# United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

March 26, 2007

Ronald J. Riedel, Range Support Manager
Department of the Air Force
23rd Wing, Detachment 1
Avon Park Air/Ground Training Complex (ACC)
Avon Park Air Force Range, Florida 33825

Service Federal Activity Code: 41420-2007-FA-0674
Service Consultation Code: 41420-2007-F-0546
Applicant: United States Air Force
Project: Timber salvage, Stand 3BT07
Formal Consultation Initiation Date: March 16, 2007
County: Highlands

Dear Mr. Riedel:

This document transmits the Fish and Wildlife Service's (Service) biological opinion based on our review for the proposed project referenced above located in Highlands County, Florida, and its effects on the endangered red cockaded woodpecker (*Picoides borealis*) (RCW) in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*). Your March 14, 2007, request for formal consultation was received on March 16, 2007. You specifically requested confirmation that the proposed action is in conformance with the existing Endangered Species Management Plan for Florida grasshopper sparrow, Florida scrub-jay, and the RCW at Avon Park Air Force Range (Plan) (U.S. Air Force [USAF] 2000).

This biological opinion is based on information provided in the Plan (USAF 2000); the Biological Opinion for the Plan dated August 24, 2001; the South Florida Multi-Species Recovery Plan (MSRP); the March 14, 2007, project proposal; telephone conversations; field investigations; and other sources of information. A complete administrative record of this consultation is on file at the South Florida Ecological Services Office in Vero Beach, Florida.

**Consultation History**

On July 12, 2006, a site visit was conducted by Service staff and staff at Avon Park Air Force Range (APAFR) to discuss options for management of RCW foraging habitat after a fire had burned slash pine stand 3BT07. In a letter dated July 24, 2006, the Service recommended that the trees be left and under-planted with long leaf pine. The Service received the Air Force's proposal described below on March 16, 2007.

## DESCRIPTION OF PROPOSED ACTION

### Proposed Action

The proposed action consists of removing 70 percent of the stand trees from stand 3BT07 and replanting the site with a mix of 50 percent south Florida slash pine and 50 percent long leaf pine. The remaining trees will be left standing to provide foraging habitat for hairy woodpeckers (*Picoides villousus*), Downy woodpecker (*Picoides pubescens*), red-bellied woodpecker (*Melanerpes carolinus*), and Northern flicker (*Colaptes auratus*).

### Action Area

The action area is defined as all areas to be affected directly or indirectly by the Federal action. The Service has determined that the action area for this project is the boundary of plantation 3BT07 as shown on your map accompanying the salvage proposal.

## STATUS OF THE SPECIES/CRITICAL HABITAT RANGEWIDE

*Red-cockaded Woodpecker*

The Service identified the RCW as a rare and endangered species in1968 and officially listed as endangered in 1970 (Federal Register 35:16047). With passage of the Act in 1973, the RCW received the protection afforded listed species under the Act. No critical habitat has been designated for the RCW.

### Species Description

The RCW measures approximately 18 to 20 cm in length with a wing span of 35 to 38 cm. The RCW is distinguished by its conspicuous white cheek patches, black cap and neck, and black-and-white barred back and wings.

The current distribution of this non-migratory, territorial species (endemic to open, mature and old growth pine ecosystems) is restricted to the remaining fragmented parcels of suitable pine forest in 11 southeastern States; it has been extirpated in New Jersey, Maryland, Missouri, Tennessee, and Kentucky (Costa 2003). As of April 2003, there were an estimated 14,500 RCWs living in 5,800 known active clusters across 11 States (Service 2003, unpublished data). This is less than 3 percent of the estimated abundance at the time of European settlement.

### Life History

The RCW is a territorial, non-migratory, cooperative breeding species (Lennartz et al. 1987). It is unique in that it is the only North American woodpecker that exclusively excavates its roost and nest cavities in living pines. Each group member has its own cavity, although there may be multiple cavities in a cavity tree. The aggregate of cavity trees, surrounded by a 200-foot

forested buffer, is called a cluster (Walters 1990). Cavities within a cluster may be complete or under construction and either active, inactive, or abandoned.

RCWs live in social units called groups. This family unit usually consists of a breeding pair, the current year's offspring and zero to four helpers (adults, normally male offspring of the breeding pair from previous years) (Walters 1990).

Red-cockaded woodpeckers forage almost exclusively on live pine trees, although they will forage on recently killed pines (Franzreb 2003). Their prey consists of wood cockroaches, caterpillars, spiders, woodborer larvae, centipedes, and ants (Hanula and Horn 2003). Although they will use smaller pine trees as foraging substrate RCWs prefer pines greater than 10 inches in diameter at breast height (Hooper and Harlow 1986; Engstrom and Sanders 1997).

**Population Dynamics**

Reproductive rates, population density, and re-colonization rates may influence RCW population variability more than mortality rates, sex ratios, and genetic variability. RCWs exhibit relatively low adult mortality rates; annual survivorship of breeding male and female RCW is high, ranging from 72 to 84 percent and 51 to 81 percent, respectively (Lennartz and Heckel 1987; Walters et al. 1988, Delotelle and Epting 1992).

Regarding sex ratios, only two studies (Francis Marion National Forest and central Florida populations) report significantly different fledgling sex ratios than 50:50 (Gowaty and Lennartz 1985; Epting and Delotelle, unpublished data.); however, other populations report an unbiased sex ratio (Hardesty et al. 1997; LaBranche 1992; J. Walters 1990, unpublished data).

The average number of young fledged from successful nests is about two in northern populations. Productivity in Florida populations typically is somewhat less (averaging 0.9 to 1.6 young per group) due largely too greater partial brood loss.

RCW populations can be increased dramatically because of their ability to re-colonize unoccupied habitat made suitable by providing the limiting resource of cavity trees, via artificial cavities (Copeyon 1990; Allen 1991). Significant population expansions have been documented where artificial cavity provisioning has been employed (Gaines et al. 1995; Franzreb 1999; Carlile et al. 2003; Doresky et al. 2003; Hagan et al. 2003; Hedman et al. 2003; Marston and Morrow 2003; Stober and Jack 2003).

**Status and Distribution**

The precipitous decline of RCWs was caused by an almost complete loss of habitat. Approximately 920,000 (Costa 2001) to 1.5 million (Conner et al. 2001) groups of RCWs inhabited southeastern forests prior to European settlement. Fire-maintained old growth pine savannahs and woodlands that once dominated the southeast (92 million acres pre-European settlement; Frost 1993), on which the woodpeckers depend, no longer exist except in a few small patches (<3.0 million of acres today; Frost 1993). Longleaf pine ecosystems, of primary

importance to RCWs, are now among the most endangered systems on earth (Simberloff 1993; Ware et al. 1993).

## ENVIRONMENTAL BASELINE

### Status of the Species/Critical Habitat Within the Action Area

At APAFR, all RCW groups occur in longleaf pine (*Pinus palustrus*) habitat, though historically they occurred in slash pine (*P. elliottii* var. *densa*). The distribution of longleaf pine at APAFR is patchy with small tracts scattered throughout a matrix of habitat types unsuitable or of low habitat value for RCWs.

Current management practices in RCW Habitat Management Units include prescribed burning, mechanized vegetation treatments, and planting of longleaf pine. In addition, translocation of the RCW and cavity augmentation with artificial cavities is a part of the habitat management plan (USAF 2000). APAFR has translocated 32 RCWs, and to date, 20 of the translocated birds have successfully entered the breeding population (Gilson, 2006).

In 2006, 25 active RCW clusters were documented at APAFR (Gilson 2006). This is similar to the number of clusters ($n$ = 21) reported from APAFR during the mid-1970s, suggesting that the population has remained stable (USAF 2000).

### Factors Affecting Species Environment within the Action Area

The factor affecting RCW outside the APAFR include residential development and related fire suppression, agricultural development, logging, replacement of native pine flatwoods with cultivated timber stands, road construction and maintenance. These activities result in loss and fragmentation of suitable habitat for RCWs. Ongoing factors within APAFR include expanded training activities by Armed Forces including Florida National Guard, Air Force, Army, Navy, Marines. These activities could result in direct loss of cavity trees and/or foraging habitat, or indirect loss through ordnance-related wildfire. Military training can disrupt breeding and foraging activities as well as incubation of eggs and care of young.

## EFFECTS OF THE ACTION

The proposed action is consistent with activities described in the Plan (USAF 2000). The effects have been analyzed in the Biological Opinion for the Plan dated August 24, 2001, and are described below.

### Beneficial Effects

The proposed action will result in re-forestation of the site with long leaf pine and South Florida slash pine. Foraging habitat lost due to the severity of the wildfire will be restored in the long-

term. In approximately 30 to 50 years, trees in the 10-inch diameter at breast height size class will be available for RCW foraging and nesting. The success of the re-forestation effort will be more likely by planting two species instead of a single species planting. Random events, such as insect infestation, disease, wildfire, etc., are less likely to affect a mixed stand than one consisting of one species.

**Direct Effects**

No live slash pine trees within one-half mile of the active RCW clusters will be removed and no long leaf pines, live or dead, will be removed. However RCWs are known to forage outside the one-half distance and may make limited use of dead trees within the plantation for several more months. It is possible that the salvage operation will result in short term loss of foraging habitat. This effect will be reduced by leaving all live trees within one-half mile of the cluster epicenter and by leaving 30percent of the dead trees within the plantation. However some loss of foraging is likely to occur.

**Interrelated and Interdependent Actions**

An interrelated activity is an activity that is part of the proposed action and depends on the proposed action for its justification. An interdependent activity is an activity that has no independent utility apart from the action under consultation. No interrelated or interdependent actions are expected to result from the project.

**Indirect Effects**

Portions of the pine plantation are located within two active clusters. The logging activity associated with removal of dead trees may result in disturbance to foraging and breeding activities of RCWs within two active clusters: AP 33 and AP 49. This disturbance is estimated to last for approximately 2 to 3 weeks during which time RCWs will tend to avoid live trees in close proximity to the salvage operation. This could result in a reduction of food delivery to nestlings during nesting season.

**CUMULATIVE EFFECTS**

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. The Service has not identified any cumulative effects.

**SUMMARY OF EFFECTS**

The proposed action will result in some loss of foraging habitat since RCWs may still be foraging prey from the dead pines within the plantation and may be foraging on live slash pines outside the one-half radius of the active clusters. Some disturbance to RCWs is anticipated

during salvage operations. The reforestation of the site with long leaf pine and south Florida slash pine will result in improved foraging conditions in the long term.

## CONCLUSION

After reviewing the status of the RCW, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the Timber Salvage project as proposed, is not likely to jeopardize the continued existence of the RCW. No critical habitat has been designated for the RCW, therefore, none will be affected.

## INCIDENTAL TAKE STATEMENT

Sections 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without a special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns such as breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns, which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are nondiscretionary, and must be undertaken by the USAF so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in action 7(o)(2) to apply. The USAF has a continuing duty to regulate the activity covered by this incidental take statement. If the USAF (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the USAF must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement.

## AMOUNT OR EXTENT OF TAKE

The Service has developed the following incidental take statement based on the premise that the reasonable and prudent alternative will be implemented.

The Service anticipates incidental take of RCWs will be difficult to detect for the following reason(s): (1) RCW has a small body size; (2) finding a dead or impaired adult specimen is unlikely; and (3) losses may be masked by seasonal fluctuations in prey base or habitat quality unrelated to the proposed action. The proposed action is consistent with activities described in the Plan (USAF 2000) and take will not exceed the loss of 1.2 RCW cavity trees per year specified in the Biological Opinion dated August 24, 2001.

## EFFECT OF THE TAKE

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

## REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of RCW:

1. The salvage operation will leave some dead trees within the plantation, since RCWs are known to forage on recently killed trees.

2. Live slash pine trees within one-half mile of the epicenter of the active RCW clusters will be left uncut for RCW foraging.

3. Continue implementation of the Plan (USAF 2000).

## TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, the USAF must comply with the following terms and conditions, which implement the reasonable and prudent measures, described above and outline required reporting/monitoring requirements. These terms and conditions are nondiscretionary.

1. The salvage operation will leave between 27 percent and 33 percent of the trees in plantation 3BT07 uncut to allow for possible foraging by RCWs. This uncut percentage will include all live trees within one-half mile of the epicenter of active RCW clusters: AP33 and AP49.

2. The Air force will continue to abide by terms and conditions in the Biological Opinion for the Plan dated April 24, 2001 (USAF 2000).
3. Upon locating a dead, injured, or sick specimen, initial notification must be made to the nearest Service Law Enforcement Office (Fish and Wildlife Service; 9549 Koger Boulevard., Suite 111; St. Petersburg, Florida 33702; 727-570-5398). Secondary notification should be made to the Florida Fish and Wildlife Conservation Commission; South Region, 3900 Drane Field Road, Lakeland, Florida, 33811-1299; 1-800-282-8002. Care should be taken in handling sick or injured specimens to ensure effective treatment and care or in the

handling of dead specimens to preserve biological material in the best possible state for later analysis as to the cause of death. In conjunction with the care of sick or injured specimens or preservation of biological materials from a dead animal, the finder has the responsibility to carry out instructions provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

## CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to further minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

The USAF should continue the use of native pine species in re-forestation projects in RCW Habitat Management Units within APAFR.

The Service requests notification of the implementation of any conservation recommendations in order to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats.

## REINITIATION NOTICE

This concludes formal consultation on the action outlined in the request. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Thank you for your cooperation and effort in protecting fish and wildlife resources. If you have any questions regarding this project, please contact Mark Fredlake at 863-452-4164.

Sincerely,

Paul Souza
Field Supervisor
South Florida Ecological Services Office

cc:
APAFR, Avon Park, Florida (Paul Ebersbach)
FWC, Lakeland, Florida (Jeff McGrady)
Service, Atlanta, Georgia (Noreen Walsh) (electronic copy only)
Service, Clemson, South Carolina (RCW Species Lead)
Service, Vero Beach, Florida (Tylan Dean) (electronic copy only)

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