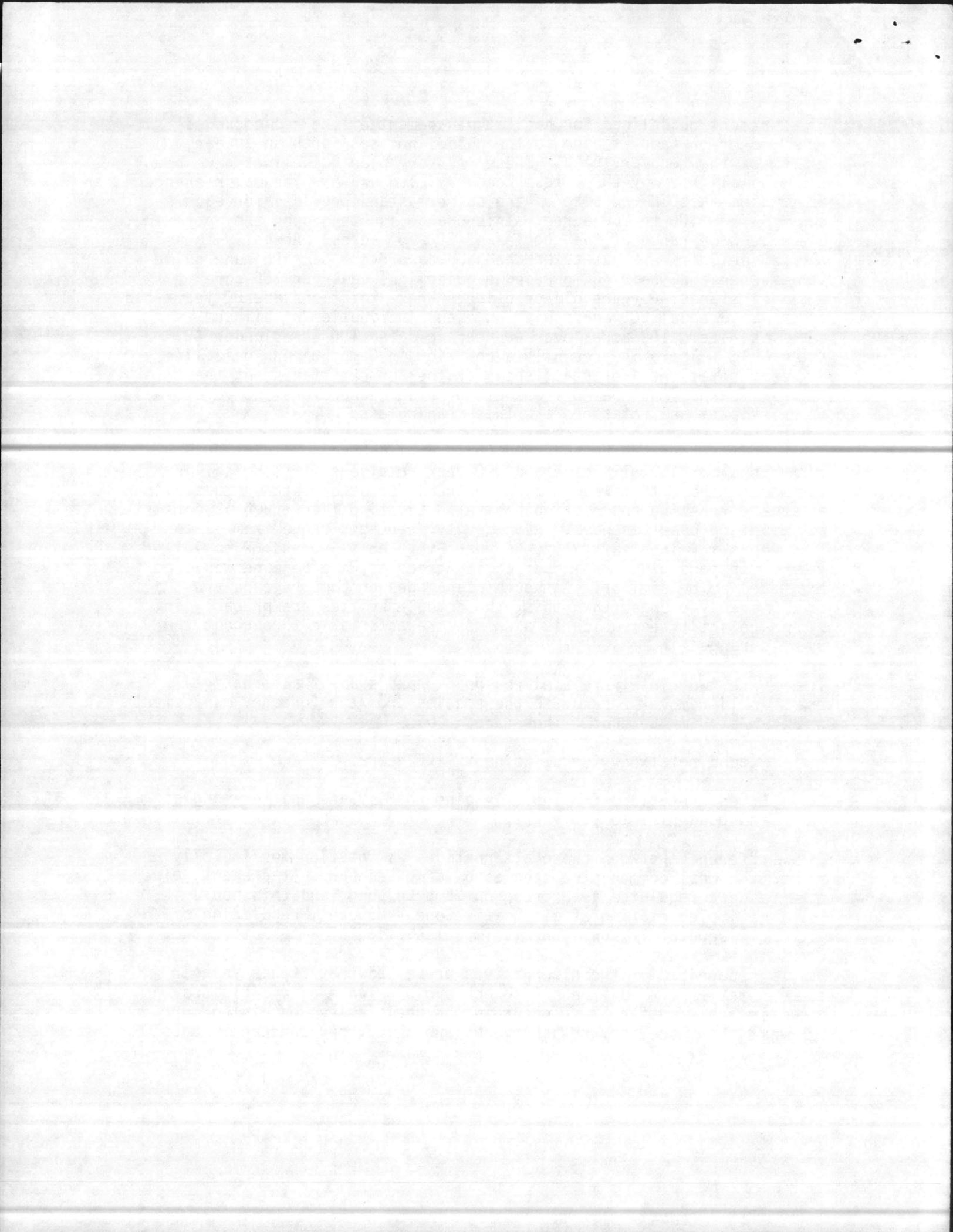
The draft recovery plan and Camp Lejeune guidelines call for 80-year rotations for loblolly pine and 100-year rotations for longleaf in support stands, thus recognizing the need for mature stands to provide adequate roosting and nesting habitat. Existing literature is consistent in pointing out this need. Mean cavity tree ages range from 72 to 125 years for longleaf, 71 to 98 years for loblolly, and 62 to 131 years for pond pine. Aging of cavity trees at Camp Lejeune would be expected to be similar. Although stand ages on Camp Lejeune are considerably younger than this, the actual cavities are probably in older relict trees, which is a common characteristic throughout the bird's range.

There are two closely related reasonable and prudent alternatives that would remove jeopardy to the species from the forestry management program at Camp Lejeune. These are:

1. Extend rotations for all pine to 100 years.
2. Extend rotations for loblolly pine to 80 years and for longleaf and pond pine to 100 years.

The difference between these alternatives is rotation for loblolly pine, the most common pine species on Camp Lejeune. At present, pine species are regulated as a group on Camp Lejeune, and this would require implementation of alternative one. However, regulation of loblolly separately would permit implementation of alternative two.

It is recognized in the alternatives presented that stands younger than rotation age must be cut to achieve a balance of age classes. However, this cutting must occur in the age classes containing more acreage than necessary to achieve balance; i.e., predominantly ages



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red-cockaded woodpecker by such training activities, support stands
and the inherent restrictions addressed in the Biological Opinion of
February 1, 1979, are still necessary in the Training Area.

However, even though marked support stands per se are not necessary,
the alternatives must include the provision that colonies are not
isolated by cutting on all sides but are always connected to a
minimum of 200 acres of contiguous pine and/or pine-hardwood stands
20 years old or older. No more than one-third of the compartment, or
one-third of the support stand in the Mechanized Infantry Training
Area, should be in 0-20 year age classes at any time. To prevent
major disruptions to home ranges, regeneration stand sizes immediately
surrounding colony sites should not exceed 50 acres, and 30 acres is
preferable.

The Camp Lejeune Habitat Management Guidelines for the Red-Cockaded
Woodpecker needs some other revisions as discussed with Natural
Resources personnel. The buffer zones, as well as the colony sites,
should be restricted from road construction. The colonies and buffer
zones should be prescribed burned at 2- to 3-year intervals, instead
of 5-year intervals. To the extent feasible with available manpower
and funds, the support stands in the Mechanized Infantry Training
Area and the general pine habitat elsewhere should also be prescribed
burned at 2- to 3-year intervals.

Although several management concepts for the species were carefully
evaluated, including present Camp Lejeune guidelines, present draft
recovery plan guidelines, and U. S. Forest Service existing and
proposed guidelines, the alternatives presented are the most certain
of all concepts to ensure the conservation of the red-cockaded woodpecker.

As agreed in discussions with Base Natural Resources personnel, we
evaluated other alternatives based on modifications of the presented
alternatives that would exclude certain acreage from long rotations
where habitat is marginal and/or unoccupied and not believed to be

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Bio Opinions

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30 to 57 on Camp Lejeune. At present only 2,594 acres are older than 60 years and thus considered suitable for meeting shelter requirement ^{regeneration} of the red-cockaded woodpecker. Therefore, there should be no cutting in age classes above 60 until 40 percent of the acreage on 100-year rotations and/or 25 percent of the acreage on 80-year rotations are 60 years old or older. Some stands must be carried past rotation age in order to achieve a balance of age classes and provide habitat for the red-cockaded woodpecker.

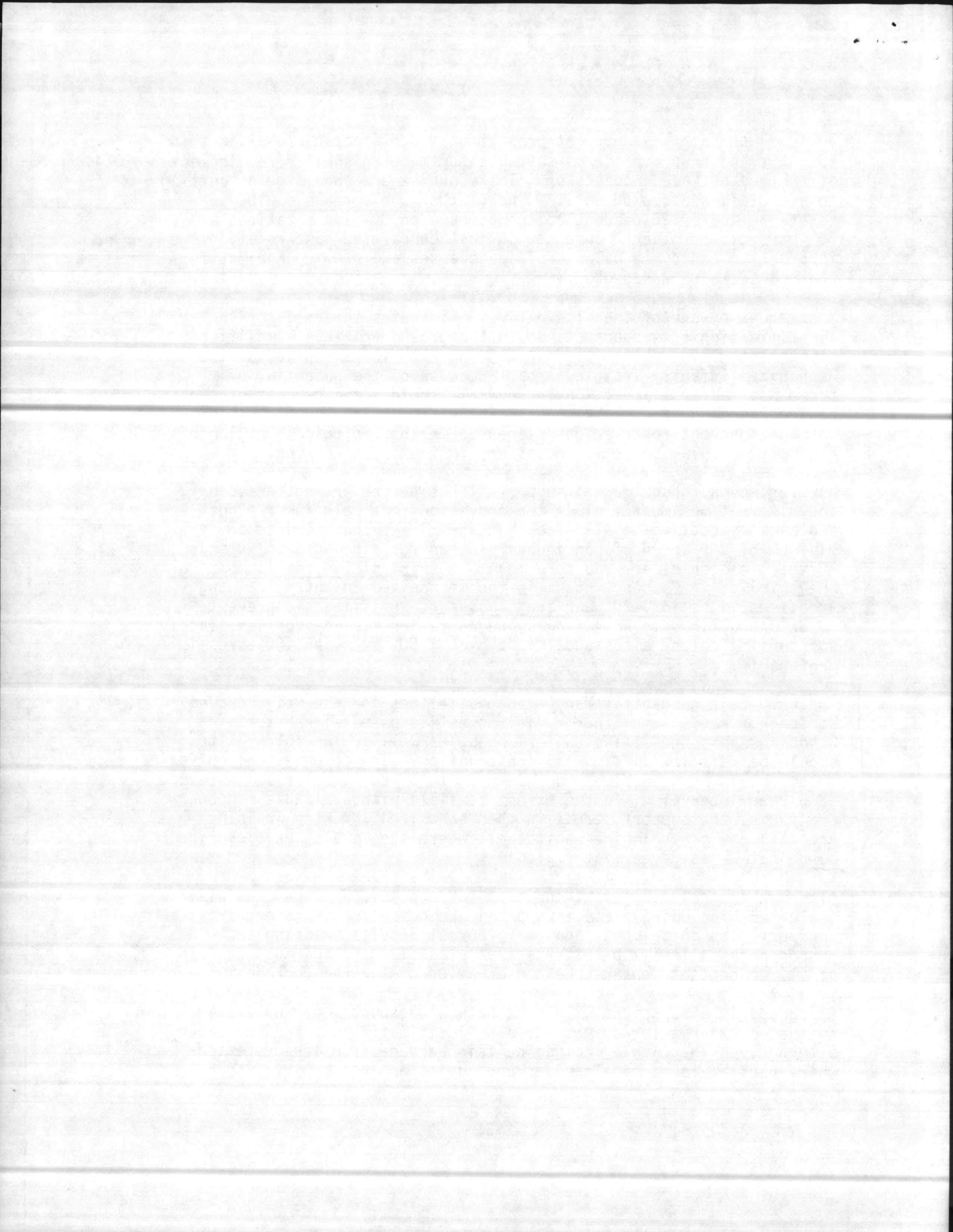
Management by one of the alternatives eliminates the need for the identification of support stands on the ground and thus simplifies management. This applies to Camp Lejeune with the exception of the Mechanized Infantry Training Area. Because of the potential of tremendous adverse impact on the overall ecology and habitat of the red-cockaded woodpecker by such training activities, support stands and the inherent restrictions addressed in the Biological Opinion of February 1, 1979, are still necessary in the Training Area.

However, even though marked support stands per se are not necessary, the alternatives must include the provision that colonies are not isolated by cutting on all sides but are always connected to a minimum of 200 acres of contiguous pine and/or pine-hardwood stands 20 years old or older. No more than one-third of the compartment, or one-third of the support stand in the Mechanized Infantry Training Area, should be in 0-20 year age classes at any time. To prevent major disruptions to home ranges, regeneration stand sizes immediately surrounding colony sites should not exceed 50 acres, and 30 acres is preferable.

The Camp Lejeune Habitat Management Guidelines for the Red-Cockaded Woodpecker needs some other revisions as discussed with Natural Resources personnel. The buffer zones, as well as the colony sites, should be restricted from road construction. The colonies and buffer zones should be prescribed burned at 2- to 3-year intervals, instead of 5-year intervals. To the extent feasible with available manpower and funds, the support stands in the Mechanized Infantry Training Area and the general pine habitat elsewhere should also be prescribed burned at 2- to 3-year intervals.

Although several management concepts for the species were carefully evaluated, including present Camp Lejeune guidelines, present draft recovery plan guidelines, and U. S. Forest Service existing and proposed guidelines, the alternatives presented are the most certain of all concepts to ensure the conservation of the red-cockaded woodpecker.

As agreed in discussions with Base Natural Resources personnel, we evaluated other alternatives based on modifications of the presented alternatives that would exclude certain acreage from long rotations where habitat is marginal and/or unoccupied and not believed to be



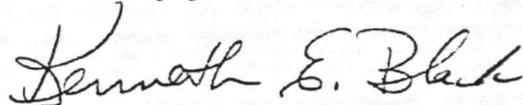
needed in the foreseeable future for expansion of present red-cockaded populations. However, consideration of seven different alternatives resulted in excluded acreages ranging from 4,889 to 6,940 acres. In discussions with the Base Forester, it was agreed that this small acreage would not justify the added effort, difficulty, and cost of regulating separately. Therefore, these alternatives are not presented but are a part of the administrative record on this Biological Opinion filed at the Asheville Area Office.

We certainly recognize that existing management of the red-cockaded woodpecker at Camp Lejeune was based on the best information and recommendations available at the time, and this interest and initiative in conservation of endangered species is commended. Unfortunately, continued analysis of data and new information indicates a necessity to do more. The cumulative effects of shorter rotations than those presented in the alternatives for public lands, which contain approximately 90 percent of present red-cockaded woodpecker populations, is believed extremely detrimental when added to the trend to shorter pulpwood rotations on private lands over which we have no control, the decreasing availability of southern pine sawtimber across the southeast, and the restriction of the species to a very small percent of its original habitat.

Current research on the species should shed more light on essential habitat requirements of the species. Such new information would, of course, be one basis for reinitiating consultation, if Camp Lejeune so desired. Along these lines, we would certainly recommend that data be collected on Camp Lejeune regarding cavity tree ages stratified by species of tree, stand forest type, site index, and start trees versus existing cavities. This would provide input on age of trees selected for cavities on Camp Lejeune, age of trees when cavity excavation begins, and the effect of site index on selection of cavity trees by age.

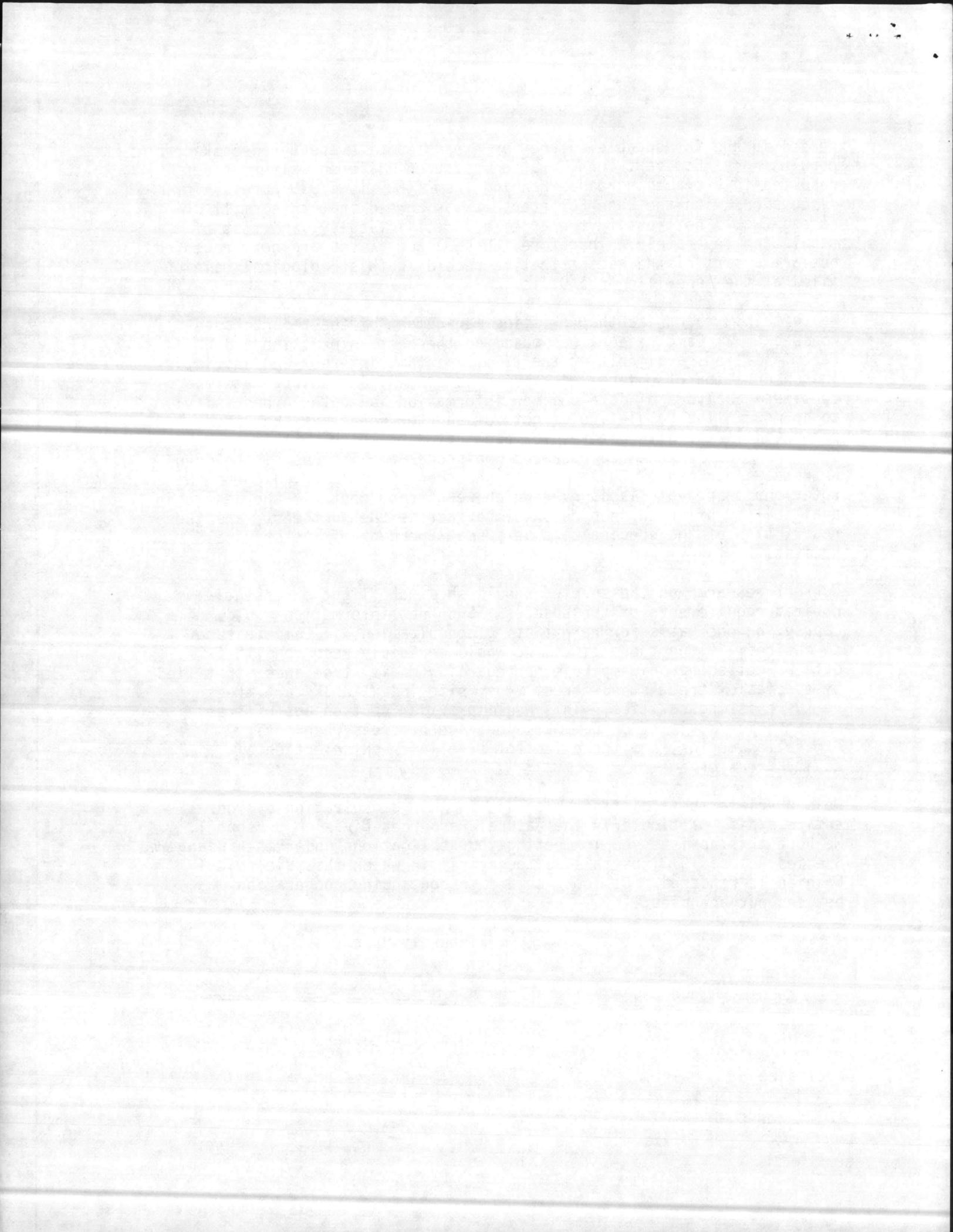
We appreciate the assistance provided in this consultation by your entire staff, particularly the Natural Resources Division personnel. We hope this assists you in meeting your obligations under the Endangered Species Act of 1973, as this is the spirit in which this Biological Opinion is rendered. We look forward to continuing cooperation between our agencies.

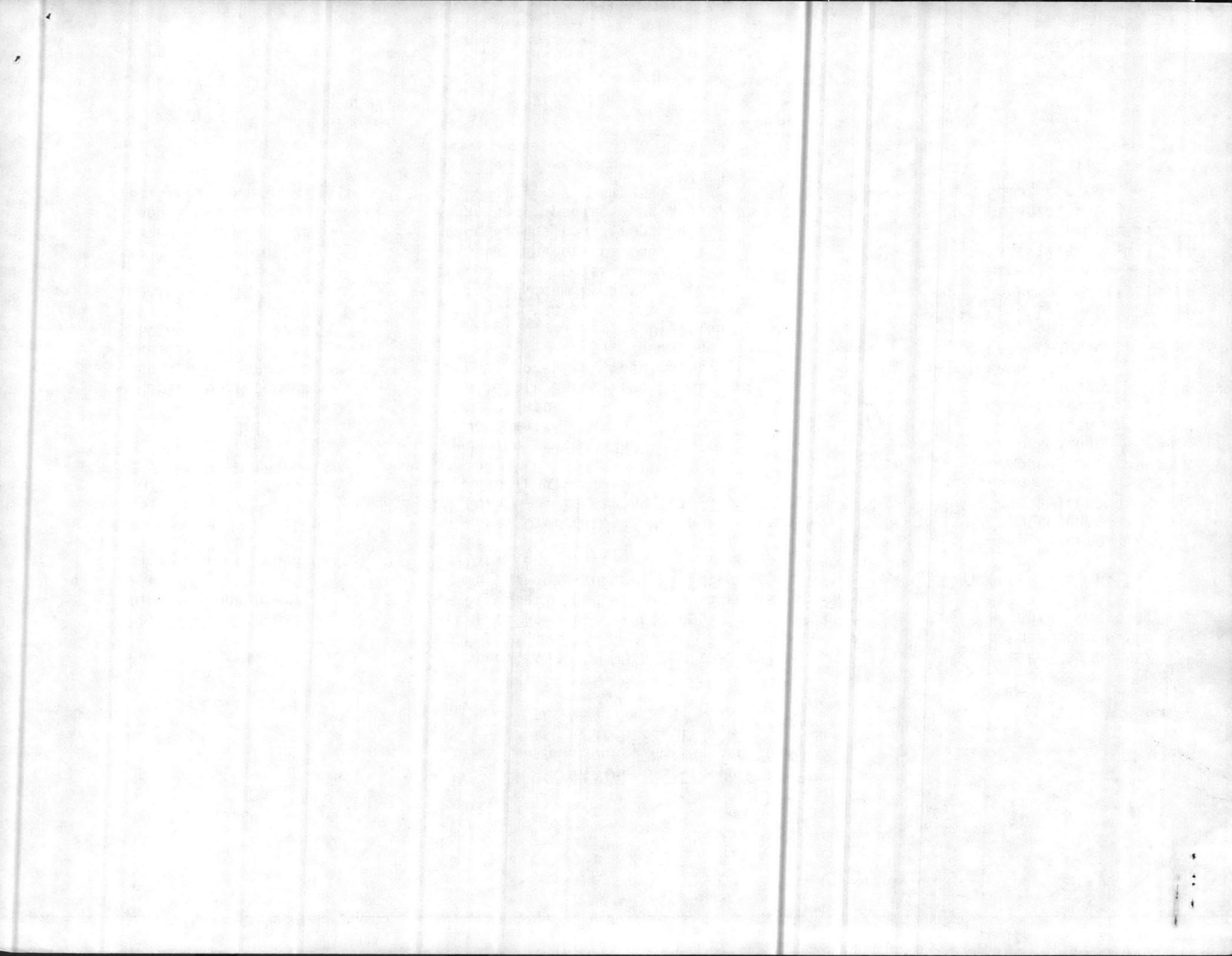
Sincerely yours,



Regional Director

Enclosure





HISTORY OF PROTECTION OF RED-COCKADED WOODPECKER ABOARD CAMP LEJEUNE

The red-cockaded woodpecker (*Picoides borealis*) was placed on the National List of Endangered Species in 1969. Conservation efforts by Camp Lejeune began in 1968. Original efforts were limited to mapping, marking and protection of cavity/nesting trees, but with official designation, conservation efforts were expanded to include maintenance and protection of colony sites and habitat.

These first efforts gradually resulted in the marking of cavity/nesting trees at colony sites and the posting of metal signs. These efforts were deemed sufficient to protect the species, including colony sites in the MIT area, based on the level of training activities which then existed in that area. Since approximately 1948 the area had been used for a variety of training scenarios with various roads, trails and firing positions being well established and well marked very early on. These activities increased significantly starting in 1952 when the Combat Town complex was completed. Since that time the types of training remained basically unchanged until 1975, with the level of training fluctuating with operational requirements.

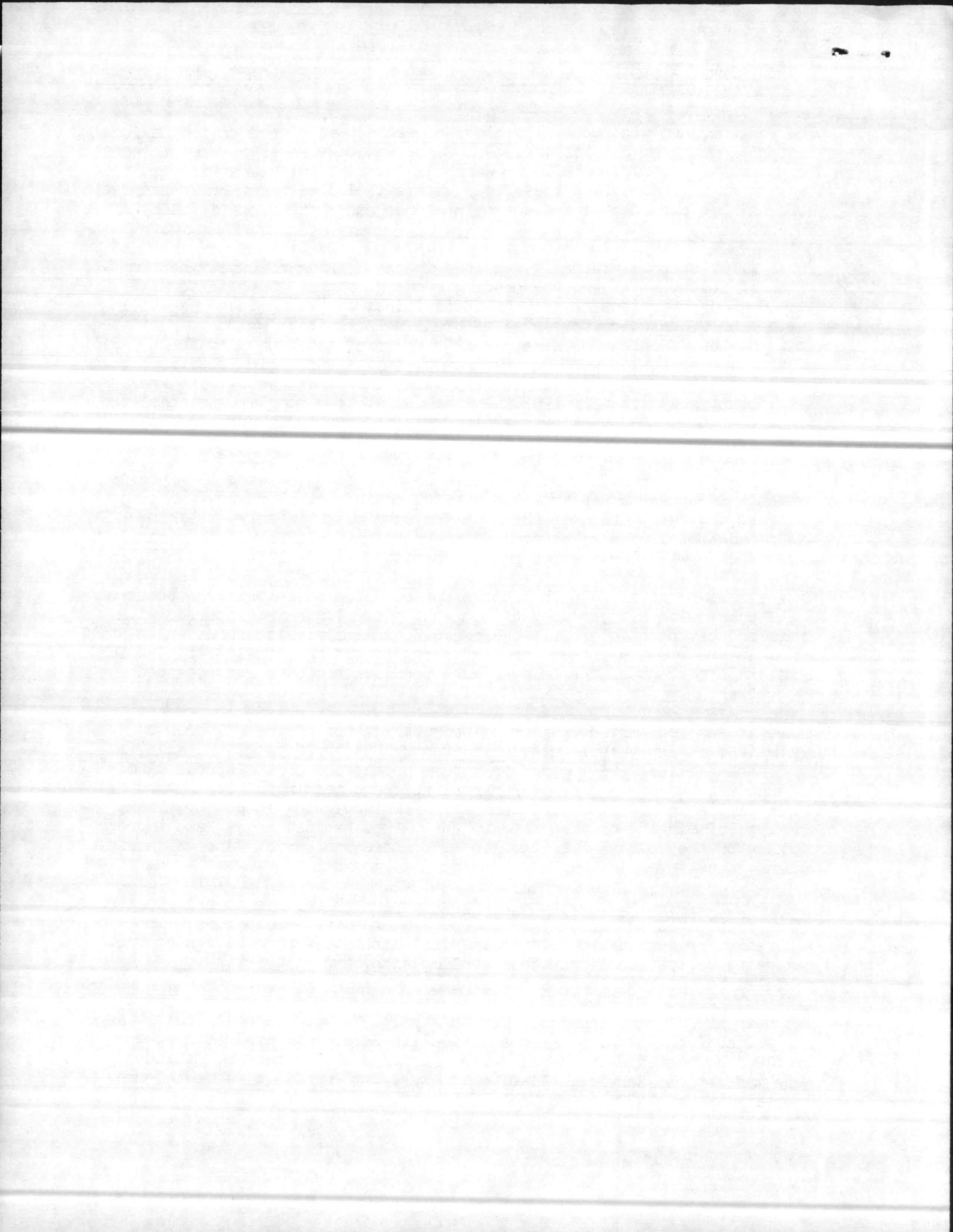
In 1975 establishment of the MIT area was proposed. Because the species' presence in the area was known, a careful environmental review was conducted prior to the designation of the area for mechanized infantry training. It was noted that limits to be applied to training would result in minimal interference with the species and its habitat.

It was also noted in 1975 that the proposed MIT area comprised a total of 3,251 acres with a topography of longleaf pine ridges interspersed with swamp and bay/pocosin areas. There are four managed fish ponds which still exist in the area, and there are 334 acres of old-age longleaf pine which contain 30 percent of the Camp Lejeune population of the red-cockaded woodpecker.

Since it was recognized that unlimited utilization of the MIT area by mechanized infantry could result in eventual destruction of the area, reasonable limits were imposed to insure protection of the species and its habitat and still provide for realistic and meaningful training. These limits included prohibitions against bivouacking in colony sites, any type of digging or trenching in the marked habitat areas, and improved marking of the colony sites coupled with increased surveillance of habitat areas.

These efforts were further augmented by issuing guidelines to using units which prohibited any activities in the MIT area that would result in alteration or degradation of the species' habitat, a prohibition against damage to vegetation larger than sapling size, and restriction of all vehicles to existing roads and trails.

The next significant step occurred in April 1977 when technical assistance was sought from the U. S. Fish and Wildlife Service in evaluating the problems connected with the MIT area. Three specific recommendations were made by the Service, all of which were implemented by Camp Lejeune starting in May 1977:



a. Camp Lejeune began the maintenance of at least 100 acres of contiguous forest, including the colony site and support stands, that were 40 years of age or older. This requirement was to provide the species with replacement cavity trees and additional feeding and roosting areas.

b. Tanks, heavy machinery, and other major disturbances were prohibited within 400 feet of any nest tree during the species' nesting and brood rearing period, March through July. Nesting trees were already well marked.

c. Increased enforcement and supervision of these new requirements was initiated.

As part of its overall efforts, Camp Lejeune identified the species' sites throughout the base and began an extensive relabeling of the sites within the MIT area. All sites within the MIT area are now marked by 12" x 12" metal signs, along the outer boundaries of contiguous habitat, clearly indicating the presence of the endangered species and the prohibition against disturbing its habitat. Buffer zone signs posted around cavity trees depict the colony site so that even the most casual onlooker could recognize the nesting area of the species if sighted.

Meanwhile plans were initiated to mark all the other sites of the species on the rest of Camp Lejeune in a similar manner. In addition, on-site inspections throughout the base, but especially the MIT area, were greatly increased.

On September 13, 1978, formal consultation with the U. S. Fish and Wildlife Service was requested. The consultation was received on 1 February 1979 and has prompted this submission. The specific guidelines imposed by the Service included the following:

a. Prohibition of all major training activities in the MIT area from March through July, including prohibition from firing from Gun Position 21, which is within the MIT area, and from Gun Positions 3, 6 and 10, which are located near other species sites at 9242, 9038 and 9537, respectively.

b. Prohibition from normal field training activities within the marked areas including cutting or destruction of woody vegetation, digging of fox-holes, trenches and garbage pits, laying underground communication lines or any activity significantly disturbing the soil, and bivouacking within the areas.

Re-initiation of formal consultation was requested by the Deputy Under Secretary of the Navy on 30 March 1979. An amended biological opinion was issued by the Fish and Wildlife Service on 12 June 1979 which Marine Corps Base began implementing.

A base order was implemented on 7 June 1979 setting forth regulations and establishing responsibilities to ensure conservation of the red-cockaded woodpecker. The order established weekly inspection intervals for improved monitoring of the MIT area. Specific regulations are as follows:

a. Within the contiguous habitats of the red-cockaded woodpecker (marked by one white stripe painted on trees and signs stating "Restricted Area Endangered Species":)

PROHIBITED ACTIVITIES:

(1) Movement/introduction of tracked vehicles except on existing/designated trails. The establishment of any new trails must be approved by Base Natural Resources Department (NRD), prior to use.

(2) Artillery firing (gun positions) within 200 meters of a cavity tree.

(3) Cutting of woody vegetation except in areas designated by NRD.

AUTHORIZED ACTIVITIES

(1) Movement/introduction of wheeled vehicles.

(2) Establishment of command posts at sites approved/designated by NRD.

(3) Establishment of bivouacs.

(4) Judicious digging/excavation which does not cause root damage.

(5) Use of tracked vehicles on existing/designated trails.

(6) LVTC-7 entry into command post sites which have been pre-designated.

(7) Designation of new trails after approval of NRD.

b. Within the red-cockaded woodpecker colony buffer zone (marked by two white stripes painted on trees and signs depicting a woodpecker and stating "Endangered Species Buffer Zone":)

PROHIBITED ACTIVITIES

(1) Tracked and wheeled vehicle movement/operations except on established/designated trails.

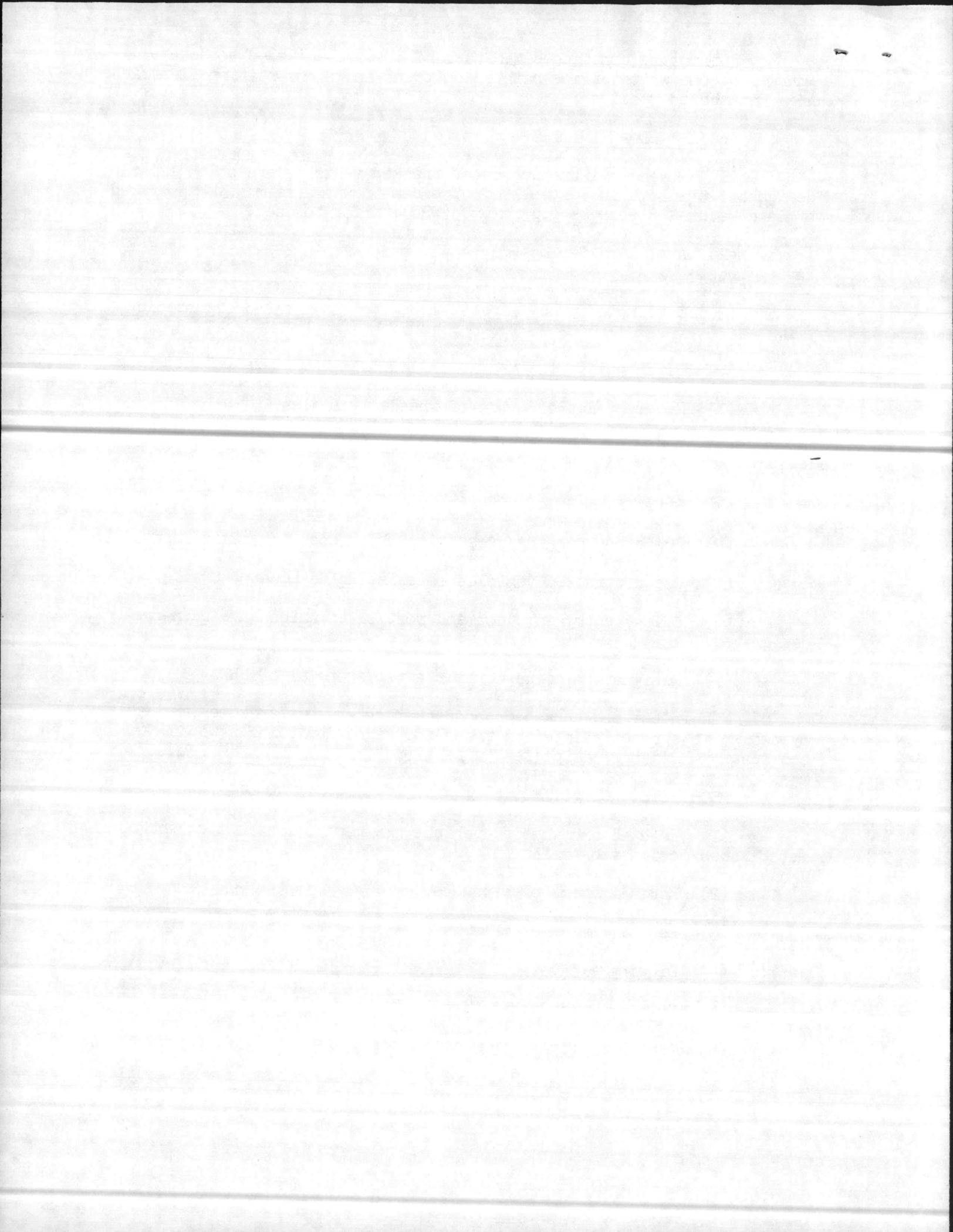
(2) Establishment of bivouacs.

(3) Establishment of CP's.

(4) Digging/excavation.

(5) Cutting woody vegetation.

(6) Artillery firing (gun positions).



AUTHORIZED ACTIVITIES

- (1) Unrestricted movement by foot troops.
- (2) Tracked and wheeled vehicle operations on established/ designated trails.
- (3) Blank small arms firing.

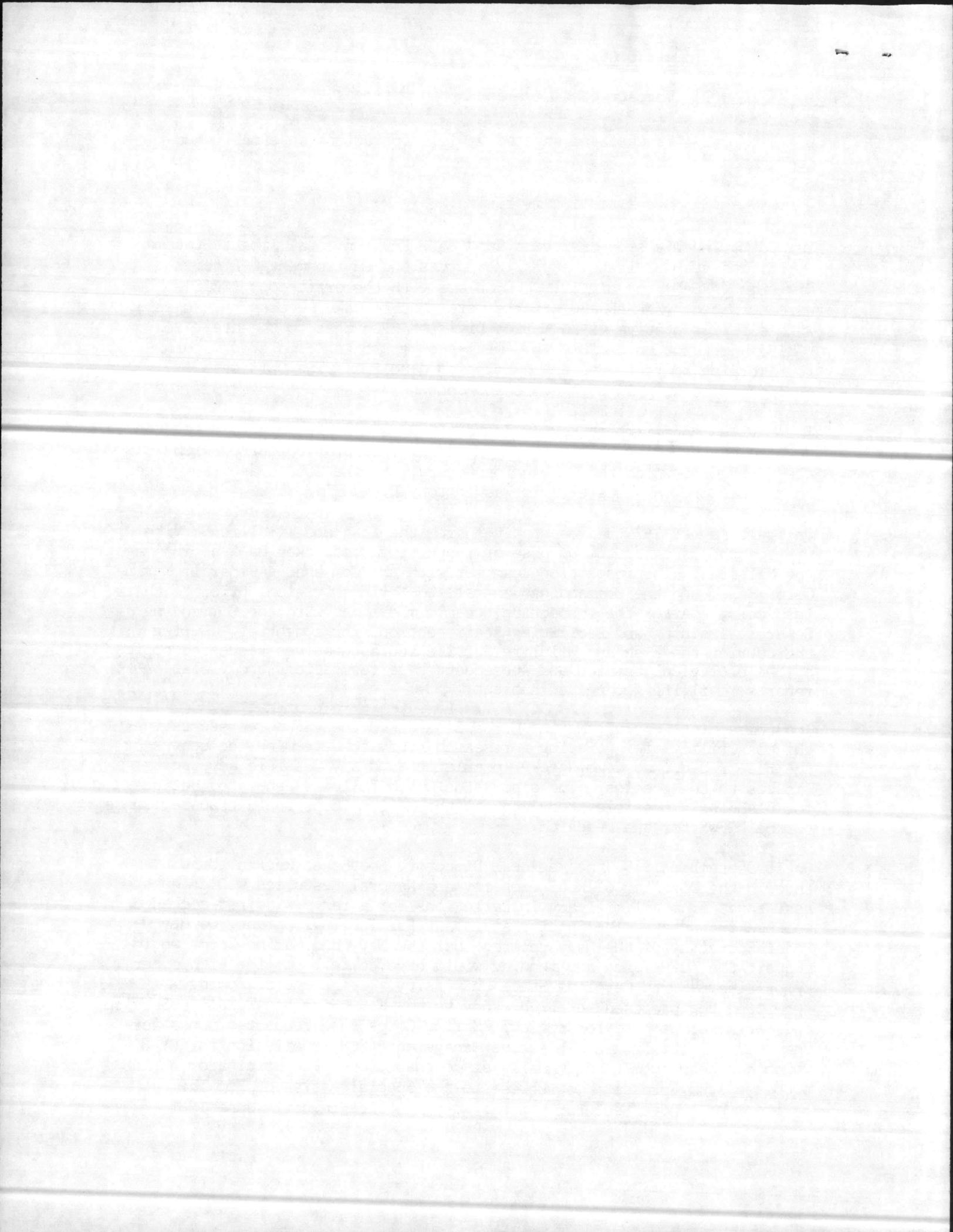
The 2d Marine Division drafted a Candidate Environmental Impact Statement (CEIS) and staffed it to Natural Resources and Environmental Affairs Division (NREAD) in July 1979. Problems with the draft copy (CEIS) were surfaced by NREAD and efforts were made to make necessary changes with a representative of 2d Marine Division. Changes to the draft copy (CEIS) were made on 27 July 1979 with the work being completed within four working hours due to the submission deadline. The CEIS was considered lacking in both scope and context.

The Environmental Impact Review Board (EIRB) met on 27 July 1979 for the purpose of reviewing the draft copy (CEIS). The EIRB concurred with the draft CEIS which the Commanding General, Marine Corps Base, submitted to Marine Corps Headquarters in Washington, D. C.

On 14-15 August 1979 representatives from the Fish and Wildlife Service visited the base for the purpose of inspecting woodpecker habitat in the MIT area. The inspection team met with the Commanding General, Marine Corps Base, and the Commanding General, 2d Marine Division, prior to their inspection. After the inspection, team members met with the Commanding General, Training and Facilities staff sections for a debrief. During the debrief the Fish and Wildlife Service representatives requested copies of the biological opinion and subsequent base regulations and violation reports involving woodpecker habitat.

The Commanding General, Marine Corps Base asked the USFWS representatives the possibility of initiating a research study to determine the status of the Base red-cockaded woodpecker population and any possible adverse impacts to the species. The discussion which followed generated action for planning a possible study whereby the Marine Corps would transfer funds to the USFWS for the research.

On 18 September 1979, the Regional Director, Southeast Region, USFWS through the Director of Real Property and Natural Resources DOD, requested assistance from all military installations for a range-wide red-cockaded woodpecker survey. The Special Assistant For The Environment, Deputy Under Secretary of the Navy replied that the Navy and Marine Corps would support the survey but any funding would have to fall in line with other priorities. North Carolina State University, Department of Zoology submitted the proposed research study to the U.S. Fish and Wildlife Service and Marine Corps Base for review. Marine Corps Base requested funds for the study in its Program Objective Management (POM) submission for FY-80 which has been submitted annually since that time. The originator of the proposed study presented a request to the Special Assistant For The Environment, Under Secretary of the Navy's office in early June 1981



requesting assistance in implementing the study. A copy of the response to the request was provided to the Commanding General, MCB, by the Commandant, USMC, requesting review and comments.

A response was submitted by the CG, MCB on 17 July 1981 noting that (1) weekly inspection of red-cockaded woodpecker habitat were being conducted in compliance with the biological opinion, (2) that the USFWS was presently conducting a range-wide survey to determine the population status on base and other areas of the southeast and (3) there was no legal requirement for conducting the proposed study and recommended it be disapproved. Subsequently, Marine Corps Base decided against participating with USFWS in the range-wide Red-cockaded Woodpecker Survey. Fort Stewart, Ga. and Camp Lejeune are the only Federal Activities having red-cockaded woodpeckers in the country that did not participate.

Marine Corps Base requested the USFWS on 27 July 1983 to review the biological opinion relative to the habitat boundaries established for red-cockaded woodpeckers in the training areas. A representative visited the Base on 24-25 August 1982 at which time he reviewed proposed changes and discussed them with Base Maintenance Officer, LTCol Calta, AC/S Facilities, Col Marshall, J.I. Wooten and C.D. Peterson, NREA.

The USFWS concluded that there is no new knowledge regarding the biology of the bird that would justify changes in boundaries established for support stands as they were then marked. In reality, his conclusion was that the designated boundaries are not sufficient by themselves to support the present colonies. The Recovery Plan for the species recommends 200-acre support stands based on home ranges of the species. Therefore, the USFWS could not support relocation of support stand boundaries at present. One and possibly two colony support stands which are apparently abandoned will be dropped as colony sites as in compliance with guidelines contained in the USFWS letter to CG, MCB on 30 September 1982. One colony site was in LC area. The other site was in the MB area of the base.

