# APPENDIX 5. PRIVATE LANDS GUIDELINES

Private landowners have different responsibilities than do public land managers for endangered species conservation under the Endangered Species Act. Because of this, we provide specific guidance here for private landowners to follow on lands occupied by red-cockaded woodpeckers. However, private landowners are strongly encouraged to follow general guidelines for red-cockaded woodpecker management given in section 8 of this document.

Here, we first list activities that have the potential for harass and/or harm under the definition of "take" in the Act. These activities cannot be conducted within clusters and foraging habitat of red-cockaded woodpeckers without concurrence and/or a permit (see 4A) from the U.S. Fish and Wildlife Service. We then present guidelines for the management of foraging habitat on private lands. Finally, we give guidance on monitoring the activity status of red-cockaded woodpecker clusters specific to private landowners.

## Potentially Harmful Activities

Because of the potential for harass and/or harm under the definition of 'take' in the Endangered Species Act, the following activities require concurrence and/or a permit from the U.S. Fish and Wildlife Service.

1. Removing any red-cockaded woodpecker cavity tree, through cutting, bulldozing, or any other activity.

2. Damaging an active cavity tree which results in the death of that tree. Damage includes, but is not limited to, injury to the bole or root system (generally due to heavy equipment use), exposure to herbicides, and fire scorch to the crown due to inadequate protective measures during prescribed burning. Pines are best protected from damage by intense fires through frequent low-intensity prescribed burns (see 8K).

3. Using insecticides on any standing pine tree. Prevention and control of disease and insect infestations is encouraged. Infestations of insects such as southern pine beetles are best prevented by maintaining open structure and adequate spacing between pines (see 8J). Control of active infestations often includes the cutting of infested trees. If such control will result in losses of trees below recommended foraging guidelines (below), or in the removal of cavity trees, the U.S. Fish and Wildlife Service must be contacted prior to the action.

4. Constructing roads and utility rights-of-way within a cluster. Use of existing roads, improved or unimproved, generally does not adversely affect red-cockaded woodpeckers and therefore is permitted. If, in the landowner’s opinion, there is no reasonable alternative to construction of new roads, either improved or unimproved, or if there is no reasonable alternative to placing a utility right-of-way within the cluster, the U.S. Fish

and Wildlife Service must be contacted before construction or clearing activities are initiated.

5. Construction of facilities including, but not limited to, buildings, campgrounds, recreational developments, residential dwellings, and industrial or business complexes. If, in the landowner's opinion, extenuating circumstances require a facility to be constructed in an active cluster, the U.S. Fish and Wildlife Service must be contacted during the planning phase and prior to any construction activity.

6. Planting of shrubs and/or ornamental plants that will exceed 2.1 m (7 ft) in height within 15.24 m (50 ft) of active and inactive cavity trees. If cavities are 3.05 m (10 ft) or less in height, planting any shrubs within 15.24 m (50 ft) of cavity trees may adversely affect red-cockaded woodpeckers. Construction equipment and construction material cannot be stored within 61 m (200 ft) of cavity trees. Landscaping within clusters should be accomplished with hand tools or lightweight power equipment rather than tractor-mounted equipment.

Foraging Habitat

We present two sets of guidelines for the management of foraging habitat. The first, named the recovery standard, is presented in 8I, and scientific reasoning underlying these guidelines is explained in 2E. However, because of differing responsibilities of private landowners and public land managers under the Endangered Species Act, it may be unreasonable to expect that private landowners manage their foraging habitat at the same level of quality at which public land managers are expected to manage their lands. Populations on public lands are required to be increasing, whereas many populations on private lands are managed for stability. For those private landowners that wish to increase the size of their population, we strongly encourage that the recovery standard be followed. However, we present an alternative set of foraging guidelines for groups in populations on private lands managed to maintain existing population size. Because our understanding of foraging requirements is not yet sufficient to identify the specific level of foraging resources at which a population changes from stable to increasing (see recovery task 5.8.), these guidelines are based on existing minimum amounts of foraging resources of groups known to be surviving and reproducing over at least short time periods.

Red-cockaded woodpeckers can benefit by the establishment of lower guidelines for populations in which only stability rather than increasing trends is required, because lower guidelines can encourage private landowners to enroll in conservation agreements and participate in active management. Flexibility in guidelines, within appropriate boundaries, is an important component of successful conservation on private lands because it fosters cooperation rather than resentment (see 4A). But, these guidelines are presented with a caveat: stability of small populations cannot be attained without additional management (such as use of artificial cavities and/or translocation; see 3B, 3D, 8E, 8H). Additionally, the standard for managed stability is not designed to increase

population size nor is its wide-scale implementation within a population adequate to maintain that population's viability over the long-term. It does not provide future nesting habitat or suitable, i.e., good quality, foraging habitat over the long-term. Its wide-scale implementation will result in population fragmentation with subsequent problems related to demographic stochasticity and perhaps genetic variability. Again, private landowners are strongly encouraged to manage at or toward the recovery standard, and should provide at least the standard for managed stability. The standard for managed stability is as follows:

1. Provide each group of red-cockaded woodpeckers a minimum of 689 $m^2$ (3000 $ft^2$) of pine basal area, including only pines $\geq$ 25.4 cm (10 in) dbh.

2. Provide the above pine basal area on a minimum of 30.4 ha (75 ac).

3. Count only those pine stands in suitable habitat that, for this standard only, has each of the following characteristics:

a. Stands that are at least 30 years old and older.

b. An average pine basal area of pines $\geq$ 25.4 cm (10 in) between 9.2 and 16.1 $m^2$/ha (40 and 70 $ft^2$/ac).

c. An average pine basal area of pines < 25.4 cm (10 in) less than 4.6 $m^2$/ha (20 $ft^2$/ac).

d. No hardwood midstory or if a hardwood midstory is present, it is sparse and less than 2.1 m (7 ft) in height.

e. Total stand basal area, including overstory hardwoods, less than 23.0 $m^2$/ha (80 $ft^2$/ac).

f. We recommend that all land counted as foraging habitat be within 0.4 km (0.25 mi) of the cluster, and that any stand counted as foraging habitat be within 61 m (200 ft) of another foraging stand or the cluster itself.

g. Frequent prescribed burning of foraging habitat, especially during the growing season, is strongly recommended. Development and protection of herbaceous groundcovers facilitates prescribed burning and benefits red-cockaded woodpeckers.

As stated above, the standard for managed stability can benefit red-cockaded woodpeckers on ownerships not legally required to recover the species, because it encourages cooperation between landowners and the U.S. Fish and Wildlife Service. Previous guidelines for privately owned lands facilitated the development of successful

Safe Harbor Agreements and Memoranda of Agreement (see 4A). Again, research to date does not adequately support the designation of foraging habitat that will result in stable vs. increasing populations, so these guidelines have been developed using minimum observed values for successfully reproducing groups. For the most part, the standard for managed stability reflects previous guidelines for private lands. Changes include requirements of slightly more minimum acreage, lower maximum pine densities, and higher minimum pine densities. These modifications were made based on results of recent research described in detail in 2E.

We stress the importance of adequate stand structure. Stands cannot be considered suitable as foraging habitat unless they have an "open" character. A pine stand that is 30 years in age and has an average tree diameter of 25.4 cm (10 in) or more does not necessarily qualify as suitable foraging habitat. If such a stand has not been prescribed burned (or otherwise treated to control hardwood midstory) and has not been thinned to a basal area of 16.1 $m^2$/ha (70 $ft^2$/ac) or less, it will not satisfy the "open" condition criterion. Dense stands of young pine and pine/hardwood are typical of unmanaged plantations and natural regeneration areas (particularly loblolly seedtree harvests) that have not been thinned or frequently burned. Such stands cannot be considered suitable foraging habitat simply because they have the required total and stand basal area and average stem diameter. Stand quality, as measured by an open structure, is a critical factor determining suitability and use of foraging habitat and must be considered when acceptable foraging habitat is identified.

Development, with concurrence from the U.S. Fish and Wildlife Service, can occur within the 0.8 km (0.5 mi) radius surrounding the cluster. However, the level of development cannot reduce the available foraging substrate below the required standard of managed stability. Although residential and commercial facilities and their associated infrastructures (roads, right-of-way, parking areas, recreational complexes, etc.) are permitted, all reasonable measures will be taken to minimize the impact of these developments on the foraging habitat available to the red-cockaded woodpecker. In other words, developments will strive to minimize clearing for rights-of-way, road widths, residential dwellings, and commercial and/or industrial complexes. If development would result in foraging habitat losses below the recommended guidelines, a permit (see 4A) is required. Landscaping, whenever possible, should use existing natural vegetation and will not involve extensive hardwood tree plantings.

## Monitoring Activity Status of Clusters

Private landowners are encouraged to monitor the number of active clusters on their property and report this information annually to the Red-cockaded Woodpecker Recovery Coordinator. A description of monitoring number of active clusters, and further information concerning the Annual Report, is given in 3A. Private landowners are not responsible for the protection and maintenance of inactive or abandoned clusters, but must adequately document that a cluster is no longer active. This section defines inactive and abandoned clusters and explains how to adequately document cluster activity status.

For the purposes of these private lands guidelines, an abandoned cluster is one that has not shown any evidence of activity by red-cockaded woodpeckers for three years or more. An inactive cluster is one that is not currently supporting any red-cockaded woodpeckers and shows no evidence of red-cockaded woodpecker activity.

Declaring a cluster inactive or abandoned requires the expertise of a knowledgeable biologist or other individual familiar with the identification, life history, and ecology of red-cockaded woodpeckers. The individual must have ample experience with red-cockaded woodpeckers to recognize, and interpret, the sometimes confusing and subtle differences associated with cavity status. One visit is not sufficient to determine activity status, because of several of the species' life history traits. Therefore a cluster-specific monitoring program must be established for at least each cluster in question, and preferably for all clusters on the property.

The objective is to determine whether any red-cockaded woodpeckers are using any cavities within the cluster. Clusters are monitored for red-cockaded woodpecker activity during early morning and/or early evening hours. The number of monitoring days and/or periods (morning/evening) required to document the use or non-use of the cluster by red-cockaded woodpeckers will depend on several factors.

These factors include, but are not limited to,

1. The existing number and condition of cavities. If at least one cavity tree has fresh resin, the cluster is active. If all cavity trees appear as if abandoned for several years, one additional visit at dawn or dusk is generally sufficient to verify the absence of red-cockaded woodpeckers. In contrast, if the cluster appears possibly active, or active within the last few months, several visits may be necessary to document the presence or absence of birds.

2. Distance from, and numbers of, other known active clusters. Active clusters nearby (within a few km, or mi) increase the probability that the cluster in question is active. The number of visits to the cluster should be increased if there are active clusters nearby.

3. Time of year that cluster status is determined. Red-cockaded woodpeckers may not spend as much time in the fall and winter on cavity and resin well maintenance; additionally, resin flow is not as vigorous during the non-growing season. Both of these factors should be considered if cluster status is being determined during the fall/winter period.

Ultimately, a significant amount of professional judgment is required when deciding upon an acceptable monitoring strategy. In general, the monitoring program should be designed to meet individual needs, to the degree necessary, to accurately determine whether or not red-cockaded woodpeckers are using the cluster. Landowners are encouraged to obtain the assistance of red-cockaded woodpecker biologists, consultants, and other qualified individuals to help them certify the status of their particular cluster(s).

As general guidance, when it is not obvious that the cluster has been abandoned for a long time (several to many years), monitoring for either: (1) an extended period of consecutive days, with a mix of morning and evening periods or (2) a series of randomly selected days, spread over several weeks or months, will be necessary to determine the cluster's status. If new evidence, such as a change in appearance of cavities or resin wells, arises during the monitoring period, even though red-cockaded woodpeckers were not observed, the existing monitoring strategy must be revised to include additional visits to the cluster.

Because of the variability and uncertainties associated with individual red-cockaded woodpecker behavior, no single monitoring strategy can be designed for all situations. Strategies will be developed on a case-by-case basis and discussed with the Red-cockaded Woodpecker Recovery Coordinator for adequacy and acceptability. Flexibility in design and implementation of red-cockaded woodpecker cluster status monitoring programs is important and will be emphasized with each landowner.