May 26, 2011

INFORMATION MEMORANDUM FOR THE REGIONAL DIRECTOR

FROM: David Rabon, Coordinator, Red Wolf Recovery Program, USFWS

CC: Patrick Leonard, ARD, Ecological Services, USFWS

SUBJECT: Revision of Nonessential Experimental Population Rule for the Red Wolf

I. INTRODUCTION

We are pursuing a revision of the Nonessential Experimental Population (NEP) rule for the endangered red wolf (Canis rufus). Increasing levels of anthropogenic-caused mortality (e.g., gunshot, illegal trapping, poisoning) in red wolves, public misconceptions about red wolves, and changes in the strategies to manage red wolves and other wild canids warrant a revision and clarification of the NEP rule. The current NEP rule is no longer effective to address the current and future management needs of the red wolf, and is precluding the development of sound management strategies for this and other species of management interest (e.g., coyotes, foxes).

II. BACKGROUND

We are working to revise the existing NEP rule to address three specific issues: (1) simplify reintroduced population information; (2) explain changes in the protocols to manage red wolves and other canids; and, (3) clarify the legality of actions and the exemptions for take of red wolves.

At the time of publication of the current NEP rule (1995; 60 FR 18940), the red wolf recovery program (RWRP) managed two reintroduced populations (i.e., Alligator River and Great Smoky Mountains National Park) and three island propagation sites (i.e., Horn Island at Gulf Islands National Seashore, Bulls Island at Camp Romain NWR, and Saint Vincent NWR). Regarding the two reintroduced populations, only the Alligator River population is extant; the Great Smoky Mountains National Park (GSMNP) population was terminated in 1998 (ref. 63 FR 54151). In addition, the Alligator River population name is misleading, and creates confusion as to its geographic location and boundary. Furthermore, the three island propagation sites were not mentioned by name in the NEP rule, and their inclusion under the 10(j) designation was uncertain. Moreover, only two of the island propagation sites are currently used (i.e., Saint Vincent NWR) or are likely to be used in the future (i.e., Bulls island at Cape Romain NWR). [Bulls Island currently is not used because of site staffing and budget constraints.] The Horn Island site receives too many public visitors for it to be an effective island propagation site for red wolves. We would revise the NEP rule to (1) change the name of the Alligator River population to the Northeastern North Carolina (NENC) population to reduce public confusion of the location of the population; (2) clarify the boundaries of the NENC population; (3) remove
reference to the GSMNP population; and, (4) clarify that the island propagation sites are not part of the nonessential experimental populations.

The RWRP has faced many new issues in the intervening years since the current NEP rule was published. Accordingly, we have adjusted our efforts to address these challenges. However, the NEP rule was not written with the flexibility to adapt management strategies for emerging issues. For example, the issue of red wolf-coyote hybridization was not fully considered in the management of the reintroduced population until the organization of the Population Habitat Viability Assessment (PHVA) in 1999 and the implementation of the Adaptive Management Plan (AMP) in 2000. In the course of implementing the AMP, it was determined that using sterile coyotes as “placeholders” on the landscape was an effective means to limit the introgression of coyotes into the red wolf population. Sterile coyotes will hold a territory from other intact coyotes until they are driven out or replaced by a wolf or breeding wolf pair. Unfortunately, the current NEP rule does not support such a management strategy because it requires, in part, the removal of wolves (and de facto coyotes) on private lands at the landowner’s request. Furthermore, our current understanding of canid movements suggests that wolves removed from an area will likely return to that same area upon release unless the animal is biologically driven to disperse, which is typically age-dependent, making the removal of most wolves (and coyotes) from a particular area ineffectual. In addition, an NEP that incorporates our strategies would facilitate the use of similar techniques by the State of North Carolina (i.e., North Carolina Wildlife Resources Commission; NCWRC) in their management of coyotes within and outside of the reintroduced red wolf population. We recently have incorporated much of the AMP recommendations as standard operating procedures for our management strategies, and are coordinating our management efforts with the NCWRC in the development of a state-wide Canid Management Plan. We would revise the NEP rule to reflect the changes in our management strategies for red wolves and to facilitate the development of management strategies for other canids of interest (e.g., coyotes, foxes) with our partners.

Lastly, we would like to clarify the legality of actions and the exemptions for take of red wolves as it relates to the changes in management strategies (described above) and to reduce the potential for illegal anthropogenic-caused mortality (e.g., gunshot, illegal trapping, poisoning). Since 2004, the RWRP has witnessed a steady increase in the number of wolves killed by gunshot or other similar illegal activity. We have recorded 83 wolves taken as the result of anthropogenic-caused activities since the wolves were reintroduced in 1987. Beginning in 2004, the number of wolves killed as a result of these types of actions increased to nearly seven (7) wolves per year, compared to about two (2) wolves lost per year between 1987 and 2003. Furthermore, approximately 60% of the wolves killed have been breeders. This level of take appears to be having a negative effect on population growth because it results in the loss of a breeding pair and potentially their reproductive effort. In addition, responding to the loss of wolves requires an unnecessary reallocation of time and resources to counter its effects (e.g., increased hybridization, increase in the number of coyotes filling space created by the loss of a wolf, reduced recruitment of red wolves). We believe this rise in anthropogenic-caused mortality is the result of (1) a misunderstanding of the legality of actions that
result in take, (2) a misconception of activities that are exempt from take under the NEP designation; (3) general misconceptions about red wolves and the presence of coyotes; and, (4) an increased interest by the public and the State of North Carolina (i.e., NCWRC) to “manage” nuisance coyotes. We would revise the NEP rule to clarify the legality of actions that constitute take and the exemptions for take of red wolves as it relates to our management strategies (described above) and to reduce the potential for illegal anthropogenic-caused mortality (e.g., gunshot, illegal trapping, poisoning).

We are in the process of drafting rule documents that are due to the Regional Office (RO) in August 2011. As part of that process, we are considering how we would revise the text of our special rule that accompanies our NEP rule. We are cooperating with the State in considering the possible options to make this rule more effective on the ground to help red wolf recovery. We will share pieces of the rule to the RO as early as possible so individuals can review in advance potential changes to restrictions.

III. POSITION of INTERESTED PARTIES

Interested parties include the NCWRC and the general public. The NCWRC is interested in how the NEP rule can assist in the management of State-authorized programs (hunting, depredation control, etc.) and in the development of a coordinated state-wide Canid Management Plan. The NCWRC also is receptive to us clarifying the language of the NEP designation to assist in hunter and public education. The NCWRC has not publicly taken a position on a revision of the NEP rule, but they have privately stated that a revision that provided greater clarification with similar flexibility in management and public recreation could be beneficial for both public education and management of other canids of interest (i.e., coyotes, foxes). The repeated (and as of to date unsuccessful) proposal to authorize the hunting of coyotes at night and the virtually unregulated use of coyotes in Controlled Hunting Preserves (i.e., fox pens) within North Carolina strongly suggests that there is growing public pressure on the state to control nuisance canids. In fact, current strategies for managing coyotes within the state have created additional and unnecessary pressure on the RWRP in the management of red wolves. The potential mis-management of nuisance canids will most certainly compromise the recovery of the red wolf unless the NEP rule is revised to address and clarify management strategies and the legality of actions or exemptions of take of red wolves.
Follow up on meeting

Nordsven, Ryan <ryan_nordsven@fws.gov>  Thu, Jul 24, 2014 at 10:04 PM
To: Cynthia Dohner <cynthia_dohner@fws.gov>, Leopoldo Miranda <leopoldo_miranda@fws.gov>, Pete Benjamin <pete_benjamin@fws.gov>
Cc: Arthur Beyer <arthur_beyer@fws.gov>, Rebecca Harrison <rebecca_harrison@fws.gov>

Thank you all for taking the time to meet with us yesterday and allowing us to voice our concerns and ask questions. I wanted to take this opportunity to act on your invitation to contact you with any additional questions/comments. There was one additional point that I wanted to make that slipped my mind yesterday while we were discussing the 1995 rule revision, that I felt was important to mention. You are most likely all aware of this already, but in the case that you are not, I wanted to highlight a caveat that was included in the revision regarding the relaxation of the incidental take provision. On page 18944 of the Federal Register (Vol. 60, No. 71) it states and I quote:

"This incidental taking provision places trust in the public to be responsible citizens by obeying the special rule. The Service intends to revisit this issue to determine if excessive taking of red wolves is occurring because of the revised special rule."

It has been our experience during the better part of the last decade that excessive taking of red wolves is indeed occurring because of the revised special rule. We believe it has lead to not only less wolves on the landscape and less pup recruitment via a high percentage of breeder mortality, but also increased hybridization with coyotes through disruption of pack stability, all of which has greatly hindered our ability to recover red wolves. At any rate, since issuing the statement of intention to "revisit this issue", almost 20 years have now passed with no reassessment of the rule revision taking place (despite requests from Red Wolf Recovery Program staff to do so).

Again, you were all most likely aware of this already, but, by some chance that you weren't, I felt it important to bring it to your attention in hopes that, along with everything else that will be reviewed in the coming weeks, this does not get overlooked.

Thanks again,

Ryan

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Ryan Nordsven
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US Fish & Wildlife Service
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Endangered and Threatened Wildlife and Plants; Revision of the Special Rule for Nonessential Experimental Populations of Red Wolves

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), propose to amend the special rule for the nonessential experimental populations (NEP) of the red wolf (Canis rufus) in North Carolina and Tennessee to: revise and clarify population names and boundaries; remove reference to the population of red wolves in western North Carolina and eastern Tennessee; revise and clarify the incidental take provision; revise and clarify the notification requirements for take; and clarify the status of island propagation sites.
Proposed revisions to the special rule, if made final, will contribute toward the recovery of the species. No conflicts are envisioned between these proposed revisions to the special rule and any existing or anticipated Federal, State, Tribal, local government, or private actions such as agricultural practices, pesticide application, water management, construction, recreation, trapping, or hunting.

DATES: We request that you send us comments on the proposed rule by the close of business on [INSERT DATE 60 DAYS FROM THE DATE OF PUBLICATION IN THE FEDERAL REGISTER], or at the public hearings (see ADDRESSES section below for further detail).

ADDRESSES: Written comments: You may submit comments on the proposed rule by one of the following methods:


We will post all information received on the proposed rule on http://www.regulations.gov. This generally means that we will post any personal information you provide us (see the Public Comments Procedures section below for more details).

Comment [RD1]: Is this true since NCWRC has authorized hunting of coyotes? How do we rectify that hunting coyotes in the five county area is having an effect on the red wolf population (i.e., legal activities results in more red wolf deaths). There are no provisions explicitly stated in our rule otherwise, but one would think the coyote hunting rule would never have been passed as is when it creates a situation where a red wolf can be shot.

Comment [BK2]: Mike, I wanted to leave this question in to get your take on it.
Copies of Documents: The proposed rule is available by the following methods. In addition, comments and materials we receive, as well as supporting documentation used in preparing this proposed rule, will be available for public inspection:

(1) You can view them on http://www.regulations.gov. In the Search Documents box, enter FWS–R4–ES–2013–XXXX, which is the docket number for this rulemaking. Then, in the Search panel on the left side of the screen, select the type of documents you want to view under the Document Type heading.


Public Hearing: We will hold public hearings at the following locations:

1. Manteo, North Carolina, on DATE, 2013, from 7:00 p.m. to 8:00 p.m. at the Coastal North Carolina National Wildlife Refuges Gateway Visitor Center, 100 Conservation Way, Manteo, North Carolina 27954; and,

2. Columbia, North Carolina, on DATE, 2013, from 7:00 p.m. to 8:00 p.m. at the Walter B. Jones Sr. Center for the Sounds, 205 South Ludington Drive, Columbia, North Carolina 27925; and,

3. Swan Quarter, North Carolina, on DATE, 2013, from 7:00 p.m. to 8:00 p.m. at the Mattamuskeet Lodge, Mattamuskeet National Wildlife Refuge, 1 Mattamuskeet Refuge Road, Swan Quarter, North Carolina 27885; and,
Each public hearing will be preceded by a public informational open house from 6:00 p.m. to 7:00 p.m. For information on reasonable accommodations to attend the informational open houses or the hearings, see the Public Hearings section.


SUPPLEMENTARY INFORMATION:

Public Comment Procedures

To ensure that any final action resulting from this proposed rule will be accurate and as effective as possible, we request that you send relevant information for our consideration. Please make your comments as specific as possible and explain the basis for them. In addition, please include sufficient information with your comments to allow us to authenticate any scientific or commercial data you reference or provide. In particular, we seek comments concerning the following:

(1) Revisions to the incidental take provisions of the special rule for NEP populations of red wolves;

(2) Revisions to notification procedures back to the red wolf program regarding actions;

Prior to issuing a final rule on this proposed action, we will take into consideration comments and additional information we receive. Such information may lead to a final rule that differs from this proposal. All comments and recommendations,
including names and addresses, will become part of the administrative record for the final rule.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in the ADDRESSES section. If you submit a comment via http://www.regulations.gov, your entire comment—including any personal identifying information—will be posted on the Web site. Please note that comments submitted to this Web site are not immediately viewable. When you submit a comment, the system receives it immediately. However, the comment will not be publicly viewable until we post it, which might not occur until several days after submission.

If you mail or hand-deliver hardcopy comments that include personal information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so. To ensure that the electronic docket for this rulemaking is complete and all comments we receive are publicly available, we will post all hardcopy comments on http://www.regulations.gov.

Public Hearings

We will hold public hearings at the locations listed above in ADDRESSES. Each public hearing will last from 7:00 p.m. to 8:00 p.m. on DATE. Before each hearing, we will hold a public informational open house from 6:00 p.m. to 7:00 p.m. to provide an additional opportunity for the public to gain information and ask questions about the proposed rule. These open house sessions should assist interested parties in preparing substantive comments on the proposed rule. All comments we receive at the public hearings, both verbal and written, will be considered in making our final decision.
Persons needing reasonable accommodations in order to attend and participate in a public hearing should contact Dr. David Rabon (see **FOR FURTHER INFORMATION CONTACT**) as soon as possible. In order to allow sufficient time to process requests, please call no later than one week before the hearing. Information regarding this proposal is available in alternative formats upon request.

**Background**

**Previous Federal Actions**

We listed the red wolf as an endangered species in 1967 (32 FR 4001). On July 24, 1986 (51 FR 26564), we published in the *Federal Register* a proposed rule to introduce red wolves into Alligator River National Wildlife Refuge (Alligator River), Dare County, North Carolina and determined that the reintroduced population was a nonessential experimental population (NEP) according to section 10(j) of the Endangered Species Act of 1973, as amended (Act). A final rule making a determination to implement the proposed action with some modifications was published in the *Federal Register* on November 19, 1986 (51 FR 41790). The red wolf population in Dare County and adjacent Tyrrell, Hyde, and Washington Counties was determined to be a NEP. On November 4, 1991 (56 FR 56325), we published a revision to the NEP designation in the *Federal Register*, which added Beaufort County to the list of counties where the NEP designation would apply.
A proposed rule to introduce red wolves into the Great Smoky Mountains National Park (Park), Haywood and Swain Counties, North Carolina; and Blount, Cocke, and Sevier Counties, Tennessee, was published in the Federal Register on August 7, 1991 (56 FR 37513). We published a final rule to implement the proposed action with some modifications on November 4, 1991 (56 FR 56325). This population also was determined to be a NEP. Graham, Jackson, and Madison Counties, North Carolina; and Monroe County, Tennessee, were also included in the NEP designation because of the close proximity of these counties to the Park boundary.

We published a final rule amending the special rule for NEPs of red wolves in North Carolina and Tennessee on April 13, 1995 (60 FR 18940). The amendment: revised the incidental take provision to apply to both reintroduced populations; revised the livestock owner take provision to apply to both reintroduced populations; added harassment and take provisions for red wolves on private property; revised the vaccination and recapture provision; and applied the same taking (including harassment) provisions to red wolves outside the experimental population areas, except for reporting requirements.

A notice of termination of the red wolf reintroduction project in the Great Smoky Mountains National Park was published in the Federal Register on October 8, 1998 (63 FR 54151). Extremely low pup survival and the inability of the red wolves to establish home ranges within the Park were the reasons for this decision.

Status of Current Populations
The red wolf is an endangered species under the Act and it is currently only found in the wild as a NEP in northeastern North Carolina. The experimental population status means the reintroduced population is treated as a threatened species, rather than an endangered species, for the purposes of sections 4(d) and 9 of the Act, which regulate taking and other actions. This enables the Service to adopt a special rule which is less restrictive than the mandatory prohibitions covering endangered species if there is a management need for more flexibility and the resulting protections are necessary and advisable for the conservation of the red wolf.

Recent calendar year counts for red wolves in the wild population fluctuate between approximately 90 to 110 red wolves, depending on births, deaths, related social dynamics, and other factors. Red wolves currently inhabit all five counties of the existing NEP reintroduction area, and roughly two thirds of this area has been occupied by red wolf territories (FWS unpubl. data). Based on this, we believe there is likely enough space available for wild red wolves to establish additional territories and that population expansion could continue in subsequent years.

Endangered red wolves also are currently located in about 40 captive-breeding facilities throughout the United States, including one island propagation site (i.e., St. Vincent National Wildlife Refuge, in Florida). The captive-held population of endangered red wolves presently number about 200 individuals.

Reintroductions

*Alligator River*
On September 14, 1987, the Service first reintroduced the red wolf in northeastern North Carolina with the release of four male-female pairs as a NEP. From September 14, 1987 through September 30, 1992, 42 wolves were released on 15 occasions. The NEP reintroduction area included about 250,000 acres (111,750 hectares) of lands, including Alligator River National Wildlife Refuge, the U.S. Air Force Dare County Range, and adjacent private lands. A minimum of 22 wolves were born in the wild during the first five years of this reintroduction effort. A review of the first five years to reestablish red wolves in the NEP area in northeastern North Carolina was included in the revision of the special rule published on April 13, 1995 (60 FR 18940).

By almost every measure, the first five years of the reintroduction proved successful and generated benefits that extended beyond the immediate preservation of red wolves to positively affect local citizens and communities, larger conservation efforts, and other imperiled species. Several conclusions were reached during this time period, the first being the successful re-establishment of a population of red wolves was possible. Since management problems were resolved without long-term damage to the wolves and with little inconvenience to residents of the area, this showed that red wolves can be restored in a controlled manner and that land use restrictions are not necessary. However, it was also obvious that the original reintroduction area was too small to support more than 30 wolves. Therefore, the reintroduction area was extended westward to encompass Beaufort, Hyde, Tyrrell, and Washington counties, including Pocosin Lakes National Wildlife Refuge and additional adjacent large corporate and private lands (60 FR 18940).
Updates on this reintroduced NEP since 1992 show continual but slow progress. Field data from known wild red wolves since 1999 suggests that the minimum red wolf NEP size fluctuates between 80 and 100 wolves. The number of breeding social groups maintaining territories rose to 20 in 2003, fell to 15 in 2005 and 2006, then rose to 20 in 2007, but has once again fallen to 13 in 2013 (FWS unpubl. data). Red wolf biologists recorded a total of 726 known pups born between 1987 and 2013. In 2013, there was a slight decline in the number of red wolf pups born (34) compared to recent years’ pup numbers; reasons for the decline are not apparent at this time. Murray (2007, unpubl. data) reported litter sizes are largest among adult breeding pairs approximately 5 to 6 years old.

Preliminary population viability analyses revealed early estimates of survival for the red wolf NEP (D. Murray 2004, unpubl. data). Annual survival rates in the wild NEP were 78.2% overall, with adults (80.6%), yearlings (79.3%), and pups (67.8%) all showing high survival rates that reflected a stationary or increasing red wolf population. Annual survival rates for male (76.8%), female (79.6%), wild born (83.6%), island-reared (67.3%), and captive-reared (56.8%) red wolves were also reported.

From 1987 through 2013, the Red Wolf Recovery Program documented 369 known cases of mortality. Proportions of mortality were calculated to include gunshot (23.6%), vehicle strikes (19.2%), management (4.6%), health-related/disease (15.7%), intraspecific aggression (6.5%), accidental loss during private trapping activity (3.8%), poison (3.0%), other suspected illegal take (3.8%), and unknown causes (19.8%).

Great Smoky Mountain National Park (Park)
On November 12, 1991, the Service, in cooperation with the National Park Service, experimentally released a single family group (two adults, two pups) of red wolves in the Park. This release was designed to assess the feasibility of establishing a self-sustaining red wolf population on National Park Service and surrounding U.S. Forest Service property. The initial experimental release ended in September 1992, and proved the feasibility of reintroducing wolves in the Park. A decision was made to proceed with a reintroduction.

We began the reintroduction in October 1992 with the release of two family groups, each consisting of an adult pair and four pups. A total of 37 red wolves were released into the Park from 1992 through 1996. Of the 37 released red wolves, 26 later died or were recaptured after straying onto private lands outside the Park. Of the 30 wild-born pups from seven litters, only two pups removed from the wild at 6 months of age are known to have survived. As a result of extremely low pup survival and the inability of wolves to establish home ranges within the Park, the Service and the National Park Service announced a joint decision to end the reintroduction effort in the Park on October 8, 1998 (63 FR 54151). A review of the experiment to reestablish red wolves in the Park was included in the revision of the special rule published on April 13, 1995 (60 FR 18940), and in the notice to terminate the project (63 FR 54151).

Management

a. Monitoring
Captive-born released and wild-born red wolves across the entire NEP are monitored regularly, generally using radio telemetry, by USFWS project and authorized personnel to assess movements and survival. To ensure contact with the wolves, each captured wolf is equipped with a radio transmitting collar or abdominal implant. Red wolves are regularly checked via telemetry for mortality or indications of disease (listlessness, social exclusion, or obvious weakness). Social behavior (e.g., pair formation, dominance) also is evaluated. In addition, a voucher blood serum sample is taken from each wolf any time the wolf is handled (e.g., when recaptured to replace transmitters) to monitor disease exposure and physiological condition.

b. Disease/Parasite Considerations

Because canid (any member of the family Canidae which includes foxes, wolves, and dogs) diseases can spread quickly, they could cause serious setbacks in red wolf recovery. Canid diseases remain a potential threat to the red wolf NEP and to captive endangered red wolves. The magnitude of risk to the red wolf species overall is partly offset by captive endangered red wolves being held in <40 facilities across the United States and by the intensive vaccination programs for both wild NEP and captive endangered red wolves. Both captive red wolves introduced into the NEP population and wild NEP red wolves that are captured receive vaccinations to common canid diseases, including canine distemper (Genus *Morbillivirus; CDV*), canine parvovirus (Genus *Parvovirus; CPV1, CPV2*), leptospirosis (Genus *leptospira*), hemobartonellosis
(Haemobartonella canis), lyme (Borrelia burgdorferi), and rabies (Genus Lyssavirus, rabies virus). Wild NEP wolves suspected of having any such diseases or diagnosed as such receive veterinary care and are treated appropriately prior to release. None of these diseases have occurred at sufficiently high levels to cause an epidemic in the current NEP. However, veterinary research scientists caution we should not presume vaccinated red wolves are adequately protected against diseases. An example is CPV2 parvovirus, a disease which could possibly have serious impacts upon pup survival in the NEP (Acton 2007). This is important because poor pup survival from parvovirus contributed to the Service’s decision in 1998 to discontinue the Great Smoky Mountains red wolf NEP (Henry 1998).

Sarcoptic (Sarcoptes scabiei mites) and, to a lesser extent, demodectic (Demodex canis mites) mange are diseases caused by parasites that have contributed to the deaths of 18 red wolves since 1987 (USFWS, unpubl. data). Because of the nature of the red wolf recovery effort working with limited population sizes, sarcoptic mange is considered a potential threat to the the program until proven otherwise. All red wolves in the NEP are examined for evidence of sarcoptic and demodectic mange and suspected cases receive multiple treatments to eliminate infection. Sarcoptic mange is not host specific and transmission of the parasite between hosts can be either by direct or indirect contact. In wolf packs where at least one individual has been found with sarcoptic mange, all individuals in that pack are captured, if possible, and treated to avoid infection or re-infection of wolves that have been treated and released.

Additional precautions are needed to proactively address potential disease in the red wolf NEP and captive endangered red wolf populations. For example, hunting dogs
and coyotes imported to North Carolina from elsewhere in the United States are two sources of prime concern. Scientists on the Red Wolf Recovery Implementation Team recommended that a red wolf disease prevention and surveillance program be developed in the five county NEP area to ensure long-term survival in the red wolf NEP and within any future NEPS. The Service is in the process of developing a disease prevention and surveillance plan.

c. Genetic Considerations

Conservation of the red wolf gene pool and associated genetic fitness are primary concerns in the Red Wolf Recovery and Species Survival Plan (USFWS 1990). The current red wolf captive breeding program began with 14 founders. With very small populations, survival can be affected by genetic drift (random loss of genetic diversity) and inbreeding depression (i.e., increased genetic homozygosity and subsequent expression of deleterious genes). Genetic diversity of less than 90 percent of founder populations can result in compromised reproduction (Garelle et al. 2006). Gene diversity in the current captive red wolf population is approximately 89.4% of that in the founder population (Waddell 2011). Kalinowski et al. (1999) reported no inbreeding depression in the red wolf captive program. However, Rabon and Waddell (2010) reported a negative relationship between inbreeding levels and litter size in red wolves in the captive breeding program, and a positive relationship between inbreeding levels and offspring survival. Moreover, physical anomalies, such as progressive retinal atrophy, malocclusion, and undescended testicles, have been observed in a small number of
captive and wild red wolves (USFWS unpubl. data). The observable effects of inbreeding in the captive red wolf population currently do not appear to be a limiting factor in the conservation of the red wolf population. Although, additional studies exploring the extent of the effects of inbreeding will be required as inbreeding levels increase in the captive population.

By the mid-1990s, it was recognized that interbreeding between red wolves and coyotes (C. latrans var; a non-native species in the east) had produced hybrids, resulting in coyote gene introgression into the wild red wolf population (Kelly et al. 1999). To reduce interbreeding between red wolves and coyotes and limit coyote gene introgression into the wild red wolf population while simultaneously building a restored red wolf population, an adaptive management work plan was developed (Kelly 2000; Rabon et al. 2013). The adaptive management work plan employed techniques designed to use coyotes as “placeholders” by sterilizing hormonally-intact animals via vasectomy and tubal ligation, and then releasing the sterile animals back into their territory (e.g., see Bromley and Gese 2001). Essentially, “placeholder” coyotes will not interbreed with wild red wolves, and they exclude other coyotes or hybrids from the territory they hold. Early models (e.g., Hedrick 2001) also showed that sterile hybrids can function as effective “placeholders” until they are replaced by wild red wolves. Ultimately, the “placeholder” canids are replaced by red wolves either naturally (e.g. displacement) or via management actions (e.g., removal followed by pairing wild or translocated wolves into the territory).

Modeling by Hedrick (2002) projected another 60 years of this type of management would bring the red wolf NEP to the level of 99% red wolf genes,
effectively reducing coyote gene introgression to acceptable biological levels (1%). This projection implied dramatic improvement in the restored red wolf population over the former 15% coyote gene introgression reported by Kelly et al. (1999).

Interbreeding and coyote gene introgression effectively has been reduced by using non-invasive, genetics-based techniques to identify canids in the field (Adams 2002, 2006; Adams and Waits 2007; Adams et al. 2003a, 2007; Waits 2004; Waits and Paetkau 2005), incorporating pedigree-based assignment tests other testing methods to estimate genotype reliability (Miller et al. 2002, 2003), and by using sterile “placeholder” coyotes and hybrids (Adams 2006, Beck 2005, Stoskopf et al. 2005). Simulation modeling by Frederickson and Hedrick (2006) also confirmed that the sterilization method used is effective, but also emphasized long-term reproductive barriers are important, especially assortative mating and red wolf challenges to coyotes or hybrids. Since 1993, red wolf biologists have documented 41 events where a red wolf displaced or killed a non-wolf canid (coyote or hybrid). In contrast, red wolf biologists have not been able to document any evidence of reciprocal activity (i.e., usurpation or killing of red wolves) by coyotes; one documented case exists where a hybrid temporarily displaced (less a month) a wolf before the wolf reclaimed his territory.

Advances in genetics and associated field techniques provide new information helpful in managing wild red wolves. Using data on grizzly bears (*Ursus arctos*), Miller and Waits (2003) demonstrated that only a small number of individuals per generation are needed to maintain sufficient genetic diversity in a carnivore population, and we believe this to be true for red wolves. Adams (2006) noted strong evidence that a single hybridization event in 1993 resulted in most introgression of coyote genes into the red
wolf population observed to date. From this evidence, Adams (2006) infers that hybridization with coyotes has had less genetic impact on the restored red wolf population than originally thought by Kelly et al. (1999), largely because backcrossing has been rare in the population.

d. Mortality

Earlier experience during the initial five-year reintroduction of red wolf at Alligator River showed that vehicles, intraspecific aggression, and drowning were the most significant source of mortality. Additionally, one wolf was killed in a trapping incident and two were shot. The vehicle deaths were interpreted as incidental to lawful activity, which required little investigation. The trapping and shooting incidents were investigated and settlements were reached in two of the cases. No other take of red wolves occurred despite several instances of wolves visiting and having been seen on private lands. As a result, the Service revised its rule in 1995 (60 FR 18940) to include an incidental take provision limited to intentional or willful take on private lands. The basic premise of this change was that a red wolf that is incidentally taken in any type of legal activity on private lands would not be a violation of the special rule. However, a higher standard of conduct would be expected on public lands. This incidental taking provision placed trust in the public to be responsible citizens by obeying the special rule, with the intent for the Service to revisit this issue to determine if excessive taking of red wolves was occurring because of the revised special rule.
From 113 known red wolf losses in the NEP during the time period of September 1987 through December 1999, figures were calculated which showed (descending) proportions of red wolves lost to health-related/disease (25.7%), vehicle strikes (22.1%), gunshot (12.4%), intraspecific aggression (8.8%), management (6.2%), poison (3.5%), accidental loss during private trapping activity (1.8%), other suspected illegal take (1.8%), and unknown causes (17.7%). From 256 known red wolf losses in the NEP during the period of January 2000 through June 2013, figures were calculated which showed (descending) proportions of red wolves lost to gunshot (28.5%), vehicle strikes (18.0%), health-related/disease (11.3%), intraspecific aggression (5.5%), accidental loss during private trapping activity (4.7%), other suspected illegal take (4.7%), management (3.9%), poison (2.7%), and unknown causes (20.7%).

Preliminary analysis shows the majority of management mortality is accounted for by program related trapping incidents (e.g., drowning, fatal injury) and by changes in genetics identification methods earlier in the program. Initially, the Red Wolf Recovery Program used eight known gene loci to identify canids, whereas today 17 loci are used to identify canids. This change in known loci informed us that some canids formerly identified as hybrids were unfortunately wolves euthanized before newer identification methods became available. Both sets of mortality show more than half of red wolf losses are directly or indirectly related to human activity, the vast majority of which could be avoided.

e. Potential Conflicts
Habitat fragmentation remains one of the biggest challenges in red wolf recovery. Fragmentation contributed to the initial decline of the red wolf species. Viable populations of wildlife, such as red wolves and their prey, depend on movement and dispersal to maintain genetic diversity. Barriers to dispersal that fragment habitat (e.g., highways, airports, or large fenced areas) can have long-term effects upon genetic diversity. For restored populations of small size, such as the red wolf NEP, fragmenting barriers can magnify these genetic effects and potentially dampen or reverse population growth to a greater degree.

Riley et al. (2006) found a southern California freeway is a significant barrier to gene flow for western coyotes and bobcats (*Lynx rufus*). Roads or other linear barriers may also cause changes in use of spatial habitat, affecting population stability via region-wide social organization. For gray wolves (*C. lupus*), a Wisconsin highway did not influence wolf movements (Kohn et al. 1999), whereas a fenced freeway in Banff National Park, Alberta, Canada, significantly hindered movements of wolves and other carnivores (Paquet and Callaghan 1996). Animal overpass structures helped to mitigate barrier effects in Banff National Park (Clevenger and Waltho 2000, 2005). Forman et al. 2003 found that wolves prefer large, open wildlife overpass or underpass structures.

Now, fragmentation threatens red wolves in the North Carolina NEP via proposed barriers and habitat conversion on both public and private land. Proposed development projects on the Albemarle Peninsula will have short-term and long-term effects on red wolves in the NEP unless potential effects are addressed early via planning, designs, and project implementation. We intend to ask managers of large development projects on the Albemarle Peninsula to work with us in incorporating red wolf recovery needs.
Development projects could incorporate such concepts as habitat corridors, habitat linkages, population genetics, prey species, red wolf sociality, movements and dispersal.

Natural predation on red wolves is minimal, especially since red wolves are top predators in their ecosystem. Red wolves are most vulnerable as small pups exposed to threats of predation by black bears (*Ursus americanus*), bobcats, coyotes, alligators (*Alligator mississippiensis*), eagles (*Haliaeetus leucocephalus*), hawks (*Buteo* spp.), or owls (*Bubo virginianus* or *Strix varia*), though such threats are uncommon.

Historically, the red wolf was believed to be a killer of livestock and a threat to local game populations, despite lack of data to support such a belief. The red wolf poses virtually no threat to livestock in situations where its natural prey is abundant. As of June 2013, the reintroduced population of red wolves in northeastern North Carolina has been responsible for only 5 confirmed livestock depredations since 1987 (USFWS unpubl.).

In the red wolf NEP, conflicts have resulted from the hunting of coyotes (*Canis latrans*) in areas utilized by red wolves, because novice hunters may have difficulty distinguishing red wolves from coyotes. State hunting regulations allow coyotes to be hunted at any time, so coyotes provide for year-round hunting. In recent years, red wolf mortalities resulting from gunshot have increased substantially.

Conflict with traditional hunting in the release area has not occurred and is not anticipated in the future. The bulk of traditional hunting in northeastern North Carolina has been for waterfowl and migratory bird species, turkey (*Meleagris gallopavo*), deer (*Odocoileus virginianus*), bear, and small game. Although red wolves prey on game species such as deer and rabbit, there is no indication of a reduction in prey numbers due to wolves. For example, according to the State’s annual deer harvest, deer populations
have increased or remained relatively constant within the red wolf NEP. Overall, the presence of red wolves is not expected to result in constraints on hunting of wildlife or to affect economic gain landowners might receive from hunting leases.

Special Rule Changes

In the period since publication of the special rules for the experimental population introduced on Alligator River and the Great Smoky Mountains National Park, published in the Federal Register on November 19, 1986 (51 FR 41796), November 4, 1991 (56 FR 56333) and April 13, 1995 (60 FR 18941), we believe it is apparent that changes and clarification are needed in the special rule for the NEP in northeastern North Carolina due to increasing levels of anthropogenic-caused mortality in red wolves, public misconceptions about red wolves, and changes in the strategies to manage red wolves and other wild canids. The current special rule associated with the northeastern North Carolina NEP rule is no longer effective to address the current and future management needs of the red wolf, and is precluding the development of sound management strategies for this species. The proposed changes also will clarify reintroduced population information.

First, we believe the Alligator River population name is misleading, and creates confusion as to its geographic location and boundary. Furthermore, the three island propagation sites were identified in the existing NEP rule, and red wolves on these sites were identified as endangered, but we believe the text could more clearly explain why they were not included under the 10(j) designation. Moreover, only two of the island
propagation sites are currently used (i.e., Saint Vincent NWR) or are likely to be used in the future (i.e., Bulls island at Cape Romain NWR). The Horn Island site (at Gulf Islands National Seashore) receives too many public visitors for it to be an effective island propagation site for endangered red wolves. Thus, we are proposing to revise the existing NEP special rule to (1) change the name of the Alligator River population to the Northeastern North Carolina (NENC) population to reduce public confusion of the location of the population; (2) clarify the boundaries of the NENC population; (3) remove reference to the GSMNP population because the 1998 rule did not propose the appropriate edit to the rule in 50 CFR 17.84; and, (4) clarify that the island propagation sites are not part of the nonessential experimental population and indeed wolves on these sites are considered to have full endangered status under the Act.

Additionally, the RWRP has faced many new issues in the intervening years since the existing NEP rule was published in 1995. Accordingly, we have adjusted our efforts to address these challenges. However, the NEP rule was not written with the flexibility to adapt management strategies for emerging issues. For example, the issue of red wolf-coyote hybridization was not fully considered in the management of the reintroduced population until the organization of the Population Habitat Viability Assessment (PHVA) in 1999 and the implementation of the Adaptive Management Plan (AMP) in 2000 (revised, current edition dated 2013). In the course of implementing the AMP, it was determined that using sterile coyotes as “placeholders” on the landscape was an effective means to limit the introgression of coyotes into the red wolf population. Sterile coyotes will hold a territory from other intact coyotes until they are driven out or replaced by a wolf or breeding wolf pair. Unfortunately, the current NEP rule does not support such a
management strategy because it requires, in part, the removal of wolves (and de facto coyotes) on private lands at the landowner’s request. Furthermore, our current understanding of canid movements suggests that wolves (and coyotes) removed from an area will likely return to that same area upon release unless the animal is biologically driven to disperse, which is typically age-dependent, making the removal of most wolves (and coyotes) from a particular area ineffectual. Accordingly, we are proposing to revise the NEP rule also to reflect the changes in our management strategies for red wolves and to facilitate the development of management strategies for other canids of interest (e.g., coyotes) only as they relate to recovery efforts for the red wolf.

Finally since 2005, the red wolf NEP has witnessed a steady increase in the number of red wolves killed by gunshot or other similar illegal activity. We have recorded 112 wolves taken as the result of anthropogenic-caused activities (e.g., gunshot, private trapping, poisoning) since the wolves were reintroduced in 1987. Beginning in 2005, the number of wolves killed as a result of these types of actions increased to nearly seven wolves per year (range 5-10 wolves/year), compared to about 2 wolves lost per year (range 0-4 wolves/year) prior to 2005. Furthermore, about 54% of the wolves killed have been of breeding age (≥2 years old). This level of take appears to be having a negative effect on population growth because it results in the loss of a breeding pair and their potential reproductive effort. In addition, responding to the loss of wolves requires an unnecessary reallocation of time and resources to counter its effects (e.g., increased hybridization, increases in the number of coyotes filling space created by the loss of a wolf, reduced recruitment of red wolves). We believe this rise in anthropogenic-caused mortality is the result of (1) a misunderstanding of the legality of actions that result in
take, (2) a misconception of activities that are exempt from take under the NEP designation; (3) general misconceptions about red wolves and the presence of coyotes; and, (4) an increased interest by the public and the State of North Carolina (i.e., NCWRC) to “manage” nuisance coyotes. Accordingly, we are proposing to revise the NEP special rule to also clarify the legality of actions that constitute take and the exemptions for take of red wolves as it relates to our management strategies (described above) and to reduce the potential for illegal anthropogenic-caused mortality (e.g., gunshot, private trapping, poisoning).

Peer Review

In accordance with our policy on peer review, published on July 1, 1994 (59 FR 34270), we will provide copies of this proposed rule to three or more appropriate and independent specialists in order to solicit comments on the scientific data and assumptions underlying this proposed revision. The purpose of such review is to ensure that the proposed revision is based on the best scientific information available. We will invite these peer reviewers to comment during the public comment period and will consider their comments and information on this proposed rule during preparation of a final determination.

Required Determinations

Regulatory Planning and Review (E.O. 12866)
The Office of Management and Budget (OMB) has determined that this proposed rule is not significant under Executive Order 12866 (E.O. 12866). OMB bases its determination upon the following four criteria:

(a) Whether the rule will have an annual effect of $100 million or more on the economy or adversely affect an economic sector, productivity, jobs, the environment, or other units of the government.

(b) Whether the rule will create inconsistencies with other Federal agencies’ actions.

(c) Whether the rule will materially affect entitlements, grants, user fees, loan programs, or the rights and obligations of their recipients.

(d) Whether the rule raises novel legal or policy issues.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996; 5 U.S.C. 801 et seq.), whenever a Federal agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare, and make available for public comment, a regulatory flexibility analysis that describes the effect of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of an agency certifies that the rule will not have a significant economic impact on a substantial number of small entities.
The SBREFA amended the Regulatory Flexibility Act to require Federal agencies to provide a statement of the factual basis for certifying that a rule will not have a significant economic impact on a substantial number of small entities. We certify that this rule would not have a significant economic effect on a substantial number of small entities. The following discussion explains our rationale.

If this proposal is finalized, the area affected by this rule includes the State of North Carolina. Because NEP designation does not establish substantial new regulation of activities, we do not expect this rule would have any significant effect on recreational, agricultural, or development activities. Because of the regulatory flexibility for Federal agency actions provided by the NEP designation and the exemption for incidental take in the special rule, we do not expect this rule to have significant effects on any activities within Federal, State, or private lands within the proposed NEP.

On National Wildlife Refuges within the NEP, Federal action agencies would be required to consult with us, under section 7(a)(2) of the Act, on any of their activities that may affect the red wolf. In portions of the NEP outside of National Wildlife Refuge lands, the population is treated for 7(a)(2) purposes as proposed for listing and Federal action agencies are not required to consult on their activities. Section 7(a)(4) requires Federal agencies to confer (rather than consult) with the Service on actions that are likely to jeopardize the continued existence of a proposed species. But because the NEP is, by definition, not essential to the continued existence of the species, and because the results of a conference are advisory in nature and do not restrict agencies from carrying out, funding, or authorizing activities, conferring will likely help to ensure that the proposed activities do not unnecessarily affect never be required for the red wolf population within

Comment [RD4]: I don’t care for these statements. We have worked hard to get federal agencies to confer with us so that we can discuss options for their projects to minimize impacts to red wolves. I have changed the wording around to encourage conferring.

Comment [BK5]: Mike I left this wording in here and question to get your take on it (compared to other 10 (j) rules you and I have done)
the NEP area. Furthermore, the results of a conference are advisory in nature and do not restrict agencies from carrying out, funding, or authorizing activities.

In addition, section 7(a)(1) requires Federal agencies to use their authorities to carry out programs to further the conservation of listed species, which would apply on any lands within the NEP area. As a result, and in accordance with these regulations, some modifications to proposed Federal actions within the NEP area may occur to benefit the red wolf, but we do not expect projects to be halted or substantially modified as a result of these regulations.

The principal activities on private property within the NEP are private and large-scale commercial agriculture, large-scale silviculture, and recreation. The presence of red wolves would likely not affect the use of lands for these purposes because there would be no new or additional economic or regulatory restrictions imposed upon States, non-Federal entities, or members of the public due to the presence of red wolves. Therefore, this rulemaking is not expected to have any significant adverse impacts to recreation, agriculture, silviculture, or any development activities.

*Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)*

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.):

(1) This rule would not “significantly or uniquely” affect small governments. We have determined and certify pursuant to the Unfunded Mandates Reform Act, 2 U.S.C. 1502 et seq., that, once made final, this rulemaking would not impose a cost of $100 million or more in any given year on local or State governments or private entities. A
Small Government Agency Plan is not required. Small governments would not be affected because the proposed NEP designation would not place additional requirements on any city, county, or other local municipalities.

(2) This rule would not produce a Federal mandate of $100 million or greater in any year (i.e., it is not a “significant regulatory action” under the Unfunded Mandates Reform Act). This proposed NEP designation for red wolves would not impose any additional management or protection requirements on the States or other entities.

Takings (E.O. 12630)

In accordance with Executive Order 12630, this rule does not have significant takings implications. This rule would allow for the taking of reintroduced red wolves when such take is incidental to an otherwise legal activity and other activities that are in accordance with Federal, State, and local laws and regulations. Therefore, we do not believe the occurrence of red wolves would conflict with existing human activities or hinder use of private and public lands within the proposed NEP area.

A takings implication assessment is not required because this rule: (1) would not effectively compel a property owner to suffer a physical invasion of property, and (2) would not deny all economically beneficial or productive use of the land or aquatic resources. This rule would substantially advance a legitimate government interest (conservation and recovery of a listed mammal species) and would not present a barrier to all reasonable and expected beneficial use of private property.
In accordance with Executive Order 13132, we have considered whether this proposed rule has significant Federalism effects and have determined that a Federalism assessment is not required. This rule would not have substantial direct effects on the States, on the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government. In keeping with Department of the Interior policy, we requested information from and coordinated development of this proposed rule with the affected resource agencies in North Carolina. Achieving the recovery goals for this species will contribute to its eventual delisting and return to State management. No intrusion on State policy or administration is expected, roles or responsibilities of Federal or State governments would not change, and fiscal capacity would not be substantially directly affected.

The proposed special rule operates to maintain the existing relationship between the State and the Federal Government and is being undertaken in coordination with the State of North Carolina. We have cooperated with NCWRC in the preparation of this proposed rule. Therefore, this proposed rule does not have significant Federalism effects or implications to warrant the preparation of a Federalism Assessment pursuant to the provisions of Executive Order 13132.

Civil Justice Reform
In accordance with Executive Order 12988 (February 7, 1996; 61 FR 4729), the Office of the Solicitor has determined that this rule would not unduly burden the judicial system and would meet the requirements of sections (3)(a) and (3)(b)(2) of the Order.

**Paperwork Reduction Act**

Office of Management and Budget (OMB) regulations at 5 CFR 1320, which implement provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), require that Federal agencies obtain approval from OMB before collecting information from the public. A Federal agency may not conduct or sponsor and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. This proposed rule does not include any new collections of information that require approval by OMB under the Paperwork Reduction Act. OMB has approved our collection of information associated with reporting the taking of experimental populations (50 CFR 17.84(p)(6)) and assigned control number 1018-0095, which expires March 31, 2011.

**National Environmental Policy Act**

We have prepared a draft environmental assessment for this proposed rule under the National Environmental Policy Act of 1969, 42 U.S.C. § 4321 et seq. It is available from the Red Wolf Recovery Program Office (see **ADDRESSES**) and http://www.regulations.gov.

Comment [RD6]: If this is still necessary, then we will have to prepare an EA before publication in the FR.
**Government-to-Government Relationship with Tribes**

In accordance with the President’s memorandum of April 29, 1994, “Government-to-Government Relations with Native American Tribal Governments” (59 FR 229511), Executive Order 13175, and the Department of the Interior Manual Chapter 512 DM 2, we have considered possible effects on Native American Tribes within the NEP area about this proposal. There are no Native American Tribes within the area covered by the NEP. If future activities resulting from this proposed rule may affect Tribal resources, a Plan of Cooperation will be developed with the affected Tribe or Tribes.

**Energy Supply, Distribution, or Use (E.O. 13211)**

On May 18, 2001, the President issued Executive Order 13211 on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. This rule is not expected to significantly affect energy supplies, distribution, and use. Therefore, this action is not a significant energy action and no Statement of Energy Effects is required.

**Clarity of This Regulation (E.O. 12866)**
We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(a) Be logically organized;
(b) Use the active voice to address readers directly;
(c) Use clear language rather than jargon;
(d) Be divided into short sections and sentences; and
(e) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in the ADDRESSES section. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

References Cited

A complete list of all references cited in this proposed rule is available upon request from the Red Wolf Recovery Program Office (see FOR FURTHER INFORMATION CONTACT).

Authors
The principal authors of this rule are Art Beyer and David Rabon of the Red Wolf Recovery Program Office (see FOR FURTHER INFORMATION CONTACT).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:


2. Amend § 17.11(h) by revising the existing entry for “Wolf, red” under “MAMMALS” to read as follows:
§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *
<table>
<thead>
<tr>
<th>Species</th>
<th>Historic range</th>
<th>Vertebrate population where endangered or threatened</th>
<th>Status</th>
<th>When listed</th>
<th>Critical habitat</th>
<th>Special rules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wolf, red</td>
<td>US.A. (SE U.S.A., west to central Texas).</td>
<td>Entire, except where listed as an Experimental Population.</td>
<td>E</td>
<td>1, 248, 449, 579, ___</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Do...........</td>
<td>Do...........</td>
<td>U.S.A. (portions of NC – see §)</td>
<td>XN</td>
<td>248, 449,</td>
<td>NA</td>
<td>17.84(c)</td>
</tr>
</tbody>
</table>
3. Amend § 17.84 by section (c) to read as follows:

§ 17.84 Special rules—vertebrates.
* * * * *

(c) Red wolf (Canis rufus).

(1) The red wolf population identified in paragraphs (c)(6) of this section is a nonessential experimental population (NEP), as defined in § 17.80. The experimental population status means the reintroduced population will be treated as a threatened species, rather than an endangered species, for the purposes of sections 4(d) and 9 of the Act, which regulate taking and other actions.

(2) No person may take [as defined at 16 U.S.C. 1532 (19) and restated in paragraph (c)(11) of this section] this species except as provided in paragraphs (c)(3)(i) through (viii) of this section. The Fish and Wildlife Service (Service) may investigate each take of a red wolf, and may refer the take of a red wolf contrary to this rule to the appropriate authorities for prosecution. For any red wolves taken as provided in paragraphs (c)(3) (ii), (iii), (vii) and (viii), the taking must be reported to the Red Wolf Recovery Coordinator as provided in paragraph (ix). This reporting and subsequent information is for research purposes and is important to the Red Wolf Recovery Program.

If a person in the red wolf NEP area defined in (c)(6) shoots, wounds, kills, traps, captures, or collects an animal that looks like a canid, that individual must immediately report it to the Red Wolf Recovery Coordinator as provided in paragraph (ix).
addition, it is prohibited for any person to make contact with a telemetry-collared red wolf or a telemetry-collared canid in the NEP area for the purpose of removing such equipment that is secured for research purposes in the pursuit of recovery of the red wolf. The red wolf is fully protected under the Endangered Species Act from take except in the few instances identified in paragraphs (c)(3)(i) through (viii) of this section.

(3)(i) Any person with a valid permit issued by the Service under Sec. 17.32 may take red wolves in the NEP area defined in (c)(6) for educational purposes, scientific purposes, the enhancement of propagation or survival of the species, zoological exhibition, and other conservation purposes consistent with the Act and in accordance with applicable State fish and wildlife conservation laws and regulations.

(ii) Any person may take red wolves in defense of their own life or the lives of others, provided that such taking shall be reported immediately to the Red Wolf Recovery Program Coordinator or the appropriate designated authority identified in paragraph (c)(3)(ix) of this section.

(iii) Any private landowner, or any other individual having his or her permission, may take red wolves found on his or her property in the area defined in paragraph (c)(6) of this section when the wolves are involved in a “depredation” [see definition in paragraph (c)(11) of this section], provided that freshly wounded or killed livestock or pets are evident and that evidence exists that the animal was killed by a red wolf, and provided that such taking is reported immediately to the Red Wolf Recovery Program Coordinator identified in paragraph (c)(3)(ix) of this section. The Service, or other Service-authorized agencies, will confirm cases of wolf depredation on domestic and livestock animals.
(iv) Any private landowner, or any other individual having his or her permission, may “harass” [see definition in paragraph (c)(11)] red wolves found on his or her property in the area defined in paragraph (c)(6) of this section, provided that wolves are not being purposely attracted, tracked, searched out, or chased and then harassed, and provided that such harassment to the red wolf is “opportunistic, noninjurious harassment” [see definition in paragraph (c)(11)], and provided that such taking is reported immediately to the Red Wolf Recovery Program Coordinator identified in paragraph (c)(3)(ix) of this section.

(v) Any private landowner may take red wolves found on his or her property in the area defined in paragraph (c)(6) of this section, provided that the wolves have been determined to be “problem wolves” [see definition in paragraph (c)(11)], and after efforts by Red Wolf Recovery Program personnel to capture such animals have been abandoned, and provided that the Red Wolf Recovery Program Coordinator has approved such actions in writing and all such taking is reported immediately to the Red Wolf Recovery Program Coordinator identified in paragraph (c)(3)(ix) of this section.

(vi) The provisions of paragraphs (3)(ii) through (v) of this section also apply to red wolves found in areas outside the area defined in paragraph (c)(6) of this section, with the exception that reporting of taking or harassment to the Red Wolf Recovery Program Coordinator identified in paragraph (c)(3)(ix) of this section, while encouraged, is not required.

(vii) Any employee or agent of the Service who is designated for such purposes, when acting in the course of official duties, may take a red wolf if such action is necessary to:
(a) Aid a sick, injured, or orphaned specimen;

(b) Dispose of a dead specimen, or salvage a dead specimen which may be useful for scientific study;

(c) Take a red wolf which constitutes a demonstrable but non-immediate threat to human safety, or which is found to constitute a problem if it has not been possible to otherwise eliminate such depredation or loss of personal property, provided that such taking must be done in a humane manner, and may involve killing or injuring the wolf only if it has not been possible to eliminate such threat by live capturing and releasing the wolf unharmed on a “public lands” [see definition in paragraph (c)(11)] within the area describe in paragraph (c)(6) of this section, or on private lands where permission is granted by the landowner.

(viii) Personnel authorized by the Service may take any red wolf in the area defined in paragraph (c)(6) in a manner consistent with a Service-approved management plan, special management measure, or a valid permit issued by the Service under Sec. 17.32. This may include, but is not limited to, capture and translocation of wolves that prey on livestock; attack pets or domestic animals other than livestock on private land; “impact game populations in ways which may inhibit further wolf recovery” [see definition in paragraph (c)(11)]; are considered problem wolves; endanger themselves by their presence in a military impact area; need aid or veterinary care; or are necessary for authorized scientific, research, or management purposes. Lethal methods of take may be used when reasonable attempts to capture wolves alive fail and when the Service determines that immediate removal of a particular red wolf or wolves from the wild is necessary. Personnel authorized by the Service may use leg-hold traps and any other
effective device or method for capturing or controlling wolves to carry out any measure that is a part of a Service-approved management plan. The disposition of all wolves (live or dead) or their parts taken as part of a Service-authorized management activity must follow provisions in Service-approved management plans or interagency agreements or procedures approved by the Service on a case-by-case basis.

(ix) Any taking pursuant to subparagraphs (c)(3)(i) through (v) of this section must be immediately reported to the Red Wolf Recovery Program Coordinator, U.S. Fish and Wildlife Service, Manteo, North Carolina, telephone 252-473-1132 or 1-855-4WOLVES (1-855-496-5837). The date, time, exact location, and circumstances of the taking should be reported for each incident. The Red Wolf Recovery Program Coordinator will determine the disposition of any live or dead specimens.

(4) No person shall possess, sell, deliver, carry, transport, ship, import, or export by any means whatsoever, any such species taken in violation of these regulations or in violation of applicable State fish and wildlife laws or regulations or the Act. If a person kills, injures, or traps a red wolf, finds a dead or injured red wolf, or finds a red wolf in a leg-hold trap, it is forbidden to disturb it (unless instructed to do so by the Service or an authorized agent of the Service). However, the person shall minimize the disturbance of the area around the animal, and report the incident immediately to the Red Wolf Recovery Program Coordinator as provided in subparagraph (c)(3)(ix) of this section for investigation.

(5) It is unlawful for any person to attempt to commit, solicit another to commit, or cause to be committed, any offense defined in paragraphs (c)(2) through (4) of this section.
(6)(i) With the exception of the population(s) identified below, the red wolf is believed to be extirpated from the wild. Therefore, there are no other extant populations with which the experimental population could come into contact.

(ii) The red wolf reintroduction site in eastern North Carolina encompasses Dare, Hyde, Tyrrell, Washington, and Beaufort Counties, and is within the historic range of the species. This reintroduced population of wolves is known as the Northeastern North Carolina (NENC) population.

(7) No land use restrictions will be imposed on private lands for red wolf recovery without the concurrence of the landowner.

(8) On “public lands” [see definition in paragraph (c)(11)], the Service and cooperating agencies may temporarily restrict human access and “disturbance-causing land-use activities” [see definition in paragraph (c)(11)] around release pens when wolves are in them, around active dens between April 1 and June 30, and around active wolf “rendezvous sites” [see definition in paragraph (c)(11)] between June 1 and September 30, as necessary.

(9)(i) The reintroduced population(s) will be continuously and closely monitored for the duration of the reintroduction, generally using radio telemetry, as appropriate.

(ii) Any red wolf that is determined to be in need of special care will be recaptured, if possible, by Service and/or a designated authority and will be given appropriate care. Such wolves will be released on “public lands” [see definition in paragraph (c)(11)] or on private lands where permission is granted by the landowner, as soon as possible, unless physical or behavioral problems make it necessary to return the animal to a captive facility. Red wolves will be vaccinated against diseases prevalent in canids prior to
release and/or when captured in the course of authorized management actions, if
necessary and appropriate.

(iii) When a landowner requests the removal of a wolf or reports a problem
concerning a wolf [see definition of a “problem wolf” in paragraph (c)(11)], Service
personnel will respond within 48 hours and will attempt to determine if a wolf is
responsible for the reported problem. If a wolf is determined to be responsible, the
application of some behavioral modification technique and/or the capture and removal of
the offending wolf will be attempted if feasible. If capture attempts are not successful or
feasible, lethal means may be employed. If it is determined that a wolf is present but not
causing a problem, Service personnel will assess the situation and determine if efforts to
capture the wolf are warranted. The criteria upon which this decision will be made
include: the history of problems in the area in question, available authorized personnel,
environmental conditions that may limit retrieval of the animal, the presence of wolf or
other wild canid sign, the history of wolf or other canid presence in the area in question,
and the known presence of a wolf or other wild canid in the area based on radio telemetry
data. Any wolves captured will be given appropriate care and will be released unharmed
on “public lands” [see definition in paragraph (c)(11)] within the area described in
paragraph (6), or on private lands where permission is granted by the landowner.

(10) The status of the reintroduced red wolf population will be reevaluated
periodically, to determine future management needs. This review will take into account
the reproductive success of the mated pairs, movement patterns of individual animals,
food habits, and the overall health of the populations.

(11) Definitions. Key terms used in this rule have the following definitions.
**Depredation** -- the confirmed killing or wounding of lawfully present domestic animals by one or more wolves, or when a wolf or wolves are actively engaged in the pursuit and grasping, biting, attacking, wounding, or feeding upon livestock that are alive. If wolves are observed feeding on a livestock carcass, it cannot be assumed that wolves killed the livestock because livestock can die from many causes and wolves will feed on carrion. The Service, or other Service-authorized agencies, will confirm cases of wolf depredation on domestic and livestock animals.

**Disturbance-causing land-use activities** -- any land use activity that the Service determines could adversely affect reproductive success, natural behavior, or survival of red wolves. These activities may be temporarily restricted within a radius of release pens, active dens, and rendezvous sites [see definition below]. Such activities may include, but are not limited to: timber or wood harvesting, management-ignited fire, camping outside designated campgrounds, livestock drives, off-road vehicle use, hunting, and any other use or activity with the potential to disturb wolves. The following activities are specifically excluded from this definition – (1) Vehicle access over established roads to private property and to areas on “public lands” [see definition below] where legally permitted activities are ongoing if no reasonable alternative route exists; (2) Use of “public lands” [see definition below] as safety buffer zones for military activities; (3) Prescribed natural fire except in the vicinity of release pens; and (4) Any authorized, specific land use that was active and ongoing at the time wolves chose to locate a den or rendezvous site nearby.

**Harass** – as defined in § 17.3, the “intentional or negligent act or omission which creates the likelihood of injury to the wildlife by annoying it to such an extent as to
significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering”. This special rule permits only “opportunistic, noninjurious harassment” (see definition below).

Impact on game populations in ways which may inhibit further wolf recovery -- wolf predation that is shown to be a primary cause of ungulate (deer) population declines (i.e., greater than 50 percent of documented adult or young mortality). When such conditions exist, wolves may be moved to reduce ungulate mortality rates and assist in herd recovery, but only in conjunction with application of other common, professionally acceptable, wildlife management techniques.

Opportunistic, noninjurious harassment (see “harass”) – harassment of the wolf as the wolf presents itself (e.g., the wolf travels onto and is observed on private land or near livestock) and that does not cause bodily injury or death to the wolf. This is the only type of harassment permitted by this rule. A person cannot track, attract, search out, or chase a wolf and then harass it. The basic intent of harassment permitted by this rule is to scare wolves away from the immediate area. Examples of permitted types of harassment include, but are not limited to, approaching wolves and discharging firearms or other projectile launching devices in proximity to, but not in the direction of, wolves; throwing objects in the general direction of but not at wolves; and, making any loud noise in proximity to wolves. Any discharge of weapons or projectile launching devices should be done in compliance with all applicable laws and regulations.

Problem wolves -- red wolves that:

(1) Directly cause the loss or damage to personal property (e.g., livestock, pets, farm materials and equipment, irrigation hoses);
(2) Exhibit abnormal behavior, such as tolerance of people or human residences or other facilities, that suggests that the red wolf may become a serious problem.

*Public lands* -- lands under the administration of Federal agencies including, but not limited to, the U.S. Fish and Wildlife Service, National Park Service, and Department of Defense; and State-owned or -managed lands within the boundaries of the NEP area.

*Rendezvous sites* -- gathering and activity areas regularly used by a litter of young wolf pups after they have emerged from the den. Several sites may be used in succession.

*Take* -- as defined in the Act, 16 U.S.C. § 1532 (19), “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct”.

Also, see definitions of “harass” and “opportunistic, noninjurious harassment.”

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Dated: ____________

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Assistant Secretary for Fish and Wildlife and Parks

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