

CANIS RUFUS: HOW THE U.S. FISH AND WILDLIFE SERVICE IS FAILING THE RED WOLF

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INTRODUCTION

Conservation is a slow moving process and efforts to restore the red wolf population are no exception.¹ The red wolf is native to North America, but now exclusively reside in the United States.² Scientists recorded descriptions of the red wolf as early as 1791, and taxonomists believe they have existed from 13 thousand to 130 thousand years.³ Now, however, the red wolf has declined to a dwindling, wild population in North Carolina.⁴ Scientists first noticed this decline during the 1960s.⁵ In 1967, the red wolf was listed as an endangered species under provisions of the Endangered Species Preservation Act.⁶ The Act provided a series of protections that balanced the needs of landowners and red wolves.⁷ Nevertheless, in the 1970s, both habitat loss and predator control programs pushed the red wolf populations to the Gulf Coast regions of Texas and Louisiana.⁸ In fact, the uncontrolled killing of the species during that time nearly led to its extermination.⁹ Over

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¹ Davis R. Rabon, Jr., *Free to Wander*, INT'L WOLF, Winter 2007, at 15.

² *Red Wolf*, U.S. FISH & WILDLIFE SERV., https://www.fws.gov/redwolf/Images/RedWolfFacts_final.pdf (last visited Oct. 28, 2016) [<https://perma.cc/2G2Z-QJU6>].

³ Diane Hendry, *Red Wolf Restoration: A 20-Year Journey*, INT'L WOLF, Winter 2007, at 4.

⁴ Letter from Collette Adkins, Biological Diversity, to Aaron Valenta, Chief, Div. of Restoration and Recovery U.S. Fish and Wildlife Serv. 4 (Dec. 21, 2016), https://redwolves.com/newsite/wp-content/uploads/2016/01/CBD_five_year_review.pdf [<https://perma.cc/SEG8-D6S9>].

⁵ Hendry, *supra* note 3.

⁶ *Id.* at 5.

⁷ *Id.*

⁸ *Red Wolf*, *supra* note 2.

⁹ Letter from Raul Grijalva, Ranking Member, House Comm. on Nat'l Res., to Sally Jewell, Sec'y, Dept. of the Interior, at 1 (Dec. 7, 2016), <http://democrats-naturalresources.house.gov/imo/media/doc/Dec.%207%20Letter%20to%20Secretary%20Je>

a period of six years, from 1974-1980, over 400 animals were captured and evaluated for red wolf morphological characteristics.¹⁰ Of the 400 animals, only seventeen were pure red wolves.¹¹ Fourteen of those seventeen were selected for the captive breeding program at Point Defiance Zoo and Aquarium.¹² Pups born as a result of the captive breeding program were released at Bulls Island, off the coast of South Carolina.¹³ Once the animals had been tracked and recaptured, the experimental release was considered a success, as it demonstrated the recovery program's potential.¹⁴ At this time, in order for recovery efforts to proceed, the red wolf was declared biologically extinct.¹⁵ "By 1987, enough red wolves were bred in captivity to begin a restoration program at Alligator National Wildlife Refuge in northeastern North Carolina."¹⁶ Because the number of captive-bred wolves reached a sufficient level, eight were released in the Alligator River National Wildlife Refuge as an experimental population.¹⁷ The restoration area spanned five counties in northeastern North Carolina, totaling 1.7 million acres.¹⁸ In the 1990s, the population grew to 100 wolves and peaked at 130 in 2006.¹⁹ It was a success. The restoration program is recognized as not only being "one of the most innovative carnivore restoration programs in the world," but also as "the gold standard for [species] reintroduction."²⁰

well%20on%20Maintaining%20Red%20Wolf%20Recovery%20Efforts.pdf [perma.cc/7C6Y-G8BW].

¹⁰ Hendry, *supra* note 3, at 5.

¹¹ *Id.*

¹² *Id.*

¹³ *Id.*

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *History of the Red Wolf Recovery Program*, U.S. FISH & WILDLIFE SERV., <https://www.fws.gov/redwolf/redwolfrecovery.html> (last updated June 29, 2016) [https://perma.cc/S5D5-H9RK].

¹⁷ Lisa Sorg, *U.S. Fish and Wildlife Service to Scale Back Endangered Red Wolf Program in NC, Send Some Animals to Zoos*, NC POLICY WATCH (Sept. 14, 2016), <http://www.ncpolicywatch.com/2016/09/14/u-s-fish-and-wildlife-service-to-scale-back-endangered-red-wolf-program-in-nc-send-some-animals-to-zoos/> [https://perma.cc/5QH8-NSZD].

¹⁸ The five counties were Dare, Tyrrell, Washington, Beaufort, and Hyde. Hendry, *supra* note 3, at 5.

¹⁹ *Red Wolf Coal. v. U.S. Fish and Wildlife Serv.*, 210 F.Supp.3d 796, 799 (E.D.N.C. 2016).

²⁰ Letter from Raul Grijalva to Sally Jewell, *supra* note 9, at 2.

But this success was short lived. Due to the Federal Wildlife Service's failure to restrict North Carolina's authorization of nighttime coyote hunting, the population declined by more than fifty percent in just two years.²¹ After several red wolves consequently died in 2013, environmental organizations successfully challenged nighttime hunting in court, leading to an immediate drop in red wolf mortality.²² While seen as a victory to red wolf conservationists, the United States Fish and Wildlife Service (FWS) disagreed.²³ In fact, the FWS responded by eliminating key positions (e.g., the Red Wolf Recovery Coordinator), staffing, and programming—including the widely praised pup-fostering activities.²⁴

The FWS estimates that between forty-five and sixty wild red wolves exist today.²⁵ Cornelia Hutt, chairwoman of the Board of Directors for the Red Wolf Coalition, however, stated that the FWS estimate is inflated and that there are actually closer to thirty to forty-five remaining wolves.²⁶ Between 2013 and 2016, the FWS reported approximately fifty red wolf deaths, with more than half resulting from human-related causes.²⁷ Conservationists believe that humans continue to kill red wolves because of their "non-essential" classification under the Endangered Species Act (ESA). The non-essential classification allows humans to kill the wolves with no penalties for the FWS or private landowners.²⁸ The number of red wolves in the wild also decreased when the FWS halted its release efforts in 2015.²⁹ After conducting a review of the Red Wolf Recovery Program (Recovery Program), the FWS announced its plan to capture and remove the remaining wild population to zoos across the United States in order to aid the

²¹ Joanne Klein, *Red Wolves Need Emergency Protection*, *Conservationists Say*, N.Y. TIMES (May 31, 2016), http://www.nytimes.com/2016/06/01/science/red-wolves-north-carolina-fish-and-wildlife-service.html?_r=0 [perma.cc/R7M9-CAMN].

²² Letter from Sierra Weaver, Senior Attorney, S. Envtl. Law Ctr., to Aaron Valenta, Chief, Div. of Restoration and Recovery U.S. Fish and Wildlife Serv. 3 (Dec. 30, 2016), https://redwolves.com/wp/wp-content/uploads/2016/01/SELC_five_year_review.pdf [https://perma.cc/4CHW-2EX4].

²³ See Letter from Raul Grijalva to Sally Jewell, *supra* note 9, at 2.

²⁴ *Id.*

²⁵ *Mortality Table*, U.S. FISH & WILDLIFE SERV., <https://www.fws.gov/redwolf/Images/Mortalitytable.pdf> [perma.cc/7PDL-LUSW].

²⁶ Letter from Sierra Weaver to Aaron Valenta, *supra* note 23, at 6.

²⁷ *Mortality Table*, *supra* note 26.

²⁸ Klein, *supra* note 22.

²⁹ Letter from Sierra Weaver to Aaron Valenta, *supra* note 23, at 6.

efforts of sustaining the current captive population.³⁰ In response, the Red Wolf Coalition sued the FWS in 2016 and received a preliminary injunction, stopping wild red wolf removal from private lands.³¹ Though timely, the decision was not enough.

This Note first discusses the competing interests of the FWS, the Recovery Program, private land owners, and the remaining red wolf population (including the recent preservation advances made by the FWS and the North Carolina Wildlife Resources Commission). Second, this Note argues that, while the FWS review revealed detrimental issues in the current program, placing the world's only wild red wolf population back into captivity is actually a step back in the fight to recovery. Third, this Note further argues that the FWS should be estopped from wild red wolf removal indefinitely, and offers alternative strategies for sustaining both wild and captive populations.

I. RECENT DEVELOPMENTS BY THE U.S. FISH & WILDLIFE SERVICE

In 2015, the FWS began a review that was to be a two-step evaluation process of the Red Wolf Recovery Program.³² The FWS and the North Carolina Wildlife Resources Commission worked closely with private land owners, academic institutions, and non-governmental organizations to develop four components of information:³³ (1) the appropriate taxonomic designation and historic distribution of the red wolf; (2) the sustainability of captive red wolf populations; (3) the recovery needs of red wolf populations in response to threats such as coyote hybridization, hunting, and climate change; and (4) the co-existence of people and red wolves.³⁴ Based on the information gathered during the review, the FWS then extended its review to include a Population Viability Analysis

³⁰ Sorg, *supra* note 17.

³¹ *Id.* at 802.

³² Jeff Fleming, *Science Leads Fish and Wildlife Service to Significant Changes for Red Wolf Recovery*, U.S. FISH & WILDLIFE SERV. (Sept. 12, 2016), https://www.fws.gov/news/ShowNews.cfm?ref=science-leads-fish-and-wildlife-service-to-significant-changes-for-red-&_ID=35794 [perma.cc/3LDZ-USSE].

³³ *Red Wolf Recovery Program - Questions and Answers*, U.S. FISH & WILDLIFE SERV., <https://www.fws.gov/redwolf/faq.html> (last updated June 29, 2016).

³⁴ *Id.*

(Viability Analysis).³⁵ Although the FWS predicted its review would be completed by the end of 2015, the final report was not issued until June 2016.³⁶

The June 2016 Viability Analysis revealed that current conditions, with no improvements, would result in the extinction of the red wolf in as little as eight years.³⁷ It further predicted the outcomes of several scenarios.³⁸ Notably, when addressing the viability of a captive population absorbing the remaining wild population, the Viability Analysis predicted that doing so would not greatly impact the captive population.³⁹

Accordingly, in September of 2016, the FWS announced its new agenda:⁴⁰ restricting the number of wild wolves while focusing on placing them in captivity.⁴¹ The FWS recommended continued support for the Red Wolf Recovery Program and shifts in resource allocation, to focus on the captive population and find new experimental project sites.⁴² The FWS intended to move quickly to secure the captive population because the FWS believed it was growing increasingly unsustainable.⁴³ Results also showed that the captive population, in order to remain strong enough to support population recovery goals, would need to increase its viability by enlarging the space needed to support reproductive improvements.⁴⁴ Because both the captive and wild populations were small in numbers, inbreeding remained an issue.⁴⁵ Scientists conducting the Viability Analysis advised that the “best strategy to maintain the species’ long-term genetic health” would be to

³⁵ *Id.*

³⁶ Lisa Faust et al, *Red Wolf (Canis rufus) Population Viability Analysis – Final Report for U.S. Fish and Wildlife Service (USFWS): Feasibility Study*, (June 10, 2016), <https://www.fws.gov/southeast/pdf/report/red-wolf-population-viability-analysis-faust-et-al-2016.pdf> [<https://perma.cc/LPX7-ZWH3>].

³⁷ *Id.* at 3.

³⁸ *Id.* at 20.

³⁹ *Id.*

⁴⁰ Fleming, *supra* note 35.

⁴¹ Sorg, *supra* note 17.

⁴² Memorandum from Cynthia Dohner, Assistant Regional Director for Ecological Services, Southeast Region to the Regional Director, Southeast Region 5 (Sept. 12, 2016), <https://www.fws.gov/redwolf/docs/recommended-decisions-in-response-to-red-wolf-recovery-program-evaluation.pdf> [<https://perma.cc/YXS4-H7X9>].

⁴³ Fleming, *supra* note 35.

⁴⁴ Faust et al., *supra* note 41.

⁴⁵ *Id.* at 29.

manage the two populations as one large population, in order to “manage gene diversity and inbreeding in both populations.”⁴⁶

Additionally, the FWS recommended reducing the size of the restoration area from five counties to one.⁴⁷ The FWS reasoned that doing so would maximize the “efficient use of [the organization’s] resources during the transition/planning period.”⁴⁸ That is, it would have better control over the experimental population if it was confined to federal lands in a smaller area. The FWS acknowledged, however, that it still could not restrict wolves on federal lands within the area, and would consequently still need written agreements from landowners to remove the remaining wolves.⁴⁹ Unfortunately, “shifting the focus” to federal lands within one county was anything but beneficial to the red wolf population. When confining the wolves to a specified area, experts have stated that it is unrealistic to think that the wolves will remain in the designated area if their needs for survival cannot be met within that area.⁵⁰ Scientists have been calling for restoration areas even larger than the current five-county, 1.7 million-acre restoration site; the FWS, however, has failed to respond.⁵¹ During the hearings that led to the injunction against the FWS, the District Court noted that “federal officials have proposed confining the wild population to a peninsula that frequently floods,” basically pushing wolves into an area that is neither suitable nor sustainable.⁵² Sierra Weaver, an attorney for the Southern Environmental Law Center, stated, “The idea is to make sure we still have a red wolf

⁴⁶ *Id.* at 30.

⁴⁷ Memorandum from the Assistant Regional Director for Ecological Services, Southeast Region, *supra* note 47.

⁴⁸ *Id.*

⁴⁹ *Id.* at 8.

⁵⁰ WILDLIFE MGMT. INST., INC., A COMPREHENSIVE REVIEW AND EVALUATION OF THE RED WOLF (*CANIS RUFUS*) RECOVERY PROGRAM 30 (Nov. 14, 2014), <https://www.fws.gov/redwolf/reviewdocuments/wmi-red-wolf-review-final-11142014.pdf> [<https://perma.cc/B4FU-WLKP>].

⁵¹ Memorandum from the Assistant Regional Director for Ecological Services, Southeast Region, *supra* note 47, at 7-8.

⁵² *Conservationists Ask Judge to Curb Red Wolf Removals*, DAILYMAIL.COM (Sept. 14, 2016), <http://www.mailonsunday.co.uk/wires/ap/article-3790062/Conservationists-ask-judge-curb-red-wolf-removals.html> [<https://perma.cc/J7BU-E6M8>].

population to recover by the time we get to the end of this litigation.”⁵³

A. Incorrect Factual and Statutory Interpretations by the Fish and Wildlife Service Will Be Detrimental to the Long-Term Survival of the Red Wolf

The FWS should reconsider its recently developed plan because it is inconsistent with the scientific findings of the Viability Analysis. On behalf of the Red Wolf Coalition, the Southern Environmental Law Center commented on the FWS’s Five-Year Status Review, stating that the FWS based its decision to shift resources to the captive population on the unsupported conclusion that the current captive population is unsustainable.⁵⁴ The FWS states that it based its decision on the Viability Analysis.⁵⁵ The Viability Analysis, however, did not suggest allocating resources away from or removing the remaining wild population to achieve sustainability of the captive population.⁵⁶ The authors of the Viability Analysis responded to the FWS, noting that its interpretation was in error because “[t]he authors explicitly noted that the captive population [was] under no risk of extinction” while the “[FWS’s] selected course of action [would] almost certainly result in extinction of” the wild population.”⁵⁷

By focusing its efforts on the captive population, the federal government was abandoning what was left of the wild population. A conservation biologist from North Carolina stated that “[t]hey’re basically giving up completely on maintaining a sustainable wildlife population and taking the politically expedient route of growing the captive population.”⁵⁸ Additionally, an official from the United States Department of Agriculture provided that the wild population was working, [but the FWS] essentially made the decision [in 2014] to allow the program to degrade.”⁵⁹

⁵³ *Decision Imminent on Fate of World’s Only Wild Red Wolves*, CHICAGO TRIBUNE (Sept. 3, 2016), <http://www.chicagotribune.com/news/nationworld/ct-red-wolves-north-carolina-20160903-story.html>.

⁵⁴ Letter from Sierra Weaver to Aaron Valenta, *supra* note 23, at 6.

⁵⁵ *Id.*

⁵⁶ *Id.* at 5-6 (internal quotation marks omitted).

⁵⁷ *Id.* at 6.

⁵⁸ Sorg, *supra* note 17.

⁵⁹ *Id.*

Because the Viability Analysis recommended that the wild and captive populations be merged, the FWS “can no longer claim that the last remaining wild red wolf population is ‘nonessential’ to the species’ continued existence.”⁶⁰ Moving forward, if the FWS does not consider both populations as one metapopulation, the red wolf will face severe consequences (e.g., inbreeding) that could ultimately lead to the red wolf’s demise.⁶¹

Additionally, the FWS classifying the wild population as “nonessential” was inconsistent with legislative intent.⁶² By labeling it ‘nonessential,’ the FWS effectively suggested that the recovery of the wild red wolf population was unnecessary so long as the species survived in captivity.⁶³ The FWS incorrectly interpreted the questions needed to make the determination of whether a population was nonessential.⁶⁴ The FWS maintained that the wild population was “nonessential because of the existence of the captive population.”⁶⁵ Legislators, however, made their intent clear: “In making the essential/nonessential determination, the Secretary [of the Interior] shall consider whether the loss of the experimental population would be likely to appreciably reduce the likelihood of survival of that species *in the wild*.”⁶⁶ The more the wild population decreases, the more important the experimental population becomes to the long-term survival of the species.⁶⁷

II. MOVING FORWARD: CONSIDERING THE PRELIMINARY INJUNCTION ISSUED BY THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF NORTH CAROLINA

The FWS expanded its interpretation of the rules allowing legal takes to include lethal takes upon landowner request—an action not authorized by the red wolf rules.⁶⁸ “Beginning in 2014, the Service departed from its long-standing, conservation-minded

⁶⁰ Letter from Sierra B. Weaver to Aaron Valenta, *supra* note 60, at 7.

⁶¹ Faust et al., *supra* note 41, at 28.

⁶² Letter from Sierra Weaver to Aaron Valenta, *supra* note 23, at 7.

⁶³ Letter from Collette Adkins to Aaron Valenta, *supra* note 4, at 4.

⁶⁴ Letter from Sierra Weaver to Aaron Valenta, *supra* note 23, at 8.

⁶⁵ *Id.*

⁶⁶ *Id.* (quoting H.R. Conf. Rep. 97-835 (1982) *reprinted in* 1982 U.S.C.C.A.N. 2860, 2875) (emphasis added).

⁶⁷ *Id.* at 8.

⁶⁸ *Id.*

interpretation of the red wolf rule in favor of an interpretation of the rule designed to allow for unprecedented removals of wolves from private lands.”⁶⁹ The ESA requires “federal departments and agencies to use their authorities in order to carry out programs for the protection of endangered species.”⁷⁰ The ESA further requires that “each federal agency consult with the Secretary of the Interior to ensure that agency action is not likely to jeopardize the continued existence of any endangered or threatened species.”⁷¹ Additionally, the ESA proscribes two obligations that federal agencies must follow:⁷² (1) procedurally, agencies must “consult with the FWS to determine the effects of their actions on endangered or threatened species and their critical habitat;”⁷³ and (2) substantively, agencies must “ensure that their actions [do] not jeopardize endangered or threatened species or their critical habitat.”⁷⁴

A complaint was filed in November 2015, in response to the FWS issuing legal take permits to private landowners “without first satisfying the requirements of the governing regulations.”⁷⁵ The complaint further noted how the FWS administered “the red wolf rules and regulations in a manner resulting in a failure to provide for the conservation of the wild red wolf population.”⁷⁶ In one particular instance, a legal take permit issued to a private landowner by the FWS resulted in the death of a wild-born female red wolf.⁷⁷ This female wolf had produced several litters and “was possibly still nursing pups” at the time she was killed.⁷⁸

In September 2016, the United States District Court for the Eastern District of North Carolina enjoined the FWS from taking red wolves from private lands where the wolves had not demonstrated any threat to humans, pets, or livestock.⁷⁹

⁶⁹ Letter from Sierra Weaver to Aaron Valenta, *supra* note 23, at 12.

⁷⁰ *See* Red Wolf Coal. v. U.S. Fish and Wildlife Serv., 210 F. Supp. 3d 796, 803 (E.D.N.C. 2016).

⁷¹ *Id.*

⁷² *Id.* at 804.

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Id.*

⁷⁶ *Id.* at 800-01.

⁷⁷ *Id.* at 804.

⁷⁸ *Id.*

⁷⁹ *See* Red Wolf Coal. v. U.S. Fish and Wildlife Serv., 210 F. Supp. 3d 796, 802 (E.D.N.C. 2016).

Specifically, they were enjoined “from taking red wolves, either directly or by landowner authorization, without first demonstrating that such red wolves” were a threat to the safety of humans, livestock, or pets.⁸⁰ The court reasoned that the FWS not only “failed to adequately” protect wild red wolves, but also that it might have harmed the population’s ability to survive in the wild” and, consequently, violated of Sections 4 and 7 of the ESA.⁸¹ The court clearly demonstrated that a decreased ability to enjoy the species, a possible increase in their mortality, and the general decline of red wolf population would cause irreparable harm.”⁸²

The court concluded that “expanding its interpretation of the take rules necessarily affects the health of the wild red wolf population as it results in greater numbers of both intended [and] unintended mortalities.”⁸³ The FWS responded with two arguments. First, the organization argued that there had been “no change in the Service’s interpretation of the red wolf rules.”⁸⁴ Second, the organization argued that to whatever extent there had, “it was only to come into compliance with the rules, and that none of its current actions could be considered to be at odds with the protection of the species.”⁸⁵ The court did not buy this argument; rather, it found the argument “difficult to square ... with the drastic decline in the red wolf population over the last two years,” noting the steady growth of the population during the early 2000s.⁸⁶ The FWS “estimated there to be only forty-five to sixty red wolves in the wild. Such rapid population decline has been described as a catastrophic indicator that the wild red wolf population is in extreme danger of extinction.”⁸⁷ The court concluded that until the [FWS] stopped its efforts to restore the species under the red wolf recovery program, the public interest weighed against the irreparable harm caused by takes that were permitted.⁸⁸ The court reasoned that finding otherwise “would fly

⁸⁰ *Id.* at 807.

⁸¹ *Id.* at 804.

⁸² *Id.* at 805-06.

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.* at 804.

⁸⁶ *Id.*

⁸⁷ *Id.*

⁸⁸ *Id.*

in the face of the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.”⁸⁹

The red wolf’s current “non-essential” classification should be reconsidered and changed to “essential.” A “nonessential” designation for the red wolf experimental population in North Carolina means that the “experimental population is not essential for the continued existence of the species.”⁹⁰ This classification prevents the red wolf from receiving the full protections of the ESA.⁹¹ Accordingly, it only receives the Section 7 ESA protections within our national parks and the National Wildlife Refuge system.⁹² If the experimental population were deemed “essential,” however, “the species [would be] treated as threatened and [could] receive” full protection under the ESA.⁹³ This protection would include a critical habitat designation which would require all agencies to consult with the FWS, under Section 7 of the ESA, prior to taking any action that could affect the experimental population.⁹⁴ The FWS classified the experimental population as “nonessential” because it “believed the species was fully protected in captivity and all animals released into the wild [could] be quickly replaced through captive breeding.”⁹⁵ But the Viability Analysis’ final report found otherwise. The report’s 2016 results indicated that, without any changes to the current conditions, the experimental population could go extinct in as little as eight years.⁹⁶ The report further indicated that the loss of the experimental population would not only be damaging to the number of remaining wolves, but also to the “creation of future populations.”⁹⁷ If the current experimental population becomes extinct, the loss of “behaviorally competent wild wolves” would stifle reproduction because these new populations would not only

⁸⁹ *Id.* at 806 (internal quotation marks omitted).

⁹⁰ *Endangered Species Act: Experimental Populations*, U.S. FISH AND WILDLIFE SERV. [hereinafter *Experimental Populations*], <https://www.fws.gov/southwest/es/arizona/Documents/SpeciesDocs/SonoranPronghorn/ES10jFactSheet.pdf> [<https://perma.cc/GF98-6CD8>].

⁹¹ Letter from Collette Adkins to Aaron Valenta, *supra* note 4.

⁹² *Experimental Populations*, *supra* note 97.

⁹³ *Id.*

⁹⁴ *Id.*

⁹⁵ Letter from Sierra Weaver to Aaron Valenta, *supra* note 23 (internal quotations omitted).

⁹⁶ Faust et al., *supra* note 41.

⁹⁷ *Id.*

have to regain their behavioral competence, but, consequently, would also likely experience higher mortality rates.⁹⁸ These results suggest that the current experimental population should be classified as “essential.”⁹⁹

In 1986, the ESA was amended to include Section 10(j).¹⁰⁰ “The 10(j) rule was deemed necessary to gain public acceptance for the reintroduction in the Alligator National Wildlife Refuge.”¹⁰¹ The ESA “protects endangered and threatened species and their habitats by prohibiting the ‘take’ of listed animals.”¹⁰² Section 10 of the ESA provides exceptions that “authorize activities that would otherwise be prohibited.”¹⁰³

Before the 1986 amendment, the ESA stipulated that no wolf could be killed for any reason other than to defend one’s life or safety.¹⁰⁴ Section 10(j) created a more relaxed standard for the FWS managers overseeing experimental populations. The updated clause allowed managers of experimental “nonessential” populations to remove problematic wolves from the wild.¹⁰⁵ Initially, this clause was viewed as a step in the right direction as it fostered cooperation by allowing managers to work with landowners.¹⁰⁶ But the Chair of the Red Wolf Coalition’s Board of Directors, Cornelia “Neil” Hutt, stated that this relaxed protocol has ultimately caused great harm to the Red Wolf Recovery program, “as many feared it would.”¹⁰⁷

Specifically, there are several provisions in the 10(j) clause that require revision in order for it to be more beneficial to both the community and red wolf population. Conservationists call for a revised 10(j) clause that limits gunshot mortality.¹⁰⁸ The current

⁹⁸ *Id.*

⁹⁹ *See generally*, Faustet al., *supra* note 41.

¹⁰⁰ *See generally* 16 U.S.C.A. § 1539(j) (West, Westlaw through P.L 115-91).

¹⁰¹ WILDLIFE MGMT. INST., INC., *supra* note 55, at 31.

¹⁰² *See generally* Endangered Species Act (ESA) of 1973, 16 U.S.C.S. § 1531 et seq. (LEXIS through Pub. L. No. 115-114).

¹⁰³ *Experimental Populations*, *supra* note 97.

¹⁰⁴ *See* Endangered Species Act.

¹⁰⁵ *See Experimental Populations*, *supra* note 97.

¹⁰⁶ *See* E-mail from Cornelia Hutt, Chairman, Bd. of Dirs., Red Wolf Coal. to Taylor Rippe, Staff Editor, Kentucky Journal of Equine, Agriculture, and Natural Resources Law (Jan. 3, 2016, 01:18 EST) (on file with author).

¹⁰⁷ *Id.*

¹⁰⁸ *See* Letter from Tara Zuardo, Wildlife Attorney, Animal Welfare Inst., et al., to Sally Jewell, Sec’y, Dept. of Interior (May 24, 2016),

10(j) clause has liberalized the taking of red wolves and contributed to the increase in gunshot mortality.¹⁰⁹ “One of the most problematic exceptions to the prohibition on take of red wolves is that any person may take red wolves found on private land if such taking is not intentional or willful.”¹¹⁰ This exception allows individuals who kill red wolves to escape punishment with more ease. “The [FWS] is not pursuing prosecution of suspected illegal takes, allowing local opponents of recovery to believe that they can kill wolves with impunity.”¹¹¹ Lack of management at the local levels of the Red Wolf Recovery Plan is contributing to this problem.¹¹² “Local program managers have received inadequate oversight and coordination from the regional office.”¹¹³ The Wildlife Management Institute learned that “program authority rested largely with local staff.”¹¹⁴ “Decisions made at the local level, though made with the best intentions ..., did not always comply with the rules established for the reintroduction program.”¹¹⁵

Since 2013, seventeen red wolves have been taken by gunshot without repercussion.¹¹⁶ In fact, one such shooting occurred in December 2016.¹¹⁷ There, the shooter acted in violation of the court’s preliminary injunction and did not contact the FWS to request removal of the wolf.¹¹⁸ Even if the shooter was identified for the purposes of being assessed a penalty, he or she could simply say they killed the red wolf after mistakenly identifying it as a coyote—a common defense—and consequently fall within an exception.¹¹⁹ Admittedly, coyotes and red wolves are difficult to distinguish—especially at night. This exception, however, has still

<https://awionline.org/sites/default/files/uploads/documents/WL-AWI-EmergencyPet-RedWolf-05192016.pdf>.

¹⁰⁹ *Id.* at 12.

¹¹⁰ *Id.*

¹¹¹ Letter from Raul Grijalva to Sally Jewell, *supra* note 9.

¹¹² *See* WILDLIFE MGMT INST., INC., *supra* note 55, at 46.

¹¹³ *Id.*

¹¹⁴ *Id.* at 3.

¹¹⁵ *Id.*

¹¹⁶ *See* Cornelia Hutt, *Endangered Means There is Still Time: A Status Update on the Red Wolf 2* (Jan. 5, 2017) (unpublished manuscript) (on file with author).

¹¹⁷ *See* Anne Blythe, *Rare Red Wolf is Found Dead in NC; Reward Offered to Find Shooter*, THE NEWS & OBSERVER, (Dec. 30, 2016, 6:20 PM), <http://www.newsobserver.com/news/local/crime/article123879694.html> [<https://perma.cc/K7LC-CC7D>].

¹¹⁸ *See id.*

¹¹⁹ Letter from Tara Zuardo to Sally Jewell, *supra* note 116.

been too broadly applied as a preliminary injunction, issued in 2014, prohibited coyote hunting in the five-county recovery area.¹²⁰ But this 2014 injunction has seemingly been widely ignored and, while in theory good for the red wolf, has only angered many North Carolina residents and led to further opposition of the Red Wolf Recovery Program.

The impact of these mishaps cannot be overstated. The death of one red wolf can significantly impact the entire population.¹²¹ Losing just one wolf not only disrupts the dynamics of that lost wolf's pack, but also possibly of surrounding packs by reducing breeding capability.¹²² In fact, this reduction in reproduction can last for more than a year and lead to both reduced recruitment and increased risks of hybridization.¹²³

The FWS has made little effort to work with private landowners. Instead, the FWS has provided more lenient standards on legal takes and has removed wolves from private lands even when no apparent threat exists, causing a disruption in breeding and pack dynamics.¹²⁴ Conservationists believe the FWS's shift in resources is in part due to opposition from some private landowners.¹²⁵ This is evidenced by a petition sent to the FWS in July 2016, with almost 500,000 signatures urging the agency not to abandon its efforts to recover the red wolf population.¹²⁶ While there appeared to be strong support for the Red Wolf Recovery Program, the FWS has been particularly receptive to a few "loud" voices of private landowners in North Carolina. One particular landowner voiced concern about the red wolves decreasing the "availability of prey on private hunting grounds."¹²⁷ Data from the North Carolina Wildlife Commission,

¹²⁰ See *Red Wolf Coal. v. U.S. Fish and Wildlife Serv.*, 210 F. Supp. 3d 796, 807 (E.D.N.C. 2016).

¹²¹ See Cornelia Hutt, *A Closer Look at Red Wolf Recovery: A Conversation with Dr. David R. Rabon*, INT'L WOLF, Summer 2013, at 8, 12.

¹²² *Id.*

¹²³ *Id.*

¹²⁴ Letter from Raul Grijalva to Sally Jewell, *supra* note 9.

¹²⁵ Sorg, *supra* note 17.

¹²⁶ Press Release, Ctr. for Biological Diversity, Half a Million People Urge U.S. Fish and Wildlife Service Not to Abandon Red Wolves: With Only 45 Remaining, Species Is One of World's Most Endangered Mammals (July 13, 2016), https://www.biologicaldiversity.org/news/press_releases/2016/red-wolf-07-13-2016.html.

¹²⁷ Brian Clark Howard, *For World's Only Red Wolves, a Fateful Decision*, NATIONAL GEOGRAPHIC (Mar. 18, 2015),

however, shows that deer and turkey populations “have not declined overall” in the five counties where the red wolf population is currently situated.¹²⁸ Moreover, the Wildlife Management Institute (WMI) noted that there was a “concerted effort on the part of some individuals to motivate citizens in the red wolf restoration area to contact the FWS and request removal of wolves [from] their property.”¹²⁹ Because many of the requests come from owners of small, private properties where there is no evidence of red wolf activity, some requests appeared to be a statement in opposition to the recovery program, rather than legitimate requests for removal.¹³⁰

Because landowner support and cooperation is essential to the survival of the red wolf population, efforts by the FWS to inform, educate, and incentivize private landowners would benefit conservation efforts and would provide a win-win situation for both landowners and red wolves. Unfortunately, a recent review conducted by the WMI concluded that efforts by the FWS to educate private landowners were minimal at best.¹³¹ The FWS made efforts in the past to educate the public by holding several meetings to discuss the Red Wolf Recovery Program.¹³² The WMI reported that it was unaware of any public meetings held in the past few years and “did not see a concerted effort to maintain these public outreach and education efforts.”¹³³ The WMI further stated that “private landowners were arguably the key stakeholders” in the Red Wolf Recovery Program.¹³⁴ The WMI believes in order to create a “self-sustaining red wolf population, it will be essential to gain the cooperation of state wildlife agencies and private landowners.”¹³⁵ The FWS “by its own admission ... has considered sociopolitical factors just as important, if not more important than ecological factors.”¹³⁶ In its Recommended Decisions in Response to Red Wolf Recovery Program Evaluation, the FWS stated that

<http://news.nationalgeographic.com/2015/03/150318-red-wolves-north-carolina-conservation-reintroduction-science/>.

¹²⁸ *Id.*

¹²⁹ WILDLIFE MGMT INST., INC., *supra* note 55, at 40.

¹³⁰ *Id.* at 53.

¹³¹ *Id.* at 56.

¹³² *Id.*

¹³³ *Id.*

¹³⁴ *Id.*

¹³⁵ *Id.* at 30.

¹³⁶ Letter from Collette Adkins to Aaron Valenta, *supra* note 4.

the red wolf presents a unique, challenging situation because reintroduction onto private lands means that private landowner support is essential.¹³⁷ It seems clear the FWS is aware of the importance of landowner support and cooperation and should, accordingly, take this knowledge and implement new management procedures to coordinate more public outreach efforts. Because the mortality rate of the wild population is so dramatically effected by human causes, gaining landowner support and cooperation must be a top priority for the FWS moving forward.

Finally, the rise in sea level is becoming a growing concern for the red wolf population.¹³⁸ As the court noted, drastic decline in the population of the red wolf over the years serves as an indication that the mammal is in extreme danger of becoming extinct.¹³⁹ The area in which the FWS intends to confine the red wolf population is not completely suitable to the wolf because of its vulnerability to rising sea levels—a problem that affects water salinity and chemistry, resulting in overall changes in water system dynamics.¹⁴⁰ Additionally, rising sea levels causing changes to vegetation or loss of agricultural lands could be detrimental to the red wolf, as it prefers these areas for pup rearing.¹⁴¹ Although the red wolf population has survived “seasonal flooding, hurricanes and wildfire since their 1987 reintroduction,” seawater would completely eliminate the red wolf’s habitat.¹⁴² “Current sea level rise modeling indicates that significant portions of the Alligator River National Wildlife Refuge and portions of the Albemarle Peninsula will be lost to sea level rise within the next fifty to seventy-five years”—an estimate that clearly does not allow for long-term success of population restoration.¹⁴³ This is of particular concern “given the projected impacts of sea-level rise on the Albemarle Peninsula.”¹⁴⁴ Experts consider “sea-level rise ... [to be]

¹³⁷ Memorandum from Cynthia Dohner to the Regional Director, *supra* note 47, at 4.

¹³⁸ Cornelia Hutt, *Wildlife and Environmental Disasters: Surviving Wind, Flood and Fire*, INT’L WOLF, Spring 2012, at 4, 7.

¹³⁹ See *Red Wolf Coal. v. United States Fish and Wildlife Serv.*, 210 F. Supp. 3d 796, 804 (E.D.N.C. 2016).

¹⁴⁰ WILDLIFE MGMT INST., INC., *supra* note 55, at 43-44.

¹⁴¹ *Id.* at 97.

¹⁴² Hutt, *supra* note 147.

¹⁴³ WILDLIFE MGMT INST., INC., *supra* note 55, at 40.

¹⁴⁴ *Id.*

the greatest potential threat to [wild] red wolves in northeastern North Carolina.”¹⁴⁵

III. SUCCESSFUL CARNIVORE REINTRODUCTION

The gray wolf has similarly experienced many of the challenges currently confronting the red wolf. The gray wolf was common in the United States prior to people seeing them as a threat.¹⁴⁶ The American government called for its eradication and by 1960; the gray wolf was “essentially extinct throughout its former range.”¹⁴⁷ About 300 gray wolves remained in parts of Michigan and Minnesota.¹⁴⁸ The gray wolf became protected under the ESA in 1974 and provided new hope for other wolf recovery programs.¹⁴⁹ After receiving protected status, the gray wolf was able to make what could be called a natural recovery, assisted by gray wolves crossing the border from Canada into Glacier National Park.¹⁵⁰ Although the gray wolf was able to push its population in the right direction, human intervention played a large part in the success of the gray wolf population restoration. “Perhaps the most monumental move in gray wolf policy over the past century was the decision to reintroduce wolves to Yellowstone National Park and Idaho.”¹⁵¹ This monumental step, however, was not an easy one. After years of both opposition and support, gray wolves were released into Yellowstone and the Frank Church Wilderness in Idaho.¹⁵² “Beginning in 2003, the FWS began moving to reduce or remove protections for wolves, but was repeatedly rebuffed by the courts.”¹⁵³ This was neither the first nor last time the FWS would seek to remove protections only to later have courts reinstate

¹⁴⁵ Hutt, *supra* note 147, at 7.

¹⁴⁶ Annie B. White, *A History of Wild Wolves in the United States*, GRAY WOLF CONSERVATION, (last visited Jan. 23, 2016), http://www.graywolfconservation.com/Wild_Wolves/history.htm. [<http://perma.cc/R8HY-6T5V>].

¹⁴⁷ *Id.*

¹⁴⁸ *Id.*

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² *Id.*

¹⁵³ *Restoring the Gray Wolf*, CENTER FOR BIOLOGICAL DIVERSITY (last visited Jan. 23, 2016), http://www.biologicaldiversity.org/campaigns/gray_wolves/. [<https://perma.cc/P9YX-DMVJ>].

them.¹⁵⁴ Despite efforts by the FWS to remove protections, the gray wolf has made a successful recovery. In the last thirty years, the wild wolf population has grown to over 4,000.¹⁵⁵ Even though the gray wolf has made a successful comeback, it still faces the same criticism and opposition the red wolf is facing.¹⁵⁶ Nevertheless, the gray wolf is no longer an endangered species.

CONCLUSION

A review of the competing interests, scientific studies, and input from both the Red Wolf Coalition and the FWS reveals a difficult, but promising path to the recovery for the red wolf. The FWS has several avenues it can take to ensure the red wolf does not go extinct. It is equipped with the latest science and data to provide it with a clear path to success, and should use this information to its advantage.

Research has shown that the current plan will not sustain a long-term population of red wolves. As the Viability Analysis suggested, the FWS should merge the wild population together with the captive population to create a metapopulation capable of long-term survival. Additionally, the FWS should revise the 10(j) clause so that red wolves are neither intentionally or mistakenly killed. The red wolf needs to be reclassified as an “essential” population under the ESA so that it can be afforded full protection in the future.

Moving forward, diligence on the part of the FWS will be of the utmost importance. Without time, resources, and effort invested by the FWS, the red wolf population will continue to dwindle to extinction. An attorney for the Animal Welfare Institute recently stated, “[FWS] regulations are supposed to provide for the conservation of the species, but when wolves continue to die and the population continues to decline, that clearly isn’t working.” The attorney further provided that “the [FWS] needs to re-examine its regulations and what it can do to put this species back on the road

¹⁵⁴ *Id.*

¹⁵⁵ White, *supra* note 157.

¹⁵⁶ *The War on Wolves*, DEFENDERS OF WILDLIFE (last visited Jan. 23, 2016), <http://www.defenders.org/the-war-on-wolves/delisting-disaster>. [<https://perma.cc/P4W7-V6EZ>].

to recovery.”¹⁵⁷ Researchers believe that “successful recovery of red wolves will require the elimination of factors that initially caused the decline of the species.”¹⁵⁸

Based on the FWS’s previous run-ins with the court, it should work to improve the Red Wolf Recovery Program with the resources it currently has, instead of using time and resources to conduct further reviews and studies on the viability of the wild population. The most recent information and science available to the FWS, the Viability Analysis and the Wildlife Management Institute Review, both state that the wild population is capable of surviving long term, so long as the recommended changes are implemented.

¹⁵⁷ Amey Owen, *Conservation Groups Condemn Killing of Red Wolf Mother*, ANIMAL WELFARE INSTITUTE (June 23, 2015), <https://awionline.org/content/conservation-groups-condemn-killing-red-wolf-mother>. [<https://perma.cc/FGN6-98C3>].

¹⁵⁸ Joseph W. Hinton et al., *Strategies for red wolf recovery and management: a response to Way (2014)*, 18 CANID BIOLOGY & CONSERVATION 22, 25 (2015), http://www.canids.org/CBC/18/Red_wolf_recovery_response_to_Way.pdf.