

**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****Notice of Availability of a Final Environmental Assessment and the Strategy and Guidelines for the Recovery and Management of the Red-cockaded Woodpecker and Its Habitat on National Wildlife Refuges**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Notice of document availability.

**SUMMARY:** The Fish and Wildlife Service (Service or we) announces the availability of a finalized Strategy and Guidelines for the Recovery of the Red-cockaded Woodpecker (RCW) and Its Habitat on National Wildlife Refuges (Guidelines). Included in the Guidelines are population management objectives for 644–654 active clusters of RCWs on approximately 141,900 acres of pine and pine hardwood forest on 13 refuges in the southeastern United States. We will implement actions directed at protection of clusters, management of nesting habitat, population management, management of foraging habitat, forest management (including silvicultural activities), and management of RCWs in federally designated Wilderness.

We also announce the availability of a final environmental assessment (EA) and Finding of No Significant Impact (FONSI). The EA includes an evaluation of the environmental impact of four alternatives: (1) implementing the Guidelines as proposed; (2) taking no action to comprehensively implement revised recovery guidelines and strategies; (3) implementing the Guidelines, intensifying management efforts and expanding the area to be managed for RCWs; and (4) implementing the Guidelines on a smaller area of refuge land.

You may obtain copies of the Strategy and Guidelines and the EA by making a request in writing to the Regional Office (see **ADDRESSES**). This notice also advises the public that we have made a determination that issuing the Guidelines is not a major Federal action significantly affecting the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969 (NEPA), as amended. We base the FONSI on an evaluation of the information contained in the Guidelines and provide this notice pursuant to NEPA regulations (40 CFR 1506.6).

**DATES:** We plan to implement the strategy and Guidelines effective upon

publication of this notice in the **Federal Register**.

**ADDRESSES:** Persons wishing to obtain a copy of the Strategy and Guidelines, should submit a request in writing to: U.S. Fish and Wildlife Service, Southeast Regional Office, 1875 Century Boulevard, Atlanta, Georgia 30345. (Attn: Assistant Regional Director, Refuges and Wildlife.) You may also obtain copies at the Southeast Regional Office (address above) and at the following locations: Office of the Red-cockaded Woodpecker Recovery Coordinator, U.S. Fish and Wildlife Service, Clemson University, Department of Forest Resources, 261 Lehotsky Hall, Clemson, SC 29634–1003, and Office of the Refuge Manager, Noxubee National Wildlife Refuge, Route 1, Brooksville, MS 39739.

**FOR FURTHER INFORMATION CONTACT:** Mr. Ralph Costa, Red-cockaded Woodpecker Recovery Coordinator, Clemson Field Office, (see **ADDRESSES** above), telephone: 864/656–2432, or Mr. David Richardson, Biologist, Noxubee National Wildlife Refuge (see **ADDRESSES** above), 601/323–5548.

**SUPPLEMENTARY INFORMATION:****Background**

The Service is the lead Federal agency responsible for preserving, protecting and enhancing nonmarine endangered species. We listed the RCW as an endangered species in 1970. In addition to responsibilities under the Endangered Species Act (Act), we administer National Wildlife Refuge system lands. There are an estimated 141,900 acres of pine and pine-hardwood habitat capable of supporting RCWs on 13 national wildlife refuges in the southeast United States.

The RCW is a territorial, non-migratory cooperative breeding bird species. RCWs live in social units called groups or clans which generally consist of a breeding pair, the current year's offspring, and one or more helpers (normally adult male offspring of the breeding pair from previous years). Groups maintain year-round territories near their roost and nest trees. The RCW is unique among the North American woodpeckers in that it is the only woodpecker that excavates its roost and nest cavities in living pine trees. Each group member has its own cavity, although there may be multiple cavities in a single pine tree. We call the aggregate of cavity trees a cluster. RCWs forage almost exclusively on pine trees, and they generally prefer pines greater than 10 inches in diameter at breast height. Foraging habitat is contiguous with the cluster. The number of acres

required to supply adequate foraging habitat depends on the quantity and quality of the pine stems available.

The RCW is endemic to the pine forests of the Southeastern United States and was once widely distributed across 16 States. The species evolved in a mature fire-maintained ecosystem. The RCW has declined primarily due to the conversion of mature pine forests to young pine plantations, agricultural fields, and residential and commercial developments, and to hardwood encroachment in existing pine forests due to fire suppression. The species is still widely distributed (presently occurring in 13 southeastern states), but the remaining populations are highly fragmented and isolated. Presently, the largest known populations occur on federally owned lands such as military installations and national forests.

The most recent estimate of the status of RCW populations on National Wildlife Refuge lands indicates that 237 to 242 active RCW clusters are present.

The EA contains an evaluation of the environmental consequences of four alternatives, including the action to be implemented. This "action" alternative would result in implementation of the Guidelines as prepared by the Service. The "no action" alternative would result in a continuance of the current management activities with no revision to the guidelines for management actions or recovery on refuge lands beyond the actions contained in the 1987 Guidelines and the recovery plan for this species. The third alternative is to implement the Guidelines and expand their application to include additional habitat on Alligator River, Piedmont and Santee National Wildlife Refuges. The fourth alternative would result in a 50% reduction in the managed area under the revised Guidelines and a reallocation of resources to other wildlife management needs.

As stated above, we have made a determination that the issuance of the Guidelines is not a major Federal action significantly affecting the quality of the human environment within the meaning of Section 102(2)(C) of NEPA. We provide an excerpt from the FONSI reflecting our finding on the application below:

Based on our analysis, we determined that:

1. Issuance of the Guidelines would not have significant indirect or cumulative adverse effects on the human environment.

2. Implementation of the Guidelines will contribute substantially to the recovery of the RCW by providing for consistent application of the most

appropriate forms of management available on all refuge lands. Application of the Guidelines will also assure that we accomplish forest management in a manner which will result in accelerated recovery of the species.

3. Population goals contained in the Strategy and Guidelines are substantially higher than the current population levels and would represent a major positive step towards recovery of the RCW.

We also have evaluated whether the issuance of the Guidelines complies with section 7 of the Act by preparing an intra-Service section 7 consultation. The results of the consultation in combination with the above findings, and public comment were used in the final analysis to make the decision to issue and implement the Guidelines.

#### Public Comments Received

The proposal to issue the above Guidelines was announced in the **Federal Register** on March 13, 1998 (63 FR 12498). In addition to general notice in the **Federal Register**, the draft Guidelines were distributed widely internally and to Service partners when an expression of interest was made. Public comment was open from the date of issue until close of business on April 27, 1998.

We received 36 requests for the Strategy and Guidelines and Draft Environmental Assessment and 4 sets of written comments. Respondents submitting written comments were: Mr. W. V. McConnel, Land Management Planner and Forester; Ms. Margaret S. Copeland, private citizen; Mr. Robert Bonnie, Economist, in the Wildlife Program of the Environmental Defense Fund; and Dr. Jerome A. Jackson, Professor of Biological Sciences, Mississippi State University. Many of the comments were editorial in nature, and we incorporated changes into the text. Other comments consisted of philosophical statements with no specific directions to amend the Guidelines or EA. Listed below are our responses to the substantive comments, summarized and grouped by subject matter category.

All letters requesting copies of the Guidelines and EA as well as written comments are on file at the Southeast Regional Office of the Fish and Wildlife Service and are available for review on request.

#### A. General Comments

1. The range of 60–90 million acres for the original extent of the longleaf pine forest seems rather imprecise. Don't we have better figures? If not, perhaps an explanation?

*Answer:* Frost (1993) estimated that prior to European settlement the southern pine ecosystem covered 92 million acres. Longleaf pine dominate 74 million of these acres and longleaf pine mixed with other pines and hardwoods dominate the remaining 18 million acres.

2. The figures presented on historic timberlands give no indication of habitat quality. The extent of old growth is what is important. Of the 4 million acres referred to as existing now, how much is old growth RCW habitat? See also Jackson 1988.

*Answer:* An assessment of this type is beyond the scope of guidelines which focus on the management of refuge forest lands as they relate to the recovery and management of the RCW. We now consider none of the refuge forest old growth and believe an estimated 3–4000 acres of virgin long-leaf forest to be left.

3. P. 26. "Bluebook" is not defined. Don't use in-house jargon that is meaningless to the reader.

*Answer:* We made changes in text to clarify use of the term "Bluebook."

#### B. Management Methods/Actions

1. P. 4. First paragraph, last sentence. This sentence needs to be stronger and more clearly written. The commenter suggests something like the following: "Efforts to accomplish Actions 1 and 2 should begin immediately if not already underway. Specific goals need to be set and a sustained action plan established and functioning within two years."

*Answer:* We made no changes; the statement in text is accurate.

2. P. 12. Monumentation. The commenter recommended adding cavity start with some scale of the extent of the start to the list: surface = <2 inches deep; tunnel = >2 inches deep, but no downward excavation; incomplete chamber = not a completed cavity, but capable of offering shelter—a bird can turn around in it. Flagging used on cavity trees should not be left with "long tails" blowing in the wind. The commenter further was against red flagging because of its potential as a negative behavioral stimulus and feel strongly that numbered tags should be unique—i.e., tags that simply say "1," "2," etc. should not be in every cluster. A system should be developed to identify individual nest trees by a unique number.

*Answer:* Refuge procedures will assure that trees are individually identifiable although we have not yet worked out the specific methods. We noted other technical comments.

3. P. 16. Lines 12, 13. The commenter sees no justification for using snake nets

(SNETs) under any circumstances. They are a lethal and very cruel device and simply cannot be justified. A recent suggestion to lower the SNETs to near ground level is untenable—there is no evidence to suggest that they would not capture birds even at that level and there is a much greater chance that they would ensnare and cause the slow death of a wide range of species.

*Answer:* We made changes in the text and will not authorize use of SNETS with the possible exception of research.

4. P. 23. Banding and marking. Banding should be done only by experienced, well-trained personnel. The commenter's recommendation would be to have a crew of trained individuals travel from refuge to refuge to do the banding—especially of nestlings. Injuries are occurring as a result of carelessness and lack of experience by the banders. Trainees should not be capturing RCW nestlings, but should be getting experience by banding the nestlings of other woodpecker species.

*Answer:* We already required this under section 10(a)1(A) of Endangered Species Act.

5. P. 25. The mandate to color band all nestlings at all sites each year (MIL 4) is not reasonable. There needs to be a good reason to do this and there needs to be flexibility. Survival of nestlings is much more important than rushing to get all of them banded, or trying to band nestlings that already have their eyes open, or having someone who is inadequately trained attempt to band them. The commenter emphasized here too that "training" per se is not enough. The commenter has frequently had students who were very bright who simply did not have the dexterity and patience to competently band adults, let alone nestlings. He feels that whoever is sent for training gets certified—and that not all of these individuals should really be attempting to band nestlings. It is not something that everyone can reasonably do. In addition to the mechanics of doing it, the disturbance of checking nests in small populations may not be justified. Some of the losses on the Daniel Boone NF may have been a result of disturbance as a result of too frequent nest checks.

*Answer:* We require that all activities, including banding, be conducted in a manner that will not result in a detriment to RCW. The Guidelines do not authorize any activities that will result in take of RCW absent the required permits and review.

6. P. 34. See discussion in Jackson et al. 1986 relative to management of RCWs in wilderness areas.

*Answer:* We reviewed the discussion by Jackson and made no changes in text.

7. P. 35. The commenter doesn't understand why a cooperative agreement should be necessary in order for there to be RCWs on Tombigbee National Forest; The Mississippi State University, John W. Starr Memorial Forest; and the State of Mississippi, Noxubee County School Board lands. In the case of the National Forest, that is Federal land with a clear obligation towards endangered species. There are recent historical records of the species from Tombigbee National Forest, and the species most likely disappeared from there as a result of inadequate management for the species—a potential violation of the ESA. Certainly Tombigbee National Forest has suitable habitat for the species and their stated goal should not be a population of zero RCWs—which is their currently stated management goal! In the case of the other two properties, there are also recent historical records of the RCW from these properties—birds which disappeared directly as a result of management actions taken by those responsible for the properties. Such actions were also potentially—almost certainly—in violation of the ESA since Federal monies are involved with each property. They are also potentially (probably) in violation of state endangered species law. The commenter feels FWS should first of all be in the business of enforcing the law and protecting the species—not in the business of negotiating away habitat and management responsibilities for endangered species.

*Answer:* The Guidelines presented here apply to the recovery and management of the RCW on national wildlife refuge lands. We noted the comments, but they are beyond the scope of these Guidelines.

8. While Bienville National Forest has been designated the “recovery” population in Mississippi, Noxubee NWR's contributions are too important to relegate to “second class.” RCW research potential at Noxubee is vital, too.

*Answer:* We made changes in the text.

9. Why aren't Barge and Georgia Pacific included in the listings?

*Answer:* A Memorandum of Agreement is in effect with Georgia Pacific. We do not intend to exclude involvement of other private landowners by these Guidelines. In fact, we endorse and encourage such cooperation.

10. Does the PVC pipe eliminate the Red-bellied Woodpecker's competition for a cavity?

*Answer:* We do not believe that use of the pipe eliminates red-bellied woodpecker use of cavities.

11. A trained bander could readily travel from refuge to refuge (particularly all the smaller refuges) and band birds with less trauma to the RCWs and perhaps refuge personnel.

*Answer:* We noted the comments.

12. Some provision needs to be made to get RCWs, injured during banding, to trained people for rehabilitation and release. Probably the Forest Service needs that same type of help.

*Answer:* We noted the comments. Efforts are underway, in cooperation with personnel at Fort Bragg, to identify veterinarians in each state who could act as rehabilitators.

13. Cluster Survey/Inspection guidelines do not specifically require inspection with the “peeper” because a hole does not necessarily mean that a cavity is usable. The prime use of the “peeper” is to determine the condition of the cavities. Knowing this is essential to providing the number of cavities needed to maximize productivity.

*Answer:* We do not require cavity inspection with a peeper but recommend it as a useful tool to inspect cavities.

14. Does the Service have standard reporting forms for all RCW monitoring, etc.? Could you quickly have statistics that will help in decision making once information is readily shared and accessible.

*Answer:* We noted the comments, prepared forms, and will issue them in the near future.

15. Goals in the plan should focus on doing the maximum for RCWs rather than establishing minimum standards. RCW management at Noxubee NWR has demonstrated what intensive management can do in a matter of a few years. Why can't we move in that direction across the board immediately?

*Answer:* It is our intent to do the maximum extent of recovery and management for this species given habitat limitations, fund and staff resources, etc. In some instances other resource management efforts, including recovery of other threatened or endangered species, may limit efforts aimed exclusively at the RCW. We strive to take an ecosystem approach to management and recovery activities.

16. It is stated in the Guidelines that “The NWR System should set an example for proper RCW management through an aggressive program using all opportunities to enhance RCW populations.” Firm timetables for this plan are needed. A greater than 10% increase (perhaps 20 to 25%) for the smaller refuges would be a more

reasonable goal in “setting an example” with an aggressive program.

*Answer:* We noted the comments.

Based on recent studies we believe that the maximum annual increase in RCW populations is about 10%, regardless of population size. We base this on studies of numerous populations throughout the species range.

17. Concern was expressed that the Service may be overlooking opportunities to manage for RCWs on several refuges in North Carolina and perhaps elsewhere. Pocosin Lakes NWR is listed in the draft NWR Guidelines as containing only one active cluster. The Service should conduct aerial surveys of Pocosin Lakes, Mattamuskeet, Cedar Island and Swanquarter NWRs if it has not already done so to better determine the extent of current use of these areas by RCWs.

*Answer:* This year we plan Surveys at Alligator River National Wildlife Refuge. We acknowledge the need to conduct new surveys and will accomplish this as funds become available. Refuges with no known population of RCWs are not free from the responsibility to survey habitat prior to authorizing activities that may impact woodpecker populations. The refuges listed are those with known populations of RCWs. Future comprehensive conservation planning efforts should identify recovery and management needs for the RCW and other threatened or endangered species.

18. Concerned was expressed that if the Service has neglected opportunities in these North Carolina refuges that it may have done the same for refuges in other states. Given the land management objectives of the National Wildlife Refuges (not to mention the fact that the Refuges are managed by the Service itself), the Service should pursue all opportunities to bolster recovery efforts on these lands.

*Answer:* We agree and efforts are now underway, see answer B.17.

19. The Service should seek to enter into safe harbor agreements with corporate and other private landowners in order to stabilize and increase available RCW habitat on lands surrounding refuges. This is especially important since several refuges have relatively small current and potential RCW populations. By stabilizing and perhaps increasing RCW numbers around refuges through safe harbor, this approach would in turn strengthen RCW populations on the refuges. Safe harbor agreements have been praised by both landowners and conservationists and offer a unique opportunity to build bridges with landowners surrounding refuges. Under the Service's proposed

national safe harbor policy, such agreements would not require completion of an HCP but could instead be done more easily through Section 10(a)(1)(A) permits. The Service could facilitate safe harbor agreements by using the expertise of refuge staff to assist landowners in baseline surveys and in undertaking proactive RCW management (such as artificial cavity construction).

*Answer:* As we develop refuge comprehensive management plans, we will identify and evaluate these considerations. Safe harbor and other Section 10 activities are valuable management tools but are beyond the scope of management guidelines for federally owned lands.

### C. Management of Understory/Midstory

1. P. 4, paragraph 2, line 4. The commenter feels it is important not to give the impression that all hardwoods need to be eliminated from RCW habitat. Hardwoods mixed with pines provide habitat diversity that increases the diversity and stability of the bird's arthropod food supply and small strands of hardwoods often provide habitat barriers that separate adjacent RCW groups—for example, the boundaries among cavity clusters near refuge headquarters at Noxubee NWR. Do not destroy these natural barriers. Hardwoods need to be controlled, but not eliminated. They provide very important functions within the RCW's ecosystems. Furthermore, the importance of hardwoods likely varies from one geographic region to another—one across-the-range-of-the-species management plan for controlling hardwoods is not appropriate. Distinctions do need to be made between hardwoods in the proximity of cavity trees and hardwoods within foraging habitat, though both need to be controlled.

*Answer:* The draft text indicates that some hardwoods will remain in RCW habitat. We further modified text to reflect retention of hardwood component in the understory and midstory.

2. P. 12. Midstory Control. The statement "The removal of within-canopy hardwoods in the immediate vicinity of cavity trees is necessary" is ambiguous and needs to be clarified. The commenter disagrees that all such hardwoods must be removed. Removal should be a site-specific decision. Pruning might be an appropriate alternative in some situations. They also disagree strongly with the removal of all hardwood stems within 50 feet of a cavity tree. This says that even trees like dogwood would have to be removed.

Again, the commenter feels, hardwoods play a positive role in RCW ecology too. They agree completely with the statement regarding retention of hardwoods to protect the cluster from wind damage. Examples of where such damage has occurred as a result of overaggressive hardwood removal include the Daniel Boone National Forest and D'Arbonne National Wildlife Refuge.

*Answer:* See answer C.2. We clarified the text to indicate that a hardwood component should remain.

3. P. 20. Last paragraph, line 2. The continued reference to Henry 1989 needs to be given further consideration. Henry's cookbook approach to habitat quality has no scientific basis as an "across the range of the species" management guideline. A 10-inch diameter tree in coastal South Carolina is considerably different from a 10-inch diameter tree in the Florida flatwoods. There are no data whatsoever that suggest they offer equivalent foraging opportunities for the RCW.

*Answer:* Comments noted. The "Henry Guidelines" are standard guidance for Federal properties. Our policy provides for development of population specific foraging guidelines based on multiple years of monitoring data and analysis of habitat use by groups.

4. P. 20. "Midstory-free forested corridors" absolutely not needed. A reduced midstory is needed, but not "midstory-free." This cut-it-all mentality not only creates an environment that would not be found in a natural ecosystem, it adds greatly to management costs and level of disturbance in the forest.

*Answer:* Changes made in text to reflect that the midstory will not be "midstory-free."

5. The section on Midstory Control should have a sentence suggesting that some 12 inch diameter trees be left dead as snags for other cavity nesting birds. The recommended removal of hardwoods seems too harsh. For example, the Forest Service plan allows dogwood and persimmon trees to remain. Hardwood midstory may be used by RCWs for foraging and provides protection from predators. Have studies on the first flights of RCWs indicated the importance of hardwood midstory for protection from predators and for foraging habitat?

*Answer:* We acknowledge the valid concern expressed but believe that the current text adequately addresses the concern.

6. Firewood cutting is the "best" way to remove midstory without damaging the remaining pine trees and the land in

the cluster. This method should be listed number one and should be used by the smaller refuges? The commenter realizes the shear V-blade is faster—but the tracks left by the equipment are horrible and the mess left behind is really a fire hazard during the prescribed burns.

*Answer:* We determine the best method for midstory control on a case-by-case basis depending on stand characteristics, need, site conditions, administration factors and demand.

### D. Forest Regeneration

1. P. 4. Paragraph 3. The commenter believes really serious consideration needs to be given to the extent of regeneration needed to "mimic" natural ecosystem processes. We have not eliminated southern pine beetles, thus they still function in the ecosystem—and often function in a positive way relative to the birds. We also can control fire in the ecosystem. In many cases regeneration is overdone and not needed to sustain the ecosystem. Nature provides regeneration and has done so without human assistance up until very recently.

*Answer:* We agree and considered the factors discussed and addressed them in the text.

2. P. 9. One commenter felt the maximum regeneration patch sizes are much too large for a National Wildlife Refuge—our refuges are not, and should not be, tree farms and there is no justification or need for such large regeneration areas. How about 5 and 10 acres? What justification is there for regular "rotations" at all—except commercial exploitation—which seems inappropriate for National Wildlife Refuges?

*Answer:* The Guidelines allow for 5 and 10 acre clearings. We provide individual refuges flexibility to apply the guidelines in their particular area. All regeneration, except off site slash pine, requires retention of some seed trees. A forest modified through seed tree and Shelterwood regeneration cuts does not necessarily result in non-woodpecker habitat.

3. Natural disturbances (in particular lightning strikes and wind problems) seem to be prolific in most of the RCW clusters. Regeneration by nature seems to be more than enough without the removal of the older trees that are vital for RCW survival. Old growth trees are removed in the name of "regeneration." Feeding ecology in old growth stands should be examined (i.e., time and quality of food offered to nestlings) prior to removal of mature trees. Have feeding studies (i.e., time and quality of food offered to nestlings) been conducted on

density, age, and type of habitat within/nearby the cluster? The vulnerability to lightning strikes within the cluster is increased with the removal of the surrounding large trees just outside the cluster.

*Answer:* We acknowledge the value of natural regeneration. However, due to the even-aged structure of much of the RCW habitat on refuges, it is important to maintain balance in stand age to provide for future nesting and foraging habitat. Active, planned management will insure adequate distribution of habitats in the age classes needed at the time needed.

#### E. Land Acquisition

1. P. 6. Paragraph 3, last line. This sentence does not follow from previous information provided. Why should priority for land acquisition be given to just those three refuges? On P. 5, four refuges are listed under the first goal—at the very least, St. Marks Refuge should be included for priority for land acquisition—or a reason stated as to why it shouldn't be included. On the other hand, the commenter suggests that D'Arbonne NWR should be a priority for land acquisition in order to assure adequate habitat for the species there for the short term. How about Santee and Upper Ouachita in that regard as well? These small populations can serve very important genetic reservoir functions—as well as important PR functions. They should be supported rather than written off.

*Answer:* St. Marks National Wildlife Refuge is part of an adequate land base when coupled with adjacent publicly owned lands. Land acquisition at St. Marks is not a critical need at this time with regard to RCW recovery. The other populations, while significant, are not designated as recovery populations. We will address the need for land acquisition to aid in the recovery of the RCW at each refuge, based on RCW recovery and other management needs.

#### F. Population Management/Ecology

1. P. 7. The commenter disagreed with the population delineation approach presented on this page. Citing the Forest Service as saying that "it is so" doesn't make it so. If you want "population delineation," then base it on hard science. There are no consistencies here (If you're going to accept the Forest Service's "18 miles," why does the Fish and Wildlife Service then use "20 miles"?), and no scientific justification for what is provided. There are two sides to the coin here that need to be considered. Here the FWS argues that we need delineation of populations to prevent habitat fragmentation—which is

good. But elsewhere, FWS uses the same figures to argue for not protecting "demographically isolated populations"—which in my opinion is bad. Yes, we need to maintain corridors and the integrity of habitat, but no, we should not write off populations or move them just because they happen to be separated by 3.1 miles of unsuitable habitat from other clusters. The figures included in #1 at the bottom of this page are not reasonable considering what we know about the movements of these birds. In addition, with our abilities to move birds, we can as easily maintain these by occasionally moving birds into them as we can move the birds to a larger population. Annual evaluation of subpopulation delineation could appropriately be used to prevent habitat fragmentation—but it should not be used to write off clusters and justify moving birds to concentration centers. Unfortunately there seems to be a tendency to say the former and do the latter.

*Answer:* We changed the standard of 18 miles in the text from 20 and use the standard identified in the Guidelines to delineate MILs to direct allocation of management and recovery resources. It is not our intention to "write off" populations.

2. P. 16. Flying squirrel control. The commenter feels the use of the term "kleptoparasite" is misleading and a loaded term here. Southern flying squirrels are "secondary cavity users" and do not require an active RCW cavity in which to roost or nest. They often use natural cavities. A cavity that is actively being used by another species is generally left alone unless other cavities are not available. The case against flying squirrels is poorly documented and consists primarily of reports of their use of RCW cavities rather than documentation of reduced RCW fecundity. The commenter has no doubt that occasionally there may be reduced fecundity due to flying squirrels, but evidence to date suggests that it is the exception rather than the rule. We do not need language that encourages the old "predator elimination" mentality. Squirrel presence does not "constitute a history of squirrel problems." We do need a better understanding of the interrelationships between these species.

*Answer:* Additional research findings now indicate reduced fecundity due to flying squirrels which supports the current text. We believe elevating control of cavity competitors on a cluster-by-cluster basis when we document impacts on RCW productivity.

3. P. 20. First paragraph. The commenter didn't understand the sentence. What does it mean that the Service requires them to "annually establish"? Presumably once recruitment clusters have been established they don't need to be reestablished each year—they're already there. Perhaps the Service means they should "reevaluate" recruitment clusters on an annual basis. If so, this has some drawbacks. Once established, recruitment clusters should not be subject to "change." For example, the commenter can see a stand being labeled a recruitment cluster, then at age 60, have it "delisted" as one so that it can be cut, only to be replaced by a 20-year-old stand. The commenter feels the second paragraph helps to clarify this, but thinks clarification is needed in the first paragraph.

*Answer:* We made changes in the text to clarify this.

4. P. 22. Translocation of birds for reintroduction to unoccupied territories. The word "reintroduction" should be replaced with "introduction."

*Answer:* We made changes in the text.

5. P. 22. Adult birds should not be moved. HCPs are not a valid excuse for moving them (see Jackson 1997).

*Answer:* We made clarification in the text. We will respond to opportunities to move adults from private lands through the Habitat Conservation Planning process.

6. P. 22. Juveniles, mid-paragraph. By definition, there can be no such thing as "intra-population demographic isolation."

*Answer:* We made changes in the text.

7. The use of "important" Service goal and "second" goal as used in the Population Objectives section do not represent the best choice of words? If these "important" goals for the four refuges are the primary or first goal, then those refuges should be managed at MIL 4. Carolina Sandhills NWR should not have the option of selecting a MIL 3 or 4 to assure that the maximum habitat for initial population growth is provided.

*Answer:* We made changes made in the text. See comment B.8.

#### G. Harvest Management

1. P. 10. Paragraph 2.

2. The commenter felt log landings should not be adjacent to a cluster either and to better define this. The traditional 200 foot buffer is inadequate to protect a cluster from disturbance such as log landings. Doubling that would certainly be better.

*Answer:* We are unaware of any factual basis for the recommendation and made no changes.

3. Even if no other access exists, new roads, temporary or otherwise, should not be constructed—or used—through a cluster during the nesting season.

*Answer:* We revised the text and agree that construction within clusters during the nesting season should not occur unless a Section 7 review and concurrence has been obtained.

4. No log landings are permitted within or adjacent to clusters. Please add: as the damage to tree trunks from bark scuffing in the cluster occurs due to carelessness of the loggers. In addition, the noise and activity can be detrimental.

*Answer:* We noted the comments and believe the Guidelines provide an adequate explanation.

5. Logging activities (outside of breeding season) near clusters should be allowed only after the RCWs leave the clusters in the morning and should cease prior to the time that RCWs will be returning to the cluster (approximately 1 hour before sundown).

*Answer:* We noted the comments and believe the Guidelines provide an adequate explanation.

6. If necessary, temporary roads should only be constructed on the edges of the cluster not "through the cluster." If skidding is allowed, the cavity tree must be absolutely protected from scuff marks or debarking.

*Answer:* See response G.3.

7. Language should be inserted to the effect that the cavity tree and the area within its drip line should be totally protected from harvesting operations.

*Answer:* See response G.4.

8. Timber/pulpwood sales at refuges create a negative public image and should be difficult to justify given the foraging/habitat needs of RCWs.

*Answer:* See response G.4.

9. The draft NWR Guidelines appear to limit the use of clearcutting to areas of <25 acres, except for the Sandhills NWR which could utilize patch sizes of 40 acres if its RCW population expands. Clearcutting may be appropriate when re-establishing longleaf pine on sites currently occupied by off-site pine and/or hardwoods. However, other silvicultural options do exist to convert off-site pines to longleaf. For example, in many of these stands, the Service could reduce the basal area of the pine overstory substantially, and underplant containerized longleaf pine. The advantages of this approach are that: (1) it is more aesthetically pleasing; (2) it requires less disturbance of the ground cover; and (3) a few off-site pines can be left as future potential cavity trees.

*Answer:* The Guidelines allow, i.e., do not limit, the type of management recommended by the commenter.

10. The draft NWR Guidelines appear to allow clearcutting in longleaf pine stands (page 9 and 29), though page 10 of the FONSI suggests clearcutting will only be used in converting stands back to longleaf pine. The commenter would appreciate clarification of this issue. Clearcutting in longleaf is inappropriate on the National Wildlife Refuges. Longleaf naturally grows in an uneven-aged manner (Platt et al. 1988. The population dynamics of a long-lived conifer (*Pinus palustris*). The American Naturalist 131[4]: pp. 491–525), and, as has been demonstrated throughout the South, selective timber management in longleaf pine mimics natural stand dynamics and provides excellent RCW habitat. While narrow strip cuts or small patch regeneration can be used, clearcutting should be specifically prohibited in longleaf pine on the refuges. Further, clearcutting in longleaf has the potential to fragment RCW foraging habitat leading to increased energetic requirements for the bird and increased risk of predation.

*Answer:* We will not generally use clearcutting in regeneration of existing longleaf stands. Even aged regeneration systems most often used (irregular shelterwood and seed tree) require retention of a specified number of trees on each acre of forest in perpetuity.

11. No guidance is provided regarding site preparation, which can be far more disruptive to pine ecosystems than clearcutting itself. Intensive site preparation can severely damage ground cover in fire-maintained, southern pine ecosystems. This is an especially important consideration in longleaf pine and in stands that once were dominated by longleaf but now contain off-site pines. These stands may contain wiregrass or other natural vegetation depending upon past stand history. Such native vegetation is important to maintenance of the natural fire regime in southern pine and, thus, to the maintenance of RCW habitat. It also contributes significantly to the overall floral diversity of the forests. The Service should, therefore, protect such native ground cover. The commenter urges that the draft NWR Guidelines be amended to address protection of native ground cover during site preparation and/or reforestation.

*Answer:* We agree and revised the text to recommend using the least disruptive means of site preparation.

12. (page 25) Beyer et al, 1995 found that pine basal area (BA) had a high ( $R^2 = .96$ ) correlation with stem density. Requiring a minimum BA in addition to stem density seems to be redundant.

*Answer:* Guidelines follow the current recovery plan. We believe it would be

most appropriate to effect changes through the revision of the Recovery Plan now underway.

13. (page 28) Minimum rotation ages of 100 years for slash and loblolly pine, especially for poorer sites, could result in mortality and beetle infestation. The May, 1986 Southern Forest Experiment Station publication. "Long-term strategies and research needs for managing southern forests to reduce southern pine beetle impacts" suggests rotations of 40 to 50 years. Refuge managers should be encouraged to set rotations based on prevailing sites and local conditions of beetle occurrence.

*Answer:* We noted the comments. Managers have the leeway to adjust rotations on a site specific basis, however, rotations of 40–50 years are too short. Sites with rotations of 40–50 years do not typically support populations of RCWss.

#### H. Prescribed Burning

1. P.10. Prescribed Burning: While prescribed burning may sometimes be used during the breeding season, it should definitely not be used at night in colony areas. Heat and smoke from night fires can force birds from their cavities at a time of day when they cannot see to avoid predators and such fires have been associated with bird loss/cluster abandonment. Burning during the nesting season should be avoided in colony areas under MIL 4 or 5 management.

*Answer:* RCWs evolved with growing season burns. The Guidelines provide adequate information.

2. P. 26. Prescribed Burning. The second paragraph is a bit distorted. The evidence suggests that natural fire would have been primarily during the breeding season and rarely during the dormant season.

*Answer:* We noted the comments. The time of the burn is dependent on the habitat objectives to be met.

3. Are dormant season burns really a contributing factor to the decline of RCWs? Would not a more likely cause simply be lack of burns? This sentence seems to require active-growing season burns. Why not recommend late July or August burns to avoid impacts on nesting species like Bachman's Sparrows? This would also avoid impacts on nesting RCWs. Even if this "produces the best understory control" this is not a good option for RCWs.

*Answer:* We believe that we adequately addressed the concern in the Guidelines.

4. A notation as to the acceptable intensity of the blaze and height of the flames might be needed to protect other trees in the cluster besides the cavity

trees. Often fires are too hot and seem to damage surrounding pines.

*Answer:* We noted the comments and the text needed no changes.

#### *I. RCW Ecology*

1. P. 11. A firm specified range of dates defining the extent of the breeding season is needed with the possibility of extension if needed—such as evidence of late summer or fall breeding. The commenter also disagreed with pine beetle control in a cavity cluster area during the nesting season. These can be important food resources for the birds at this time.

*Answer:* We added the July 31st date to the Guidelines. There is no justification for a January-February time frame. The currently proposed time frames are adequate although we may need some site-specific review. We would apply and identify group/cluster specific restrictions on a case-by-case basis.

2. P. 14. Inactive Clusters: While inactive clusters should be protected and managed and do have a higher rate of reoccupation, these need to be looked at on a case-by-case basis. The first question to be asked is "Why did abandonment occur?" If abandonment was due to habitat loss (maybe on neighboring private property) or to demographic isolation (real demographic isolation), then management potential and intensity might be different than if abandonment was due to mid-story encroachment.

*Answer:* We agreed and noted the comments.

3. P. 14. Abandoned Clusters: At Noxubee we have had at least one abandoned cluster reactivated after >nine years. In general, the commenter concurs with recommendations here.

*Answer:* We noted the comments.

4. P. 14–15. Competition should not be assumed by the presence of these other species. These species are natural components of the RCW's ecosystem and should be treated as such. Technically competition occurs only when one species causes a reduction in the fecundity of the other as a result of the two using the same resource.

*Answer:* We noted the comments.

5. P. 25. The cookbook approach presented in Henry (1989) will result in differing quality habitats in different geographic locations. The commenter feels that just because it's in print doesn't make it so. The commenter also feels it is also important to not automatically assume that a clan's foraging habitat will be symmetrically centered on the cavity cluster. Shape of the foraging range will depend on many factors: terrain, forest type and age,

neighboring groups, presence of various disturbances, etc. In some cases, foraging habitat may include a substantial amount of non-pine—for example, one group at Noxubee NWR uses cypress extensively.

*Answer:* See our response to C.3.

#### *J. Cavity Management*

1. The commenter disagrees with Harlow's definition of an active cluster as one with two or more cavity trees—saying they have known several colonies with only a single cavity tree with multiple cavities. Granted more than one cavity tree is desired—but doesn't want to write-off or ignore single active nest trees.

*Answer:* We made changes in the text.

2. P. 20. The number of cavities provided should be the number of "acceptable cavities" provided. Some invariably are unacceptable because of gum, etc.—thus more need to be provided to compensate for those not useable by the birds.

*Answer:* The changes suggested were not needed since we will not intentionally prepare unacceptable cavities. If we subsequently deem some cavities unacceptable, we will prepare additional cavities.

3. Pileated woodpeckers seem to "attack" RCW cavity entrances following logging operations that remove the large trees near RCW clusters. Have their cavities been removed? Logging operations should consider the cavity trees that other species require to avoid enhancement of cavity competition.

*Answer:* We made changes in the text and will give priority to hardwoods with cavities.

4. The commenter feels artificial cavities should always be ready and available for use by the biologists. Artificial cavities should be available at the time cavity trees are removed because of pine beetles. There should not be a 24-hour period with no available cavities. If cavity trees for other species are also removed, there is the potential for real cavity competition. Therefore, extra suitable cavities would reduce the likelihood of competition.

*Answer:* We believe that the Guidelines provide adequate information. Quick installation of cavities may result in installation in trees that will later die as a result of beetle infestation.

5. In the firewood cuts at Noxubee NWR, the cavity trees for other species are marked and protected. This really seems to reduce RCW cavity competition following the removal of hardwood trees near clusters. Leaving cavity trees for other species should be

addressed in the plan. Perhaps a paragraph needs to be added about cavity competition.

*Answer:* See response J.2.

6. Retention of cavity trees is encouraged. Other surrounding tall/mature trees should also be kept since the retained cavity trees will simply be lightening rods or vulnerable to the wind and not survive.

*Answer:* See response J.2.

7. In several places, 4 cavities to a cluster are mentioned. Because some cavities are unsuitable/unusable, the commenter firmly believes that each cluster should have a minimum of 6 (or 8) usable cavities available. Usable cavities (ones without flying squirrels, other birds, reptiles, etc.) should always be available; thus, a statement that 2–3 more cavities available than the number of RCWs present in a cluster would better fit the needs of the birds.

*Answer:* We made changes in the Guidelines to include a recommended 4–8 usable cavities.

8. When a breeding pair has a helper (3 adults in a cluster), the fledging rate is higher. Since many pairs will raise 3 young, a minimum of 6 cavities per cluster will insure maximum reproduction success and survival. In the smaller refuges this extra hour of time for insertion will repay dividends immediately in the survival of more fledglings—which is your way to increase numbers quickly. In addition, capture for translocation is easier when the RCWs roost in inserts rather than 40 to 60 feet in the air in a natural cavity. Those RCWs that have used inserts also more willingly occupy other inserts.

*Answer:* See response J.7.

#### *K. Southern Pine Beetle Management*

1. P. 11. Pine Beetle Suppression/Control: The number of artificial cavities installed should be greater than the number of cavities lost—not all artificial cavities are acceptable. Also, cavities unsuitable to RCWs that are destroyed may force competition with other species. The commenter urges caution and restraint relative to cutting any cavity tree—even with beetles. They know of no case of "control" of southern pine beetle (SPB), etc. that has truly saved RCWs—but know of several cases where control activities have devastated RCW habitats. The commenter would like to see documentation of control "successes relative to RCWs."

*Answer:* We believe the Guidelines provide adequate information.

2. P. 27. Pine beetle suppression/control. Where is the evidence that any pine beetle suppression/control efforts have ever saved a RCW cavity tree

cluster? There is a lot of evidence to the contrary. Cutting trees will definitely destroy RCW habitat. SPB are a natural and important part of the ecosystem and should be treated as such on a National Wildlife Refuge. Suppression/control efforts seem to be primarily of economic importance. Saying "spots that are active and growing" is too loose. How big is too big? Time of year is important too. A spot in early spring should be considered differently than one in late fall. The commenter disagrees with the use of pesticides near RCW trees. We now have the ability to provide replacement cavity trees as needed.

*Answer:* Documentation exists to support statements relative to Southern Pine Beetle control as helping RCWs on National Forest lands in Texas and on the Kisatchie National Forest in LA.

3. Are records kept or studies done on the necessity of removing cavity trees for pine beetle control? Have entire clusters been lost to pine beetle or is this just a fear that perpetuates logging?

*Answer:* See response K.2.

#### L. Forest Management

1. P. 14. Snag Retention: The sentence beginning on line 5 is important, yet is in opposition to the Midstory Control section. If you remove all hardwood trees, there will never be dead hardwoods for other species to use.

*Answer:* Guidelines included a discussion of midstory management including live trees. Removal of all midstory trees was not recommended. We will, therefore, produce/retain snags.

2. P. 20. Last two lines. The commenter hopes that we truly mean "all relict trees"—but suspects that we meant "all relict pines." Clarify.

*Answer:* We changed the text to reflect that the reference is to relict pines.

3. P. 20. Last sentence. "Reduced to at least 20 BA" is a bizarre way to state this. Do you mean no more than 20 BA" or do you mean "no less than 20 BA"? And how are you defining BA—are you counting only trees >2 inches dbh, 4 inches dbh, 10 inches dbh? Different people measure BA by different criteria.

*Answer:* We made changes to clarify text.

4. P. 25, bottom. #4. The specifications of stands "greater than 30 years of age and preferably >60 years of age" is too loose. While one would assume management would be for the birds, there are those who would think 30 years of age is adequate. Management on a National Wildlife Refuge should be optimum and not leave room for minimums. As far as the preferable habitat for foraging, the commenter would say >100 would be preferable to

>60 years of age. With uneven age management, some older trees could/should be on every acre of foraging habitat.

*Answer:* The guidelines are consistent with the recovery plan and we made no changes.

5. P. 26. Pine thinnings. Here the term BA is qualified—"60 to 80 square feet of pine BA greater than 30 years old." It has not been qualified elsewhere and the reader is left not knowing what was intended. This needs to be clarified.

*Answer:* We noted the comment and considered no changes in Guidelines necessary.

6. P. 26. The commenter questions the statement that timber harvests may still be appropriate when foraging habitat is limiting except in extremely dense stands. The other reasons given here could easily wait until growth has brought the habitat to the point where foraging habitat is not limiting.

*Answer:* We noted the comments and considered no changes in Guidelines necessary.

7. P. 28 and following relating to silvicultural methods: See the commenters above observations relative to dispersion of older trees. The commenter feels even-aged management is inappropriate in that it does not provide the habitat mosaic and landscape stability that would be provided by uneven-aged management. A scattering of trees across the landscape should be allowed to reach their natural potential longevity.

*Answer:* We noted the comments and believe the Guidelines will achieve this eventually through recommended management See G.10. Even aged regeneration systems that are used (irregular shelterwood and seed tree) require retention of trees on each acre in perpetuity.

8. P. 33, Clearing of RCW habitat, line 4. The implication here seems to be that clearing of habitat for road construction does not affect the future ability of a refuge to support RCWs. The commenter strongly disagrees. A road could be anything from a logging road to a 6–8-lane interstate—and anything approaching the latter could have very serious negative consequences for RCWs and their habitat. Such consequences could range from loss of acreage of forested area, to the function of a road as a barrier, to mortality of birds as a result of traffic, to reduction in the potential to use prescribed fire in management. The commenter agrees that potential RCW habitat on each refuge should not be reduced, but would add further that the reduction of any habitat on each refuge has the potential to influence the RCW. The commenter

would also add that the tendency to "round" refuges by trading or selling peripheral lands in order to obtain more centralized in-holdings should be avoided. A refuge with a nice—perhaps more easily manageable compact boundary would likely support fewer RCWs than one that is more dispersed. Furthermore, the extension of fingers of habitat away from the refuge offers greater potential as dispersal corridors for birds to and from nearby forested areas on other lands.

*Answer:* We noted the comments and revised the guidelines.

9. The 40 BA of pine in regeneration areas must be allowed. Because Noxubee has the fourth highest current acreage and has the potential of working in cooperative agreements with several entities, their RCW population should not be relegated to "short-term" viability. Noxubee's third place in planned acreage also places this refuge higher in importance in its contributions to RCW sustainability and recovery.

*Answer:* We do not understand the comment. We have not relegated Noxubee National Wildlife Refuge to third and have revised the text to reflect this.

10. The commenter cannot understand any plan that removes old trees when these are the very trees that RCW's need the most at this critical time in their recovery. Minimum rotation age seems to be recommended and encouraged. Why is that? Isn't your goal maximum recovery potential? Then, encouragement of an even older rotation would allow trees to serve their function longer and the food potential would be maximized.

*Answer:* See response L.7. The Guidelines attempt to direct maximization of the number of trees allowed regardless of MIL. Note that a minimum of 6 trees/acre will be left at the time of cutting in perpetuity.

11. Also, page 22 of the FONSI states: "Since most seedling stage, yellow pine species are intolerant of fire, uneven-aged silviculture would be used only for longleaf pine." While most yellow pine species are intolerant of fire, uneven-aged management nonetheless can and should be used with them. Potlatch's Habitat Conservation Plan (approved by the Service), for example, documents and prescribes uneven-aged management in loblolly and shortleaf pine forests. Uneven-aged silviculture in loblolly/shortleaf forests has been well demonstrated elsewhere and has been the subject of numerous publications (e.g., James B. Baker. 1986). The Crossett farm forestry forties after 41 years of selection management. Southern Journal



of Applied Forestry 10:233-237). In addition, the above referenced sentence from the FONSI is not consistent with the draft NWR Guidelines, which specifically sanction the use of unevenaged management in all southern pine types managed for RCWs (see page 9).

*Answer:* We modified the FONSI to incorporate these comments.

12. (Page 32) The discussion of uneven-aged management does not address the problem of integrating fire with regeneration. As regeneration is standwide and as all southern pines, except long-leaf, are fire intolerant in the seedling and sapling stage, there appears to be no practical method of combining the practice of regular prescribed burning with all-age management, except in the longleaf type. The commenter knows of no research that has studied this problem, nor have they seen a proposed solution to the problem. It should also be noted that the research basis for the current proposals to use all-age management in longleaf pine consists of only 2 tracts, totaling 66 acres and established in 1977-78 (Farrar and Boyer, "Managing Longleaf Pine under the Selection System—Promises and Problems" 6th Biennial Southern Silvicultural Research Conference, Memphis TN, Oct. 1990).

Using uneven aged management will generally require the combined use of fire and alternative methods of competition control.

*Answer:* We added additional discussion of this issue to the Guidelines.

#### M. Foraging Habitat

1. Page 25 of the draft NWR Guidelines defines the foraging habitat criteria for the refuges and states that "foraging habitat must be greater than 30 years of age *and preferably* >60 years of age" (emphasis added). This is not consistent with the RCW Recovery Plan which calls for at least 50 acres of foraging habitat per cluster greater than 60 years. Due to no fault of the Service, some areas on the National Wildlife Refuges may not have enough >60 year old habitat to meet the Recovery Plan's standards. However, the language in the draft NWR Guidelines should clearly state that at least 50 acres of >60 year old habitat per cluster will be preserved whenever possible. Moreover, if a sufficient amount of >60 year old habitat is not available in a given refuge but can be produced, the refuge should immediately adjust harvest schedules to produce the requisite foraging habitat (the only possible exceptions are when dealing with southern pine beetle

attacks or when undertaking management designed to achieve other ecological objectives).

*Answer:* We made changes in the text.  
2. (page 25) The requirement of 6,350 stems >10" DBH within 1/2 mile of the cluster is based on a single unpublished study by Hooper and Lennartz. The commenter knows of no peer-reviewed and published study which supports this figure. Recent peer-reviewed research raises serious doubts as to the validity of this study and suggests that this number may be in excess of the density "optimum" to clan vigor, (James et al. 1997, Beyer et al. 1996, Hooper and Lennartz 1995, DeLotelle and Epting 1992, Wood et al. 1985). See also attached reformulation and re-analysis of the Hooper and Lennartz (1985) data which indicates a critical equivalent stem density of 2500-3500 stems rather than 6350.

*Answer:* We wrote the Guidelines to be consistent with the recovery plan. See also response I.5.

#### Authority

The authorities for this action are the Endangered Species Act (16 U.S.C. 1531 *et seq.*), The National Environmental Policy Act (42 U.S.C. 4321-4347) and the National Wildlife Refuge System Improvement Act of 1997 (Pub.L. 105-57 to be codified at 16 U.S.C. 668dd *et seq.*).

Dated: January 11, 1999.

**Sam D. Hamilton,**  
*Regional Director.*

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## DEPARTMENT OF THE INTERIOR

### Bureau of Land Management

[UT-090-1220-00]

#### Grand Gulch/Cedar Mesa, UT

**AGENCY:** Bureau of Land Management, Interior.

**ACTION:** Notice of recreation fee structure, allocation system and prohibitions for Grand Gulch/Cedar Mesa in San Juan County, Utah.

**SUMMARY:** Beginning March 1, 1999, the Bureau of Land Management (BLM) will implement provisions of the 1993 Grand Gulch Plateau Cultural and Recreation Area Management Plan concerning an advanced reservation system, use limits, and permit fees. The permit area involves recreation use of the following canyons on Cedar Mesa including Grand Gulch Primitive Area, Fish, Owl, McCloyd, Road, Lime and Slickhorn Canyons. Use on the mesa tops of Cedar

Mesa will not be regulated at this time. Permits will be required and fees charged from March 1 to November 30 of each year. The advanced reservation portion of the permit system will be in effect during the primary visitation season only, from March 1 to June 15, but may be extended in the future as need dictates. Advanced reservations will be accepted, for this time period, by phone or mail to the Monticello BLM office starting January 1, 1999. Day use of the canyons will require a day use pass or multi-day use pass (7 days), for which a fee is charged, from March 1 to November 30.

The permit requirement, because it is based on an allocation of the number of people per trailhead (Grand Gulch) or per canyon (other Cedar Mesa canyons), will help to decrease in-canyon use during the primary visitation season, and to monitor use at other times of the year.

Fees collected from individual, non-commercial visitors will be used to augment protection of Cedar Mesa's outstanding cultural and primitive recreation values. Notice is also given that campfires will be prohibited within any canyon on Cedar Mesa.

**SUPPLEMENTARY INFORMATION:** Cedar Mesa has long been identified with world class Ancestral Puebloan cultural remains and excellent day hiking and backpacking opportunities. Grand Gulch itself has been managed to protect these values since 1970 when the Secretary of the Interior designated it as a Primitive Area. The other canyons were protected within the Cedar Mesa Area of Critical Environmental Concern in the 1991 San Juan Resource Management Plan (RMP). In recognition of increasing recreational visitation and declining resource conditions, the BLM developed the Grand Gulch Plateau Cultural and Recreation Area Management Plan in 1993. In 1991, individual self-serve permits, advanced reservations for pack stock and larger foot parties, and fees were first established for Grand Gulch. The actions outlined in this **Federal Register** Notice are a continuation and implementation of direction established in the Grand Gulch Plateau Plan.

The fee for either day use or overnight non-commercial recreation use of the Cedar Mesa Canyons must be paid before entering. The day use fee (\$2/person/day) can be paid at the Kane Gulch Ranger Station or at fee tubes placed at the trailheads. A multi-day use pass (\$5/person for a 7 day pass) may be obtained at Kane Gulch or through the Monticello BLM office. Advanced overnight reservations (\$8/person/trip) may be made through the Monticello