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**Management Guidelines
For the Red-cockaded Woodpecker
On Army Installations**

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1. General

A. *Purpose.* The purpose of these guidelines is to provide standard Red-cockaded Woodpecker (RCW) management guidance to Army installations for developing endangered species management components (ESMCs) for the RCW as part of an installation's integrated natural resource management plan (INRMP). Terminology has been revised from endangered species management "plans" to "components" to reflect that endangered species management on installations is an integral component of natural resource management activities on Army installations. Installation RCW ESMCs will be prepared according to these guidelines and chapter 11, AR 200-3, Natural Resources – Land, Forest, and Wildlife Management and subsequent policies and guidance published by the Army¹. These guidelines establish the baseline standards for Army installations in managing the RCW and its habitat. Installation RCW ESMCs will supplement these guidelines with detailed measures to meet installation-specific RCW conservation needs and unique military mission needs. The requirements in RCW ESMCs will apply to all activities on the installation.

B. *Applicability.* The guidelines are applicable to Army installations where the RCW is present. These guidelines replace 1996 Management Guidelines for the Red-cockaded Woodpecker on Army Installations, 30 October 1996.

C. *Revision.* These guidelines will be revised as necessary to be consistent with the 2003 U.S. Fish and Wildlife Service (USFWS) RCW Recovery Plan and to incorporate the latest and best scientific data available. These guidelines are the third major revision. Previous guidelines were dated 30 October 1996, 21 June 1994 and 1986.

D. *Goal.* The Army's goal is to implement management guidelines which will allow the Army to accomplish military readiness missions while concurrently developing and implementing methods to assist in the conservation, downlisting, and recovery of the RCW.

E. *Existing Biological Opinions (BOs).* Installations will continue to comply with the requirements of existing BOs until RCW ESMCs are prepared in accordance with these management guidelines and are approved through consultation with USFWS. To the extent practicable RCW ESMCs should be drafted to incorporate the requirements of existing BOs, as modified to conform to these management guidelines through consultation with the USFWS.

II. Consultation

A. *Consultation Requirement.* In preparing RCW ESMCs and taking action that may affect the RCW, installations will comply with the consultation

¹ The Army will be replacing AR 200-3 with AR 200-1, Environmental Protection and Enhancement and Natural Resource Implementation Guidance for Active Installations.

requirements of section 7 of the Endangered Species Act (ESA); the implementing USFWS regulations at 50 CFR part 402; chapter 11, AR 200-3, and subsequent policies and guidance published by the Army.

B. Informal Consultation. Early entry into informal consultation with the USFWS is critical to resolving potential problems and establishing the foundation to address issues in a proactive and positive manner. If, through informal consultation (which may include preparation of a biological assessment or evaluation), the USFWS concurs in writing that proposed actions are not likely to adversely affect any endangered or threatened species, formal consultation is not required. Issue resolution through informal consultation is the preferred method of consultation.

C. Formal Consultation. If development and implementation of an installation ESMC is likely to result in adverse effects and, particularly incidental take beyond existing authorization in an installation's BO, the installation must initiate formal section 7 consultation in accordance with the procedures in 50 CFR 402.14 and Army Regulation 200-3, Chapter 11. The purpose of formal section 7 consultation is to obtain a Non-Jeopardy BO with authorization for incidental take sufficient to implement the ESMC. When consulting with the USFWS on RCW ESMCs and other actions that are likely to adversely affect the RCW, the BOs of the USFWS are expected to be consistent with these guidelines. Installations will make every effort to resolve potential inconsistencies during consultation. Installations will report USFWS guidance that is not consistent with these guidelines, through command channels, to the Office of the Director of Environmental Programs (ODEP), Headquarters, Department of the Army. ODEP will expeditiously review these reports and determine if HQDA-level action is necessary. Installations should report any inconsistencies for action by ODEP prior to USFWS issuing the final BO.

D. Incidental Take. Military training activities and other land use activities may affect RCWs resulting in "take" as defined under section 9 of the ESA. As part of the consultation process for revision of ESMCs, installations will estimate the potential level of take associated with military mission and prescribed burning on the installation based on historical records, long-term monitoring results, and research data. If the estimated level of take does not restrict population growth and maintenance of population goals, the USFWS normally will provide an incidental take statement allowing the conduct of military mission and prescribed burning. Potential incidental take that is not identified within the ESMC consultation will require additional project-level formal consultation. The installation will immediately notify USFWS in the event of incidental take that exceeds authorization or meets other criteria established in the consultation process.

E. Reinitiation. After receiving a Non-Jeopardy BO, an installation is required to re-initiate consultation if: (i) new information arises concerning effects

to the RCW not previously considered; (ii) the ESMC is modified resulting in effects on the RCW that were not considered in the BO; or (iii) implementation of the ESMC exceeds the amount or extent of take specified in the incidental take statement. The installation will notify USFWS and reinitiate consultation within 30 days of discovering a 10 percent decline in active clusters from the previous year or a 10 percent decline in active clusters over a five-year period. Upon discovery of a 10 percent decline, the installation will conduct a systematic review of available data to evaluate the potential causes of the observed decline, e.g. declines due to forest senescence, and present the results of this review to the USFWS. Consultation with USFWS will determine actions required to prevent further population decline. Unpredictable catastrophes such as significant hurricane damage may present conditions that cannot be anticipated under these guidelines. In the event of catastrophic impacts on RCW habitats and populations, installations will reevaluate population goals and management requirements in consultation with USFWS.

III. Army Policies Applicable to RCW Management.

A. *Conservation.* Implementation of RCW ESMCs, prepared in accordance with these guidelines, supports the Army's responsibility under the ESA to assist in conservation of the RCW. Conservation, as defined by the ESA, means the use of all methods and procedures which are necessary for endangered and threatened species survival and to bring such species to the point where measures provided by the ESA are no longer necessary.

B. *Mission Requirements.* Installation and tenant unit mission requirements do not justify violating the ESA. Mission considerations are necessary in determining the installation management and recovery goals. The keys to successfully balancing mission and conservation requirements are long-term planning and effective RCW management to prevent conflicts between these interests. In consultations with the USFWS, installations will preserve the ability to maintain training readiness, while meeting ESA conservation requirements. Small installations with small populations should be especially sensitive to developing innovative strategies to maintain this balance.

C. *Cooperation with U.S. Fish and Wildlife Service.* The Army will work closely and cooperatively with the USFWS on RCW conservation. Installations should routinely engage in informal consultation with the USFWS to ensure that proposed actions are consistent with ESA requirements.

D. *Ecosystem Management.* Conservation of the RCW and other species is part of a broader goal to conserve biological diversity on Army lands consistent with the Army's mission. Biological diversity and the long-term survival of individual species, such as the RCW, ultimately depend upon the health of the sustaining ecosystem. Therefore, RCW ESMCs should promote ecosystem integrity. Maintenance of ecosystem integrity and health also benefit the Army by

preserving and restoring training lands for long-term use.

E. *Staffing and Funding.* Garrison commanders are responsible for ensuring that adequate professional personnel and funds are provided for the conservation measures prescribed by these guidelines and RCW ESMCs. RCW conservation projects are critical requirements of the Army Environmental Conservation program element of Base Support.

F. *Conservation on Adjacent Lands.* Necessary habitat for the RCW includes nesting and foraging areas. Both of these RCW habitat components may be located entirely on installation lands. There may be instances, however, where one of these components is located on installation land, while a portion of the other is located on adjacent or nearby non-Army land. The USFWS and installations should initiate cooperative management efforts with adjacent landowners, if such efforts would complement installation RCW conservation initiatives.

G. *Regional Conservation.* The interests of the Army and the RCW are best served by encouraging conservation measures in areas off the installation. The USFWS and installations should participate in promoting cooperative RCW conservation plans, solutions, and efforts with other federal, state, and private organizations and landowners in the region. Examples of such programs include, but are not limited to, Safe Harbor agreements, the Army Compatible Use Buffer Program, and regional translocation cooperation.

H. *Management Strategy.* These guidelines require installations to adopt a long-term approach to RCW management consistent with the military mission and the ESA. First, installations are required to establish installation RCW population goals in consultation with the USFWS using the methodology described in paragraph V.B, below. Once established, the installation must designate sufficient nesting and foraging habitat to attain and sustain the goals. The goals will also dictate the required management intensity level. Next, installations must implement an ESMC to attain and sustain the installation RCW population goals in accordance with Chapter 11, AR 200-3. Fourth, installations are required to ensure that all units and personnel that conduct training and other activities at the installation comply with the requirements of the installation RCW ESMC.

IV. Definitions

Active Cavity - A completed cavity or start exhibiting fresh pine resin associated with cavity maintenance, cavity construction, or resin well excavation by RCWs.

Active Cavity Tree - Any tree containing one or more active cavities.

Active Cluster - A cluster containing one or more active cavity trees.

Buffer zone - The zone extending outward 200 feet from a marked cavity tree or cavity start tree in clusters with training restrictions.

Cavity - An excavation in a tree made, or artificially created, for roosting and nesting by RCWs.

Cavity restrictor - A metal plate that is placed around an RCW cavity to prevent access by larger species. A restrictor also prevents a cavity from being enlarged, or if already enlarged, shrinks the cavity entrance diameter to a size that prevents access by larger competing species.

Cavity start - An incomplete cavity excavated by, or artificially created for, RCWs.

Cavity tree - A tree containing one or more active or inactive RCW cavities or cavity starts.

Cluster - The aggregation of cavity trees previously or currently used and defended by a group of RCWs and a 200 foot wide buffer of continuous forest.

Deleted cluster - a cluster that has not been active in the last 5 years, including recruitment clusters that were established more than 5 years ago and have never activated. Deleted clusters may also include inactive clusters that have not been active and not been managed for several years and are proposed for removal from long-term management.

Group - A social unit of one or more RCWs that inhabits a cluster. A group may include a solitary territorial male or female, a mated pair, or a pair with helpers (offspring from previous years).

Habitat Management Unit (HMU) - Designated area(s) managed for RCW nesting and foraging, including clusters and areas determined to be appropriate for population maintenance and recruitment.

Impact areas - The ground within the training complex used to contain fired or launched ammunition or explosives and the resulting fragments, debris, and components from various weapons systems.

Inactive cluster - a cluster that is suitable* for RCW occupancy, has been active in the last 5 years, but has no active cavities during the breeding season of the reporting year (*suitable means midstory in cluster and foraging habitat is controlled (i.e., less than 7 feet tall) and suitable cavities are available).

Population - An aggregate of groups that function as a closed population,

demographically. Limited genetic interchange may occur between populations. Population delineations should be made irrespective of land ownership.

Potential Breeding Group (PBG) - An adult female and adult male that occupy the same cluster, with or without one or more helpers, whether or not they attempt to nest or successfully fledge young.

Population goal - A desired RCW population size. On installations the population goal will be the number of RCW PBGs that are in accordance with population goals established in the RCW Recovery Plan.

Protected Clusters - Clusters subject to training restrictions identified in Appendix 1 and paragraph V.C.5, and guidance for certain activities identified in paragraph V.C.

Recruitment cluster - A cluster designated and managed for the purpose of attracting a PBG to that territory.

Stochasticity - Random events.

Training Area - A distinct unit of land on an installation that is scheduled for training events by specific units on specific dates.

Translocation - The relocation of one or more RCWs from an active cluster to a recruitment cluster that contains both suitable cavities and foraging habitat, or the relocation of an individual to stabilize a group, e.g. a female to a solitary male cluster.

Unprotected clusters - Clusters not subject to training restrictions identified in Appendix 1 of these guidelines. These clusters are still subject to guidance for certain activities under paragraphs V.C. and V.C.5 of these guidelines, unless otherwise authorized through consultation with USFWS (preferably through the ESMC process).

V. Guidelines for Installation RCW ESMCs.

Installations will prepare RCW ESMCs and manage RCW populations according to the following guidelines. Installations will update ESMCs in conjunction with the INRMP as required by the Sikes Act and Army guidance or sooner if circumstances dictate.

A. RCW ESMC Development Process.

Preparation of installation RCW ESMCs requires a systematic, step-by-step approach. RCW populations (current and goal), RCW habitat (current and potential), and training and other mission requirements (present and future) must

be identified. Detailed analysis of these factors and their interrelated impacts are required as a first step in the development of an ESMC. Installations should use the following or a similar methodology in conducting this analysis:

1. Identify the current RCW population and its distribution on the installation.
2. Identify areas on the installation currently and potentially suitable for RCW nesting and foraging habitat.
3. Establish the installation RCW population goal with the USFWS according to the guidance in B. below.
4. Identify installation and tenant unit mission requirements. Overlay these requirements on the RCW distribution scheme.
5. Identify mission requirements that are incompatible with the conservation of RCW habitat.
6. Identify critical mission areas where activities cannot reasonably be relocated.
7. Identify areas which could support RCW recruitment clusters.
8. Identify areas suitable for RCW habitat and limited conflict with present and projected mission activities. These are prime areas for designation as recruitment clusters.
9. Analyze the information developed above using the guidance contained in these guidelines.
10. Identify important RCW populations, habitats, cooperators, and partnership opportunities outside the installation boundaries.
11. Prepare the RCW ESMC to implement the best combination of options, consistent with meeting the established RCW population goals, while minimizing adverse impacts to training readiness and other mission requirements.

B. RCW Population Goals.

1. The USFWS 2003 RCW Recovery Plan establishes Recovery Units and population goals for federal, state, and private lands within those recovery units. Installation population goals (measured as the number of “potential breeding groups”; see V.B.3, below) established under the ESMC will be in accordance with goals established under the RCW Recovery Plan. The

installation population goal should be considered long-term but is subject to change, through consultation with the USFWS, based upon changing circumstances, changing missions, or new scientific information. In conjunction with the 1-year and 5-year reviews of ESMCs, installations will reexamine population goals to reflect changing conditions. The biological significance of different population thresholds are described in paragraphs a-e, below.

a. A population size of 350 PBGs is considered highly robust to threats from environmental stochasticity as well as inbreeding and demographic stochasticity. It is the lowest current estimate of the minimum size necessary to offset losses of genetic variation through genetic drift.

b. A population size of 250 PBGs is the minimum size considered robust to environmental stochasticity, and is well above the size necessary to withstand inbreeding and demographic stochasticity.

c. A population size of 100 PBGs is considered sufficient to withstand threats from demographic stochasticity and inbreeding depression.

d. A population size of 70 PBGs is midway in estimates of sizes necessary to withstand threats from inbreeding depression and is considered robust to demographic stochasticity if territories are moderately aggregated in space.

e. A population size of 40 PBGs is at the lower end of estimates of sizes necessary to withstand inbreeding depression and is considered robust to demographic stochasticity if territories are highly aggregated in space.

2. ESMCs must clearly state the installation RCW population goal. If this goal is not provided in the RCW Recovery Plan, it will be determined by availability of suitable habitat, ecosystem attributes, and current and future mission requirements. Installations should not stop establishing recruitment clusters or conducting other proactive management actions once the population goal is reached, but should continue to manage to achieve habitat carrying capacity consistent with mission requirements.

3. Installation population goals will be established as the number of PBGs in accordance with population goal definitions of the RCW Recovery Plan. PBGs may be estimated as a percent of active clusters, using criteria established in the RCW Recovery Plan.

4. Installations that have not yet achieved their population goals will implement actions to achieve a five percent annual increase in active clusters. To achieve recommended rates of increase installations will provide a constant supply of unoccupied recruitment clusters equal to 10 percent of the current number of active clusters. Installations that do not meet this target will informally

consult with USFWS to determine whether actions are necessary to achieve this population growth rate.

5. All clusters on installations that support PBGs will count toward the installation population goal. This will include clusters where training restrictions are implemented, clusters where training restrictions are not implemented, and clusters in impact areas as long as they can be monitored in accordance with Recovery Plan criteria to determine group status (i.e., solitary bird or PBG). If the installation's estimate of population size (number of PBGs) is based on the percentage of active clusters in a sample set that support a PBG, then the number of active clusters from which the number of PBGs is estimated will only include clusters that can be accessed for management (installation of artificial cavities, midstory control, augmentation, etc.). This will help ensure validity of the assumption that the percentage of clusters that support a PBG is applicable to all active clusters from which population size is estimated. In clusters where management access is limited, PBGs may be included in the population estimate only if their presence in a specific cluster in a specific year is determined by direct observation. In addition to installation groups, clusters on state and private lands that are functioning demographically with the installation's population and are secured by an enduring covenant and are not counted as part of another agency's clusters may be counted toward the installation population goal.

C. Training in Clusters.

The purpose of training restrictions associated with RCW clusters is to avoid or minimize the potential for "take" as defined under section 9 under the ESA. Implementation of training restrictions on Army installations will balance support of RCW population growth to achieve installation population goals and flexibility to achieve training mission requirements. ESMCs, with appropriate consultation, may contain provisions to remove or add restrictions in HMUs.

Certain activities (refueling points, generators, smoke generators, smoke pots, and mechanical digging) are by their nature likely to disrupt the ability of RCWs to roost or nest (or conduct nesting activities; e.g., incubating, brooding, feeding) if conducted in proximity to cavity trees, or have potential for significant habitat damage. These activities will be conducted only at locations approved by Directorates of Plans, Training, and Mobilization (DPTMs) either IAW provisions of the Installation Range Regulation or by case-by-case evaluation. DPTMs must consult with the installation biologist to ensure that such activities are avoided in buffer zones and minimized elsewhere in RCW HMUs. These activities will not be approved within buffer zones of protected clusters or within 200 feet of unprotected cavity trees unless authorized through consultation with USFWS (preferably done during the ESMC process).

1. Designation of Protected Clusters.

a. Installation ESMCs currently identify the current and projected number of clusters that are subject to training restrictions. The number of these protected clusters has been established in installation-specific consultations with the USFWS and includes active clusters (solitary birds and PBGs) and currently inactive recruitment clusters. Installations will modify the current number of protected clusters in accordance with criteria established in paragraph V.C.2., below.

b. Locations of protected clusters will be determined by installation natural resources management personnel in coordination with the installation Director of Training and the Senior Mission Commander or a designee. Locations of protected clusters will be based on biologically sound principles to reduce risk of disturbance, demographic isolation, and habitat fragmentation, while minimizing effects on training operations.

2. Removal of Training Restrictions.

a. Installations with a population of \leq 250 PBGs will maintain the currently negotiated number of protected clusters for both active clusters and recruitment clusters.

b. Installations with populations $>$ 250 PBG may remove training restrictions from clusters according to the following schedule:

Total PBGs	Restrictions Removed*	Cumulative Total**
251-275	25 (1:1)	25
276-300	50 (2:1)	75
301-350	150 (3:1)	225
>350	Restrictions removed on all clusters***	

* Installations with 250-275 PBGs may remove restrictions from one protected cluster for each PBG over 250. Installations with 276 or more PBGs may remove restrictions from 25 protected clusters, plus two additional clusters for each PBG over 275. Installations with 301-350 PBGs may remove restrictions from 75 protected clusters plus 3 clusters for each PBG over 300. Restrictions will continue to be removed annually based on the documented growth in the installation's RCW population. For example, if the population increases from 255 to 260 PBGs, training restrictions will be removed from 5 clusters. If it increases from 275 to 285, training restrictions will be removed from 20 clusters, etc.

**These are in addition to the current and/or projected number of clusters that do not have training restrictions in populations under current installation ESMCs.

***Installations will specify in their ESMCs a schedule for removing training restrictions from all clusters upon reaching ≥ 350 PBGs. This schedule will be implemented after appropriate consultation with USFWS.

c. The number of clusters eligible for removal of training restrictions is dependent on the number of PBGs; however, clusters selected for removal of restrictions may include unoccupied recruitment clusters, solitary bird clusters, or clusters with PBGs. Removal of training restrictions according to the above schedule is dependent on growth of installation RCW populations. Restrictions will be removed incrementally. Depending on population size; 1, 2, or 3 clusters may be unprotected for each additional new PBG. If installation RCW PBGs fail to increase, the proportion of clusters without training restrictions cannot be increased. For populations >350 PBGs or populations exceeding the installation population goal, all new clusters (natural or recruitment clusters) may be unprotected, based on the best judgment of the biologists and DPTM.

d. For installations where the current population goal does not exceed 250 PBGs, the number of clusters with and without training restrictions will remain in accordance with levels under the current installation ESMC. Typically, reduction of training restrictions on installations with population goals ≤ 250 PBGs will occur when recovery goals are reached. However, prior to achieving their population goal, reduction of some restrictions may be possible as data become available from installations where training restrictions have been decreased or removed in entirety and critical population benchmarks are met. These benchmarks, in part, would be tied to population sizes (e.g., 100 PBGs) that are sufficient to withstand threats from such factors as demographic stochasticity and inbreeding depression. Determining whether training restrictions could be reduced prior to reaching population goals would be evaluated by considering factors such as the training mission, population aggregation (e.g., dispersed or highly aggregated), and results (based on monitoring and/or research) of training impacts on unprotected clusters from the subject and other installations. Installations may specify in their ESMCs a schedule for removing training restrictions upon attaining or exceeding the population goal or other population benchmarks. Removal of training restrictions is dependent on growth or maintenance of installation RCW populations. Schedules for removing training restrictions will be implemented after appropriate consultation with USFWS.

e. Once the installation has reached its population goal (or 350 PBGs, whichever is less), any and all training restrictions may be removed subject to the following guidelines and precautions.

(1) Installation staff will continue to identify clusters where training restrictions are warranted (and conversely where they are not warranted)

as described in paragraph V.C.1.b. Deliberations will weigh the risks and benefits to RCWs, habitat, and training. Data and observations of training impacts (or lack of same) during the population's growth from 250-350 PBGs will also be considered in assessing the risk of impacts from training. The installation will report annually to the USFWS the results of monitoring conducted IAW paragraph V.E.4. for protected and unprotected clusters as shown below.

	Protected Clusters	Unprotected Clusters
# Active Clusters		
# PBGs		
# Nests		
# of adult RCWs per PBG		
# of fledgling RCWs per PBG		

(2) Installation staff and USFWS staff will evaluate these data jointly to identify any trends that might indicate a need for modifications to the installation's application of training restrictions. Data from annual inspections of RCW clusters collected IAW paragraph V.D.5. will also be evaluated to assess habitat condition and trends. Factors such as adequacy of environmental awareness training should also be assessed. The goal will be to make any necessary adjustments and avoid population levels falling below 350 PBGs (or the installation population goal, whichever is less). If populations fall below this threshold for reasons that may be training related (i.e. not explained by habitat conditions, hurricane damage, disease, etc.), training restrictions will be re-implemented IAW Appendix 1 for all training areas containing inactive or single-bird clusters that supported a PBG at the time restrictions were removed, and formal consultation with the USFWS will be reinitiated. In this way, installations will be free to remove restrictions based on their determination of risk, but they will also bear the consequences of their decisions.

(3) Installations should use caution and discretion before reducing training restrictions as soon as 350 PBGs are met because falling back below 350 will require reinstatement of restrictions (see C.2.e.(2) above). Therefore, it is recommended that prior to implementing restriction reductions, installations should provide a reasonable number of "buffer" PBGs (e.g., 10 percent beyond the goal) to ensure that if some losses occur, restrictions do not

have to be re-implemented.

(4) In cases where continued protection is deemed appropriate even though the population exceeds 350 PBGs or the Installation Goal, protected cavity trees will be marked by two white bands. No military maneuver is authorized within 50 feet of marked cavity trees except for foot traffic and vehicles traveling on existing roads and trails. Additional "Off-Limits" areas may be marked with Seibert Stakes or by other means IAW the installation's established practices for protection of sensitive/hazardous areas.

(5) Once restrictions are removed, incrementally or in total at a later date, it is imperative that installations maintain both: (1) the level of habitat management required, particularly prescribe burning, to sustain recovery standard foraging habitat, and (2) an adequate level of monitoring (negotiated via consultation with the USFWS) to document that the population remains stable, or indeed, increases to a higher level.

3. Marking of Clusters

a. Cavity and cavity start trees in protected clusters will be marked for easy recognition. Trees will be marked with two white bands no more than four inches wide and no more than eight inches between them. Bark will only be scraped lightly to remove loose bark or not scraped at all. The bands will be centered approximately four to six feet from the base of the tree. A uniquely numbered small metal tag will be affixed to the cavity tree for monitoring and identification purposes.²

b. In protected clusters, buffers for all suitable cavity or cavity start trees will be marked. Warning signs will be posted and will be constructed of durable material, ten inches square (oriented as a diamond), white or yellow in color. The RCW graphic and the lettering "Endangered Species Site" and "Red-cockaded Woodpecker" will be printed in black. The lettering "Do Not Disturb" and "Restricted Activity" will be printed in red. All lettering will be 3/8 inches in height. Warning signs will be posted at reasonable intervals along the 200 foot perimeter of cavity trees facing to the outside of the buffer zone and along roads, maintained trails and firebreaks, and other likely entry points into the buffer zone.

c. Installations conducting long-term training on private, state, or other federal lands with RCW habitat will attempt to obtain agreement from the landowners on compliance with these marking guidelines. If a landowner does not agree to comply with these guidelines, even with the installation paying the costs associated with compliance, installations will educate troops training on

² Studies in community ecology are showing that rat snakes predate kleptoparasites and usually cannot overcome the resin barriers on active RCW trees. Thus rat snakes provide a net benefit to RCWs. Impediments which prevent rat snakes from climbing cavity trees (especially inactive trees) should be avoided.

such lands to help them recognize the markings used by the landowner.

d. Cavity and cavity start trees in unprotected clusters may be marked for management and monitoring purposes at the installation's discretion. Warning signs will not be posted. A uniquely numbered small metal tag will be affixed to the cavity tree for identification purposes. Marking will be distinctively different than that used for protected clusters.

4. Training in Protected Clusters

a. The training restrictions in this section apply to buffer zones within protected clusters. RCW-related training restrictions do not apply to foraging areas or unprotected clusters as designated in the first two paragraphs under V.C.

b. Standard training guidelines in protected clusters are:

(1) Military training within 200 feet of marked cavity trees is limited to military activities of a transient nature (less than two hours occupation). Appendix 1 provides a list of prohibited and permitted training activities within buffer zones.

(2) Military vehicles are prohibited from occupying a position or traversing within 50 feet of a marked cavity tree, unless on an existing road or maintained trail or firebreak.

5. Training Activities in All Habitats. In addition to training restrictions associated specifically with RCW clusters, the installation will implement the following guidelines for habitats throughout the installation to maintain and improve potentially suitable habitat for the RCW. These guidelines will remain in effect even if restrictions under paragraph V.C.4. above are discontinued upon reaching 350 PBGs or the installation population goal, whichever is less.

a. Military personnel are prohibited from cutting down or intentionally destroying pine trees unless the activity is approved previously by the installation biologist and is authorized for tree removal. Hardwoods may be cut and used for camouflage or other military purposes. If removal of hardwoods would damage a cavity tree, approval from the installation biologist would be required.

b. Units will immediately report to range control known damage to any marked cavity or cavity start tree and/or any known extensive soil disturbance in and around RCW clusters. Range control will notify installation biologists immediately.

c. The installation will immediately (within 2 working days of

notification) re-provision a cavity tree if one is destroyed due to training activity.

d. Installations will as soon as practicable (normally within 3 working days of notification) repair damage to training land within a cluster to prevent degradation of habitat.

e. All digging for military training activities in RCW habitat management units (HMU; see V.F.1., below) will be filled and inspected upon completion of training.

f. Training guidelines will be actively enforced through installation training and natural resources enforcement programs, prescribed in chapters 1 and 11, AR 200-3, and installation range regulations.

D. Habitat Monitoring

1. Surveys for New Cavity Trees and Clusters. Comprehensive surveys for new cavity trees and clusters have already been conducted on Army lands that may support RCWs. Normally, detection of previously unknown cavity trees or clusters will occur coincident to annual inspections of known clusters and adjacent habitat areas. Foresters and biologists will report any new activity observed during the routine process of other work. Surveys in previously unoccupied habitats should also be conducted by qualified biologists following protocols of the RCW Recovery Plan if the land has not been previously surveyed, or if the installation biologist determines that changing habitat conditions or changes in the distribution of known populations increases the likelihood of RCW occurrence.

2. Project Surveys. The installation will conduct surveys prior to timber harvesting operations, construction, or other significant land-disturbing activities, excluding prescribed fire, in accordance with recommendations of Chapter 8.I. of the RCW Recovery Plan. These surveys will be conducted by natural resources personnel trained and experienced in RCW biology, and must be conducted within a year of project initiation. The guiding principle of these surveys, as noted in the RCW Recovery Plan, is that, if the installation can demonstrate reasonable progress toward and support of installation population goals, most projects can be implemented.

3. Foraging Habitat. Installations will assess quality and quantity of installation-wide foraging habitat using the USFWS Matrix tool at a minimum of once every 10 years and midstory at a minimum frequency of once every five years in RCW HMUs. Foraging habitat will be assessed for all foraging elements identified in the RCW Recovery Plan under paragraph 8.I. The desired future condition of foraging habitat for RCW territories counted toward an installation's recovery goal is to meet criteria of the RCW Recovery Plan's foraging habitat "recovery standard". Foraging habitat data collected will be appropriate to the

forestry management practice (e.g. uneven versus even-aged management).

4. Prescribed and Wildfires. Installations will keep accurate records of the timing and extent of all prescribed and wild fires in RCW HMUs.

5. Cluster Status and Condition. Active and recruitment clusters that have not been deleted from management in accordance with paragraph V.F.2.b. below must be inspected annually. These are prescriptive inspections, used to develop treatments and modifications of treatments to maintain suitable nesting habitat. At a minimum, installations will inspect and record data for:

- a. Density and height of hardwood encroachment (using Matrix standards).
- b. Height of RCW cavities.
- c. Condition of cavity trees and cavities.
- d. A description of damage from training including: damage to cavity and cavity start trees requiring remedial measures if any, soil disturbance adjacent to cavity and cavity start trees requiring remedial measures if any, and general condition of the forage habitat of the cluster being monitored if impacted by training activities.
- e. Effects of fire (prescribed or wild) on midstory and cavity trees.
- f. Evidence of RCW activity for each cavity tree (includes each cavity and cavity start in the tree) within the cluster.

E. Population Monitoring

1. Installations will conduct monitoring programs to determine scientifically demographic trends within the population as a whole. At a minimum, installations will follow standards established in the RCW Recovery Plan for sampling schemes, sample sizes, frequency of monitoring and data parameters to be collected. To annually monitor population trend and size, the RCW Recovery Plan requires monitoring of cluster activity status and the presence/absence of PBGs. The RCW Recovery Plan recommends the following sample sizes for monitoring number of active clusters (ACT) and PBGs in red-cockaded woodpecker populations, by population size.

Parameter	Population Size (PBG)				
	<30	30-99	100-249	250-349	>349 or at approved property goal
ACT	100% of potentially active clusters per year	100% annually	100% annually	100% annually	Consult with USFWS
PBG	100% of potentially active clusters per year	100% annually	50% annually	33% annually	Consult with USFWS

2. To track population size relative to status of training restrictions in clusters, installations conducting < 100 percent survey of PBGs will allocate sample clusters proportional to the ratio of the number of clusters with training restrictions and the number of clusters without training restrictions. Sampling design and allocation of sample clusters will be established in consultation with USFWS.

3. All recruitment clusters, regardless of status of training restrictions, must be inspected annually for five consecutive years to document RCW occupancy. Once recruitment clusters are occupied, use monitoring criteria for active clusters.

4. To track effects of reducing training restrictions and other land use activities, installations will compare fecundity of active clusters, recruitment rates, and demographic stability between protected clusters and unprotected clusters. Input from a qualified wildlife statistician is expected at appropriate organizational levels to assure the best comparisons possible. All sampling and statistical comparisons will follow the guidance of the RCW Recovery Plan where it is applicable and will include USFWS input, especially when the RCW Recovery Plan does not provide sufficient guidance.

a. To compare fecundity between protected and unprotected clusters, installations with 30 or fewer active clusters will monitor all clusters to determine number of adults, nesting status, and number of fledglings per group. This monitoring will require color banding of birds. Installations with >30 active clusters will annually monitor these parameters in a random sample of all clusters in excess of 30, stratified by protected and unprotected clusters. Sample size in each stratum will be the greater of 25 percent of the number of clusters in the stratum, or 30 clusters. The sample should not include clusters that have been active for fewer than 3 years. Typically, recruitment clusters have a disproportionately high incidence of being occupied by a single RCW and/or low

productivity due to lack of breeder experience in their first 2 years of occupancy. Excluding recently activated clusters from the sample will help make comparisons between protected and unprotected clusters more meaningful.

b. To compare recruitment rates and demographic stability between protected clusters and unprotected clusters, installations will use monitoring data collected in accordance with paragraph V.E.1.

5. The monitoring standards established in the preceding paragraphs are the minimum requirement. Any time RCWs are banded, the RCW Recovery Plan sets the minimum data collection standards. Installations may implement additional monitoring activities or programs in support of other management and research objectives as necessary, e.g. translocations.

F. *Habitat Management*

1. Installation RCW ESMCs will identify nesting and foraging areas sufficient to attain and sustain installation RCW population goals. These areas will be designated RCW HMUs. HMU delineation is an important step in the planning process because it defines the future geographic configuration of the installation RCW population. Areas designated as HMUs for all active and recruitment clusters, regardless of training restriction status, must be managed according to these guidelines. HMUs should be large enough to enable the installation to meet or exceed its recovery goal as identified in the Recovery Plan.

2. Areas Included in HMUs

a. HMUs will encompass all clusters, areas designated for recruitment, and adequate foraging areas as specified in d., below.

b. Clusters that have been documented as continuously inactive for a period of five consecutive years or more may be deleted from RCW management requirements. Designated recruitment clusters that have not been occupied for a period of five consecutive years may also be deleted from HMUs. Once deletion of a cluster from management is approved by the USFWS, existing cavities may be covered to discourage reactivation.

c. In designating HMUs, fragmentation of nesting habitat will be avoided. Installations will attempt to link HMUs with corridors, allowing for demographic interchange throughout the installation population.

d. Adequate foraging habitat in acres, quality, and location must be provided with HMUs. Installations will determine availability of and manage for foraging habitat in accordance with guidelines established in Chapter 8.I. of the RCW Recovery Plan, i.e., the recovery standard.

e. Installations may formulate population-specific foraging guidelines in consultation with the USFWS. Population-specific guidelines must be based on site-specific study consisting of multi-year (typically 3-5 years) data on RCW group and population health and their relationships to quantity and quality of foraging habitat. Chapter 8.I.4. of the RCW Recovery Plan provides guidelines for determining population-specific foraging guidelines.

f. HMUs should be located where there will be a minimum impact upon current and planned installation missions/operations and should be consistent with land use requirements in the Real Property Master Plan.

g. Installations should delineate HMUs to maximize demographic linkage among groups on and off the installations. Where fragmentation exists, installations should develop plans to link groups on the installation by designating habitat corridors where practical.

3. Management Within Clusters.

a. Due to RCW biological needs, clusters, including the area within 200 feet of cavity trees, require a higher management intensity level than other areas within HMUs. Within HMUs, maintenance priority will be given to active clusters over both inactive and recruitment clusters (see definitions).

b. Installations will manage habitat within active and recruitment clusters in accordance with guidelines established in the RCW Recovery Plan. In general, recommended management practices in the RCW Recovery Plan include:

(1) Protection of existing cavity trees from damage due to fire, human disturbance (including erosion and sedimentation and logging activities), southern pine beetle infestations, and damage from high winds.

(2) Maintain sufficient large and old pines to serve as cavity trees.

(3) Control hardwood and pine midstory.

(4) Encourage restoration and maintenance of native grasses and forbs by using prescribed burning, minimizing soil disturbance, and implementing appropriate timber management to promote adequate light at ground level.

(5) Reduce excessive overstory hardwoods within the cluster

(6) Establish recruitment clusters in upland sites whenever

possible, consistent with demographic and habitat considerations.

(7) Retain dead and dying cavity trees and all other snags, unless they present a safety hazard.

c. Active and inactive cavities found to be in poor condition during periodic inspections will be repaired whenever feasible to prolong their use. Cavity restrictors can be installed on enlarged RCW cavities or where threat of cavity enlargement of properly-sized cavities is probable. Restrictors will be installed according to guidelines of the RCW Recovery Plan with the following priority: (a) active single tree clusters, (b) solitary bird groups, (c) clusters with less than four suitable cavities, and (d) others.

d. Artificial cavities and cavity starts will be constructed in areas designated for recruitment or translocation and in active clusters where the number of suitable cavities is limiting. Construction must be accomplished by fully trained and permitted personnel. Artificial cavities and cavity starts will be constructed using the following priorities: (a) active single tree clusters, (b) solitary bird groups, (c) clusters with less than four suitable cavities, and (d) others.

e. Avoid timber harvesting, pine straw harvesting, and habitat maintenance activities, with the exception of burning activities, during the nesting season. If a biologist, experienced in RCW management practices, determines that habitat maintenance activities are not likely to adversely affect nesting activities, they may be conducted after coordination with USFWS. Consultation on these activities may be accomplished through a programmatic consultation or on a case-by-case basis, and will typically be "informal consultation".

4. Management in Other Areas of HMUs

a. Silviculture. Forest management and timber harvest on installations will be consistent with achieving and maintaining installation RCW population goals. In general, silvicultural practices in HMUs will have the objectives of ecosystem management including maintaining adequate old-growth pine, reducing midstory encroachment, and meeting recovery standard foraging habitat requirements. Silviculture in HMUs will include: (a) maintenance of sufficient large and old pines to serve as cavity trees; (b) control of hardwood and pine midstory, encouragement of restoration and maintenance of native grasses and forbs by using prescribed burning, minimizing soil disturbance, and implementing appropriate timber management to promote adequate light at ground level; (c) reducing excessive overstory hardwoods; and (d) retaining dead and dying trees and all other snags, unless they present a safety hazard. Installations will follow guidelines for silvicultural methods and objectives that are established in Chapters 8.J. and 8.I. of the RCW Recovery Plan.

b. Prescribed Burning. Prescribed burning is normally the most effective means of midstory control and is recommended as the best means of maintaining a healthy ecosystem. Prescribed burning will be conducted at least every three years in longleaf, loblolly, slash pine, and shortleaf pine systems. Burning must be conducted in accordance with applicable Federal, state, and local air quality laws and regulations. With the agreement of the USFWS, the burn interval may be increased to no more than five years after the hardwood midstory has been brought under control. Cavity trees will be protected from fire damage during burning. Burning should normally be conducted in the growing season because the full benefits of fire are not achieved from non-growing season burns. Winter burns may be appropriate to reduce high fuel loads. Use of fire plows in clusters will be used only in emergency situations.

5. Management in Impact and Direct Firing Areas.

a. Impact Areas

(1) Impact areas that contain or likely contain unexploded ordnance or other immediate hazardous materials (radiological or toxic chemicals) can pose danger to personnel. Natural resources conservation benefits to be gained by intensive management in high risk areas generally are not justified. Certain installations may have impact areas or other areas that have been contaminated with improved conventional munitions or submunitions where entry by personnel is forbidden.

(2) Designation of impact areas and the associated effects of these actions on RCW management activities may affect the RCW and other federally listed species within impact areas. These actions may lead to the possibility and necessity of incidental take.

(3) To the degree practicable, clusters and surrounding foraging area should be designated as "no firing areas" to protect clusters from projectile damage.

b. Direct Firing Areas.

(1) Direct fire, non-dud producing impact areas that do not contain unexploded ordnance or other immediate hazardous materials may be included within HMUs, subject to the guidelines below.

(2) In HMUs in direct fire areas that are not directly impacted by weapons firing, RCW management will be the same as for HMUs outside of impact areas. In HMUs where there is a significant risk of projectile damage to foraging or nesting habitat, the following guidelines apply:

(a) Range layout should be modified/shielded where

practical and economically feasible to protect HMUs from projectile damage. Protective measures that will be considered include reorienting the direction of weapons fire, shifting target arrays, establishing “no firing areas” around RCW clusters or HMUs, revising maneuver lanes, constructing berms, etc.

G. *Translocation*

1. Translocation can be a useful tool to expand and disperse RCW groups into unoccupied areas of designated HMUs. Translocation also provides a means to maintain genetic viability in populations with fewer than 350 PBGs. Installation plans will provide for translocation to augment solitary bird groups, where appropriate. Installations participating in translocation activities will follow guidelines established in chapter 8.H. of the RCW Recovery Plan.

2. Installations may translocate RCWs from active clusters to recruitment clusters that meet standards for translocation for strategic recruitment. This will only include translocation of subadult birds from their natal territories. Within-population translocations that do not meet these criteria must be approved on a case-by-case basis through consultation with the RCW Recovery Coordinator.

3. In areas to receive RCWs, habitat inspection and improvement work must be completed before translocation is attempted to ensure that nesting and foraging habitat meets the standards established by these guidelines.

4. Installations should support regional translocation efforts by supplying or receiving donor birds provided the installation meets criteria established in the RCW Recovery Plan for donor or recipient populations.

5. Translocation will not be undertaken without the approval of, and close coordination with, the USFWS. Installations must obtain an ESA section 10 permit (scientific purposes) or an incidental take statement under ESA section 7 and all applicable marking, banding, and handling permits prior to moving any RCW through translocation.

H. *Data Records, Reporting, and Coordination.*

1. Installations will record and retain permanently all survey, inspection and monitoring data for RCW populations and habitats for trend analysis.

2. Installation biologists and foresters will maintain close coordination and, at a minimum, will conduct an internal RCW installation progress review twice a year.

3. Installation Management Agency (IMA) Southeast Region will serve as integrator and facilitator for Army RCW management throughout all installations with RCW. IMA Southeast Region will host an annual RCW meeting for RCW

installations, USFWS, ODEP, United States Army Environmental Center, National Guard Bureau, and other organizations.

4. ODEP will provide RCW oversight. ODEP will ensure that data collected in accordance with paragraph V.E. above for protected and unprotected clusters will be evaluated for trend analysis. These data will be analyzed at least every five years, and the results will be presented to USFWS for review. Results of this trend analysis will be used to determine revision, continuation, or cancellation of military training restrictions in consultation with USFWS.

5. Installations annually will report results of RCW inventory and monitoring programs to USFWS, IMA Southeast Region, and ODEP through command channels. These data will be reported in formats agreed upon between the Army and USFWS. These data will include measures of population status and actions taken to recruit RCWs and improve habitat. These data will normally be presented to USFWS at the annual meeting hosted by IMA Southeast Region. All installations will report at the meeting in a standard format agreed upon by the USFWS and IMA Southeast Region.

6. RCW maps will be included in the ESMC using survey data to accurately depict the location of RCW clusters, RCW-related training restricted areas, HMUs, and cavity trees. Maps will be updated at least annually or when a 20 percent change in the number of active clusters occurs, whichever is sooner. Maps used internally will be tailored to the users, e.g. trainers, foresters, etc. and will be widely distributed for use by those conducting land use activities on the installation, including military training, forest management, construction projects, and range maintenance.

Appendix 1

TRAINING ACTIVITY WITHIN BUFFER ZONES (1)	
MANEUVER AND BIVOUAC:	ALLOWED
Hasty defense, light infantry, hands and hand tool digging only, no deeper than 2 feet, 2 hours MAX	Yes
Hasty defense, mechanized infantry/armor	No
Deliberate defense, light infantry	No
Deliberate Defense, mechanized infantry/armor	No
Establish command post, light infantry	No
Establish command post, mechanized infantry/armor	No
Assembly area operations, light infantry/mech infantry/armor	No
Establish CS/CSS sites	No
Establish signal sites	No
Foot transit thru the cluster	Yes
Wheeled vehicle transit thru the cluster (2)	Yes
Armored vehicle transit thru the cluster (2)	Yes
Cutting natural camouflage, hardwood only	Yes
Establish camouflage netting	No
Vehicle maintenance for no more than 2 hours	Yes
WEAPONS FIRING	
7.62mm and below blank firing	Yes
.50 cal blank firing	Yes
Artillery firing point/position	No
MLRS firing position	No
All others	No
NOISE:	
Generators	No
Artillery/hand grenade simulators	Yes
Hoffman type devices	Yes
PYROTECHNICS/SMOKE	
CS/riot agents	No
Smoke, haze operations only, generators or pots, fog oil and/or graphite flakes (3)	Yes
Smoke grenades	Yes
Incendiary devices to include trip flares	Yes
Star clusters/parachute flares	Yes
HC smoke of any type	No

Appendix 1 (continued)

DIGGING	ALLOWED
Tank ditches	No
Deliberate individual fighting positions	No
Crew-served weapons fighting positions	No
Vehicle fighting positions	No
Other survivability/force protection positions	No
Vehicle survivability positions	No
NOTES:	
(1) These training restrictions apply to RCW cavity trees in training areas but not to cavity trees located in dedicated impact areas.	
(2) Vehicles will not get any closer than 50 feet of a marked cavity tree unless on existing roads, trails or firebreaks.	
(3) Smoke generators and smoke pots will not be set up within 200 feet of a marked cavity tree, but the smoke may drift thru the 200 feet circle around a cavity tree.	