

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

GENERAL LAND OFFICE OF THE STATE
OF TEXAS,

Plaintiff,

v.

UNITED STATES DEPARTMENT OF THE
INTERIOR, THE HONORABLE DEB
HAALAND in her official capacity as
Secretary of the Interior, UNITED STATES
FISH AND WILDLIFE SERVICE, MARTHA
WILLIAMS in her official capacity as Acting
Director of the United States Fish and Wildlife
Service, and AMY LUEDERS in her official
capacity as Southwest Regional Director of the
United States Fish and Wildlife Service,

Defendants.

Case No. 6:22-CV-00044

COMPLAINT FOR INJUNCTIVE AND DECLARATORY RELIEF

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I. INTRODUCTION

1. The defendants named above (collectively, the “Federal Defendants” or the “Service”) have disobeyed the vacatur and remand orders of the Fifth Circuit and this court by continuing to violate the Endangered Species Act (the “ESA”) and its implementing regulations. Once again, the Federal Defendants have used an impermissibly stringent standard to deny the 90-day Petition to remove the Golden-Cheeked Warbler (the “Warbler”) from the ESA list of endangered species. Accordingly, Plaintiff General Land Office of the State of Texas (“TXGLO”) files this Complaint seeking declaratory judgment and injunctive relief.

II. PARTIES

2. Plaintiff TXGLO is the oldest state agency in Texas and, among other things, is charged with maximizing revenues from Texas public lands dedicated to the Permanent School Fund. TXGLO derives those revenues by selling public school lands and leasing their mineral rights, which flow to the Permanent School Fund under the Texas Constitution. *See Tex. Const. Art. VII § 5(g).* TXGLO also owns and maintains state veterans’ homes that provide care and dignity for veterans, their spouses, and Gold Star parents, as well as state veterans’ cemeteries to honor those who have served. TXGLO owns or maintains public school lands which contain Warbler habitat. The federal government undermines TXGLO’s ability to maximize revenues by imposing restrictions due to Warbler population or habitat on TXGLO property, lowering the property’s market value and subjecting TXGLO to onerous, costly, and time-consuming ESA review. Delisting the Warbler will therefore provide immediate relief for TXGLO.

3. Defendant United States Department of the Interior (“Interior”) is a department-level agency of the United States. Congress has charged Interior with administering the ESA for terrestrial species.

4. Defendant United States Fish and Wildlife Service (the “FWS” or the “Service”) is a bureau of Interior. The FWS has responsibility for the day-to-day administration of the ESA, including listing and delisting terrestrial species and designating their critical habitat.

5. Defendant Deb Haaland is the Secretary of the Interior. She oversees Interior’s administration of the ESA.

6. Defendant Martha Williams is the Acting Director of the FWS. She oversees the Service’s administration of the ESA.

7. Defendant Amy Lueders is the Southwest Regional Director of the FWS. She oversees the Service’s administration of the ESA in a region that includes the State of Texas.

III. JURISDICTION AND VENUE

8. Plaintiff brings this action under the Administrative Procedure Act (“APA”), 5 U.S.C. §§ 701-706, and the Endangered Species Act (“ESA”), 16 U.S.C. §§ 1540(g)(1)(A).

9. This court has subject matter jurisdiction pursuant to 5 U.S.C. §§ 701-706 (APA); 28 U.S.C. § 2201 (Declaratory Judgment Act); and 16 U.S.C. §§ 1540(g)(1)(A) and (C) and (g)(2)(A) and (B) (ESA citizen suit provisions).

10. Pursuant to the citizen suit provisions of ESA, Plaintiff sent a 60-day notice of intent (“NOI”) to sue the Federal Defendants over their respective failures to comply with the ESA and the orders of the Fifth Circuit and this Court. The NOI was sent to the Federal Defendants on October 11, 2021, and was received by the last of them on October 12, 2021. A copy of the NOI is included in Exhibit A. A copy of the receipts showing delivery of the NOI is included in Exhibit B. Accordingly, Plaintiff has complied with the 60-day notice requirements of the ESA.

11. The relief requested is authorized by 28 U.S.C. § 2201 (declaratory judgment), 28 U.S.C. § 2202 (injunctive relief), 5 U.S.C. §§ 701-706 (APA), and 16 U.S.C. § 1540(g) (ESA citizen suit provision).

12. This Court also has jurisdiction pursuant to 28 U.S.C. § 1331, which grants the district courts “original jurisdiction of all civil actions arising under the . . . laws . . . of the United States,” and 16 U.S.C. § 1533(b)(3)(C)(ii) (authorizing judicial review of negative 90-day findings made under the ESA).

13. Venue is appropriate in this Court pursuant to 28 U.S.C. § 1391(e)(1) because a substantial part of the events or omissions giving rise to the claims occurred in this district, a substantial part of the property that is the subject of the action is situated in this district, or the plaintiff resides in this district. In addition, venue is appropriate under 16 U.S.C. § 1540(g)(3)(A) because the violation occurred in this district. Venue is appropriate also under 5 U.S.C. § 703.

14. An actual, justiciable controversy exists between the parties within the meaning of 28 U.S.C. § 2201.

15. The federal Government has waived sovereign immunity in this action pursuant to 5 U.S.C. § 702 and 16 U.S.C. § 1540.

16. Plaintiff TXGLO has exhausted all administrative remedies, the Federal Defendants’ action is final and ripe for review, and Plaintiff has standing because it is injured in fact because of the Federal Defendants’ denial of the 90-day Petition, which continues the burdens of the ESA on Plaintiff’s properties located in Texas, and this court has the power to redress that injury by vacating the denial of the 90-day Petition and providing the requested declaratory and injunctive relief.

IV. LEGAL BACKGROUND

A. Endangered Species Act and Implementing Regulations

17. Congress passed the ESA to protect species vulnerable to extinction and conserve the ecosystems upon which endangered and threatened species depend. *See* 16 U.S.C. § 1531(b). Before a species receives full protection under the ESA, it must be listed as “threatened” or “endangered.” A “threatened” species is “any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.” 16 U.S.C. § 1532(20). An “endangered” species is “in danger of extinction throughout all or a significant portion of its range.” 16 U.S.C. § 1532(6). The government determines whether to list a species based on certain factors using the “best scientific and commercial data available.” 16 U.S.C. § 1533(b)(1)(A).

18. Under regulations in effect on the date the 90-day Petition was filed by the Plaintiff, a species was to be listed if it was endangered or threatened based on any one or a combination of these factors:

- a. The present or threatened destruction, modification, or curtailment of its habitat or range;
- b. Overutilization for commercial, recreational, scientific, or educational purposes;
- c. Disease or predation;
- d. The inadequacy of existing regulatory mechanisms; or
- e. Other natural or manmade factors affecting its continuing existence. 50 C.F.R. § 424.11(c)(1)–(5) (2014).

19. Once a species is listed as “threatened” or “endangered,” the ESA protects it by making it unlawful for any person to “take” such species. 16 U.S.C. § 1538(a)(1)(B). To “take” means to “harass, harm, hunt, pursue, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” 16 U.S.C. § 1532(19).

20. Federal agencies must consult with the Secretary of the Interior if they believe their projects on any property may affect endangered or threatened species. Every five years the Secretary of the Interior must review each listed species to determine whether a change in the species’ listing status is warranted. 16 U.S.C. § 1533(c)(2)(A). This includes a determination as to whether a species should be delisted or changed in status from endangered to threatened, or *vice versa*. 16 U.S.C. § 1533(c)(2)(B). Under rules in effect as of the time relevant to this complaint, species may be delisted if, after review of the species, the best scientific and commercial data substantiates that the species is neither threatened nor endangered due to extinction, recovery, or the original scientific or commercial data used at the time the species was classified (or the interpretation of such data) were in error. 50 C.F.R. § 424.11(d)(3) (2014); *see General Land Office of Tex. v. United States DOI*, 947 F. 3d 309, 320-21 (Fifth Cir. 2020) (holding that the Service must apply the regulations in effect at the time the 90-day Petition was filed with the agency); *see also* 81 Fed. Reg. 7414, *et seq.* (February 11, 2016) (amending 50 CFR Part 424, effective as of March 14, 2016). For the convenience of the Court, the codification of the applicable regulations in effect as of the date on which the 90-day Petition was filed is included as Exhibit C of this complaint.

21. The factors considered for delisting are the same as those considered when listing a species. *Id.*

22. The government has a duty to specify critical habitat for any threatened or endangered species “to the maximum extent prudent and determinable.” 16 U.S.C. § 1533(a)(3)(A)(i). Critical habitat means “the specific areas within the geographical area occupied by the species . . . on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protection,” as well as specific areas outside an endangered species’ range “upon a determination by the Secretary [of Commerce] that such areas are essential for the conservation of the species.” 16 U.S.C. § 1532(5)(A)–(B) (cleaned up).

23. An interested person may petition the federal government to add a species to or remove a species from the endangered or threatened species lists (a “90-day petition”). *See* 16 U.S.C. § 1533(b)(3)(A). Within 90 days after receiving such a petition, “the Secretary shall make a finding as to whether the petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted.” *Id.* When doing so, the Secretary must consider any information within the petition or attached to it that comports with certain regulatory requirements in effect at the time a 90-day Petition is filed. *See* 50 C.F.R. § 424.11(b) – (f) (2014). If the Secretary finds the petitioned action may be warranted, the Secretary must review the species’ endangered or threatened status. *Id.* Any negative finding on a petition is subject to judicial review. 16 U.S.C. § 1533(b)(3)(C)(ii).

24. The ESA citizen suit provision permits any person to sue on his own behalf under several circumstances, including filing a suit “against the Secretary where there is alleged failure of the Secretary to perform any act or duty under section 1533 of this title which is not discretionary with the Secretary.” 16 U.S.C. § 1540(g)(1)(C). This provision negates the “zone of interests” test for prudential standing. *See Bennett v. Spear*, 520 U.S. 154, 164 (1997). The Secretary has

no discretion to ignore or otherwise refuse to comply with federal court orders issued in connection with a 90-day petition filed pursuant to 16 U.S.C. § 1533(b)(3)(A).

B. Administrative Procedure Act and Implementing Regulations

25. The Administrative Procedure Act (“APA”) provides a right to judicial review for any “person suffering legal wrong because of agency action.” 5 U.S.C. § 702. The reviewing court must “hold unlawful and set aside agency action” that it finds “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; contrary to constitutional right, power, privilege, or immunity; in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; [or] without observance of procedure required by law” 5 U.S.C. § 706(2)(A)–(D) (cleaned up).

V. FACTUAL ALLEGATIONS

The Golden-Cheeked Warbler: A Texas-Nesting Species

26. The Warbler is an insectivorous migratory songbird that breeds in the mixed Ashe juniper and deciduous woodlands of Central Texas.

27. The Warbler arrives in Texas from late February through April, migrating afterward through Central America in July and August.

28. The Warbler is the only bird species that nests entirely in the state of Texas.

The Federal Government Lists The Warbler As Endangered

29. The Warbler was first mentioned by the United States Fish and Wildlife Service in a Notice of Review published on December 30, 1982, as a species under consideration for addition to the List of Endangered and Threatened Wildlife. 47 Fed. Reg. 251, 58459. At that time, the Warbler was categorized as a species for which the Service had information indicating that a proposal to list the species was “possibly appropriate, but for which substantial data are not

currently available to biologically support a proposed rule. Further biological research and field study will usually be necessary to ascertain the status of the taxa in this category, and it is likely that some of the taxa will not warrant listing.” *Id.* at 58454. The Warbler remained in that category for both the September 18, 1985 Review of Vertebrate Wildlife [50 Fed. Reg. 37958] and the January 6, 1989, Animal Notice of Review [54 Fed. Reg. 554].

30. On February 2, 1990, a petition was filed seeking an emergency listing for the Warbler, allegedly because the normal listing procedure could be “inadequate to protect the bird and its habitat from imminent destruction from clearing and development.” 55 Fed. Reg. 18846, 18847.

31. The Service emergency-listed the Warbler on May 4, 1990, finding that “ongoing and imminent habitat destruction” warranted the action. *Id.* at 18844.

32. The Service indicated in this ruling that Central Texas contained some of the best Warbler habitat, and that increased development in the region placed this habitat under threat. *Id.*

33. The Service published a Final Rule listing the species on December 27, 1990. 55 Fed. Reg. 53153.

34. The Final Rule estimated there to be approximately 15,000 - 17,000 Warblers and between 79,400 - 263,750 acres of available suitable habitat. *Id.* at 53154.

35. In the Final Rule, the Service stated that the Warbler should be listed based on:

- a. the present or threatened destruction of Warbler habitat;
- b. the possibility of nest predation by Central Texas species;
- c. the lack of regulatory protection for Warbler habitat; and
- d. the lack of reproduction of deciduous trees in Warbler habitat.

Id. at 53157–59.

The 90-day Delisting Petition

36. On June 29, 2015, Texans for Positive Economic Policy, Susan Combs, the Texas Public Policy Foundation, and the Reason Foundation (“Petitioners”) submitted a petition to remove the Warbler from the endangered species list (the “90-day Petition” or the “Petition”). The Petition is attached to this complaint as Exhibit D.

37. Among other things the Petition provided the following information to support its contention that delisting the Warbler may be warranted:

- a. Warbler habitat is far larger than was known at the time the Warbler was listed, *see Exhibit D at 13, 18;*
- b. the Warbler population is about 19 times greater than was believed when the Warbler was listed, *see id. at 19;*
- c. habitat fragmentation and urbanization are not a threat to the Warbler due to the size and scope of its habitat and population, *see id. at 28;* and
- d. many existing conservation plans and mechanisms exist for the Warbler such that the probability of its extinction over the next 100 years is low, *see id. at 20, 23–25.*

38. The Petition stated that application of the best available scientific and commercial information indicates that, because the Warbler does not meet the ESA’s statutory factors for listing, it is “ineligible for continued listing as an endangered species.” *Id. at 14.*

The First 90-Day Finding

39. On June 3, 2016, the Service made a negative 90-day finding denying the Petition (the “First 90-day Finding”), claiming that there continues to be “ongoing, widespread destruction of [Warbler] habitat” and that the Warbler is still in danger of extinction. 81 Fed. Reg. 35698,

35700 (June 3, 2016). For the convenience of the Court, the Service’s 2016 petition review form setting forth the details of the First 90-day Finding is attached as Exhibit E.

40. While acknowledging that new data published since the Warbler’s listing indicate growth in the Warbler’s population and the existence of more habitat, the Service claimed this data represented “estimates rather than indicators of positive trends” and therefore, according to the Service, do not imply recovery of the species. 81 Fed Reg. at 35700. Although the Service noted that a study published after the Service received the 90-day Petition supported the contention that the exact Warbler population was uncertain, the Service falsely faulted the Petition for failing to address habitat fragmentation, disease and predation. *Id.*

41. The Service ignored or discounted without adequate explanation the Petition’s data showing (a) remarkable increases in Warbler population and habitat and (b) substantial evidence that neither disease nor predation significantly threaten the Warbler. Instead the Service, stated that the Petition provided no “new information” indicating the Warbler should be removed from the endangered species list or that the original listing was in error. *Id.* at 35700.

The Original Lawsuit

42. Plaintiff TXGLO filed suit in the Western District of Texas against the Service and other defendants on June 5, 2017, challenging the First 90-day Finding as in violation of the ESA and its implementing regulations and arbitrary and capricious. The district court upheld the First 90-day Finding. *See Gen. Land Office of Tex. v. U.S. Fish and Wildlife Serv.*, 2019 WL 1010688 (W.D. Tex. Feb. 6, 2019). For the convenience of this Court, the 2019 district court order is set forth as Exhibit F.

43. TXGLO appealed, and the Fifth Circuit reversed the district court’s ruling, holding that the First 90-day Finding violated the ESA and was arbitrary and capricious. *See Gen. Land Office of Tex. v. United States Dept. of the Interior*, 947 F.3d 309, 320–21 (5th Cir. 2020).

44. Among other things, the Fifth Circuit ruled that the Service applied an inappropriately stringent standard of review by impermissibly requiring the Petition to present “new” information the Service had not considered in its five-year review. *Id.* at 321.

45. The Fifth Circuit held that applicable regulations in effect at the time of the filing of the Petition required only that a petition present “that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted.” *Id.* at 320–21.

46. The Fifth Circuit went on to hold that, in denying the 90-day Petition, “[t]he Service *recited* [the correct] standard, but a careful examination of its analysis shows that the Service *applied* an inappropriately heightened one.” *Id.* at 321 (emphasis in the original).

47. The Fifth Circuit held that the Service’s denial of the 90-day Petition violated the ESA and was arbitrary and capricious because it applied an inappropriately stringent standard that was not authorized by the ESA or the then-applicable regulations. *Id.*

48. Accordingly, the Fifth Circuit vacated the First 90-day Finding and remanded to the Service for reconsideration of the Petition, ordering the Service to use the correct legal standard, as specified by the Court. *Id.*

49. On January 26, 2021, the district court awarded Plaintiff TXGLO attorney fees and issued its final judgment closing the case. *See Gen. Land Office of Tex. v. United States Dept. of the Interior*, Case No. 1:17-CV-00538-LY, Doc. No. 96. For the convenience of this Court, the final judgment of the district court is attached to this complaint as Exhibit G.

The Service Defies The Fifth Circuit’s Order In Its Second 90-day Finding

50. On July 27, 2021, the Service published a new 90-day finding on the Petition (“the Second 90-Day Finding”). Once again, the Service found that the 90-day Petition did not present

substantial scientific or commercial data indicating that delisting the Warbler may be warranted. 86 Fed. Reg. 40186.

51. The Service provided its reasoning for the Second 90-day Finding in a new petition review form dated July 7, 2021. For the convenience of this Court, the 2021 petition review form of the Second 90-day Finding is attached to the complaint as Exhibit H.

52. In the Second 90-day Finding, the Service disobeyed the Fifth Circuit's order and once again applied an impermissibly heightened standard of review to the Petition. As in the First 90-day Finding, in the Second 90-day Finding the Service recited the correct standard, but then applied an incorrect standard by stating that the Petition "does not report any *new* data or study results . . . but summarizes readily available information about the [Warbler] and its habitat." *See* Exhibit H at Factor A(1)(a) (unpaginated) (emphasis added). Thus, the Service again impermissibly required Petitioners to present *new* information the Service had not previously considered. This is precisely the standard that the Fifth Circuit told the Service not to apply when analyzing the 90-day Petition. *See Gen. Land Office*, 947 F.3d at 321 ("[T]he Service required the delisting petition to contain information the Service had not considered in its five-year review . . . The Service thus based its decision to deny the delisting petition on an incorrect legal standard.").

53. In addition, as shown throughout the Second 90-day Finding's petition review form set forth in Exhibit H, the Service ignored or misconstrued substantial scientific information presented in the Petition. It did so despite the Service's usual practice of "accept[ing] the petitioner's sources and characterizations of the information unless we [the Service] have specific information to the contrary." *Colo. River Cutthroat Trout v. Kempthorne*, 448 F. Supp. 2d 170, 176 n.4 (D.D.C. Sept. 7, 2006).

54. The Service also failed to consider whether the original habitat and population data for the Warbler were in error—a fundamental question the 90-Day Petition posed—and instead choose to ignore this question in an oversight that defies reason. *See Exhibit D at 13, 14; see also 50 C.F.R. § 424.11(d)(3) (2014).*

55. The Service required the Petition to present conclusive evidence that the Warbler has recovered, again applying an incorrect standard of review that led to the vacatur and remand of the First 90-day Finding. Specifically, the Service’s petition review form states that the Petition only provides “new estimates rather than indicators of positive trends in [Warbler] habitat and population size, and thus do not imply recovery.” Exhibit H at Factor A(1)(a) (unpaginated) This Court recently held such an approach unlawful, stating that “[t]he Service violated its regulations when it required . . . *conclusive* evidence [of] population trends . . . and the Service committed a clear error in judgment and acted arbitrarily, capriciously, and not in accordance with the law when it called for more evidence than the law requires.” *Am. Stewards of Liberty v. U.S. Dep’t of the Interior*, 370 F. Supp. 3d 711, 725 (W.D. Tex. 2019) (*emphasis added*). As in *American Stewards*, here the Service again applied a higher standard of review than the law permits.

56. The Service acknowledged in its review form that the habitat range and population of the Warbler were both larger than what had been known when the Warbler was listed. *See Exhibit H, at Petition Finding (“We acknowledge that the known potential range is more extensive than when the [Warbler] was originally listed in 1990.”) (unpaginated).* Bewilderingly, however, the Service ignored or discounted this information without adequate explanation. So again, in violation of the specific instructions of the Fifth Circuit, the Service denied the fact that the best scientific data shows the Warbler *may* be a candidate for delisting.

57. The Warbler's population numbers in the hundreds of thousands, and the Warbler has millions of acres of available habitat. The Petition made this clear. The Petition also showed that, based on the best scientific data, neither habitat fragmentation nor disease or predation provide a threat to the Warbler. *See Exhibit D at, e.g., 17, 22, 25, 27, 28.* The Service turned a blind eye to this information and instead falsely claimed the Petition did not address habitat fragmentation, disease, or predation of the Warbler.

58. The Service also failed to account for Dr. James Mueller's presentation to the Texas Chapter of the Wildlife Society on February 25, 2021 entitled *Where and by How Much do Golden-Cheeked Warbler Models Differ?* This presentation described Mueller's study using presence-absence surveys to conclude there were between 220,000 and 276,000 singing male Warblers throughout the Warbler breeding range and that the species did not appear to be imminently threatened with extinction. While this study has not been published yet, the information referenced would have been in the Service's files when they issued the Second 90-day Finding.

59. Finally, the Service required proof of Warbler recovery as a condition precedent for a positive 90-day finding. But success at the 90-day finding stage only requires a petition to present substantial information that delisting *may be* warranted and not that delisting is warranted.

The Current Lawsuit

60. On October 11, 2021, pursuant to the citizen suit provision of the ESA, 16 U.S.C. § 1540(g)(2), Plaintiff TXGLO provided a 60-day notice of intent to file suit against the Service to the Federal Defendants. As indicated above, the 60-day notice letter is attached as Exhibit A and is hereby incorporated by reference in its entirety in this Complaint.

VI. PLAINTIFF'S CLAIMS FOR RELIEF

First Claim For Relief

IN DIRECT VIOLATION OF THE FIFTH CIRCUIT'S REMAND ORDER, THE SERVICE IMPERMISSIBLY REQUIRED THE 90-DAY PETITION TO CONTAIN NEW INFORMATION THAT THE SERVICE HAD NOT CONSIDERED DURING IT'S PREVIOUS FIVE YEAR REVIEW

(Violation of 16 U.S.C. § 1533(b)(3)(A); 50 C.F.R. § 424.14(b)(1) (2014); 50 C.F.R. § 424.11(c)-(d) (2014); 5 U.S.C. § 706(2))

61. Plaintiff realleges and incorporates by reference the allegations contained in Paragraphs 1 through 60 as though fully set forth herein.

62. Upon receipt of a delisting petition, federal law requires the Service, acting under delegation from the Secretary of the Interior, to “make a finding as to whether the petition presents substantial scientific or commercial information indicating that the petitioned action *may* be warranted.” 16 U.S.C. § 1533(b)(3)(A) (emphasis added).

63. According to the ESA’s implementing regulations in effect at the time the Petition was submitted, “substantial information” means “that amount of information that would lead a reasonable person to believe that [delisting] *may be* warranted.” 50 C.F.R. § 424.14(b)(1) (2014) (emphasis added). Nothing in those regulations required the 90-day Petition at issue here to contain new information not previously considered by the Service.

64. After the 90-day Petition was submitted in 2015, the implementing regulations were revised in 2016, providing that where a prior species status review resulted in final agency action, a petitioned action “generally would not be considered to present substantial scientific and commercial information indicating the petitioned action may be warranted unless the petition provides *new information* not previously considered.” 50 C.F.R. 424.14(h)(iii) (2016) (emphasis added).

65. In its First 90-day Finding, the Service impermissibly applied the 2016 revision of the ESA’s implementing regulations to the 90-day Petition.

66. The Fifth Circuit found in the Original Lawsuit that “[t]he Service *recited* [the correct] standard, but a careful review of its analysis shows that the Service *applied* an inappropriately heightened one.” *See Gen. Land Office*, 947 F.3d at 321. Among other things, the Court found that “the Service required the [Petition] to contain information the Service had not considered in its five-year review,” which was “an incorrect legal standard.” *Id.* Accordingly, the Fifth Circuit found the Service’s First 90-day Finding unlawful, arbitrary and capricious, vacated the 90-day Finding, and remanded to the Service, requiring it to apply the correct standard of review. *Id.*

67. The Service defied the Fifth Circuit’s explicit instructions and impermissibly applied in its Second 90-day Finding the same incorrect standard it had applied in the vacated and remanded First 90-day Finding, requiring the Petitioners to offer “new data or study results,” while improperly criticizing the 90-day Petition because it “summarizes readily available information about the warbler and its habitat.” Exhibit H at Factor A(1)(a).

68. The Service’s inexplicable and willful refusal to apply the correct standard of review at the 90-day stage notwithstanding the order of the Fifth Circuit violated the ESA and its implementing regulations applicable at the time the 90-day Petition was filed and was “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; [or] without observance of procedure required by law” 5 U.S.C. § 706(2)(A)–(D) (cleaned up).

Second Claim For Relief

THE SERVICE IMPERMISSIBLY REQUIRED PETITIONERS TO SHOW PROOF OF RECOVERY AT THE 90-DAY STAGE

(Violation of 16 U.S.C. § 1533(b)(3)(A); 50 C.F.R. § 424.14(b)(1) (2014); 5 U.S.C. § 706(2))

69. Plaintiff realleges and incorporates by reference the allegations contained in Paragraphs 1 through 68 as though fully set forth herein.

70. The Service stated in its Second 90-day Finding that the Petition's information presented in favor of delisting constituted "estimates rather than indicators of positive trends in warbler habitat and population size, and thus *do not imply recovery*." Exhibit H at Factor A(1)(a). (emphasis added) (unpaginated). Moreover, the Service stated that "recovery criteria have not been *accomplished*." *Id.* (emphasis added).

71. The Service's requirement that the Petitioners provide conclusive evidence at the 90-day stage that the Warbler had recovered goes well beyond the requirements of the ESA and its then-applicable regulations, which simply require substantial evidence that delisting *may* be warranted under a reasonable person standard. Accordingly, the Service's insistence on conclusive proof of recovery at the 90-day stage violates the ESA and is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; [or] without observance of procedure required by law" 5 U.S.C. § 706(2)(A) - (D).

Third Claim For Relief

THE SERVICE IMPERMISSIBLY USED ITS SPECIES RECOVERY PLAN AS THE DETERMINATIVE FACTOR IN DENYING THE 90-DAY PETITION

(Violation of 16 U.S.C. § 1533(b)(3)(A); 50 C.F.R. 424(b)(1) (2014); 5 U.S.C. § 706(2))

72. Plaintiff realleges and incorporates by reference the allegations contained in Paragraphs 1 through 71 as though fully set forth herein.

73. At the 90-day stage, when determining whether a petition presents substantial information that may lead to delisting, the Service is bound by the ESA's explicit criteria supplemented by the criteria in its applicable implementing regulations in effect at the time a 90-day petition is submitted. *See* 16 U.S.C. § 1533(b)(3)(A); 50 C.F.R. § 424.14(b) (2014).

74. Neither the ESA nor its applicable regulations authorized the Service to base its decision solely or substantially on its species recovery plans when evaluating a delisting petition at the 90-day stage. Courts have held that species recovery plans do not contain binding criteria and do not have the force of law. Rather, it is the ESA's statutory and regulatory criteria that bind the Service's decision-making at the 90-day stage and not the species recovery plan. *See, e.g.*, *Friends of Blackwater v. Salazar*, 691 F.3d 428, 434 (D.C. Cir. 2012); *Fund for Animals, Inc. v. Rice*, 85 F.3d 535, 547 (11th Cir. 1996); *Conservation Cong. v. Finley*, 774 F.3d 611, 614 (9th Cir. 2014) (citing *Friends of Blackwater*).

75. The Service impermissibly used its species recovery plan as the determinative factor in issuing its negative 90-day Finding on the Warbler, going beyond the standard permitted by law. *See* Exhibit H at Factor A.1.a (unpaginated) ("[R]ecovery criteria have not been accomplished") (citing the Service's species recovery plan). In doing so, the Service ignored or impermissibly discounted substantial scientific and commercial information in the Petition indicating the Warbler had met or exceeded the legal standard under the ESA's then-applicable implementing regulations to support a finding that delisting may be warranted. *See* Exhibit D at 12-29.

76. The Service’s *ultra vires* use of the species recovery plan as the determinative factor in denying the 90-day Petition, while disregarding or impermissibly discounting the Petition’s substantial evidence that delisting of the Warbler may be warranted, was a violation of the ESA and its then-applicable implementing regulations and was “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; [or] without observance of procedure required by law” 5 U.S.C. § 706(2)(A), (D).

Fourth Claim For Relief

THE SERVICE IMPERMISSIBLY FAILED TO PROPERLY CONSIDER INFORMATION IN THE 90-DAY PETITION REGARDING HABITAT FRAGMENTATION, URBANIZATION, DISEASE AND PREDATION

(Violation of 16 U.S.C. § 1533(b)(3)(A); 50 C.F.R. 424.14(b)(1) (2014); 5 U.S.C. § 706(2))

77. Plaintiff realleges and incorporates by reference the allegations contained in Paragraphs 1 through 76 as though fully set forth herein.

78. When determining whether a 90-day Petition presents substantial information that may lead to delisting, the Service considers the factors listed in the ESA and its implementing regulations. *See* 16 U.S.C. § 1533(b)(3)(A), 50 C.F.R. § 424.14(b) (2014), 50 C.F.R. § 424.11(c)-(f) (2014).

79. The Service falsely states in its Second 90-day Finding that the Petition failed to adequately address various threats to the Warbler, including those caused by habitat fragmentation, urbanization, disease, and predation. *See* Exhibit H at Factors A(1)(a) and C (unpaginated).

80. In fact, the Petition includes substantial scientific and commercial information showing that habitat fragmentation, urbanization, disease, and predation may not pose substantial threats to the Warbler. *See* Exhibit D at 17, 22, 25, 27–28. The Service failed to properly consider

such information when making the Second 90-day Finding, which requires only substantial evidence that delisting *may* be warranted under a reasonable person standard. The Service's failure to apply the correct standard when reviewing the evidence set forth in the 90-day Petition regarding fragmentation, urbanization, disease, and predation violated the ESA and its then-applicable implementing regulations and was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; [or] without observance of procedure required by law . . ." 5 U.S.C. § 706(2)(A) - (D).

Fifth Claim For Relief

THE SERVICE IMPERMISSIBLY FAILED TO PROPERLY CONSIDER SUBSTANTIAL INFORMATION SET FORTH IN THE 90-DAY PETITION DEMONSTRATING INCREASES IN THE WARBLER'S POPULATION AND HABITAT

(Violation of 16 U.S.C. § 1533(b)(3)(A); 50 C.F.R. § 424.14(b)(2) (2014); 50 C.F.R. § 424.11(c)-(d); 5 U.S.C. § 706

81. Plaintiff realleges and incorporates by reference the allegations contained in Paragraphs 1 through 80 as though fully set forth herein.

82. When making a finding on a delisting petition under 16 U.S.C. § 1533(b)(3)(A), the Service "shall consider" the criteria referenced in 50 C.F.R. § 424.14(b)(2) (2014) and 50 C.F.R. § 424.11(c)-(d) (2014), which include population and habitat considerations.

83. The 90-day Petition presented substantial scientific and commercial information demonstrating remarkable increases in Warbler population and habitat since the initial listing, thereby meeting the applicable statutory and regulatory requirements that delisting *may* be warranted under a reasonable person standard. *See* Exhibit D at 18-29. In reviewing the 90-day Petition, the Federal Defendants impermissibly rebuffed and downplayed such information by

failing to give appropriate credence to a wealth of peer-reviewed studies supporting a finding that delisting may be warranted based upon increases in Warbler population and habitat. *See Exhibit H at Factor A(1)(a) (unpaginated).*

84. The Federal Defendants' failures to follow their statutory and regulatory duties under the ESA to properly consider relevant information presented in the 90-day Petition regarding Warbler population and habitat violate the ESA and was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; [or] without observance of procedure required by law" 5 U.S.C. § 706(2)(A) - (D).

Sixth Claim for Relief

THE SERVICE IMPERMISSIBLY IGNORED SUBSTANTIAL INFORMATION SET FORTH IN THE 90-DAY PETITION SHOWING THAT THE ORIGINAL SCIENTIFIC OR COMMERCIAL DATA USED AT THE TIME THE WARBLER WAS LISTED WERE IN ERROR

(Violation of 50 C.F. R. § 424.1(d)(3) (2014); 5 U.S.C. § 706)

85. Plaintiff realleges and incorporates by reference the allegations contained in Paragraphs 1 through 84 as though fully set forth herein.

86. Under rules in effect as of the time relevant to this complaint, it is appropriate for the Service to make a positive 90-day finding where a delisting petition shows that the best scientific or commercial data available when the species was *originally* listed (or the interpretation of such data) were in error. *See* 50 C.F.R. § 424.11(d)(3) (2014); *see also* 81 Fed. Reg. 35698, 35700 (June 3, 2016); 81 Fed. Reg. 7414 (Feb. 11, 2016)

87. Here, the 90-day Petition provided substantial scientific or commercial data showing that the best scientific or commercial data available when the species was originally listed (or the interpretation of such data) were in error. *See Exhibit D at 14-20.*

88. The Federal Defendants inexplicably ignored the substantial scientific and commercial information in the 90-day Petition showing that the best scientific or commercial data available when the species was originally listed (or the interpretation of such data) were in error. *See Exhibit H at Factors A, C, and D (unpaginated).* This failure to properly consider such information set forth in the 90-day Petition was in violation of the ESA and its applicable regulations and was “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; [or] without observance of procedure required by law” 5 U.S.C. § 706(2)(A), (D).

VII. PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully seeks an Order of this Court:

- A. Declaring that Federal Defendants did not follow the proper evidentiary standard in the Second 90-Day Finding, thereby rendering the Second 90-Day Finding *ultra vires*, arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law; in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; [or] without observance of procedure required by law.
- B. Declaring the proper evidentiary standard for the Second 90-Day Finding, as set forth in the Fifth Circuit’s Order and as reflected in the regulations in effect at the time the 90-day Petition was filed;
- C. Holding unlawful, setting aside, and vacating the Second 90-Day Finding;
- D. Ordering the Federal Defendants to make a positive 90-day finding within 90 days of this Court’s final judgment in this case and to proceed to the 12-month review, or alternatively, ordering the Federal Defendants to issue a 90-Day finding on the Petition applying the proper

evidentiary standard declared by the Fifth Circuit in the Original Lawsuit within 90 days of this Court's final judgment in this case;

- E. Retaining continuing jurisdiction of this matter until the Federal Defendants fully remedy the violations of law complained of herein;
- F. Awarding Plaintiff its costs and attorneys' fees as appropriate; and
- G. Providing such other relief as is just and proper.

DATED: January 12, 2022

Respectfully submitted,

/s/Theodore Hadzi-Antich
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Attorneys for Plaintiff

CERTIFICATE OF SERVICE

I hereby certify that on January 12, 2022, I electronically filed the foregoing Complaint for Declaratory and Injunctive Relief, Exhibits A-H, and this Certificate of Service with the Clerk of the Court for the United States District Court for the Western District of Texas by using the CM/ECF system. In accordance with Fed. R. Civ. Proc. 4, I am causing to be served one true and correct copy of the filed documents via certified mail, along with a summons, on each of the following persons:

The United States Department of the Interior
1849 C Street, NW, MS 5311
Washington, DC 20240

The Honorable Deb Haaland
In her Official Capacity as Secretary of the Interior
U.S. Department of the Interior
1849 C Street, NW
Washington, DC 20240

The United States Fish and Wildlife Service
1849 C Street, NW
Washington, DC 20240

Martha Williams
In her Official Capacity as Acting Director and Principal Deputy Director
U.S. Fish and Wildlife Service
1849 C Street, NW
Washington, DC 20240

Amy Lueders
In her Official Capacity as Southwest Regional Director
U.S. Fish and Wildlife Service
500 Gold Avenue SW
Albuquerque, NM 87102-3118

Ashley Chapman Hoff
U.S. Attorney for the Western District of Texas
800 Franklin Avenue, Suite 280
Waco, TX 76701

/s/Theodore Hadzi-Antich
THEODORE HADZI-ANTICH

EXHIBIT A



Texas Public Policy Foundation

October 11, 2021

Via Email and Federal Express

Deb Haaland
Secretary of the Interior
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240
feedback@ios.doi.gov

Martha Williams
Acting Director and Principal Deputy Director
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Southwest Regional Director
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Albuquerque, NM 87102
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Re: Notice of Intent to File Suit Concerning the Status of the Golden-cheeked Warbler under The Endangered Species Act

Dear Secretary Haaland, Acting Director Williams, and Regional Director Leuders:

Pursuant to the citizen suit provision of the Endangered Species Act (“ESA”), 16 U.S.C. 1540(g)(2), this letter serves as a 60-day notice (“Notice”) on behalf of the General Land Office of the State of Texas (sometimes hereinafter referred to as “GLO”) of its intent to sue the U.S. Fish and Wildlife Service (“Service”) in connection with the Service’s July 27, 2021, 90-day negative finding that a June 29, 2015, petition to delist the golden-cheeked warbler (*Setophaga chrysoparia*) (“GCWA”) did not present substantial scientific or commercial information indicating that

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delisting may be warranted (sometimes hereafter referred to as the “2021 Negative Finding”). 86 Fed. Reg. 40,186 (July 27, 2021).¹

As is set forth in greater detail below, the 2021 Negative Finding violates the ESA and the Administrative Procedure Act (“APA”), 5 U.S.C. 702, et seq., in a number of ways and must be reconsidered by the Service in accordance with applicable law and the best available scientific information. In addition, the Negative Finding failed to follow the explicit instructions of the United States Court of Appeals for the Fifth Circuit in the case of *General Land Office of Texas v. United States Department of the Interior*, 947 F.3d 309 (5th Cir. 2020) (the “Fifth Circuit Decision”).

INTRODUCTION TO THE GENERAL LAND OFFICE OF THE STATE OF TEXAS

The General Land Office of the State of Texas is the oldest state agency in Texas, established by the Constitution of the Republic of Texas. Upon annexation by the United States, Texas retained control of its public lands. Texas constitutionally dedicated half of these public lands to the Permanent School Fund, which is maintained for the benefit of the public schoolchildren of the State of Texas. T.X. Const. art. VII §2. The GLO is responsible for maximizing revenues from Texas public school lands. Tex. Nat. Res. Code Ann. §31.051. Under the Texas Constitution, proceeds from the sale and mineral leasing of public school lands flow to the Permanent School Fund via the GLO. T.X. Const. art. VII § 5(g). The Texas Legislature established the School Land Board in 1939 to manage the sale and mineral leasing of Permanent School Fund lands. The Commissioner of the Texas General Land Office chairs the School Land Board.

Additionally, the GLO owns and maintains State Veterans Cemeteries to honor those who have served, as well as State Veterans Homes that provide care and dignity for veterans, their spouses, and Gold Star parents. The ability of the GLO to maximize revenues from Texas public school lands, and to maintain State Veterans Cemeteries and State Veterans Homes to a high standard, is undermined by the restrictions imposed due to the presence of Warblers or Warbler habitat on GLO properties.

For example, in Bexar and Kendall counties, GLO owns a 2,316.45-acre parcel of land – approximately 84.5% of which contains Warbler habitat. In order to clear or develop the property under the Service’s mitigation program, GLO must replace every one acre of cleared land with three acres of Warbler habitat. This encumbrance on the property makes development of the property vastly more expensive and significantly decreases its market value if sold, resulting in less money for the Permanent School Fund, State Veterans Cemeteries, and State Veterans Homes. In fact, after conducting three studies on the presence of Warbler habitat on this property, experts concluded that the presence of Warbler habitat decreased the property’s value an average of 43%.

GLO also owns and leases 429 acres in Williamson County, approximately 5 miles east of Jonah. Warbler habitat is located throughout Williamson and surrounding counties.

¹ GLO intends to challenge the 2021 Negative Finding under both the ESA and the Administrative Procedure Act (“APA”). Advanced notice to the Service is required only under the ESA and not under the APA.

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If the Service does not correct the noted deficiencies within 60 days of this notice, GLO will seek to have the challenged Negative Finding declared unlawful and set aside. In addition, all other appropriate relief, including costs and fees, will be sought

BACKGROUND

A. Listing History of the Golden-cheeked Warbler

The GCWA is an insectivorous, migratory songbird that breeds in the mixed Ashe juniper and deciduous woodlands of Central Texas, west and north of the Balcones Fault. The species arrives in Texas from late February through April and migrates through Mexico and Central America in July and August to winter in the mountainous regions of Southern Mexico, Guatemala, Honduras, El Salvador, and Nicaragua. *See* Golden-cheeked Warbler (*Setophaga chrysoparia*) 5-year Review (2014) at 1. The Service emergency-listed the GCWA on May 4, 1990 based on the agency's belief that "ongoing and imminent habitat destruction" for the GCWA would occur and that the species needed federal funding and protection available to ESA-listed species. *See* 55 Fed. Reg. 18,844 (May 4, 1990). In the emergency listing rule, the Service indicated that Travis County, Texas, contained some of the best habitat for the GCWA and that the species' habitat was threatened due to development, including development in "late-stage approval" processes by Travis County and the City of Austin. *Id.*

The Service published a final rule listing the species in 55 Fed. Reg. 53,153 (Dec. 27, 1990). The final listing rule estimated there to be approximately 15,000-17,000 GCWAs, and between 79,400-263,750 acres of available suitable habitat. *Id.* at 53,154. Pursuant to the listing factors identified by the ESA, the Service provided the following justification for the listing of the GCWA as endangered:

Listing Factor A (the present or threatened destruction, modification, or curtailment of its habitat or range): The Service asserted that the central and western range of the GCWA had been "decimated" by clearing of mature Ashe junipers and by encroachment and fragmentation of habitat due to urban development, particularly in the Austin and San Antonio metropolitan areas. *Id.* at 53,157. The Service further asserted that "[c]onsistent population growth in the Edwards Plateau region of Texas" constituted a "major threat" to the GCWA. Other threats to the species asserted by the Service included highway construction, proposed reservoirs and water delivery systems, and private and commercial development. *Id.* at 53,157.

Listing Factor B (overutilization for commercial, recreational, scientific, or educational purposes): The Service did not indicate this factor was present at the time the species was listed. *Id.* at 53,158.

Listing Factor C (disease or predation): While the Service acknowledged that observation of GCWA nests was difficult and, therefore, challenging to assess the extent the species experiences nest predation, the Service nevertheless identified

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scrub jays, blue jays, crows, grackles, feral cats and dogs, rat snakes, raccoons, opossums, and squirrels as nest predators. *Id.* The agency also noted that fire ants “could become” a threat to the GCWA. *Id.*

Listing Factor D (the inadequacy of existing regulatory mechanisms): The Service identified the Migratory Bird Treaty Act and Texas Parks and Wildlife Department (“TPWD”) regulations as providing limited protection for the species, but noted TPWD regulations did not provide for protection of GCWA habitat. The Service acknowledged that the City of Austin had “limited” ability to protect GWCA habitat, and stated listing the species under the ESA would provide additional protection of the species habitat. *Id.*

Listing Factor E (other natural or manmade factors affecting its continued existence): The Service identified habitat destruction causing habitat fragmentation as an “immediate threat” to the GCWA, the threat of brown-headed cowbird predation, and lack of reproduction of deciduous trees as additional threats to the species. *Id.* at 53,159.

In summary, the final listing rule identified habitat loss and fragmentation due to urban development as posing the greatest threat to the GCWA, with nest predation and lack of regulatory mechanisms contributing to the species’ purported endangered status.

B. Delisting Petition, Original 90-day Finding, and Associated Litigation

1. Delisting Petition

On June 29, 2015, Texans for Positive Economic Policy, Susan Combs, the Texas Public Policy Foundation, and the Reason Foundation (collectively, “Petitioners”) submitted to the Service their *Petition to remove the golden-cheeked warbler from the list of endangered species* (“Delisting Petition”). The Delisting Petition provided substantial information indicating delisting the GCWA may be warranted. Among other things, the Delisting Petition provided information indicating available habitat for the species is substantially greater than was known at the time the species was listed, that the GCWA population is roughly 19 times greater than was believed at the time of listing, and that significant conservation has been put into place for the species since its listing in 1990. Delisting Petition at 4, 25. Specifically, the Delisting Petition provided scientific and commercial information indicating:

- Estimates of GCWA habitat have consistently demonstrated a substantial increase in the amount of available GCWA habitat than was known at the time the species was listed, including studies published between 2012-2013 indicating between 1,578,281 and 1,678,053 hectares (between 3,900,017-4,146,559 acres) of available GCWA habitat exist across the species’ range in Texas. *Id.* at 13, 18.
- Recent population estimates indicate the male GCWA population at between 223,927-302,620 (up from approximately 13,800 territories at the time the species was emergency listed). *Id.* at 19.

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- Sufficient habitat exists to suggest the probability of GCWA extinction over the next 100 years is low. *Id.* at 20.
- Predation and brood parasitism of GCWAs is uncommon or otherwise a low risk to the species. *Id.* at 22.
- Myriad habitat conservation plans and other conservation mechanisms ensure continued protection for the GCWA even if the species were delisted, including:
 - The Balcones Canyonlands National Wildlife Refuge—30,000 acres;
 - Fort Hood—22,591 hectares (55,823 acres) supporting between 4,482-7,236 male GCWAs;
 - 160 habitat conservation plans approved by the Service which include GCWAs as a covered (protected) species. *Id.* at 23-25.

The Delisting Petition stated that application of the best available scientific and commercial information clearly indicates the GCWA does not meet the statutory listing factors set forth in the ESA. *Id.* at 14.

2. Original Negative 90-day finding on Delisting Petition

Despite the substantial information provided to the Service in the Delisting Petition, on June 3, 2016, the Service made a negative 90-day finding on the Petition (“Original Negative Finding”). 81 Fed. Reg. 35,698. In the Original Negative Finding, the Service asserted the Petition provided no “new information” indicating the GCWA was originally listed in error or that the species had recovered. *Id.* at 35,700. Further, the Service asserted that there continues to be “ongoing, widespread destruction of [GCWA] habitat” and that the species “continues to be in danger of extinction throughout its range.” *Id.*

The Service’s petition review form prepared in connection with the agency’s Original Negative Finding acknowledged that studies published subsequent to the GCWA’s listing indicate growth in the species’ distribution and abundance and the existence of more available habitat. However, the agency stated that these studies represent “new estimates rather than indicators of positive trends” in habitat population and size and, therefore, do not imply recovery of the species. The petition review form also referred to a study published subsequent to the agency’s receipt of the Delisting Petition to support the Service’s contention that uncertainty with respect to GCWA population continued to exist. The petition review form noted that the Delisting Petition did not address whether habitat fragmentation represents a significant threat to the GCWA and did not cite to “new studies” demonstrating continued urbanization, habitat loss and habitat fragmentation.

In its petition review form, the Service also summarily dispensed with information provided by the Delisting Petition indicating neither disease nor predation pose a significant threat to the GCWA, finding that the Delisting Petition did not provide “new information” supporting its position.

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3. Lawsuit Challenging Original Negative Finding in District Court

On June 5, 2017, GLO filed suit in federal district court in Austin, challenging as arbitrary and capricious the Original Negative Finding. On February 6, 2019, the U.S. District Court for the Western District of Texas upheld the Original Negative Finding. *See General Land Office of Texas v. U.S. Fish and Wildlife Service*, 2019 WL 1010688 (W.D. Tex. Feb. 6, 2019).

4. U.S. Court of Appeals for the Fifth Circuit Reverses District Court and Overturns the Original Negative Finding

On January 15, 2020, Fifth Circuit Decision reversed the district court and found the Service’s Original Negative Finding to be arbitrary and capricious. Specifically, the Fifth Circuit found that the Service applied an inappropriately stringent standard in connection with the agency’s review of the Petition. *See General Land Office of Texas v. United States Department of the Interior*, 947 F. 3d 309, 320-21 (5th Cir 2020). The Fifth Circuit held that while the Service’s regulations in place at the time the agency made its Original Negative Finding required a petition present only “that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted,” *id.* (citing 50 C.F.R. 424.14(b)(1)), the Service instead impermissibly required the Petition to contain “new” information the agency had not considered in its 5-year review. *Id* at 321. Accordingly, because the Service made the Original Negative Finding using an incorrect legal standard, the Fifth Circuit reversed the district court’s decision, required vacatur of the Original Negative Finding, and remanded the matter to the Service for reconsideration of the Delisting Petition, ordering the Service to use the correct legal standard. *Id.*

THE POST-REMAND 2021 NEGATIVE FINDING

On July 27, 2021, in response to the order of the Fifth Circuit, the Service published a new 90-day finding that is the subject of this NOI. As noted above, the 2021 Negative Finding stated that the Petition did not present substantial scientific or commercial information indicating delisting the GCWA may be warranted. 86 Fed. Reg. 40,186 (July 27, 2021). The Service provided the rationale for its Negative Finding in the Petition Review Form, which is located in Docket No. FWS-R2-ES-2016-0062 on www.regulations.gov. The remaining portions of this 60-day notice set forth the legal standard that the Service should have applied but failed to apply in connection with the Delisting Petition and the specific reasons why the 2021 Negative Finding is arbitrary, capricious, contrary to law, and contrary to the explicit instructions of the Fifth Circuit’s remand order.

A. The Legal Standard Applicable to the Delisting Petition

Upon receipt of a petition to delist a threatened or endangered species, and to the maximum extent practicable, the Service is required by ESA section 4 to make a finding within 90 days regarding whether the petition presents substantial information indicating that delisting may be warranted. 16 U.S.C. 1533(b)(3)(A); 50 C.F.R. 424.14(b)(1). If the Service makes a positive 90-day finding by determining that a petition presents substantial information indicating the petitioned action *may* be warranted, the Secretary is required to commence a review of the species’ status and make a

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second determination, that is, whether listing is warranted. This second determination is generally referred to as a “12-month finding.” If, however, the Secretary makes a negative 90-day finding, the petition is rejected and no further review is conducted by the Service. A negative 90-day finding is subject to judicial review. 16 U.S.C. 1533(b)(3)(C)(ii), 1540(g).

Making a positive 90-day finding is a low bar, as it simply triggers further review of the status of a species. At the 90-day finding stage, the Secretary is required to determine only whether a petition presents substantial scientific and commercial information indicating the petitioned action “may be warranted.” As the Fifth Circuit recognized, Service regulations in place at the time the Petition was submitted defined “substantial information” as “that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted.” 16 U.S.C. 1534(b)(3)(A); 50 C.F.R. 424.14(b)(1).

Courts generally have held that in making a 90-day finding, the Service does not critically analyze petitions, conduct additional research, or make a determination as to whether listing under the ESA is warranted. *See, e.g., Colorado River Cutthroat Trout v. Kempthorne*, 448 F. Supp. 2d 170, 176-77 (D.D.C. 2006) (recognizing the Service’s explicit acknowledgement, in the agency’s routine statement in 90-day findings on petitions that it does not conduct additional research or subject the petition to rigorous critical review at the 90-day finding stage). In a 90-day review, the Service may utilize the information that it already has in its files regarding the species in addition to the information provided in the petition; however, the Service may not solicit or consider outside information and opinions. *E.g., Ctr. for Biological Diversity v. Morgenweck*, 351 F. Supp. 2d 1137 (D. Colo. 2004); *WildEarth Guardians v. U.S. Secretary of the Interior*, 2011 WL 1225547, *4, *7 (D. Idaho Mar. 28, 2011); *McCrary v. Gutierrez*, 2010 WL 520762 (N.D. Cal. Feb. 8, 2010).

It is well-established that a lower standard of evidence is required at the 90-day finding stage than is required for the Service to make a 12-month finding, because the question before the Service at that preliminary stage is whether the petitioned action *may be* warranted, not whether *it is* warranted. *See e.g., Moden v. U.S. Fish and Wildlife Service*, 281 F. Supp. 2d 1193, 1203-4 (D. Or. 2003) (concluding that “the standard for evaluating whether substantial information has been presented by an ‘interested person’ is not overly-burdensome, does not require conclusive information, and uses the ‘reasonable person’ to determine whether...action may be warranted.”); *Humane Soc’y of the U.S. v. Pritzker*, 2014 WL 6946022, *5-8 (D.D.C. Nov. 14, 2014) (summarizing case law verifying the lower evidentiary standard for a 90-day finding and determining that the agency was arbitrary and capricious in its failure to apply the correct evidentiary standard where there was “conflicting evidence” regarding the species and the agency’s “own conclusion regarding the need for more thorough analysis suggest[ed] that a reasonable person might conclude that a review of the status of the species concerned was warranted”); *Ctr. for Biological Diversity v. Kempthorne*, 2008 WL 659822, *9 (D. Ariz. Mar. 6, 2008) (holding that the “application of an evidentiary standard requiring conclusive evidence in the context of a 90-day review is arbitrary and capricious”); *Morgenweck*, 351 F. Supp. 2d at 1141 (setting aside negative 90-day finding where the agency applied an incorrect standard to require conclusive evidence that the petitioned-for action was warranted); *Colorado River Cutthroat Trout*, 448 F. Supp. 2d at 176 (holding that the 90-day finding stage is intended to be a threshold determination” and a “less searching review”). At the 90-day finding stage, the Service is not

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allowed to “simply discount scientific studies that support the petition or to resolve reasonable extant scientific dispute against the petition. Unless the Service explains why the scientific studies that the petition cites are unreliable, irrelevant, or otherwise unreasonable to credit, the Service must credit the evidence presented.” *Buffalo Field Campaign v. Zinke*, 289 F. Supp. 3d 103, 110 (D.D.C. 2018).

Recently, the U.S. District Court for the Western District of Texas specifically examined the standard the Service must apply at the 90-day finding stage. In *American Stewards of Liberty v. U.S. Dep’t of the Interior*, the court found the Service’s denial of a petition to delist the Bone Cave harvestman—a central Texas karst invertebrate species—was arbitrary and capricious ***because the Service “required a higher quantum of evidence than is permissible*** under the [ESA] and implementing regulations governing a 90-day finding.” 370 F. Supp. 3d 711, 725 (W.D. Tex. 2019) (“*American Stewards*”) (emphasis added). In that case, the court held that the Service should have considered whether the information presented by the delisting petition “may indicate” delisting was warranted but, instead, required “conclusive evidence” of the same. Importantly, the court recognized that “the evidence presented in the petition is not conclusive proof” that the species warranted delisting; however, the court concluded that “the evidence presented in the petition meets the ***low evidentiary threshold set forth in the [ESA] and implementing regulations for a 90-day finding***.” *Id.* at 728 (emphasis added). The Service’s ultimate decision as to whether the species should be delisted would be made, said the court, “after a more searching inquiry” associated with the 12-month finding.

B. The 2021 Negative Finding is Unlawful for a Variety of Reasons

Despite clear instruction from the Fifth Circuit that a heightened standard should not be used at the 90-day finding stage to judge the Delisting Petition, the Service has, again, applied the same unlawfully heightened standard to the same Delisting Petition, thereby ignoring the Fifth Circuit’s instructions. Throughout the 2021 Negative Finding, the Service made clear that it viewed the burden to be on the Petitioners as proving recovery, proving a negative, and using “new information” to do so. Moreover, the Service wholly ignored Petitioners’ claim that the GWCA should be delisted because its original listing was in error.

The Service has acted arbitrarily and capriciously in violating the ESA’s mandatory duties by applying the wrong evidentiary standard and failing to apply the “substantial information” standard and by ignoring, misconstruing, and/or subverting scientific information. This runs counter to the Service’s own interpretation of the ESA and its customary statement in 90-day findings that “as the Act and regulations contemplate, at the 90-day finding, we [the Service] accept the petitioner’s sources and characterizations of the information unless we have specific information to the contrary.” *Colorado River Cutthroat Trout v. Kempthorne*, 448 F. Supp. 2d 170, 176 n.4 (citing the Service’s statements in numerous 90-day findings that the agency does not conduct additional research or subject the petition to rigorous critical review at the 90-day finding stage). In applying the wrong standard, the Service has violated the instructions of the Fifth Circuit, the ESA, and the APA. *See* 5 U.S.C. 706(2)(A), (D).

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1. The Service failed to address or analyze information in the Delisting Petition demonstrating the GCWA was listed in error

In an oversight that defies reason, the Service steadfastly failed to confront in any way the primary basis for the Delisting Petition—that the original data for classification of the GCWA were in error.² There can be no dispute that the original data for classification of the GCWA as endangered were in error. As detailed in the Delisting Petition and referenced above, at the time the species was listed, there were thought to be between 15,000-17,000 GCWAs. Recent estimates, however, consistently indicate that the species numbers in the hundreds of thousands. Further, at the time the GCWA was listed as endangered, approximately 79,000-260,000 acres of habitat was thought to be present on the landscape in Texas. Today, and as detailed in the Delisting Petition, recent studies put that number closer to four million acres. And all this is despite continued rapid urbanization in parts of the GCWA’s range—the primary threat identified by the Service in its Final Listing Rule and emphasized in the Petition Review Form. The indisputable error in the original classification decision alone warrants delisting and renders the 2021 Negative Finding unlawful. However, the 2021 Negative Finding also fails for several other reasons, as detailed below.

2. The Service held the Delisting Petition to an unlawfully high standard at the 90-day finding stage

Despite the Service indicating in the Petition Review Form that the agency had reviewed the Delisting Petition under the standards applicable at the time the Delisting Petition was submitted to the Service, the agency nevertheless impermissibly applied regulations that were adopted two years after the Delisting Petition was submitted. This was the incorrect standard, as was previously held by the Fifth Circuit. *See* 947 F.3d at 320-21. The court stated, “[t]he Service recited [the correct] standard, but a careful review of its analysis shows that the Service *applied* an inappropriately heightened one.” *Id.* at 321 (emphasis in original).

The Service was required to make a finding as to whether the petition presents substantial information indicating that delisting may be warranted. 50 C.F.R. 424.14(b)(1). “Substantial information” was defined at the time the Delisting Petition was submitted as “that amount of information that would lead a *reasonable person* to believe that [delisting] *may be* warranted.” *See* 50 C.F.R. 424.14(b)(1) (2014) (emphasis added); *see also* 947 F. 3d at 321. Petition review regulations adopted in October 2016, two years *after* the Delisting Petition had been submitted, instruct that where a prior species status review resulted in final agency action, a petitioned action “generally would not be considered to present substantial scientific and commercial information

² On August 27, 2019, the Service published a final rule revising the agency’s regulations governing the standard for delisting a species (“2019 Regulations”). The 2019 Regulations removed as a basis for delisting that the species was originally listed in error and, instead, required the Service to simply apply the listing factors to the species petitioned for delisting. 50 C.F.R. 424.11(e); 84 Fed. Reg. 45,052 (Aug. 27, 2019). The Service indicated in the 2021 Negative Finding that it reviewed the Delisting Petition in accordance with standards in place at the time the petition was received, and this is consistent with the Service’s practice in other similar circumstances. Because the Service reviewed the Delisting Petition based on regulations in place when the petition was submitted, the Service was required to evaluate whether the GCWA should be delisted on the basis that the original listing was in error.

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indicating the petitioned action may be warranted unless the petition provides *new information* not previously considered.” 50 C.F.R. 424.14(h)(iii) (2016) (emphasis added).

In its 2021 Negative Finding, the Service stated that information provided by the Delisting Petition “does not report any *new* data or study results...but summarizes readily available information about the [GCWA] and its habitat.” Petition Review Form, unpaginated (emphasis added). In other words, the Service apparently would require Petitioners to provide information the Service previously had not considered in order to make a positive 90-day finding. Thus, the 2021 Negative Finding was obviously based on petition review regulations that are inapplicable to the Delisting Petition. As indicated, the Fifth Circuit, in its review of the Service’s Original Negative Finding, held this approach impermissible:

Specifically, to proceed to the twelve-month review stage, the Service required the delisting petition to contain information the Service had not considered in its five-year review...The Service thus based its decision to deny the delisting petition on an incorrect legal standard. Consequently, we conclude the Service’s decision was arbitrary and capricious.

General Land Office at 321. Thus, in issuing the 2021 Negative Finding using the same standard that had already been rejected by the Fifth Circuit, the Service acted unlawfully.

3. The Service erroneously required conclusive evidence of recovery

In addition to applying the wrong petition review regulations to the Delisting Petition, the Service also applied an unlawfully high standard at the 90-day finding stage. In countering information provided in the Delisting Petition that the GCWA and its habitat are far more abundant than at the time of listing, the Service states “...*these efforts represent new estimates rather than indicators of positive trends* in [GCWA] habitat and population size, *and thus do not imply recovery*.” Petition Review Form, unpaginated (emphasis added). The Petition Review Form additionally admits that “it is apparent that uncertainty still exists.” *Id.* The U.S. District Court for the Western District of Texas has recently held this approach unlawful:

The Service’s regulations require a petition to present only *available information*, and the Service committed a clear error in judgment and acted arbitrarily, capriciously, and not in accordance with the law when it called for more evidence than the law requires...*Rather than considering whether the information presented in the petition may indicate that delisting is warranted, the Service requires conclusive evidence...*

American Stewards, 370 F. Supp. 3d at 725, 727 (emphasis added). Here, as in *American Stewards*, rather than examine whether the Delisting Petition presented available information that may indicate delisting is warranted, the Service required conclusive evidence of the same.

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4. The Service applied inappropriate analysis to Delisting Petition claims that the GCWA has recovered

The Delisting Petition provided information indicating the GCWA has recovered and should be delisted on that basis. The Service's Petition Review Form acknowledges that the known range of the species is geographically more extensive and that the GCWA population numbers are higher than what was known at listing; however, the Service nevertheless indicated threats still exist and that recovery criteria have not been accomplished. *See* Petition Review Form, unpaginated. Achieving recovery criteria, however, is not the measure of whether a species has recovered to the point where listing is no longer necessary.

Courts have held that although the ESA mandates the Service prepare species recovery plans, such plans serve as guidance for the agency and do not carry the force of law in an agency's determination as to whether or not a listed species has recovered and necessitates delisting. *See, e.g., Friends of Blackwater v. Salazar*, 691 F.3d 428, 434 (D.C. Cir. 2012); *Fund for Animals, Inc. v. Rice*, 85 F.3d 535, 547 (11th Cir. 1996); *Conservation Cong. v. Finley*, 774 F.3d 611, 614 (9th Cir. 2014); *Friends of Animals v. U.S. Fish & Wildlife Serv.*, Case No. 6:14-cv-01449, 2015 WL 4429147, at *5 (D. Or. July 16, 2015), *appeal docketed No. 15-35639* (9th Cir. Aug. 7, 2015). The Service has itself argued successfully in the D.C. Circuit Court that the "criteria in [a] [r]ecover[y] [p]lan, unlike the factors in section 4(a)(1) of the [ESA] are not binding upon the agency in deciding whether a species is no longer endangered and therefore should be delisted." *Friends of Blackwater*, 691 F.3d at 432.

The Delisting Petition provided substantial information indicating that available GCWA habitat and the GCWA population are orders of magnitude greater than was known at the time the species was listed and that many tens of thousands of acres of important GCWA habitat have been preserved across the species range.

The ESA does not identify a minimum population, range, or preserve number or size that must be achieved or maintained in order to warrant delisting. Instead, the relevant determination whether to delist on the basis of recovery is based on the risk of extinction from any one or a combination of the five listing factors. 50 C.F.R. 424.11(d) (1984); 50 C.F.R. 424.11(e). Whether or not the GCWA has achieved its recovery criteria is irrelevant because it is the ESA's definitions of endangered ("in danger of extinction throughout all or a significant portion of its range") and threatened ("likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range") that provide the applicable standards for determining whether a species has recovered. *Id.*

A species numbering in the hundreds of thousands, with millions of acres of available habitat, cannot reasonably be determined to face an imminent threat of extinction throughout all or a significant portion of its range. Considering these facts, and the substantial conservation that has been put into place for the species, it was unreasonable for the Service to find that the GCWA has not recovered.

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5. The Service ignored information provided by the Delisting Petition

Throughout its Petition Review Form, the Service indicates the Delisting Petition failed to address various threats to the GCWA, including those caused by habitat fragmentation and urbanization. However, the Delisting Petition did, indeed, include information on whether fragmentation and urbanization threaten the GCWA. For example, on the topic of habitat fragmentation, the Delisting Petition explained, “[b]ecause the Service erroneously concluded that few birds existed and little habitat was available for the species, the Service mistakenly concluded that any encroachments on [GWCA] habitat would threaten the continued survival of the species.” Delisting Petition at 28; *see also, id.* at 17, 25, and 27.

Likewise, in its Petition Review Form, the Service claimed that the Delisting Petition did not reference *any* information calling into question that disease and predation threaten the GCWA. However, the Delisting Petition cites three separate studies—Stake, et al. (2004), Groce, et al. (2010), and Anders (2000) to support Petitioners’ claims that predation is not a threat to the GCWA. Delisting Petition at 22. In support of its claims that disease also does not threaten the GCWA, the Delisting Petition addresses the issue of an isolated outbreak of avian pox on the GCWA. *Id.* The Petition Review Form does not acknowledge that the Delisting Petition addressed the issue of predation and does not cite to Groce et al. (2010) or Anders (2000).

Despite the Service’s protests to the contrary, the information provided in the Delisting Petition is much more than required to meet the regulatory standard that a petition present substantial information that the petitioned action *may be* warranted. In the 2021 Negative Finding, the Service inexplicably required the Delisting Petition to *prove* that the GCWA has recovered. On its face, that is the same, wrong standard that caused the Fifth Circuit to vacate and remand the matter to the Service. Accordingly, the Negative Finding is arbitrary, capricious, an abuse of discretion, and otherwise is contrary to the law.

6. Other Information Relevant to GCWA Status

GLO notes that on February 25, 2021, Dr. James Mueller, a biologist with the Balcones Canyonlands National Wildlife Refuge, delivered a presentation to the Texas Chapter of the Wildlife Society titled *Where and by How Much do Golden-Cheeked Warbler Models Differ?* This presentation described a recently concluded study conducted by Dr. Mueller and others which examined potentially available GCWA habitat across the species’ breeding range (based on 2018 satellite imagery) and used presence-absence surveys at 3 and 5 minute intervals to verify results. Dr. Mueller reported that the study concluded there were between 220,000-276,000 singing male GCWAs throughout the species’ breeding range and that the species did not appear to be “imminently threatened with extinction.” Dr. Mueller indicated publication of the study was forthcoming. While the study referenced by Dr. Mueller has not been published as of the date of this Notice, the information would almost certainly have been contained within the Service’s files at the time the agency was preparing its 2021 Negative Finding. It was arbitrary and capricious for the Service to have ignored such relevant information.

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CONCLUSION

For the foregoing reasons, in issuing the 2021 Negative Finding, the Service has again violated its duties under the ESA. The 2021 Negative Finding was and is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the ESA and the standards set forth in the APA. *See* 5 U.S.C. 706(2). As indicated, if these violations have not been remedied within 60 days, we plan to file a lawsuit in federal district court for appropriate substantive and procedural relief, as well as for costs and attorneys' fees. Should you have any questions, please contact the undersigned.

Sincerely,

ROBERT HENNEKE
General Counsel & Director
THEODORE HADZI-ANTICH
Senior Attorney
Center for the American Future
Texas Public Policy Foundation

By:

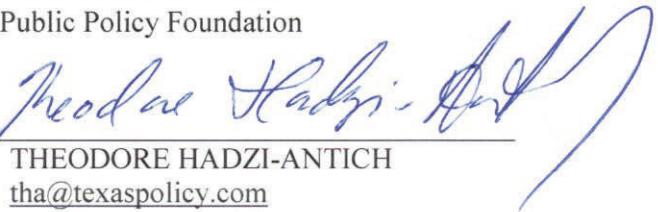

THEODORE HADZI-ANTICH
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EXHIBIT B



Dear Customer,

The following is the proof-of-delivery for tracking number: 774940013352

Delivery Information:

Status:	Delivered	Delivered To:
Signed for by:	Signature release on file	Delivery Location:
Service type:	FedEx Priority Overnight	
Special Handling:	Deliver Weekday	ALBUQUERQUE, NM,
		Delivery date: Oct 12, 2021 10:16

Shipping Information:

Tracking number:	774940013352	Ship Date:	Oct 11, 2021
		Weight:	0.5 LB/0.23 KG
Recipient:	ALBUQUERQUE, NM, US,	Shipper:	Austin, TX, US,

Reference CAF / GCW

Proof-of-delivery details appear below; however, no signature is available for this FedEx Express shipment
because a signature was not required.



Dear Customer,

The following is the proof-of-delivery for tracking number: 774939392314

Delivery Information:

Status:	Delivered	Delivered To:	
Signed for by:	Signature release on file	Delivery Location:	1849 C ST NW
Service type:	FedEx Priority Overnight		
Special Handling:	Deliver Weekday		WASHINGTON, DC, 20240
		Delivery date:	Oct 12, 2021 11:57

Shipping Information:

Tracking number:	774939392314	Ship Date:	Oct 11, 2021
		Weight:	0.5 LB/0.23 KG

Recipient: Deb Haaland, Secretary of the Interior 1849 C Street NW WASHINGTON, DC, US, 20240	Shipper: Yvonne Simental, Texas Public Policy Foundation 901 Congress Avenue Austin, TX, US, 78701
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Reference CAF / GCW

Proof-of-delivery details appear below; however, no signature is available for this FedEx Express shipment
because a signature was not required.



Dear Customer,

The following is the proof-of-delivery for tracking number: 774939717445

Delivery Information:

Status:	Delivered	Delivered To:	
Signed for by:	Signature release on file	Delivery Location:	1849 C ST NW
Service type:	FedEx Priority Overnight		
Special Handling:	Deliver Weekday		WASHINGTON, DC, 20240
		Delivery date:	Oct 12, 2021 11:50

Shipping Information:

Tracking number:	774939717445	Ship Date:	Oct 11, 2021
		Weight:	0.5 LB/0.23 KG

Recipient:
Martha Williams, U.S. Fish and Wildlife Service
1849 C Street NW
MIB Room 3148
WASHINGTON, DC, US, 20240

Shipper:
Yvonne Simental, Texas Public Policy Foundation
901 Congress Avenue
Austin, TX, US, 78701

Reference CAF / GCW

Proof-of-delivery details appear below; however, no signature is available for this FedEx Express shipment
because a signature was not required.

EXHIBIT C

FWS, DOI, and NOAA, Commerce

§ 424.02

PART 424—LISTING ENDANGERED AND THREATENED SPECIES AND DESIGNATING CRITICAL HABITAT

Subpart A—General Provisions

Sec.

424.01 Scope and purpose.
424.02 Definitions.

Subpart B—Revision of the Lists

424.10 General.
424.11 Factors for listing, delisting, or reclassifying species.
424.12 Criteria for designating critical habitat.
424.13 Sources of information and relevant data.
424.14 Petitions.
424.15 Notices of review.
424.16 Proposed rules.
424.17 Time limits and required actions.
424.18 Final rules—general.
424.19 Impact analysis and exclusions from critical habitat.
424.20 Emergency rules.
424.21 Periodic review.

AUTHORITY: 16 U.S.C. 1531 *et seq.*

SOURCE: 49 FR 38908, Oct. 1, 1984, unless otherwise noted.

Subpart A—General Provisions

§ 424.01 Scope and purpose.

(a) Part 424 provides rules for revising the Lists of Endangered and Threatened Wildlife and Plants and, where appropriate, designating or revising their critical habitats. Criteria are provided for determining species to be endangered or threatened and for designating critical habitats. Procedures for receiving and considering petitions to revise the lists and for conducting periodic reviews of listed species also are established.

(b) The purpose of these rules is to interpret and implement those portions of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*), that pertain to the listing of species and the determination of critical habitats.

§ 424.02 Definitions.

(a) The definitions of terms in 50 CFR 402.02 shall apply to this part 424, except as otherwise stated.

(b) *Candidate* means any species being considered by the Secretary for listing as an endangered or a threatened spe-

cies, but not yet the subject of a proposed rule.

(c) *Conservation, conserve, and conserving* mean to use and the use of all methods and procedures that are necessary to bring any endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

(d) *Critical habitat* means (1) the specific areas within the geographical area currently occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (i) essential to the conservation of the species and (ii) that may require special management considerations or protection, and (2) specific areas outside the geographical area occupied by a species at the time it is listed upon a determination by the Secretary that such areas are essential for the conservation of the species.

(e) *Endangered species* means a species that is in danger of extinction throughout all or a significant portion of its range.

(f) *List or lists* means the Lists of Endangered and Threatened Wildlife and Plants found at 50 CFR 17.11(h) or 17.12(h).

(g) *Plant* means any member of the plant kingdom, including, without limitation, seeds, roots, and other parts thereof.

(h) *Public hearing* means an informal hearing to provide the public with the opportunity to give comments and to permit an exchange of information and opinion on a proposed rule.

(i) *Secretary* means the Secretary of the Interior or the Secretary of Commerce, as appropriate, or their authorized representatives.

(j) *Special management considerations or protection* means any methods or procedures useful in protecting physical

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and biological features of the environment for the conservation of listed species.

(k) *Species* includes any species or subspecies of fish, wildlife, or plant, and any distinct population segment of any vertebrate species that interbreeds when mature. Excluded is any species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of the Act would present an overwhelming and overriding risk to man.

(l) *State agency* means any State agency, department, board, commission, or other governmental entity that is responsible for the management and conservation of fish, plant, or wildlife resources within a State.

(m) *Threatened species* means any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

(n) *Wildlife or fish and wildlife* means any member of the animal kingdom, including without limitation, any vertebrate, mollusk, crustacean, arthropod, or other invertebrate, and includes any part, product, egg, or offspring thereof, or the dead body or parts thereof.

Subpart B—Revision of the Lists**§ 424.10 General.**

The Secretary may add a species to the lists or designate critical habitat, delete a species or critical habitat, change the listed status of a species, revise the boundary of an area designated as critical habitat, or adopt or modify special rules (see 50 CFR 17.40–17.48 and parts 222 and 227) applied to a threatened species only in accordance with the procedures of this part.

§ 424.11 Factors for listing, delisting, or reclassifying species.

(a) Any species or taxonomic group of species (e.g., genus, subgenus) as defined in § 424.02(k) is eligible for listing under the Act. A taxon of higher rank than species may be listed only if all included species are individually found to be endangered or threatened. In determining whether a particular taxon or population is a species for the purposes of the Act, the Secretary shall

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rely on standard taxonomic distinctions and the biological expertise of the Department and the scientific community concerning the relevant taxonomic group.

(b) The Secretary shall make any determination required by paragraphs (c) and (d) of this section *solely* on the basis of the best available scientific and commercial information regarding a species' status, without reference to possible economic or other impacts of such determination.

(c) A species shall be listed or reclassified if the Secretary determines, on the basis of the best scientific and commercial data available after conducting a review of the species' status, that the species is endangered or threatened because of any one or a combination of the following factors:

(1) The present or threatened destruction, modification, or curtailment of its habitat or range;

(2) Over utilization for commercial, recreational, scientific, or educational purposes;

(3) Disease or predation;

(4) The inadequacy of existing regulatory mechanisms; or

(5) Other natural or manmade factors affecting its continued existence.

(d) The factors considered in delisting a species are those in paragraph (c) of this section as they relate to the definitions of endangered or threatened species. Such removal must be supported by the best scientific and commercial data available to the Secretary after conducting a review of the status of the species. A species may be delisted only if such data substantiate that it is neither endangered nor threatened for one or more of the following reasons:

(1) *Extinction.* Unless all individuals of the listed species had been previously identified and located, and were later found to be extirpated from their previous range, a sufficient period of time must be allowed before delisting to indicate clearly that the species is extinct.

(2) *Recovery.* The principal goal of the U.S. Fish and Wildlife Service and the National Marine Fisheries Service is to return listed species to a point at which protection under the Act is no longer required. A species may be

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delisted on the basis of recovery only if the best scientific and commercial data available indicate that it is no longer endangered or threatened.

(3) *Original data for classification in error.* Subsequent investigations may show that the best scientific or commercial data available when the species was listed, or the interpretation of such data, were in error.

(e) The fact that a species of fish, wildlife, or plant is protected by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (see part 23 of this title 50) or a similar international agreement on such species, or has been identified as requiring protection from unrestricted commerce by any foreign nation, or to be in danger of extinction or likely to become so within the foreseeable future by any State agency or by any agency of a foreign nation that is responsible for the conservation of fish, wildlife, or plants, may constitute evidence that the species is endangered or threatened. The weight given such evidence will vary depending on the international agreement in question, the criteria pursuant to which the species is eligible for protection under such authorities, and the degree of protection afforded the species. The Secretary shall give consideration to any species protected under such an international agreement, or by any State or foreign nation, to determine whether the species is endangered or threatened.

(f) The Secretary shall take into account, in making determinations under paragraph (c) or (d) of this section, those efforts, if any, being made by any State or foreign nation, or any political subdivision of a State or foreign nation, to protect such species, whether by predator control, protection of habitat and food supply, or other conservation practices, within any area under its jurisdiction, or on the high seas.

§ 424.12 Criteria for designating critical habitat.

(a) Critical habitat shall be specified to the maximum extent prudent and determinable at the time a species is proposed for listing. If designation of critical habitat is not prudent or if critical habitat is not determinable,

the reasons for not designating critical habitat will be stated in the publication of proposed and final rules listing a species. A final designation of critical habitat shall be made on the basis of the best scientific data available, after taking into consideration the probable economic and other impacts of making such a designation in accordance with § 424.19.

(1) A designation of critical habitat is not prudent when one or both of the following situations exist:

(i) The species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of such threat to the species, or

(ii) Such designation of critical habitat would not be beneficial to the species.

(2) Critical habitat is not determinable when one or both of the following situations exist:

(i) Information sufficient to perform required analyses of the impacts of the designation is lacking, or

(ii) The biological needs of the species are not sufficiently well known to permit identification of an area as critical habitat.

(b) In determining what areas are critical habitat, the Secretary shall consider those physical and biological features that are essential to the conservation of a given species and that may require special management considerations or protection. Such requirements include, but are not limited to the following:

(1) Space for individual and population growth, and for normal behavior;

(2) Food, water, air, light, minerals, or other nutritional or physiological requirements;

(3) Cover or shelter;

(4) Sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and generally;

(5) Habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

When considering the designation of critical habitat, the Secretary shall focus on the principal biological or physical constituent elements within the defined area that are essential to

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the conservation of the species. Known primary constituent elements shall be listed with the critical habitat description. Primary constituent elements may include, but are not limited to, the following: roost sites, nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality or quantity, host species or plant pollinator, geological formation, vegetation type, tide, and specific soil types.

(c) Each critical habitat area will be shown on a map, with more-detailed information discussed in the preamble of the rulemaking documents published in the *FEDERAL REGISTER* and made available from the lead field office of the Service responsible for such designation. Textual information may be included for purposes of clarifying or refining the location and boundaries of each area or to explain the exclusion of sites (e.g., paved roads, buildings) within the mapped area. Each area will be referenced to the State(s), county(ies), or other local government units within which all or part of the critical habitat is located. Unless otherwise indicated within the critical habitat descriptions, the names of the State(s) and county(ies) are provided for informational purposes only and do not constitute the boundaries of the area. Ephemeral reference points (e.g., trees, sand bars) shall not be used in any textual description used to clarify or refine the boundaries of critical habitat.

(d) When several habitats, each satisfying the requirements for designation as critical habitat, are located in proximity to one another, an inclusive area may be designated as critical habitat.

Example: Several dozen or more small ponds, lakes, and springs are found in a small local area. The entire area could be designated critical habitat if it were concluded that the upland areas were essential to the conservation of an aquatic species located in the ponds and lakes.

(e) The Secretary shall designate as critical habitat areas outside the geographical area presently occupied by a species only when a designation limited to its present range would be inadequate to ensure the conservation of the species.

(f) Critical habitat may be designated for those species listed as threatened or

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endangered but for which no critical habitat has been previously designated.

(g) Existing critical habitat may be revised according to procedures in this section as new data become available to the Secretary.

(h) Critical habitat shall not be designated within foreign countries or in other areas outside of United States jurisdiction.

[49 FR 38908, Oct. 1, 1984, as amended at 77 FR 25622, May 1, 2012]

§ 424.13 Sources of information and relevant data.

When considering any revision of the lists, the Secretary shall consult as appropriate with affected States, interested persons and organizations, other affected Federal agencies, and, in cooperation with the Secretary of State, with the country or countries in which the species concerned are normally found or whose citizens harvest such species from the high seas. Data reviewed by the Secretary may include, but are not limited to scientific or commercial publications, administrative reports, maps or other graphic materials, information received from experts on the subject, and comments from interested parties.

§ 424.14 Petitions.

(a) *General.* Any interested person may submit a written petition to the Secretary requesting that one of the actions described in § 424.10 be taken. Such a document must clearly identify itself as a petition and be dated. It must contain the name, signature, address, telephone number, if any, and the association, institution, or business affiliation, if any, of the petitioner. The Secretary shall acknowledge in writing receipt of such a petition within 30 days.

(b) *Petitions to list, delist, or reclassify species.* (1) To the maximum extent practicable, within 90 days of receiving a petition to list, delist, or reclassify a species, the Secretary shall make a finding as to whether the petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted. For the purposes of this section, "substantial information" is that amount

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of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted. The Secretary shall promptly publish such finding in the FEDERAL REGISTER and so notify the petitioner.

(2) In making a finding under paragraph (b)(1) of this section, the Secretary shall consider whether such petition—

(i) Clearly indicates the administrative measure recommended and gives the scientific and any common name of the species involved;

(ii) Contains detailed narrative justification for the recommended measure, describing, based on available information, past and present numbers and distribution of the species involved and any threats faced by the species;

(iii) Provides information regarding the status of the species over all or a significant portion of its range; and

(iv) Is accompanied by appropriate supporting documentation in the form of bibliographic references, reprints of pertinent publications, copies of reports or letters from authorities, and maps.

The petitioner may provide information that describes any recommended critical habitat as to boundaries and physical features, and indicates any benefits and/or adverse effects on the species that would result from such designation. Such information, however, will not be a basis for the determination of the substantiality of a petition.

(3) Upon making a positive finding under paragraph (b)(1) of this section, the Secretary shall commence a review of the status of the species concerned and shall make, within 12 months of receipt of such petition, one of the following findings:

(i) The petitioned action is not warranted, in which case the Secretary shall promptly publish such finding in the FEDERAL REGISTER and so notify the petitioner.

(ii) The petitioned action is warranted, in which case the Secretary shall promptly publish in the FEDERAL REGISTER a proposed regulation to implement the action pursuant to § 424.16 of this part, or

(iii) The petitioned action is warranted, but that—

(A) The immediate proposal and timely promulgation of a regulation to implement the petitioned action is precluded because of other pending proposals to list, delist, or reclassify species, and

(B) Expedited progress is being made to list, delist, or reclassify qualified species,

in which case, such finding shall be promptly published in the FEDERAL REGISTER together with a description and evaluation of the reasons and data on which the finding is based.

(4) If a finding is made under paragraph (b)(3)(iii) of this section with regard to any petition, the Secretary shall, within 12 months of such finding, again make one of the findings described in paragraph (b)(3) with regard to such petition, but no further finding of substantial information will be required.

(c) *Petitions to revise critical habitat.* (1) To the maximum extent practicable, within 90 days of receiving a petition to revise a critical habitat designation, the Secretary shall make a finding as to whether the petition presents substantial scientific information indicating that the revision may be warranted. The Secretary shall promptly publish such finding in the FEDERAL REGISTER and so notify the petitioner.

(2) In making the finding required by paragraph (c)(1) of this section, the Secretary shall consider whether a petition contains—

(i) Information indicating that areas petitioned to be added to critical habitat contain physical and biological features essential to, and that may require special management to provide for, the conservation of the species involved; or

(ii) Information indicating that areas designated as critical habitat do not contain resources essential to, or do not require special management to provide for, the conservation of the species involved.

(3) Within 12 months after receiving a petition found under paragraph (c)(1) of this section to present substantial information indicating that revision of a critical habitat may be warranted, the

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Secretary shall determine how he intends to proceed with the requested revision, and shall promptly publish notice of such intention in the FEDERAL REGISTER.

(d) *Petitions to designate critical habitat or adopt special rules.* Upon receiving a petition to designate critical habitat or to adopt a special rule to provide for the conservation of a species, the Secretary shall promptly conduct a review in accordance with the Administrative Procedure Act (5 U.S.C. 553) and applicable Departmental regulations, and take appropriate action.

§ 424.15 Notices of review.

(a) If the Secretary finds that one of the actions described in § 424.10 may be warranted, but that the available evidence is not sufficiently definitive to justify proposing the action at that time, a notice of review may be published in the FEDERAL REGISTER. The notice will describe the measure under consideration, briefly explain the reasons for considering the action, and solicit comments and additional information on the action under consideration.

(b) The Secretary from time to time also may publish notices of review containing the names of species that are considered to be candidates for listing under the Act and indicating whether sufficient scientific or commercial information is then available to warrant proposing to list such species, the names of species no longer being considered for listing, or the names of listed species being considered for delisting or reclassification. However, none of the substantive or procedural provisions of the Act apply to a species that is designated as a candidate for listing.

(c) Such notices of review will invite comment from all interested parties regarding the status of the species named. At the time of publication of such a notice, notification in writing will be sent to State agencies in any affected States, known affected Federal agencies, and, to the greatest extent practicable, through the Secretary of State, to the governments of any foreign countries in which the subject species normally occur.

50 CFR Ch. IV (10-1-14 Edition)**§ 424.16 Proposed rules.**

(a) *General.* Based on the information received through §§ 424.13, 424.14, 424.15, and 424.21, or through other available avenues, the Secretary may propose revising the lists as described in § 424.10.

(b) *Contents.* A notice of a proposed rule to carry out one of the actions described in § 424.10 will contain a detailed description of the proposed action and a summary of the data on which the proposal is based (including, as appropriate, citation of pertinent information sources) and will show the relationship of such data to the rule proposed. If such a rule proposes to designate or revise critical habitat, such summary will, to the maximum extent practicable, include a brief description and evaluation of those activities (whether public or private) that, in the opinion of the Secretary, if undertaken, may adversely modify such habitat or may be affected by such designation. For any proposed rule to designate or revise critical habitat, the detailed description of the action will include a map of the critical habitat area, and may also include rule text that clarifies or modifies the map. Any such notice proposing the listing, delisting, or reclassification of a species or the designation or revision of critical habitat will also include a summary of factors affecting the species and/or its designated critical habitat.

(c) *Procedures—(1) Notifications.* In the case of any proposed rule to list, delist, or reclassify a species, or to designate or revise critical habitat, the Secretary shall—

(i) Publish notice of the proposal in the FEDERAL REGISTER;

(ii) Give actual notice of the proposed regulation to the State agency in each State in which the species is believed to occur and to each county or equivalent jurisdiction therein in which the species is believed to occur, and invite the comment of each such agency and jurisdiction;

(iii) Give notice of the proposed regulation to any Federal agencies, local authorities, or private individuals or organizations known to be affected by the rule;

(iv) Insofar as practical, and in cooperation with the Secretary of State,

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give notice of the proposed regulation to list, delist, or reclassify a species to each foreign nation in which the species is believed to occur or whose citizens harvest the species on the high seas, and invite the comment of such nation;

(v) Give notice of the proposed regulation to such professional scientific organizations as the Secretary deems appropriate; and

(vi) Publish a summary of the proposed regulation in a newspaper of general circulation in each area of the United States in which the species is believed to occur.

(2) *Period of public comments.* At least 60 days shall be allowed for public comment following publication in the FEDERAL REGISTER of a rule proposing the listing, delisting, or reclassification of a species, or the designation or revision of critical habitat. All other proposed rules shall be subject to a comment period of at least 30 days following publication in the FEDERAL REGISTER. The Secretary may extend or reopen the period for public comment on a proposed rule upon a finding that there is good cause to do so. A notice of any such extension or reopening shall be published in the FEDERAL REGISTER, and shall specify the basis for so doing.

(3) *Public hearings.* The Secretary shall promptly hold at least one public hearing if any person so requests within 45 days of publication of a proposed regulation to list, delist, or reclassify a species, or to designate or revise critical habitat. Notice of the location and time of any such hearing shall be published in the FEDERAL REGISTER not less than 15 days before the hearing is held.

[49 FR 38908, Oct. 1, 1984, as amended at 77 FR 25622, May 1, 2012]

§ 424.17 Time limits and required actions.

(a) *General.* (1) Within 1 year of the publication of a rule proposing to determine whether a species is an endangered or threatened species, or to designate or revise critical habitat, the Secretary shall publish one of the following in the FEDERAL REGISTER:

(i) A final rule to implement such determination or revision,

(ii) A finding that such revision should not be made,

(iii) A notice withdrawing the proposed rule upon a finding that available evidence does not justify the action proposed by the rule, or

(iv) A notice extending such 1-year period by an additional period of not more than 6 months because there is substantial disagreement among scientists knowledgeable about the species concerned regarding the sufficiency or accuracy of the available data relevant to the determination or revision concerned.

(2) If an extension is made under paragraph (a)(1)(iv) of this section, the Secretary shall, within the extended period, take one of the actions described in paragraphs (a)(1) (i), (ii), or (iii) of this section.

(3) If a proposed rule is withdrawn under paragraph (a)(1)(iii) of this section, the notice of withdrawal shall set forth the basis upon which the proposed rule has been found not to be supported by available evidence. The Secretary shall not again propose a rule withdrawn under such provision except on the basis of sufficient new information that warrants a reproposal.

(b) *Critical habitat designations.* A final rule designating critical habitat of an endangered or a threatened species shall to the extent permissible under § 424.12 be published concurrently with the final rule listing such species, unless the Secretary deems that—

(1) It is essential to the conservation of such species that it be listed promptly; or

(2) Critical habitat of such species is not then determinable,

in which case, the Secretary, with respect to the proposed regulation to designate such habitat, may extend the 1-year period specified in paragraph (a) of this section by not more than one additional year. Not later than the close of such additional year the Secretary must publish a final regulation, based on such data as may be available at that time, designating, to the maximum extent prudent, such habitat.

§ 424.18 Final rules—general.

(a) *Contents.* A final rule promulgated to carry out the purposes of the Act

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will be published in the FEDERAL REGISTER. This publication will contain a detailed description of the action being finalized, a summary of the comments and recommendations received in response to the proposal (including applicable public hearings), summaries of the data on which the rule is based and the relationship of such data to the final rule, and a description of any conservation measures available under the rule. Publication of a final rule to list, delist, or reclassify a species or designate or revise critical habitat will also provide a summary of factors affecting the species.

(1) For a rule designating or revising critical habitat, the detailed description of the action will include a map of the critical habitat area, and may also include rule text that clarifies or modifies the map. The map itself, as modified by any rule text, constitutes the official boundary of the designation.

(i) The Service responsible for the designation will include more-detailed information in the preamble of the rulemaking document and will make the coordinates and/or plot points on which the map is based available to the public on the Internet site of the Service promulgating the designation, at www.regulations.gov, and at the lead field office of the Service responsible for the designation.

(ii) In addition, if the Service responsible for the designation concludes that additional tools or supporting information would be appropriate and would help the public understand the official boundary map, it will, for the convenience of the public, make those additional tools and supporting information available on our Internet sites and at the lead field office of the Service that is responsible for the critical habitat designation (and may also include it in the preamble and/or at www.regulations.gov).

(2) The rule will, to the maximum extent practicable, include a brief description and evaluation of those activities (whether public or private) that might occur in the area and which, in the opinion of the Secretary, may adversely modify such habitat or be affected by such designation.

(b) *Effective date.* A final rule shall take effect—

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(1) Not less than 30 days after it is published in the FEDERAL REGISTER, except as otherwise provided for good cause found and published with the rule; and

(2) Not less than 90 days after (i) publication in the FEDERAL REGISTER of the proposed rule, and (ii) actual notification of any affected State agencies and counties or equivalent jurisdictions in accordance with § 424.16(c)(1)(ii).

(c) *Disagreement with State agency.* If a State agency, given notice of a proposed rule in accordance with § 424.16(c)(1)(ii), submits comments disagreeing in whole or in part with a proposed rule, and the Secretary issues a final rule that is in conflict with such comments, or if the Secretary fails to adopt a regulation for which a State agency has made a petition in accordance with § 424.14, the Secretary shall provide such agency with a written justification for the failure to adopt a rule consistent with the agency's comments or petition.

[49 FR 38908, Oct. 1, 1984, as amended at 77 FR 25622, May 1, 2012]

§ 424.19 Impact analysis and exclusions from critical habitat.

(a) At the time of publication of a proposed rule to designate critical habitat, the Secretary will make available for public comment the draft economic analysis of the designation. The draft economic analysis will be summarized in the FEDERAL REGISTER notice of the proposed designation of critical habitat.

(b) Prior to finalizing the designation of critical habitat, the Secretary will consider the probable economic, national security, and other relevant impacts of the designation upon proposed or ongoing activities. The Secretary will consider impacts at a scale that the Secretary determines to be appropriate, and will compare the impacts with and without the designation. Impacts may be qualitatively or quantitatively described.

(c) The Secretary has discretion to exclude any particular area from the critical habitat upon a determination that the benefits of such exclusion outweigh the benefits of specifying the particular area as part of the critical

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habitat. In identifying those benefits, in addition to the mandatory consideration of impacts conducted pursuant to paragraph (b) of this section, the Secretary may assign the weight given to any benefits relevant to the designation of critical habitat. The Secretary, however, will not exclude any particular area if, based on the best scientific and commercial data available, the Secretary determines that the failure to designate that area as critical habitat will result in the extinction of the species concerned.

[78 FR 53076, Aug. 28, 2013]

§ 424.20 Emergency rules.

(a) Sections 424.16, 424.17, 424.18, and 424.19 notwithstanding, the Secretary may at any time issue a regulation implementing any action described in § 424.10 in regard to any emergency posing a significant risk to the well-being of a species of fish, wildlife, or plant. Such rules shall, at the discretion of the Secretary, take effect immediately on publication in the FEDERAL REGISTER. In the case of any such action that applies to a resident species, the Secretary shall give actual notice of such regulation to the State agency in each State in which such species is be-

lieved to occur. Publication in the FEDERAL REGISTER of such an emergency rule shall provide detailed reasons why the rule is necessary. An emergency rule shall cease to have force and effect after 240 days unless the procedures described in §§ 424.16, 424.17, 424.18, and 424.19 (as appropriate) have been complied with during that period.

(b) If at any time after issuing an emergency rule, the Secretary determines, on the basis of the best scientific and commercial data available, that substantial evidence does not then exist to warrant such rule, it shall be withdrawn.

§ 424.21 Periodic review.

At least once every 5 years, the Secretary shall conduct a review of each listed species to determine whether it should be delisted or reclassified. Each such determination shall be made in accordance with §§ 424.11, 424.16, and 424.17 of this part, as appropriate. A notice announcing those species under active review will be published in the FEDERAL REGISTER. Notwithstanding this section's provisions, the Secretary may review the status of any species at any time based upon a petition (see § 424.14) or upon other data available to the Service.

SUBCHAPTER B [RESERVED]

EXHIBIT D

**Petition to remove the golden-cheeked warbler
from the list of endangered species**

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From U.S. Fish & Wildlife Serv., National Digital Library, at <http://digitalmedia.fws.gov/cdm/singleitem/collection/natdiglib/id/40/rec/1>.

Executive summary

On May 4, 1990, the U.S. Fish and Wildlife Service (FWS) listed the golden-cheeked warbler (*Setophaga chrysoparia*) as endangered on an emergency basis, erroneously believing that the species was rare and that its best breeding habitat was primarily limited to Travis County, Texas.¹ At that time, FWS relied on the only available studies of the golden-cheeked warbler, which were based on ten-year-old satellite mapping using the relatively primitive technology then available, and a fourteen-year-old study of warbler density that significantly underestimated the extent of warbler habitat and the size of the warbler population.²

Today, after 25 years of additional studies, the best available science shows that the warbler's habitat and population are greater than what FWS believed in 1990. Recent studies show that the amount of warbler habitat is five times larger, and that the warbler population is roughly 19 times greater in number, than what FWS thought it to be in 1990.

Simply put, the science that prompted FWS to list the warbler in 1990 was inaccurate, and certainly current studies show that the warbler's continued listing is neither scientifically sound nor warranted by the listing criteria under the Endangered Species Act.³

¹ Endangered and Threatened Wildlife and Plants; Emergency Rule to List the Golden-cheeked Warbler as Endangered, 55 Fed. Reg. 18,844, 18,844 (May 4, 1990) (“Some of the best habitat for this species occurs in Travis County, Texas. Travis County has, by far, more warbler habitat than any other county, and it is some of the least fragmented habitat in the golden-cheeked warbler’s range.”).

² *Id.*; Endangered and Threatened Wildlife and Plants; Final Rule to List the Golden-cheeked Warbler as Endangered, 55 Fed. Reg. 53,153, 53,154 (Dec. 27, 1990).

³ 16 U.S.C. § 1533(a)(1).

Introduction

On May 4, 1990, FWS listed the golden-cheeked warbler (*Setophaga chrysoparia*) as endangered on an emergency basis, based on its mistaken belief that the species was rare and that its breeding habitat was primarily limited to Travis County, Texas.⁴ FWS published a final rule listing the warbler on December 27, 1990.⁵ At that time, FWS relied on the only available studies of the golden-cheeked warbler, which were based on ten-year-old satellite mapping using the primitive technology then available, and a fourteen-year-old study of warbler density that significantly underestimated the extent of warbler habitat and the size of the warbler population.⁶ Now, after 25 years of additional studies and massive efforts to conserve the warbler, its continued listing is neither scientifically sound nor warranted by the listing criteria under the Endangered Species Act.⁷ The time has come to remove the golden-cheeked warbler from the endangered species list.

At the time of listing in 1990, the best available science was based on a small number of studies of sites in Travis County—believed to be the prime breeding habitat of the warbler. This research suggested that there were only about 328,928 hectares⁸ of potential warbler habitat in Texas supporting 13,800 warbler territories (Wahl et al. 1990; FWS 1992). But over the last twenty-five years, extensive and comprehensive biological research has been performed indicating:

- There is almost 5 times more warbler breeding habitat (1,678,312 hectares) than FWS believed at the time of the listing;
- There are roughly 19 times more warblers than FWS believed at the time of the listing (263,339 males; 95% confidence interval = 223,927–302,620) (Collier et al. 2012, Mathewson et al. 2012); and,

The science upon which listing was based in 1990, and upon which FWS based its 1992 Recovery Plan, is therefore out-of-date. Even if it had been prudent to list the species in 1990 (although the facts suggest otherwise), today’s science shows that the species does not meet the Endangered Species Act’s definition of “endangered” or “threatened”—the golden-cheeked warbler today is not “in danger of extinction throughout all or a significant portion of its range,”⁹ nor is it likely to become so in the

⁴ 55 Fed. Reg. at 18,844 (“Some of the best habitat for this species occurs in Travis County, Texas. Travis County has, by far, more warbler habitat than any other county, and it is some of the least fragmented habitat in the golden-cheeked warbler’s range.”).

⁵ 55 Fed. Reg. 53,153 (Dec. 27, 1990)

⁶ *Id.*; 55 Fed. Reg. at 53,154.

⁷ 16 U.S.C. § 1533(a)(1).

⁸ There are 2.471 acres in a hectare, and 259 hectares comprise one square mile.

⁹ 16 U.S.C. § 1532(6).

foreseeable future.¹⁰ In addition, there is consensus among the scientific community that breeding warblers inhabit a much wider range of habitat types than identified in the early studies on which FWS relied (e.g., Klassen et al. 2012).¹¹ Recent studies also suggest that there is no genetic basis for managing warblers as separate population entities.¹²

Recognizing that the science upon which listing was based in 1990 is outmoded, FWS has concluded that its 1992 Recovery Plan—which was based on that same early science—must be revised: “[a]dditional information has been collected since the recovery plan was published [in 1992] and warrants revision of the recovery plan.”¹³

In short, both the listing and recovery plan for this species were based on scientific evidence that has since been made obsolete. There is no biological or scientific basis for maintaining this species on the endangered species list. Delisting this species is now compelled by today’s best available science and the provisions of the Endangered Species Act.¹⁴

The golden-cheeked warbler

The golden-cheeked warbler (*Setophaga chrysoparia*) is a small, insectivorous, migratory songbird that breeds in mixed oak-juniper (Quercus-Juniperus) woodland of central Texas between March and August (Pulich 1976; Ladd and Gass 1999). The warbler nests in tall, closed canopy stands of Ashe juniper mixed with a variety of oak, maple, and other trees.¹⁵ During the breeding season, warblers require shredded bark from mature Ashe juniper (*Juniperus ashei*) for nest material and a combination of Ashe juniper, oaks, and associated hardwoods for nesting and foraging (Pulich 1976; Ladd and Gass 1999). The composition of woody vegetation found in warbler habitat varies, with

¹⁰ See *id.* at § 1532(20) (defining “threatened species”).

¹¹ See Ex. 1, Tex. A&M Inst. of Renewable Natural Resources, Conservation Status of the Federally Endangered Golden-cheeked Warbler (unpublished research summary, June 2015), available at <http://irnr.tamu.edu/publications/research-reports/> (hereinafter “Ex. 1, Texas A&M Survey”).

¹² Denise L. Lindsay et al., *Habitat fragmentation and genetic diversity of an endangered, migratory songbird, the golden-cheeked warbler* (*Dendroica chrysoparia*), 17 MOLECULAR ECOLOGY 2122 (2008).

¹³ U.S. Fish & Wildlife Serv., Golden-cheeked warbler (*Setophaga chrysoparia*) 5-Year Review: Summary and Evaluation 3 (Aug. 26, 2014) (hereinafter “Five-Year Review”).

¹⁴ 16 U.S.C. § 1533(a)(1).

¹⁵ 55 Fed. Reg. at 53,154; see also U.S. Fish & Wildlife Serv., Species Profile for golden-cheeked warbler (*Dendroica chrysoparia*), <http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B07W>.

Ashe juniper often but not always the dominant species.¹⁶ The male warbler is territorial, and can be located by its territorial song.¹⁷

Most warblers leave the breeding grounds in late July and migrate through Mexico and Central America to their wintering grounds in southern Mexico, Guatemala, Honduras, El Salvador, and Nicaragua, where they remain until spring migration begins in late February (Pulich 1976; Ladd and Gass 1999). In the past few years, warbler presence has been confirmed in northern El Salvador and north-central Nicaragua.¹⁸ Warblers have also recently been documented in other new areas since 2000, and warbler sightings from Costa Rica and Panama suggest the warbler's winter range extends further south than originally assumed.¹⁹ According to Komar (2011), “[t]he warblers were overlooked for decades in other parts of their range, now recognized as regular wintering areas, such as Nicaragua, northern El Salvador and southern Chiapas.”²⁰

Petitioners

Petitioners are the Texans for Positive Economic Policy, Susan Combs, the Texas Public Policy Foundation, and the Reason Foundation.

Texans for Positive Economic Policy (TPEP) is devoted to promoting, among other objectives, the use of sound science in protecting endangered species. Over the past 20 years, Texas has created a national model for funding objective, peer-reviewed science to deal with the Endangered Species Act and thereby assure protection of both the species and the economy. TPEP works to promote the use of sound science in the study of species and habitat by helping to secure funding for research, study, and analysis. TPEP has a key organizational interest in promoting the use of objective, peer-reviewed science in listing and delisting decisions. TPEP supports local and state conservation efforts for the warbler rather than the unnecessary federal listing of the warbler under the Endangered Species Act. Texans for Positive Economic Policy is based in Austin, Texas, and can be contacted through counsel for Petitioners.

Susan Combs is a fourth-generation Texan with a ranch in Brewster County, Texas, first owned by her great grandfather over a century ago. Combs has served as a state representative, agriculture commissioner, and most recently, as state comptroller.

¹⁶ U.S. Fish & Wildlife Serv., Species Profile for golden-cheeked warbler (*Dendroica chrysoparia*),

<http://ecos.fws.gov/speciesProfile/profile/speciesProfile.action?spcode=B07W>.

¹⁷ *Id.*

¹⁸ Five-Year Review at 6.

¹⁹ *Id.*

²⁰ Oliver Komar, Winter ecology, relative abundance and population monitoring of Golden-cheeked Warblers throughout the known and potential range 29 (May 4, 2011) (submitted to Tex. Parks & Wildlife).

Combs has devoted her career to Endangered Species Act issues, heading the state task force on endangered species, and holding the state permit for the Candidate Conservation Agreement with Assurances for the dunes sagebrush lizard in her capacity as Texas Comptroller. Combs has an aesthetic interest in the golden-cheeked warbler and seeks to conserve the warbler and its habitat within Texas. Combs believes that local and state conservation efforts would be of greater benefit to the warbler and that continued unwarranted regulation under the Endangered Species Act can impede voluntary and local conservation efforts. Susan Combs is a resident of Texas and can be contacted through counsel for Petitioners.

The Texas Public Policy Foundation is a 501(c)(3) nonprofit, nonpartisan research institute, whose mission is to promote and defend liberty, personal responsibility, and free enterprise in Texas and the nation by educating and affecting policymakers and the Texas public policy debate with academically sound research and outreach. The Foundation's research fellows regularly testify before the U.S. Congress and Texas legislature on environmental and endangered species issues. This delisting petition supports the Foundation's ongoing efforts to promote the use of academically sound research in federal regulatory decisions. The Foundation supports state and local conservation efforts as being of greater benefit to the warbler and that continued regulation under the Endangered Species Act can impede voluntary and local conservation efforts. The Texas Public Policy Foundation is based in Austin, Texas, and can be contacted through counsel for Petitioners.

Reason Foundation was founded in 1978 and is a 501(c)(3) nonprofit organization. Reason Foundation's nonpartisan public policy research promotes choice, competition, and a dynamic market economy as the foundation for human dignity and progress. Reason produces rigorous, peer-reviewed research and directly engages in the policy process, seeking strategies that emphasize cooperation, flexibility, local knowledge, transparency, accountability, and results. This delisting petition is consistent with Reason's mission to encourage voluntary efforts to support conservation using peer-reviewed research and to discourage unwarranted federal regulation of species. Reason Foundation is based in Los Angeles, California, and can be contacted through counsel for Petitioners.

Procedural history

1. Emergency listing decision—May 4, 1990

Under Section 4(a)(1) of the federal Endangered Species Act, the Secretary is required to evaluate five factors in determining whether to list a species as endangered:

The Secretary shall by regulation . . . determine whether any species is an endangered species or a threatened species because of any of the following factors:

- (A) the present or threatened destruction, modification, or curtailment of its habitat or range;
- (B) overutilization for commercial, recreational, scientific, or educational purposes;
- (C) disease or predation;
- (D) the inadequacy of existing regulatory mechanisms; or
- (E) other natural or man-made factors affecting its continued existence.²¹

On May 4, 1990, FWS published an emergency listing for the golden-cheeked warbler, stating that “an emergency posing a significant risk to the well-being of the golden-cheeked warbler exists as a result of on-going and imminent habitat destruction by both illegal and legal clearing” in and around the City of Austin in Travis County, Texas. At the time of the emergency listing, FWS believed that warbler breeding habitat was very limited—31,750 to 106,750 hectares located primarily in Travis County, Texas—according to a study conducted for FWS by Wahl et al. in 1990. Wahl et al.’s analysis was based on three key sources of information: satellite images from 1974, 1976, and 1981 used to classify warbler habitat; the decision to exclude habitat under 50 hectares; and density estimates from a 1976 study by Pulich used to estimate the total warbler population.

2. Final listing decision—December 27, 1990

On December 27, 1990, FWS published its final rule to list the golden-cheeked warbler as endangered based solely on evidence found to support the first factor, threatened habitat destruction. In response to the proposed rule several commentators suggested that FWS wait to make its listing decision, stating that “further studies and surveys should be conducted and evaluated before a final decision is made on whether or not to list the golden-cheeked warbler as endangered.”²² FWS ignored that advice, instead taking the position that the agency is required to make a decision within a year of the proposal on the best science it had available at the time.

The final rule again relied on the same habitat and population estimates of Wahl et al. (1990) along with Pulich (1976). The final rule stated FWS’s belief at the time that “[b]ased on the assumption that all suitable habitat is occupied, the carrying capacity of the available suitable habitat area would support between 4,600–16,000 pairs of golden-cheeked warblers at a density of 15 pairs/100 hectares (247 acres).”²³ The primary reason for listing the warbler was the potential for habitat destruction, as described by

²¹ 16 U.S.C. § 1533(a)(1).

²² 55 Fed. Reg. at 53,156.

²³ *Id.* at 53,154.

Wahl et al.: “At present rates, the estimated maximum carrying capacity of the habitat will be 2,266–7,527 pairs of golden-cheeked warblers by the year 2000, a reduction in population size of more than 50 percent.”²⁴ Echoing the emergency rule, the final rule emphasized that the primary threat to the warbler was habitat loss in Travis County.²⁵

But FWS admitted in the final listing rule that its information on warbler habitat was so limited that it could not designate critical habitat along with the listing:

Critical habitat for this species remains undeterminable at this time. There is currently insufficient information on warbler habitat requirements to support delineation of critical habitat boundaries throughout summer range. Although some areas of warbler habitat have been identified by satellite mapping, all the specific elements of the habitat that are critical to the survival of the golden-cheeked warbler are not known. For example, information is lacking on habitat configuration fragmentation corridors, and minimum patch size.²⁶

3. FWS Species Recovery Plan—September 30, 1992

On September 30, 1992, FWS approved a Recovery Plan for the warbler based on the same scientific information that FWS relied on when issuing the 1990 listing decision. That Recovery Plan contained the following criteria based on FWS’s flawed notion that there were few warblers in Texas and that the species’ habitat was limited:

- Sufficient breeding habitat protection to ensure continued existence of at least one viable, self-sustaining population in each of the eight regions outlined in the plan;
- The potential for gene flow exists across regions between demographically self-sustaining populations needed for long-term viability;
- Sufficient and sustainable non-breeding habitat to support the breeding populations;
- All existing warbler populations on public lands are protected and managed to ensure their continued existence;
- All criteria met for 10 consecutive years.²⁷

²⁴ *Id.* at 53,157.

²⁵ *Id.* at 53,156.

²⁶ *Id.* at 53,158.

²⁷ Recovery Plan at iv.

4. Five-Year Review—August 26, 2014

On April 21, 2006, FWS published a notice indicating its intent to perform a review of the warbler's status.²⁸ FWS then commissioned a report by Groce et al. (2010) that summarized available scientific information on the warbler and made general recommendations.²⁹ FWS published its Five-Year Review on August 26, 2014.³⁰

The Five-Year Review correctly criticized the 1992 Recovery Plan for failing to address the statutory listing factors and for relying on out-of-date information, and stated that FWS was “in the process of revising the [1992] recovery plan.”³¹ And the Five-Year Review identified additional newly protected habitat, including 19,994,190 hectares of Department of Defense lands.³²

The Five-Year Review did not, however, take advantage of the work already completed by Groce et al. (2010) reviewing the state of scientific knowledge concerning the warbler. The Five-Year Review concluded that “the greatest threat to [the golden-cheeked warbler] is habitat loss” and therefore “permanent protection of large blocks of contiguous habitat is necessary for the long-term survival and recovery of the [warbler]. Enough habitat should be protected in the breeding, migrating, and wintering habitat to support viable [warbler] populations.”³³ Yet Groce et al. discussed studies that indicated “habitat type (semifragmented or fragmented) did not emerge as a significant predictor of territory abundances”; “[t]here was no difference in age structure of male warblers in unfragmented and fragmented study sites”; and “minimum patch size threshold for productivity of 15–24 h[ectares].”³⁴ The Five-Year Review also did not respond to the recommendation by Groce et al. that limited study sites for the warbler made population and habitat estimates unreliable: “Current estimates of demographics and habitat influences are derived from limited locations (i.e., Fort Hood and Travis County), thus, biasing estimates towards the eastern and central extent of the warbler range.”³⁵ Instead, the Five-Year Review relied—as did the 1990 Final Rule—on the limited surveys of Pulich (1976) and Wahl et al. (1990).³⁶ Furthermore, Groce et al. cited multiple studies

²⁸ Endangered and Threatened Wildlife and Plants; 5-Year Review of 25 Southwestern Species, 71 Fed. Reg. 20,714 (Apr. 21, 2006).

²⁹ Julie Groce et al., Five-year Status Review: Golden-Cheeked Warbler (Apr. 15, 2010) (prepared for Tex. Parks & Wildlife under Grant No. TX E-102-R).

³⁰ Five-Year Review.

³¹ *Id.* at 3; *see also id.* at 4 (“A revision to the recovery plan is warranted and a draft is being developed.”).

³² *Id.* at 10.

³³ *Id.* at 16.

³⁴ Groce et al., *supra* note 29, at 86–87.

³⁵ *Id.* at 170.

³⁶ Five-Year Review at 5.

that detected “an increasing trend in density of warblers,”³⁷ while the Five-Year Review did not discuss these findings.³⁸ The Five-Year Review also questioned population demographics studies because of the need to consider pairing success to accurately estimate the female population while ignoring the discussion in Groce et al. of various estimates of warbler pairing success, generally ranging from 53 to 100 percent.³⁹ Finally, the Five-Year Review did not delineate what would be a “viable” warbler population.

Reasons for delisting the species as endangered

1. Standard of review

When the Secretary of Interior receives a petition to delist a species from the endangered species list, the Secretary must “make a finding” within 90 days “as to whether the petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted.”⁴⁰

To determine if delisting is warranted, the Secretary must consider whether the petition contains:

1. The administrative measures sought;
2. The common and scientific name of the species;
3. A narrative justifying the measure based upon available information including past and present numbers, distribution and current threats to the species;
4. The status of the species in all or a significant portion of its range; and
5. Supporting documentation such as a bibliography, copies of publications, reports, letters from authorities, and maps.⁴¹

If the Secretary finds that there is information “that would lead a reasonable person to believe that the measures proposed in the petition may be warranted,”⁴² the Secretary is required to “promptly commence a review of the status” of the species.⁴³

Within 12 months of receiving the petition, the Secretary must issue a finding that the petitioned action is either warranted or not warranted.⁴⁴ If the petitioned action is warranted, the Secretary must promptly publish “a general notice and complete text of proposed regulation to implement such action” or publish a finding that the action is

³⁷ Groce et al., *supra* note 29, at 39–40.

³⁸ See Five-Year Review at 5.

³⁹ Compare Five-Year Review at 5, with Groce et al., *supra* note 29, at 44–45.

⁴⁰ 16 U.S.C. § 1533(b)(3)(A).

⁴¹ 50 C.F.R. § 424.14(b)(2).

⁴² *Id.* § 424.14(b)(1).

⁴³ 16 U.S.C. § 1533(b)(3)(A).

⁴⁴ *Id.* § 1533(b)(3)(B).

warranted but precluded at that time because of other pending proposals or efforts to change the status of species on the lists.⁴⁵

To make a determination that a petition is warranted under 16 U.S.C. § 1533(b)(3)(B), the Secretary must consider the “best available scientific and commercial information” for the species.⁴⁶ The scientific and commercial information should consider whether there is a “present or threatened destruction, modification or curtailment of its habitat or range; over utilization for commercial, recreational, scientific, or education purposes; disease or predation”; inadequate existing regulations, or other factors that affect the species’ continued existence.⁴⁷ In addition, the delisting petition and the scientific or commercial information must show that the species has either recovered to the point where protection of the species is no longer required or new information shows that the original data for classification was in error.⁴⁸

Federal regulations provide three circumstances under which FWS may delist a previously listed species—extinction, recovery, and error. Petitioner seeks the delisting of the golden-cheeked warbler under the authority of 16 U.S.C. § 1533(b)(3), 5 U.S.C. § 553(e), and 50 C.F.R. § 424.11(d)(2) and (3), because the best available science today shows that the species is not endangered: the warbler was either listed in error⁴⁹ or has recovered since listing.⁵⁰

Since the 1990 listing, multiple surveys and research have established that the warbler breeding habitat is five times larger, extending far beyond Travis County, and that the warbler population is an order of magnitude greater than FWS believed at the time. The exhaustive survey of these studies prepared by the Texas A&M Institute of Renewable Natural Resources, attached as Exhibit 1, summarizes these studies. Estimates of warbler habitat have dramatically increased—ranging between 551,668 and 1,771,552 hectares—due to improved classification techniques, better satellite image quality, and on-the-ground sampling.⁵¹ Independent, peer-reviewed studies in 2012—Collier et al. and Mathewson et al.—and one independent, peer-reviewed study in 2013—Duarte et al.⁵²—put the total potential habitat between 1,578,281 and 1,678,053 hectares,

⁴⁵ *Id.* § 1533(b)(3)(B).

⁴⁶ 50 C.F.R. § 424.11(b).

⁴⁷ *Id.* § 424.11(c).

⁴⁸ *Id.* § 424.11(d).

⁴⁹ *Id.* § 424.11(d)(3).

⁵⁰ *Id.* § 424.11(d)(2).

⁵¹ See Ex. 1, Texas A&M Survey 3 & 4 tbl. 1.

⁵² The Five-Year Review cites Duarte et al. (2013) only to highlight the study’s determination that warbler breeding habitat decreased 29 percent between 1999–2001 and 2010–2011. Five-Year Review at 8. The Five-Year Review fails to mention that Duarte et al.’s 1999–2001 habitat estimate for the warbler was 2,219,168 hectares—higher than any other published study to date, or that their 2010–2011 habitat estimate was 1,578,281

or nearly five times more habitat than originally estimated when the warbler was listed in 1990.⁵³ And the territory density estimates derived by Mathewson et al. (2012) were well within the range of most available information for the species (Table 1). These more recent studies represent the best available science on warbler habitat, carrying capacity, and abundance. And the reliability of these studies is underlined by the fact that these three peer-reviewed population estimates came to similar conclusions with regard to the extent of warbler breeding habitat.

This best available science, developed long after the 1976 study and the 1980s satellite images on which the listing was based, shows that the warbler does not meet the five statutory factors for listing the species. As summarized by Exhibit 1, the 2015 Texas A&M Survey, the original data on warbler habitat and population were based on a small number of study sites in a limited portion of the warbler’s breeding range, while the best available scientific evidence today shows a much larger warbler habitat and population size than originally estimated. Because the golden-cheeked warbler does not meet the statutory factors, it should be delisted.

2. The best available science developed since the listing of the warbler in 1990 shows that the species is not endangered

In 2015, the Institute of Renewable Natural Resources at Texas A&M conducted a survey analyzing the status of the golden-cheeked warbler, attached to this Petition as Exhibit 1. The 2015 Texas A&M Survey summarized the extensive research and analysis that has been performed since 1990 and concluded that the warbler’s listing status should be re-examined. This represents the best available science concerning the warbler, and it confirms that the warbler is not and never has been endangered in Texas and its habitat is far more abundantly available than FWS erroneously concluded in 1990.⁵⁴

The information presented in this Petition demonstrates that the species has either recovered to the point where protection of the species is no longer required or presents new information demonstrating that the original data for classification was in error,⁵⁵ making the golden-cheeked warbler ineligible for continued listing as an endangered species. The golden-cheeked warbler habitat and population size were significantly

hectares—in line with Mathewson et al. (2012) and Collier et al. (2012). Adam Duarte et al., *Spatiotemporal variation in range-wide Golden-cheeked Warbler breeding habitat*, 4 ECOSPHERE 5 (2013).

⁵³ Bret A. Collier et al., *Predicting patch occupancy in fragmented landscapes at the rangewide scale for an endangered species: an example of the American warbler*, 18 DIVERSITY & DISTRIB. 158 (2012); Heather A. Mathewson et al., *Estimating Breeding Season Abundance of Golden-Cheeked Warblers in Texas, USA*, 76 J. WILDLIFE MGMT. 1117 (2012); Duarte et al., *supra* note 52, at 5.

⁵⁴ Ex. 1, Texas A&M Survey at 2–13.

⁵⁵ 50 C.F.R. § 424.11(d).

underestimated in the 1990 listing. The best available scientific data today shows that habitat is at least five times larger and the warbler population is an order of magnitude larger than estimated in 1990. In addition, regulations will continue to protect the warbler and its habitat even after delisting (as discussed in Section 6 of this petition), and none of the other statutory factors are a significant threat to the warbler (as discussed in Sections 4, 5, and 7).

FWS's original listing of the warbler primarily relied upon the Wahl et al. (1990) estimate of warbler habitat of 338,035 hectares.⁵⁶ The Wahl et al. estimate was further reduced in the 1992 Recovery Plan to 237,163 hectares. This research was based on a small number of study sites in a limited portion of the warbler's breeding range.⁵⁷ As Groce et al. (2010) noted, “[w]hen the golden-cheeked warbler was listed as federally endangered, no known population size was provided for the species; rather, a range of possible population sizes was provided based on habitat and density estimates by Pulich (1976) and Wahl et al. (1990).”⁵⁸ The Wahl et al. study, and several other studies prior to 2010, sampled from small survey areas primarily within Fort Hood, which was problematic: “[T]he relative lack of warbler population estimates from other areas in the breeding range reflects the fact that both the species and the habitat have not been well studied outside of Fort Hood.”⁵⁹ The pre-2010 studies' reliance on such a limited sample was based on an erroneous assumption that habitat conditions and warbler population densities were the same, or very similar, outside Fort Hood as inside Fort Hood.

Since the Wahl et al. study in 1990, a number of subsequent studies, summarized in Table 2, have estimated the range of warbler habitat at two to six times the estimate by Wahl et al. and estimated warbler population at many times—up to an order of magnitude—greater than the estimate by Wahl et al.

Morrison et al. (2012) described the flawed assumptions relied upon in the 1990 listing:

For the golden-cheeked warbler, understanding of the species at the time of listing in 1990 was based on either incorrect or untested assumptions of species distribution within available habitats. Adhering to untested assumptions led to development of priorities for research and management that were well-intentioned but largely misguided. Ample information on the distribution of the warbler's habitats existed, however, which should have encouraged questions into the basis of population conditions when developing management prescriptions. Current knowledge clearly indicates

⁵⁶ R. Wahl, D.D. Diamond, & D. Shaw, *The Golden-cheeked Warbler: a status review* (unpubl., 1990); Recovery Plan.

⁵⁷ Ex. 1, Texas A&M Survey at 2.

⁵⁸ Groce et al., *supra* note 29.

⁵⁹ *Id.*

that a new paradigm for the warbler is needed, that being one of a widely distributed species that is preadapted to occur within a variety of environmental conditions.⁶⁰

Morrison et al. (2012) was published in a respected and widely-respected peer-reviewed scientific journal. And at least eight other studies described in Table 2 also estimated a much larger warbler habitat and population than was originally thought when FWS finalized the warbler listing in 1990 and published its Recovery Plan in 1992. FWS, however, ignored these studies in the 2014 Five-Year Review and instead relied on the out-of-date 1990 Wahl et al. study along with one 2007 SWCA study. More recent estimates since the early 1990s, contained in studies described in Table 2, of the warbler's total available habitat and population are based on much more scientifically valid and robust data: randomly sampled habitat patches on public and private land across the warbler's breeding range, congruent satellite imagery, and biological covariates known to influence warbler occurrence. One such recent study, Collier et al. (2012), identified 1,678,698 hectares of potential warbler breeding habitat.⁶¹ This estimate falls within the range of potential warbler breeding habitat—643,454 to 1,679,234 hectares—identified by others since the listing decision (see Table 2).⁶²

The 1990 Wahl et al. study used Landsat imagery at 60-meter resolution to classify potential warbler habitat.⁶³ More recent studies have improved on this classification dramatically, with the 2012 studies by Collier et al. and Mathewson et al. relying on 1-meter resolution aerial photography to classify habitat along with 30-meter resolution satellite imagery.⁶⁴ To put this into perspective, a 1-meter resolution image can have as much as 3,600 times greater detail than a 60-meter resolution image. This greater detail allows for more accurate classification of landscape features, such as the types of vegetation that constitute warbler habitat, than is possible with lower-resolution imagery. In addition, recent studies rely on more sophisticated remote sensing classification techniques that take advantage of the enormous progress in computing power since the 1990 Wahl et al. study.

Groce et al. (2010), commissioned by FWS to undertake the Five-Year Review, recognized how more recent studies used more sophisticated estimation techniques to improve survey estimates of the warbler breeding population:

Although most studies discussed in previous sections incorporated multiple site visits in their survey methods, the inclusion of detection probabilities as

⁶⁰ Michael L. Morrison et al., *The Prevailing Paradigm as a Hindrance to Conservation*, 36 WILDLIFE SOC'Y BULLETIN 408 (2012).

⁶¹ Collier et al., *supra* note 53.

⁶² See Table 2.

⁶³ Final Rule, 55 Fed. Reg. at 53,155.

⁶⁴ Mathewson et al., *supra* note 53, at 1118; Collier et al., *supra* note 53, at 160.

a component of golden-cheeked warbler research is relatively recent. . . . Results from these [more recent] studies indicate warblers are more likely to be detected in certain locations and at certain times of the breeding season. Low detection probabilities would necessitate increasing the number of visits to a site to limit non-detection errors (MacKenzie and Royle 2005).⁶⁵

In their 2012 study, Morrison et al. summarized how recent studies have re-examined pre-existing assumptions concerning warbler habitat and abundance:

It is evident that the golden-cheeked warbler is widely distributed throughout its breeding range (Collier et al. 2012), is breeding successfully in a variety of habitat conditions (Butcher et al. 2010, Klassen et al. 2012, see also Campomizzi et al., this section), and is more abundant than previous estimates have indicated (Mathewson et al. 2012). Within those areas with the longest record of research, the warbler has been shown to occur at a roughly stable abundance and shows a level of breeding success expected for similar species (Groce et al. 2010). Additionally, there is scant evidence that habitat or other resources are limited outside of the Texas breeding range. We are not implying that there are no potential threats that could negatively impact the warbler's distribution and abundance; however, given current estimates of habitat and abundance, their situation may not be as dire as it was originally assumed.⁶⁶

The 2015 Texas A&M Survey determined:

Regardless of the actual warbler population size, it is clear that there are substantially more warblers than assumed at the time of listing (Mathewson et al. 2012), the available warbler breeding habitat is much more widely distributed than initially thought (Collier et al. 2012), and that breeding warblers inhabit a much wider range of habitat conditions than identified during early studies (e.g., Klassen et al. 2012). In addition, there is no genetic evidence that warblers have demographically self-sustaining populations, and thus, there is no basis for managing warblers as separate population entities across the recovery regions (Lindsay et al. 2008).⁶⁷

The best available, peer-reviewed scientific evidence therefore presents a new perspective on the golden-cheeked warbler. Its breeding habitat is more widely distributed; its preferred habitat conditions are wider ranging; and its population is much larger than originally estimated.

⁶⁵ Groce et al., *supra* note 29, at 69–70.

⁶⁶ Morrison et al., *supra* note 60.

⁶⁷ Ex. 1, Texas A&M Survey at 15.

3. The scientific evidence confirms that there are more warblers and more habitat than FWS believed existed when it listed the species as endangered

A. Breeding habitat estimates

At the time of its listing, research conducted on a small number of study sites, primarily at Fort Hood, located in the eastern portion of the warbler's breeding range suggested that there were roughly 328,929 hectares of potential warbler habitat in Texas (Wahl et al. 1990).⁶⁸ Since that time, there have been numerous updates to this original warbler breeding habitat estimate. Results have been highly variable due to differences in land cover classification techniques, source imagery (year collected, image quality, resolution), post-hoc adjustments (minimum patch size requirements, estimated conversion rates, personal opinion), counties included as part of the warbler's breeding range, access to private land for surveys, and actual change in ground cover over time. But all of the recent studies confirm that FWS was wrong in its original conclusion that the warbler species is rare, on which it based its 1990 listing decision.

The most recent estimates, based on randomly sampled patches on public and private land across the warbler's breeding range, congruent satellite imagery, and biological factors known to influence warbler occurrence, identified 1,678,053 hectares (Collier et al. 2012; Mathewson et al. 2012) and 1,678,281 hectares (Duarte et al. 2013) of potential warbler breeding habitat. These estimates fall within the range of potential warbler breeding habitat identified by others since the listing decision (551,668–1,771,552 hectares; Table 2).

The Collier et al. (2012) habitat model provides the first probabilistic predictions for the likelihood of patch occupancy by warblers and was constructed using data and statistical procedures that were appropriate for the scale and scope of the project. Collier et al. thus is the most robust habitat model available. The Collier et al. study indicates that there is five times more warbler breeding habitat than identified at the time of the warbler's listing, that there are a large number of warbler habitat patches across their breeding range, and that these patches are not separated by large distances.⁶⁹

B. Winter and migratory habitat estimates

Recent studies have also provided estimates of the warbler's winter and migratory habitat estimates. Warblers winter in pine-oak forests of southern Mexico, Guatemala, Honduras, El Salvador, Nicaragua, and possibly Costa Rica at elevations between 792 and 2,591 meters (Komar et al. 2011). Warblers may also be found in pine, cloud or broadleaf forests; scrub habitat; or agricultural areas (Rappole et al. 2003; Potosem and Muñoz 2007; McCrary et al. 2009). Using U.S. Geological Survey data and Landsat

⁶⁸ See Recovery Plan.

⁶⁹ Collier et al., *supra* note 53.

imagery, Rappole et al. (2003) estimated 673,397 hectares of potential pine oak-habitat on the wintering grounds (excluding Nicaragua). Those authors acknowledged that known detections, however, fell into a USGS land cover class of “evergreen needleleaf forest” that they did not include in their initial analyses; this additional class could add 440,298 hectares to their estimate, resulting in 1,113,695 hectares of potential winter habitat.⁷⁰

In addition, the Alliance for the Conservation of Mesoamerican Pine-Oak Forests estimated 1,942,491 hectares of potential warbler wintering habitat, including parks and protected areas that exist along the migration route.⁷¹

C. Breeding population estimates

Population estimates extrapolated from research conducted on a small number of study sites located in the eastern portion of the warbler’s breeding range suggested that there were 13,800 warbler territories in Texas at the time of the warbler’s emergency listing as federally endangered (Wahl et al. 1990).⁷² Subsequent population estimates based on improved imagery (though still quantified using a small number of site-specific observations, qualitative definitions of warbler habitat based on personal opinion, and assumptions of constant density across the warbler’s breeding range) indicated that there were 13,000–230,000 warblers (Table 2). Most recently, Mathewson et al. (2012) estimated the warbler population size using models of patch-specific densities derived from randomly located range-wide abundance surveys, and then developed a predictive equation that related biological metrics to patch-scale density. They found that patch-specific occupancy probability (which is a function of patch size and landscape composition; Collier et al. 2012) was the best predictor of patch-specific densities, and estimated the population of male warblers at 263,339 (95% confidence interval = 223,927–302,620). Mathewson et al.’s territory density estimate was well within the range of most available information for the species (Table 1). Without accounting for detection probability, which would have increased the overall population estimate, this indicates that there are 19 times more warblers than assumed at the time of the emergency listing decision.

FWS’s Five-Year Review suggested that the Mathewson et al. (2012) model may have over-predicted warbler density estimates, and, therefore, resulted in inflated population estimates by FWS in 2014. FWS noted concerns that patch-specific territory density estimates with known warbler numbers are lower than predicted by the range-

⁷⁰ John H. Rappole, David I. King, & Jeffrey Diez, *Winter- vs. breeding habitat limitation for an endangered avian migrant*, 13 ECOLOGICAL APPLICATIONS 735 (2003).

⁷¹ Alianza para la Conservación de los Bosques de Pino-Encino de Mesoamérica, Plan de Conservación de los Bosques de Pino-Encino de Centroamérica y el Ave Migratoria *Dendroica chrysoparia* (2008).

⁷² See Recovery Plan.

wide estimates. But this is a misapplication of the model results, which the authors explained should only be applied at the range-wide scale. Mathewson et al. used data and statistical procedures that were appropriate for the scale and scope of the project (i.e., patches were randomly sampled on public and private land across the warbler's breeding range, imagery was current to the study). In addition, their overall estimates align with other habitat and population estimates when assumptions regarding habitat quality are removed (Table 2).

The territory density estimates derived by Mathewson et al. (2012) were also well within the range of most available information for the species (Table 1). Relationships between warbler density and patch-scale metrics used by Mathewson et al. to predict abundance across the species' range were consistent with patch-scale metrics previously shown to affect warbler density at local scales (Magness et al. 2006; Baccus et al. 2007). While the Mathewson et al. model should not be used at the local scale, as noted by the authors in their peer-reviewed manuscript, the Mathewson et al. study provided patch-specific predictions of warbler density across the species' breeding range and represents the best available warbler breeding population estimate. That some individuals misapply the Mathewson et al. work does not in any way negate its validity.

D. Survival

Using data collected from a small portion of the warbler's breeding range (Fort Hood Military Reservation, Coryell and Bell counties, Texas) and assuming metapopulation dynamics (but see Lindsay et al. 2008 below), Alldredge et al. (2004) developed the population viability model used to guide conservation decisions by the FWS. Results of their analyses suggest that the probability of warbler extinction over the next 100 years is low as long as enough habitat exists to support more than 3,000 breeding pairs in each of the eight defined recovery regions.

More recent studies confirm the total amount of available warbler habitat exceeds this threshold (Mathewson et al. 2012), and Hatfield et al. (2012) recently suggested that recovery region boundaries should be re-established to reflect warbler biology as opposed to watershed boundaries. Under this paradigm, recovery metrics would not include estimates of abundance across the eight recovery regions, which currently require a minimum of 3,000 males per recovery region, since these initial estimates were based off small-scale studies. We now know that density varies widely across the warbler's breeding range, and warblers do not exist as a metapopulation (Lindsay et al. 2008). The survival of the species thus depends on the number of warblers as a whole, not the number of warblers in each artificially constructed recovery region.

In a more recent analysis, Duarte et al. (2014) found (again using data collected at Fort Hood) that adult survival rates were only slightly lower than those initially estimated by Alldredge et al. (2004) (mean apparent survival for Duarte et al. = 0.47 and mean apparent survival for Alldredge et al. = 0.56). The Duarte et al. study further recognized

that warbler survival rates coincided with those obtained for other closely related warbler species.

E. Productivity

Pairing success of the species is generally high (typically >70%) and studies suggest that estimates of this metric depend on factors such as tree species composition (Marshall et al. 2013), male age (Jetté et al. 1998), and warbler territory density (Farrell et al. 2012). Territory success (proportion of territories that successfully fledge young) is also relatively high (typically >50%) and exhibits similar trends with tree species composition (Marshall et al. 2013), male age (Pruett 2014), and warbler territory density (Farrell et al. 2012). Fecundity is difficult to compare across years due to inconsistencies in measuring, reporting, and that warblers split broods (biasing fledging counts low), but estimates of fecundity are consistently high on the Fort Hood Military Reservation (1.13–2.06 young per territory; Anders 2000) and City of Austin properties (1.82–3.04 young per territory; City of Austin 2011, 2012, 2013).

While warbler management guidelines identify large-tracts of oak-juniper woodland with greater than 70% cover as high quality breeding habitat, more recent research indicates that relationships between woodland stand characteristics and fledging success vary regionally (Campomizzi et al. 2012). In the Limestone Cut Plain Ecoregion, where most warbler research has been conducted, the predicted probability of warbler fledging success increased with increasing patch size, decreasing patch edge-to-area ratio, and increasing percent cover. This coincides with site-specific nest survival data obtained at the Fort Hood Military Reservation and in the Austin area (Stake 2003; Peak 2007; Reidy et al. 2009b; Peak and Thompson 2014). These relationships are not consistent across ecoregions (Campomizzi et al. 2012), however, and warblers will fledge young in areas with less than 20% canopy cover, especially in the southern portion of their breeding range (Klassen et al. 2012). In addition, experimental, song-playback studies provide evidence that warblers can be drawn into previously unoccupied woodland stands with less canopy cover and successfully fledge young outside the habitat conditions typically considered suitable for the species (Farrell et al. 2012).

Alliance for the Conservation of Mesoamerican Pine-Oak Forests (2008) estimated that 74% of the original pine-oak forest cover remains on the warbler's wintering grounds in Mexico and Central America, and that 7% of the warbler's existing habitat is located in protected areas. Primary conversion threats include unsustainable forestry practices that are incompatible with conservation, forest fires, and commercial logging (ACMPOF 2008). Parks and protected areas exist along the migration route, but no data exists regarding the amount of potential stopover habitat.

F. Genetics

Genetic studies performed using DNA collected from 109 individuals at seven

study sites across the warblers' range in 2004 and 2005 showed no evidence of genetic bottlenecks or genetic differentiation (Lindsay et al. 2008). The latter results indicate that current allelic richness and heterozygosity are relatively high and similar to those of other warbler species, and suggests no genetic basis for managing warblers as separate population entities (i.e., there is no genetic basis for assuming metapopulation dynamics; Lindsay et al. 2008).

4. Disease, predation, and brood parasitism have never been a basis for listing this species as endangered

Although the final rule listing the species in 1990 suggests that fire ants could become a threat to young warblers, there has been no evidence supporting this supposition.⁷³ Documented warbler predators (adults and young) include snakes, birds, mammals, and red-imported fire ants (*Solenopsis invicta*) (Stake et al. 2004; Reidy et al. 2008; Reidy et al. 2009a). Stake et al. (2004) noted that the height of warbler nests reduced the risk of fire ant predation and that warblers are not the main target of other birds or mammals. Brood parasitism varies annually, but is uncommon and represents a small risk to overall warbler nest survival (Groce et al. 2010). Anders (2000) recorded no brood parasitism by cowbirds during her study of warbler territories within Fort Hood. This factor thus also supports delisting the species.

At most there is one documented outbreak in 2012 of avian pox that was confirmed on Balcones Canyonlands Preserve in Austin, Texas properties after several warblers were reported with swollen and bleeding feet, legs, and lesions on the face, legs and feet.⁷⁴ City of Austin researchers recommended exercising care when handling the birds in those locations to minimize the spread of the infection.⁷⁵ This appears to be an isolated event and there are no other disease detection records for this species. Therefore, this factor continues to support delisting this species.

5. The warbler habitat is secure and the warbler will remain protected after delisting

Due to overlap and redundancy in state and federal regulatory mechanisms, delisting the golden-cheeked warbler under the federal Endangered Species Act will not deprive it of any significant regulatory protections. Apart from the Endangered Species Act, many other regulatory mechanisms exist to ensure that the populations and habitat of the golden-cheeked warbler remain protected after delisting. These include the Migratory Bird Treaty Act of 1918,⁷⁶ the 1975 Texas Endangered Species law,⁷⁷ the Balcones

⁷³ 55 Fed. Reg. at 53,158.

⁷⁴ The City of Austin, State of Our Environment Report 19 (2012).

⁷⁵ *Id.*

⁷⁶ 16 U.S.C. §§ 703–12.

Canyonlands National Wildlife Refuge, conservation plans on Fort Hood, approximately 160 habitat conservation plans on private lands that are enforceable by FWS, and the Alliance for the Conservation of Mesoamerican Pine-Oak Forests that protects the warbler's wintering habitat in Central America. Warbler habitat is actively managed on many Texas Parks and Wildlife Management Areas, Nature Conservancy properties in Texas, and on other public and private lands.⁷⁸

FWS has never designated critical habitat for the golden-cheeked warbler. FWS declined to designate critical habitat in both the 1990 emergency listing⁷⁹ and final listing.⁸⁰ And in a 1994 letter to the Governor of Texas, the Secretary of the Interior stated:

[T]he designation of critical habitat for the warbler will be neither necessary nor prudent because it will provide no net benefit to the species. I have therefore instructed the U.S. Fish and Wildlife Service to cease work on warbler critical habitat designation.⁸¹

Since the environmental baseline is that the warbler as listed does not have any of the regulatory benefits of critical habitat designation, delisting the species does not remove any of those protections—the critical habitat baseline remains the same regardless of whether the species is listed.

A. Migratory Bird Treaty Act

Delisting will not affect the populations of the golden-cheeked warbler, which will continue to be protected under the federal Migratory Bird Treaty Act.⁸² The Migratory Bird Treaty Act makes it unlawful

to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase,

⁷⁷ Tex. Acts 1975, 64th Leg., p. 1405, ch. 545 (codified at 5 Tex. Parks & Wildlife Code § 68.001 et seq.).

⁷⁸ See, e.g., The Nature Conservancy, Texas: Golden-Cheeked Warbler, at <http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/texas/explore/birds-golden-cheeked-warbler.xml> (“The Nature Conservancy is actively protecting habitat for the rare bird at the Barton Creek Habitat Preserve and Love Creek Preserve. The Nature Conservancy also participates in numerous private and public partnerships aimed at preserving essential breeding habitat such as our community-based conservation work along the Blanco, Pedernales, Frio, and Nueces and Sabinal Rivers.”).

⁷⁹ 55 Fed. Reg. at 18,844.

⁸⁰ 55 Fed. Reg. at 53,159.

⁸¹ Letter from Bruce Babbitt, Sec'y of Interior to Gov. Ann Richardson (Sep. 22, 1994).

⁸² Migratory Bird Treaty Act of 1918, 40 Stat. 755 (codified at 16 U.S.C. §§ 703–12).

deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export, any migratory bird, any part, nest, or egg of any such bird, or any product, whether or not manufactured, which consists, or is composed in whole or part, of any such bird or any part, nest, or egg thereof⁸³

Violations are punishable by fine and imprisonment, as well as forfeit of equipment used in such acts.⁸⁴

FWS also recently announced that it was considering various approaches to regulating incidental take of migratory birds.⁸⁵ The approaches could include

issuance of general incidental take authorizations for some types of hazards to birds associated with particular industry sectors; issuance of individual permits authorizing incidental take from particular projects or activities; development of memoranda of understanding with Federal agencies authorizing incidental take from those agencies' operations and activities; and/or development of voluntary guidance for industry sectors regarding operational techniques or technologies that can avoid or minimize incidental take.⁸⁶

Such rulemaking would also "establish appropriate standards for any such regulatory approach to ensure that incidental take of migratory birds is appropriately mitigated, which may include requiring measures to avoid or minimize take or securing compensation."⁸⁷ This announcement is further evidence that FWS has options available to it under the Migratory Bird Treaty Act to protect the golden-cheeked warbler, even after delisting.⁸⁸

⁸³ 16 U.S.C. § 703(a).

⁸⁴ 16 U.S.C. § 707; *see, e.g.*, *Pacificorp Pleads Guilty To Violating Migratory Bird Treaty Act*, N. AM. WINDPOWER (Dec. 22, 2014), *at* http://www.nawindpower.com/e107_plugins/content/content.php?content.13781; Linda Chiem, *Citgo Could Pay \$2M After Judge Backs Bird Death Conviction*, LAW360 (Sep. 10, 2012), *at* <http://www.law360.com/articles/376571>.

⁸⁵ Migratory Bird Permits; Programmatic Environmental Impact Statement, 80 Fed. Reg. 30,032 (May 26, 2015).

⁸⁶ 80 Fed. Reg. at 30,033.

⁸⁷ *Id.*

⁸⁸ *See, e.g.*, U.S. Fish & Wildlife Serv., Migratory Bird Program: Management, *at* <http://www.fws.gov/birds/management.php> ("To manage birds and their habitats, [FWS] work[s] with bird conservation partnerships comprising federal and state agencies,

B. Texas Endangered Species Act

The warbler also remains separately listed and protected under the Texas Endangered Species Act, which provides:

No person may capture, trap, take, or kill, or attempt to capture, trap, take, or kill, endangered fish or wildlife . . . possess, sell, distribute, or offer or advertise for sale endangered fish or wildlife . . . possess, sell, distribute, or offer or advertise for sale any goods made from endangered fish or wildlife...sell, advertise, or offer for sale any species of fish or wildlife not classified as endangered under the name of any endangered fish or wildlife.⁸⁹

C. Balcones Canyonlands National Wildlife Refuge

Nor will delisting affect the protection of prime golden-cheeked warbler habitat in the Balcones Canyonlands National Wildlife Refuge, a 30,000-acre area in Travis County, Texas that was set aside in 1996 and is managed to protect the populations of the golden-cheeked warbler, black-capped vireo, and six invertebrates. The City of Austin and Travis County are required to report annually to FWS on warbler populations, habitat protection and scientific research—none of which will be altered by delisting.⁹⁰

Fort Hood has the largest populations of two listed migratory songbirds—the golden-cheeked warbler and the black-capped vireo.⁹¹ “Fort Hood contains an estimated 22,591 h[ectares] (roughly 25% of the total area of the installation) of habitat suitable for the federally endangered golden-cheeked warbler (*Setophaga chrysoparia*; warbler), which supports between 4,482 and 7,236 territorial male warblers”⁹² Fort Hood developed an Endangered Species Management Plan, established core and non-core habitat areas, and regularly monitored the populations of these two songbirds.⁹³

Tribes, nongovernment organizations, universities, corporations, individuals with expertise in bird conservation, and private landowners. These partnerships develop and implement management plans that provide explicit, strategic and adaptive sets of conservation actions required to return and maintain species to healthy and sustainable levels.”).

⁸⁹ 5 Tex. Parks & Wildlife Code § 68.015.

⁹⁰ Travis Cnty., Tex., The Balcones Canyon Conservation Plan, *at* <https://www.traviscountytexas.gov/tnr/bccp>.

⁹¹ Charles E. Pekins, Dep’t of the Army Envtl. Div., Conserving Biodiversity on Military Lands: A Guide for Natural Resources Managers chpt. 5, *available at* http://www.dodbiiodiversity.org/case_studies/ch_5_2.html.

⁹² David W. Wolfe et al., *Regional Credit Market for Species Conservation: Developing the Fort Hood Recovery Credit System*, 36 WILDLIFE SOC’Y BULLETIN 423, 424 (2012).

⁹³ Pekins, *supra* note 91, at chpt. 5.

According to an Army case study, “Fort Hood has greatly exceeded population and habitat goals” for the warbler and vireo.⁹⁴ And a study by Anders (2000) found that the warbler population within Fort Hood had increased in number and density since the early 1990s. The conservation status of the warbler at Fort Hood will not be impacted by delisting the warbler.

In addition, Executive Order 13,186 requires “each Federal agency taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations is directed to develop and implement, within 2 years, a Memorandum of Understanding (MOU) with the Fish and Wildlife Service . . . that shall promote the conservation of migratory bird populations.”⁹⁵ Through this Executive Order, federal agencies are required to incorporate warbler conservation considerations into their plans and report annually on implementation of the Order.

D. The Recovery Credit System

The Recovery Credit System (RCS), a voluntary natural resource management program developed by the Texas Department of Agriculture, also provides technical guidance and assistance to private landowners near the Fort Hood Military Reservation with qualifying lands that support warbler habitat. The goal of this program is to mitigate adverse impacts to habitat that result from military training activities. Since July 2006, the total investment for implementation of the RCS is \$1,954,666 and the 20 participating landowners’ cost share is \$451,295. Contract terms range from 10–25 years and the program protects approximately 881 hectares of warbler breeding habitat on private land. The Robertson Consulting Group conducted a third-party, independent peer review of the RCS, published in 2010, that details the program’s success.⁹⁶ And a study by Wolfe et al. (2012) determined that by using the Recovery Credit System, “[c]lear benefits have been achieved in terms of acres under conservation management for the species.”

E. Habitat Identification/Treatment Criteria

The black-capped vireo and golden-cheeked warbler Habitat Identification/Treatment Criteria developed by the U.S. Department of Agriculture’s Natural Resource Conservation Service (NRCS) Brush Management Consultation provides technical guidance for brush clearing to avoid warbler breeding habitat on properties with NRCS contracts.

⁹⁴ *Id.*

⁹⁵ Executive Order 13,186 of January 10, 2001: Responsibilities of Federal Agencies to Protect Migratory Birds, 3 C.F.R. 13,186 (2002).

⁹⁶ Third Party Evaluation of the Recovery Credit System Proof of Concept (March 2010), available at http://rcs.tamu.edu/media/277203/final_rcs_eval_report_march_2010.pdf.

F. Alliance for the Conservation of Mesoamerican Pine-Oak Forests

Protection of warbler wintering habitat outside the United States (which is beyond the jurisdiction of the Endangered Species Act) remains after delisting under the Alliance for the Conservation of Mesoamerican Pine-Oak Forests, established in 2003. This voluntary international cooperative partnership includes members from many national nongovernmental organizations in Mexico, Guatemala, El Salvador, Honduras, Nicaragua, and the United States (including the Nature Conservancy, Texas Parks and Wildlife Department, and the Zoo Conservation Outreach Program). The Alliance's conservation plan, published in 2008, directs management and preservation actions in the pine-oak ecoregion in Central America, where most warbler wintering habitat is located.

G. Habitat conservation plans

FWS has issued Endangered Species Act permits to approximately 160 landowners who have entered into habitat conservation agreements to protect warbler habitat, enforceable by FWS. The agreements are not affected by delisting and will continue to protect the warbler as well as other listed species.⁹⁷

6. Other natural and manmade factors support delisting

Because FWS erroneously concluded that few birds existed and little habitat was available for the species, FWS mistakenly concluded that any encroachments on warbler habitat would threaten the continued survival of the species. Current studies show that FWS was wrong in its original conclusions.

From 1992–2001, Groce et al. (2010) examined National Land Cover Data (NLCD) and estimated a net loss of 116,549 hectares (roughly 6%) of woodland within the warbler's breeding range during that time period. The highest conversion rates were identified near urban areas and were attributed to development and population growth. More recent Texas Land Trends analyses support this trend, as most land conversion from 1997–2012 occurred along with population expansion in the state's 25 fastest growing counties (txlandtrends.org).

Habitat fragmentation of existing breeding habitat represented a major concern at the time of the warbler's listing. Since then, range-wide studies conducted during the breeding season indicate that the predicted probability of occupancy increases from north to south with increasing patch size and mean percentage of woodland cover in the

⁹⁷ See, e.g., 72 Fed. Reg. 59,109 (Oct. 18, 2007) (giving notice of a proposed habitat conservation plan that would set aside land for an on-site preserve and pay Balcones Canyonlands Preserve to purchase additional warbler habitat); 72 Fed. Reg. 74,323 (Dec. 31, 2007) (proposing to aside on-site mitigation land to be managed as part of the Balcones Canyonlands Preserve in perpetuity).

surrounding landscape (Collier et al. 2012). Site-specific research conducted by Butcher et al. (2010) found that warblers establish territories in patches as small as approximately 2.6 hectares in rural landscapes. Follow-up research conducted in the Austin area found that minimum patch size requirements for territory establishment were of similar size (~13 hectares; Robinson 2013). Combined, the Collier et al., Butcher et al., and Robinson studies emphasize the importance of large and small patches to sustain the warbler population on its breeding ground.

This coincides with site-specific research (Magnesss et al. 2006; Baccus et al. 2007; Peak and Thompson 2013). Though again, small patches do support warblers and the importance of these smaller areas should not be discounted. Patch size can also influence avian reproduction. Coldren (1998) found that pairing and fledging success increased with increased patch size. Minimum patch size for reproductive success is 16–18 hectares in a rural landscape (Butcher et al. 2010) and about 21 hectares in an urban environment (Arnold et al. 1996). However, in a range-wide study that included productivity data from 1,382 territories, Campomizzi et al. (2012) did not find consistent relationships between territory success and patch size or patch edge-to-area ratio across their breeding range.

A. Habitat degradation

In a study conducted in the western portion of the warbler's breeding range, Stewart et al. (2014b) found that the presence of oak wilt (a defoliating tree disease caused by the fungus *Ceratocystis fagacearum*) did not affect warbler territory placement, but pairing success for males whose territories included some proportion of oak wilt had 27% lower pairing success. Stewart et al. (2014b) found no difference in fledging success between territories in oak wilt affected and unaffected forests. In a similar study conducted in the eastern portion of the warbler's breeding range, Appel and Camilli (2010) examined post-breeding habitat use in warblers in relation to oak wilt and found no difference in the use of affected and unaffected forest. Studies suggest that oak wilt is more likely to occur outside warbler habitat (Appel and Camilli 2010, Stewart et al. 2014a); Stewart et al. (2014a) found that oak wilt occurred in 4.1% of their study area and predicted that the amount of habitat affected will double by 2018 as the disease spreads.

Deer can limit oak survival when the saplings are browsed (Russell and Fowler 2002, 2004). No direct evidence suggests, however, that herbivory by native or non-native browsers is contributing to reduced habitat (or habitat suitability) for the warbler. Murray et al. (2013) investigated local declines in Texas red oak (*Quercus buckleyi*) at Balcones Canyonlands National Wildlife Refuge, but concluded that fire suppression and drought were likely the cause of reduced oak density. Similarly, Yao et al. (2012) suggested fire could have a dual effect on warbler habitat (such that reduced tree density could reduce suitability), but oak recruitment is typically high following moderate to high intensity fires. Yao et al. showed that properly managed fires can increase future habitat

suitability for warblers by increasing tree diversity.

B. Management practices

At the time of listing, FWS assumed that any Ashe juniper removal from warbler habitat would have a negative effect on the species.⁹⁸ Marshall et al. (2012) found, however, that a higher proportion of territories successfully fledged young in areas where understory juniper was thinned when compared to untreated control sites. Warbler territory density was also similar between the thinned sites and control sites, which suggests that the pattern of higher productivity in the treated areas did not result from density dependent mechanisms.

C. Noise

Lackey et al. (2012) found similar warbler abundance, pairing success, and fledging success across road-noise-only sites, road construction sites, and control sites, and there was no relationship between warbler reproductive success and distance from the roadway. Similarly, warblers at the Fort Hood Military Reservation occupy and breed in patches exposed to active military activity and there is no correlation between warbler reproductive success and noise level (Lopez et al. 2012). Both studies suggest that warblers habituate to noise disturbance.

Conclusion

Because golden-cheeked warbler populations and habitat are far greater than FWS believed in 1990, the species should not have been listed as endangered and, based on new scientific, peer-reviewed studies and evidence confirming the species is not in danger of extinction throughout all or any significant part of its range, the species should be removed from the federal endangered species list.

Respectfully submitted,

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⁹⁸ 55 Fed. Reg. at 53,154.

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Exhibit 1: Texas A&M Survey

Tex. A&M Inst. of Renewable Natural Resources, Conservation Status of the Federally Endangered Golden-cheeked Warbler (unpublished research summary, June 2015), available at <http://irnr.tamu.edu/publications/research-reports/>.

Exhibit 2: Enclosed bibliography

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Table 1: Summary of patch-specific golden-cheeked warbler territory density estimates⁹⁹

Source	Density (males/ha)	Location	Survey method
Pulich 1976	0.03–0.13	Dallas, Bosque, Kendall counties	Census
Kroll 1980	0.12–0.20	Bosque county	Territory mapping
Wahl et al. 1990	0.08–0.63	Rangewide	1.6 km Emlen strip census
Jetté 1998	0.14–0.28 (1992–1996)	Fort Hood (Coryell County)	Territory mapping
Peak 2003	0.10–0.22 (Site 1, 1999–2003) 0.25–0.37 (Site 2, 1999–2003)	Fort Hood (Coryell County)	# males / size of study site
Peak and Lusk 2009	0.21–0.29 (2003–2009)	Fort Hood (Coryell County)	# males / size of study site
Peak and Grigsby 2011, 2012, 2013	0.27–0.32 (2011–2013)	Fort Hood (Coryell County)	# males / size of study site
City of Austin & Travis County 2013	0.17–0.44 (1999–2013)	BCP (Travis County)	Territory mapping
Cooksey & Edwards 2008	0.04–0.20 (1991–2008)	Camp Bullis (Bexar County)	Point counts along transects
Mathewson et al. 2012	0.23	Rangewide	Point counts at random points in patches

⁹⁹ Adapted from Ex. 1, Texas A&M Survey at 9 tbl.2.

Table 2: Summary of golden-cheeked warbler breeding habitat and population estimates¹⁰⁰

Reference	Total potential habitat (hectares)	Habitat delineation method	Density estimate	Density method	Total population	Population method	Advantages	Limitations
Pulich 1976	130,017	Used Soil Conservation Service definition of “virgin Ashe juniper” (stands 20–40 ft. trees >75 years old), reduced by author; no imagery used	"good" = 0.125 pairs/ha; "average" = 0.05 pairs/ha; "marginal" = 0.03 pairs/ha	Spot-mapping with marked population in Dallas, Bosque, Kendall counties; Census surveys conducted in 1962 and 1974	1962: 15,630 individuals; 1974: 14,950 individuals	Calculated proportion of total habitat for each of 3 habitat quality ranks (23%, 31%, and 46%, respectively), multiplied by respective density estimates	Calculated proportion of total habitat for each of 3 habitat quality ranks (23%, 31%, and 46%, respectively), multiplied by respective density estimates	Site-specific estimates from a small number of sites applied to entire range; Narrow habitat definition; Assumed constant density across the warbler's breeding range; Projected density within 3 qualitative habitat assessment ranks.
Wahl et al. 1990	337,993 236,984 (corrected)	Corrected values for habitat loss and patch size; 1974, 1976, and 1981 Landsat imagery, unsupervised and supervised classification from known breeding locations (see Shaw 1989); 1989 value is corrected for estimated habitat loss	0.149 pairs/ha	Median estimate for 16 sites in 11 counties determined primarily by 1-mile transect method (Emlen 1971); surveys conducted in 1987, 1988	Carrying capacity: 4,822–16,016 pairs	Median density estimate projected to total potential habitat estimates after corrections	First attempt to use remote sensing for warbler habitat mapping	Assumed constant density across the warbler's breeding range; Imagery for habitat map did not include all portions of the breeding range; Used asynchronous remote imagery to define habitat; Corrected based on assumed habitat change and warbler-habitat relationships (e.g., patches <0.02 mi ² unoccupied); Site-specific estimates applied range-wide; Data collected primarily on public lands

¹⁰⁰ Adapted from Ex. 1, Texas A&M Survey at 4–6 tbl.1.

Reference	Total potential habitat (hectares)	Habitat delineation method	Density estimate	Density method	Total population	Population method	Advantages	Limitations
FWS 1992	329,447	Used Wahl et al. (1990) habitat total estimate for 1989 adjusted for estimated habitat loss; included the assumption that 34% of patches $<0.02 \text{ mi}^2$ are occupied. Estimates included counties with $> 3.8 \text{ mi}^2$ of potential warbler habitat.	Used Pulich (1976): "good" = 0.125 pairs/ha; "average" = 0.05 pairs/ha; "marginal" = 0.03 pairs/ha	Estimates for each of 3 habitat ranks from Pulich (1976)	13,800 territories	Followed Pulich (1976) proportions of habitat quality assuming same proportions apply to habitat delineated by Wahl et al. (1990); not corrected for patch size	See above	See above
Rowell et al. 1995	116,549 (method 1) 545,970 (method 2)	Method 1 used unsupervised classification of polygons; derived from generalized locations constraining typical warbler habitat. Method 2 used supervised classification from point locations; derived using limited warbler detections and included patches $< 0.2 \text{ mi}^2$. Used 1990–1992 Landsat, Ashe juniper-deciduous woodlands with $>75\%$ canopy cover and patches $>0.02 \text{ mi}^2$.	0.3 individuals/ha	Estimates from Wahl et al. (1990)	Carrying capacity: 64,520 individuals	Projected density to total habitat from Method 2 for patches $>0.02 \text{ mi}^2$ because less variation in spectral reflectance compared to Method 1	Based on improved imagery from a narrow period of time; Habitat classifications based on larger warbler occurrence data sets	Did not conduct range-wide field surveys; Vegetation data used to drive classification collected at few study sites; Assumed constant density across the warbler's breeding range; Corrected based on assumed warbler-habitat relationships (e.g., patches $<0.02 \text{ mi}^2$ unoccupied; estimated at 40% of the total area classified as potential habitat)

Reference	Total potential habitat (hectares)	Habitat delineation method	Density estimate	Density method	Total population	Population method	Advantages	Limitations
Diamond & True 1998	1,652,153 (1986) 1,676,240 (1996–1997)	1986 and 1996–1997 Landsat; land cover classified as Ashe juniper, or mixed juniperoak forest/woodland, or mixed or primarily deciduous forest	NA	NA	NA	NA	Clearly identified limitations	Occupancy within potential habitat unknown; classification accuracy questioned
Rappole et al. 2003	653,353	Used Diamond and True (1998) classification but removed patches $<0.02 \text{ mi}^2$	0.188 territorial males/ha 89% pairing success	Estimates from 167 males from monitored population on Fort Hood, Coryell and Bell counties from 1992 to 1996 (Jetté et al. 1998)	228,426 (95% CI: 227,142–229,710) individuals	Adjusted mean density of males by 89% pairing success to estimate number of females	More inclusive habitat classification (included patches $>0.02 \text{ mi}^2$)	Site-specific estimates from a small number of sites applied to entire range; Assumed constant density across the warbler's breeding range; Excluded ~29,000 hectares of potential warbler habitat; Adjusted based on pairing success at small number of study sites
DeBoer & Diamond 2006	756,536	Grouped forest cover types based on NLCD data; Included only patches $>246 \text{ ft.}$ from edge; Conducted occupancy surveys in 2002	NA	NA	NA	NA	Used metrics obtained at local and landscape scales; Collected data on 36 patches of privately owned land and 13 patches of publicly owned land	Limited field sampling across the range; Does not incorporate interpatch heterogeneity

Reference	Total potential habitat (hectares)	Habitat delineation method	Density estimate	Density method	Total population	Population method	Advantages	Limitations
Diamond 2007	1,678,571 (model C) 1,721,824 (model D)	Evergreen / forest / woodland or deciduous forest / woodland within 100 m of evergreen. Model C: adjusted for edge; Model D: with reduction for low canopy cover and addition for high canopy cover	NA	NA	NA	NA	Compared multiple models	Narrow habitat definition and included qualitative classification of habitat "quality"; Limited field data; unclear methodology
SWCA 2007	552,186	2004 digital imagery; >50% canopy closure composed of large Ashe juniper and deciduous trees; patches >0.02 mi	"high" = 0.22 pair/ha; "low" = 0.025 pair/ha	"High" estimate from long-term monitoring study on Fort Hood, Bell and Coryell counties (Peak 2003); "low" estimate from surveys Government Canyon SNA, Bexar Co.	13,931–116,565 pairs; 20,445–26,978 pairs (adjusted)	Estimated using the SWCA habitat model; adjusted estimate based on personal opinion, based on assumptions of density with goal of deriving a "satisfactory minimum population estimate"	Considered several landscape- scale metrics: density of woodland, proportions of Ashe juniper and deciduous trees, size of trees, patch size, land use	Site-specific estimates from a small number of sites applied to entire range; Included only high quality habitat, therefore narrow definition of warbler habitat not based on quality as it relates to productivity; Personal opinion used to adjust population estimates downward "We looked at the results of this application and did not like it."
Loomis Austin 2008	1,679,348	2001 NLCD average canopy cover in a 7 x 7 cell (cell = 98 ft.) neighborhood; potential habitat = all areas within 3 cells of areas with at least 50% mean canopy cover	NA	NA	NA	NA	Broad range in canopy cover considered potential habitat	Included qualitative classification of habitat "quality" based on canopy cover metrics; Limited field data collected small number of sites over long period of time (2001–2008); unclear methodology

Reference	Total potential habitat (hectares)	Habitat delineation method	Density estimate	Density method	Total population	Population method	Advantages	Limitations
Collier et al. 2012	1,678,053	2007 and 2008 Landsat 5; unsupervised classification; used NLCD to remove any cover types misclassified as woodland and pixels identified as woodland, but with <30% canopy cover; used road layer to further define habitat patches	NA	NA	NA	NA	Data collection and statistical procedures were appropriate for the scale and scope of the project (patches were randomly sampled across the warbler's breeding range, imagery was current to the study); Included data collected public and private land; Used biological covariates known to influence warbler occurrence; High predictive accuracy; Provided probabilistic prediction of the likelihood of patch occupancy	Did not incorporate interpatch heterogeneity

Reference	Total potential habitat (hectares)	Habitat delineation method	Density estimate	Density method	Total population	Population method	Advantages	Limitations
Mathewson et al. 2012	1,678,053	2007 and 2008 Landsat 5; unsupervised classification; used NLCD to remove any cover types misclassified as woodland and pixels identified as woodland, but with <30% canopy cover; used road layer to further define habitat patches. (Collier et al. 2012)	0.23 males/ha (mean patch-specific density)	Abundance point counts done in 301 patches, such that each patch surveyed was given a density estimate	263,339 singing males (95% CI: 223,927–302,620)	Used predicted patch-specific density estimates as a function of predicted patch-specific occupancy probability and based on 1,000 simulated realizations of population distribution	Data collection and statistical procedures were appropriate for the scale and scope of the project (patches were randomly sampled across the warbler's breeding range, imagery was current to the study); Included data collected within 306 patches on public and private land; More conservative estimate than would have been projected by including detection probability	2009 population estimate; Cannot be applied to local-scale; Patch-specific, so does not incorporate interpatch heterogeneity
Duarte et al. 2013	1,678,281	GIS data and Landsat imagery quantifying breeding habitat change from 1999–2001 to 2010–2011	NA	NA	NA	NA		

EXHIBIT E

Federal Docket No. FWS-R2-ES-2016-0062

90-DAY FINDING ON A PETITION TO REMOVE THE GOLDEN-CHEEKED WARBLER FROM THE LIST OF ENDANGERED AND THREATENED WILDLIFE

Background

Section 4(b)(3)(A) of the Endangered Species Act (Act) requires that we make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information indicating that the petitioned action may be warranted. Our standard for substantial scientific or commercial information with regard to a 90-day petition finding is “that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted” 50 C.F.R. § 424.14(b).

Petition History

On June 30, 2015, we received a petition dated June 29, 2015, from Nancie G. Marzulla (Marzulla Law, LLC – Washington, DC) and Robert Henneke (Texas Public Policy Foundation – Austin, TX) requesting that the golden-cheeked warbler be removed from the list of endangered and threatened wildlife (“delisted”) due to recovery or error in information. The petition clearly identified itself as a petition and included the requisite identification information for the petitioner, as required by 50 C.F.R. § 424.14(a).

On December 11, 2015, we received supplemental information from the petitioners that included additional published studies and an unpublished report. These studies, as well as others known to the Service and in our files at the time the supplement was received, are addressed as appropriate in this finding. This finding addresses the petition.

Evaluation of a Petition to Delist the Golden-cheeked Warbler Under the Act

Species and Range

Does the petition identify an entity that may be eligible for removal from listing (delisting) (that is, is the entity a species, subspecies, or DPS)?

Yes
 No

The American Ornithologists’ Union adopted a new classification of the Parulidae based on a phylogenetic analysis by Lovette et al. (2010, p. 763) that resulted in all *Dendroica* species being placed into a single clade for which the generic name *Setophaga* has taxonomic priority (Chesser et al. 2011, p. 608). Hereafter, the Service recognizes the golden-cheeked warbler as *Setophaga chrysoparia*, formerly placed in the genus *Dendroica*.

If yes, list common name (scientific name); and range.

Golden-cheeked warbler (*Dendroica chrysoparia* = *Setophaga chrysoparia*, hereafter warbler), breeding exclusively in Texas; wintering in the highlands of Mexico (Chiapas) and Central America (Guatemala, Honduras, Nicaragua, El Salvador).

Information in the Petition

Factor A

1. Does the petitioner claim the entity warrants delisting based on the lack of the present or threatened destruction, modification or curtailment of the species' habitat or range?

Yes
 No

- a. If the answer to 1 is yes:

Do the sources cited in the petition provide substantial information to support the claim?

Yes
 No

If yes, indicate for which activity(ies) present or threatened destruction, modification or curtailment of the species habitat or range (e.g., logging, agriculture, overgrazing, etc.) is a threat and list the citations with page numbers for each purpose. If no, please indicate for which activity(ies) and explain.

The petition asserts that none of the statutory factors pose a significant threat to the continued existence of the warbler (p. 15) and that “the warbler was either listed in error or has recovered since listing” (p. 13). The petition states that because the numbers of warblers and extent of warbler habitat is far greater than the Service determined in 1990, the warbler should not have been listed as endangered, and further cites several studies known to the Service (2014) indicating the species is not in danger of extinction throughout all or any significant portion of its range and requests that the warbler be removed from the federal endangered species list (Petition, p. 29).

The petition states that recent studies confirm there are more warblers and more warbler habitat than at the time the Service listed the warbler as endangered (p. 18). Much of this argument is based on Mathewson *et al.* (2012, p. 1,123) which employed a spatially-explicit model to estimate the range-wide population of male warblers to be 263,330 and the amount of warbler habitat to be 4,147,123 acres (1,678,281 hectares). The Mathewson *et al.* (2012) study was considered by the Service and discussed in our most recent 5-year review for the warbler, which was completed in 2014 (Service 2014, p. 5). The Mathewson *et al.* (2012, entire) study estimated a range-wide population number of warblers by applying warbler density estimates to the Collier *et al.* (2011, entire) model, which estimated the

probability of warblers occupying given patches of woodland habitats throughout the breeding range of the warbler. Previous estimates of the total adult golden-cheeked warbler population range from 14,950 individuals to 26,978 pairs (Service 2014, p. 5). Previous estimates of potential golden-cheeked warbler breeding habitat range from 326,000 to 4,378,148 acres with differences due primarily to varying definitions of breeding habitat associated with vegetation types and habitat patch size, differing parameters included in habitat models, and remote sensing techniques and data sets (Service 2014, pp. 6–7). We acknowledge that the known potential range is geographically more extensive than when the golden-cheeked warbler was originally listed. However, population estimates are very difficult to determine and threats described in the original listing rule remain and recovery criteria have not been accomplished. This and other pertinent information was evaluated in the 2014 5-year review where we recommended that the species remain listed as in danger of extinction throughout its range (Service 2014, p. 15).

Efforts to model warbler habitat, estimate patch-level occupancy probabilities, and draw inferences about distribution and abundance of warblers across the landscape will ultimately be useful to the Service in planning and implementing recovery actions and conservation measures designed to provide for the continued existence of the warbler (Mathewson *et al.* 2012, p. 1,127). However, the Service does not agree with the petitioner’s assertion that the 2015 Texas A&M Survey (Petition, Exhibit 1) “confirms that the warbler is not and never has been endangered in Texas” (Petition, p. 14). The Survey (Petition, Exhibit 1) summarizes information already known to the Service and discussed in the 5-year review (Service, 2014), which represents the best available body of science known to the Service pertaining to the status of the warbler. The Service recognizes that the modeling studies described in the 2015 Texas A&M Survey (Petition, Exhibit 1) do represent the most recent and comprehensive efforts to estimate range-wide warbler habitat and population size to date.

However, these efforts represent new estimates rather than indicators of positive trends in warbler habitat and population size, and thus do not imply recovery. Further, a recent study reported results of a similar modeling effort to infer warbler density from landscape and habitat relationships that performed well at sites with high known densities but tended to overestimate plots with lower known densities (Reidy *et al.* 2016, p. 379) and it is apparent that uncertainty still exists, especially for habitats occupied by warblers at lower-densities. Habitat destruction, fragmentation and degradation remain a real and significant threat to the continued existence of the warbler (Service 2014, pp. 8–10). The Service does plan to apply these and other modeling efforts, in the context of all that is known about the warbler and warbler habitat, to help inform and guide recovery efforts for the warbler now and in the future (Service 2014, p. 16). A recent population modeling study found that movement rates were high among warbler breeding habitat patches, immigration (i.e., natal dispersal) appears to be an important driver of local warbler population dynamics. Because these complex

processes occur on a landscape scale, the authors recommended that future conservation efforts be implemented at a larger spatial extent (Duarte *et al.* 2015 pp. 70–72).

The petition discusses habitat fragmentation generally (pp. 27–28), but fails to articulate whether or not habitat fragmentation is a significant threat to the warbler, instead stating simply that “studies emphasize the importance of large and small patches to sustain the warbler population on its breeding ground”. While we agree that all patches are important because they provide potential habitat for the warbler, we believe that larger more connected habitat patches are especially important for supporting a viable warbler population given that occupancy probability increases with patch size (Collier *et al.* 2010, Figure 4, p. 144). McFarland *et al.* (2012, p. 438) concluded that large patches are important for maintaining high rates of warbler occupancy, small isolated patches have a lower probability of occupancy, and habitat connectivity is especially important in areas where habitat patches are small. A recent study found that significant losses of warbler breeding habitat have occurred over the past decade, warbler habitats are far more likely to be diminished than regenerated, dispersal of juvenile warblers among patches of breeding habitat is essential for maintaining local warbler populations, and concluded that the conservation of large blocks of habitat is especially important for ensuring the long-term viability of the species (Duarte *et al.* 2016, pp. 57–60).

The petition briefly mentions warbler habitat loss from 1992–2001 (p. 27), but does not cite any new studies showing increasing urbanization, habitat loss, and habitat fragmentation within the range of the golden-cheeked warbler. As we describe in the 2014 5-year review, warbler habitat loss and habitat fragmentation are mostly driven by rapid suburban development and human population growth in Travis, Williamson, and Bexar Counties (Service 2014, pp. 8–9). In the warbler breeding range, the human population has increased by nearly 50 percent from 1990 to 2010 (Groce *et al.* 2010, p. 123). Further, population projections from 2010 to 2050 for 35 counties within the warbler breeding range report a 64 percent increase in the human population from 4.7 to 7.8 million, and with the population of Williamson and Hays Counties expected to more than double (Potter and Hoque 2014, entire). The threat of habitat fragmentation is ongoing and is expected to threaten the continued existence of the golden-cheeked warbler into the foreseeable future (Service 2014, p. 9). The petition does not provide any information on these significant threats.

- b. Provide additional comments, if any.

Factor B

- 2. Does the petitioner claim the entity warrants delisting based on the lack of overutilization for commercial, recreational, scientific, or educational purposes (Factor B)?

Yes

No

a. If the answer to 2 is no:

Do sources cited in the petition provide substantial information indicating the entity may warrant delisting based on factor B, even though the petitioner does not make this claim?

Yes

No

If yes, indicate for which purpose(s) overutilization is a threat and list citations with page numbers for each purpose. If no, please explain.

Factor B (overutilization) is not specifically discussed in the petition, despite the assertion that none of the statutory factors apply and that the warbler should not be listed (Petition, p. 14). However, the Service does not consider overutilization to be a threat to the warbler (Service 2014, p. 10).

c. Provide additional comments, if any.

Factor C

3. Does the petitioner claim the entity warrants delisting based on the lack of disease or predation (Factor C)?

Yes

No

a. If the answer to 3 is yes:

Which does the petitioner claim is not a threat such that delisting may be warranted? (check all that apply)

Disease

Predation

b. If the answer to 3 is yes:

Do the sources cited in the petition provide substantial information to support the claim?

Yes

No

If yes, indicate which (disease, predation, or both) is a threat and list the citations with page numbers for each. If no, please indicate disease and/or predation and provide an explanation.

The petitioners claim that neither disease nor predation constitutes a significant threat to the continued existence of the warbler and that the warbler should not be listed (Petition, p. 22). Information provided in the petition is refuted by the 2014 5-year review, in which we conclude that multiple factors such as urbanization and fragmentation have likely resulted in increased rates of predation of warbler

nests by a wide variety of animal predators (Service 2014, p. 11), especially rat snakes (*Elaphe spp.*). This increase in nest predation by rat snakes has been proposed as a proximate explanation for the observed negative effects of forest edge on warbler nest survival and productivity (Peak and Thompson 2014, p. 554–557).

No diseases in golden-cheeked warblers have been reported; therefore, we do not consider disease to be a threat to this species (Service 2014, p. 11). However, nest parasitism and nest depredation, both of which occur to a varying degree across the range of the warbler, are exacerbated by habitat fragmentation and are considered a moderate threat (Service 2014, p. 11). The petition does not provide any new information indicating that predation is no longer a threat to the warbler.

c. If the answer to 3 is no:

Do sources cited in the petition provide substantial information indicating the entity may warrant delisting based on factor C, even though the petitioner does not make this claim?

Yes

No

If yes, indicate which (disease, predation, both) is a threat and list citations with page numbers for each. If no, please explain.

d. Provide additional comments, if any.

Factor D

4. Does the petitioner claim the entity warrants delisting because existing regulatory mechanisms (Factor D) are adequate?

Yes

No

a. If the answer to 4 is yes:

Do the sources cited in the petition provide substantial information to support the claim?

Yes

No

If yes, list the citations with page numbers. If no, please explain.

The petition asserts that, even with protections of the Act removed, the warbler will be protected by existing regulatory mechanisms including: the Migratory Bird Treaty Act of 1918, and the 1975 Texas Endangered Species law (pp. 22–25). However, as discussed in the 2014 5-year review, while these regulations do provide some protections for the birds neither “prohibits habitat destruction, which is an immediate threat to the warbler” (Service 2014, p. 12).

The petition also claims that warbler habitat is protected by the Balcones Canyonlands National Wildlife Refuge, the Balcones Canyonlands Preserve, and approximately 160 habitat conservation plans (HCPs). While we did not consider these long-term land protections as “existing regulatory mechanisms” under Factor D in the 5-year review, we did consider these land protection efforts under Factor A (Service 2014, p. 10). Many but not all of these protected lands are managed for the warbler and there have been important strides in regional planning in central Texas that include the county-wide HCPs that occur along the I-35 corridor from Williamson County to Bexar County. Despite these land protections and regional HCPs, an estimated 29 percent of existing breeding season habitat was lost between 1999–2001 and 2010–2011 (Duarte *et al.* 2013, p. 7) indicating that, but for protections of the Act, adequate regulatory mechanisms do not exist to prevent continued destruction of warbler breeding habitat in Texas. Given the projected population growth, the loss of warbler habitat is expected to continue.

b. If the answer to 4 is no:

Do sources cited in the petition provide substantial information indicating the entity may warrant delisting based on Factor D, even though the petitioner does not make this claim?

Yes

No

If yes, list citations with page numbers. If no, please explain.

c. Provide additional comments, if any.

The petition (p. 25) seems to confuse the Balcones Canyonlands National Wildlife Refuge, which is an approximately 24,000-acre Federal land unit of which 19,079 acres are actively managed for the warbler (Service 2015 p. 40), with the Balcones Canyonlands Preserve (BCP), which is a system of preserves managed under a regional Habitat Conservation Plan by the City of Austin and Travis County (Texas) to benefit multiple species including the warbler as well as several species of karst invertebrates. To date the BCP has protected 30,540 acres of golden-cheeked warbler and black-capped vireo habitat (Travis County-City of Austin 2014, p. 1).

Factor E

2. Does the petitioner claim the entity warrants delisting based on the lack of other natural or manmade factors affecting its continued existence (Factor E)?

Yes

No

a. If the answer to 5 is yes:

Identify the other natural or manmade factors claimed by the petitioner to not be a threat such that delisting may be warranted.

- Habitat fragmentation (Petition, pp. 27–28)
- Habitat degradation (Petition, pp. 28–29)
- Forest management practices (Petition, p. 29)
- Noise (Petition, p. 29)

b. If the answer to 5 is yes:

Do the sources cited in the petition provide substantial information to support the claim?

Yes

No

If yes, indicate for which other natural or manmade factors (e.g., climate change, road mortality, or small population dynamics) are a threat and list the citations with page numbers for each factor. If no, please indicate for which factor(s) and explain.

The Service maintains that habitat fragmentation, habitat degradation, inappropriate habitat management practices, and excessive noise all contribute to reductions in overall warbler habitat quantity and quality and present a real and significant threat to the long term viability of the species (Service 2014, p. 15). We analyzed the threats of habitat fragmentation, habitat degradation, and poor forest management practices in our 2014 5-year review. Specifically, we described how the quality of habitat for warblers is reduced by small patch sizes, reduced oak recruitment, and unsustainable forestry practices (Service 2014, p. 9). The petition addresses some of these threats by describing research on warbler habitat quality that has resulted in some conflicting conclusions about the effects of oak wilt (described below), wildfire, vegetation management, road and construction noise, and patch size on warbler reproductive success (Petition, p. 28). While we agree that there is some uncertainty regarding the magnitude of threats these activities present to warbler habitat quality (and thus, warbler reproductive success and survival), the research cited in the petition does not allow us to conclude that oak wilt, wildfire, vegetation management, and patch size are not threats to the species.

Oak wilt is a fungal infection that can affect all oak species, especially red and live oaks, frequently occurs in warbler habitat, and has the potential to negatively affect warblers and their habitat (Stewart *et al.* 2014, entire).

Wildfire is known to be an important process for maintaining oak-dominated ecosystems throughout eastern North America (Brose *et al.* 2014, entire). However, catastrophic wildfires have the potential to significantly diminish occupancy by warblers in previously occupied habitat, and that effect can last for over a decade (Reemts and Hansen 2008, p. 8).

Vegetation management designed specifically to benefit warblers and warbler habitat is encouraged by state and federal agencies (Campbell 1995, pp. 23–27). However, inappropriate conversion of potential warbler habitat to other vegetation

types for agricultural and other practices remains a threat to the species. A recent study found that warbler breeding habitats, once lost, were not likely to be restored (Duarte *et al.* 2016, p. 56.)

The petition cites two studies conducted in 2012, which found no effect of noise disturbance on golden-cheeked warbler abundance, survival, or reproduction. While the literature on other songbird species has demonstrated profound behavioral responses to manmade noise pollution (Ortega 2012, entire), we currently have no evidence that noise pollution is affecting golden-cheeked warbler populations. Because the findings of these studies were not significant, noise from roads and construction was not discussed as a potential threat in our 2014 5-year review. We still do not consider noise to be a significant threat above and beyond the observed negative effects of edge on warbler occupancy and productivity.

Patch size is an important aspect of warbler habitat in that nest survival decreases as forest edge increases (Peak 2007, pp. 7–8) and “with an overall shift to smaller and more fragmented patches within the northern portions of the range, the probability of warbler occurrence declines significantly, even for large patches of woodland habitats” (Collier *et al.* 2011, p. 7). The combined effects of reduced patch size and increased forest edge on warbler reproductive success was recently evaluated by Peak and Thompson (2014) who demonstrated a negative relationship between forest edge density and period nest survival (p. 554). Nest depredation is one causal factor that may help explain this phenomenon. Fragmentation of woodland habitats resulting in reduced patch size and increased forest edge continues to be a threat to the warbler.

There are additional threats that we evaluated and identified in the 2014 5-year review, such as the potential consequences of climate change (that is, increased risk of catastrophic wildfire and range shifts or restrictions; Service 2014, pp. 12–14). Additionally, the 5-year review noted that recreation was a threat to the warbler (Service 2014, p. 14). The petition did not present any information to address these threats.

- c. Provide additional comments, if any.

Cumulative Effects

6. Does the petitioner claim that factors they have identified may have synergistic or cumulative effects such that the entity may warrant delisting?

Yes

No

- a. If the answer to 6 is yes:

Do the sources cited in the petition provide substantial information to support the claim?

Yes

No

If yes, indicate which factors the petitioner claims may have synergistic or cumulative effects and list the citations with page numbers. If no, please indicate which threats and explain.

Cumulative effects are not discussed in either the petition or the Service's 2014 5-year review.

- b. Provide additional comments, if any.

Petition Finding

The petition provided information indicating that the population was larger than estimated at the time of listing and that threats considered at the time of listing were no longer threatening the species. A 5-year review for the golden-cheeked warbler was completed on August 26, 2014, in which we recommended that the current classification as endangered should not change. The petition does not present substantial information not previously addressed in the 2014 5-year review for this species and does not offer any substantial information indicating that the petitioned action to delist the species may be warranted. We acknowledge that the known potential range is more extensive than when the golden-cheeked warbler was originally listed. However, threats of habitat loss and habitat fragmentation are ongoing and expected to impact the continued existence of the warbler in the foreseeable future. This and other pertinent information was evaluated in the 2014 5-year review.

No new information is presented that would suggest that the species was originally listed due to an error in information. The golden-cheeked warbler is a taxonomically unique species and was shown to be in danger of extinction at the time of the listing. The golden-cheeked warbler has not been recovered, and due to ongoing wide-spread destruction of its habitat, the species continues to be in danger of extinction throughout its range (Service 2014, p. 15).

Based on our review of the petition, sources cited in the petition, and information in our files, we find that the petition does not provide substantial scientific or commercial information indicating that the petitioned action may be warranted.

Author

The primary authors of this notice are the staff members of the Austin Ecological Services Field Office, U.S. Fish and Wildlife Service.

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Regional Outreach Contact: Lesli Gray, Public Affairs Specialist, 972-439-4542

Date: 5/25/16



Director
U.S. Fish and Wildlife Service

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See enclosed

Evaluation of a Petition to Delist the golden-cheeked warbler Under the Act

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EXHIBIT F

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

GENERAL LAND OFFICE OF THE
STATE OF TEXAS,

Plaintiff,

-vs-

CAUSE NO.:
AU-17-CV-00538-SS

UNITED STATES FISH AND WILDLIFE
SERVICE, UNITED STATES
DEPARTMENT OF THE INTERIOR,
RYAN ZINKE in his official capacity as
Secretary for the United States Department
of the Interior, GREG SHEEHAN in his
official capacity as Acting Director of the
United States Fish and Wildlife Service, and
AMY LUEDERS in her official capacity as
Southwest Regional Director of the United
States Fish and Wildlife Service,

Defendants.

FILED
19 FEB - 5 PM 2:12
CLERK, U.S. DISTRICT COURT
WESTERN DISTRICT OF TEXAS
BY *AD*
DEPUTY CLERK

ORDER

BE IT REMEMBERED on this day the Court reviewed the file in the above-styled cause, and specifically Plaintiff General Land Office of the State of Texas (Texas)'s and Defendants United States Fish and Wildlife Service, United States Department of the Interior, Ryan Zinke in his official capacity as Secretary for the United States Department of the Interior, Greg Sheehan in his official capacity as Acting Director of the United States Fish and Wildlife Service, and Amy Leuders in her official capacity as the Southwest Regional Director of the United States Fish and Wildlife Service (collectively, Defendants)' respective Motions for Summary Judgment ([#64] and [#67]), along with their respective Responses ([#67] and [#76]) and Replies ([#76] and [#77]). Having reviewed the documents, the relevant law, and the file as a whole, the Court now enters the following opinion and orders.

Background

I. Introduction

The golden-cheeked warbler (*Setophaga chrysoparia*) (hereinafter Warbler) is a small, migratory songbird that breeds exclusively in parts of central Texas. Pl.'s Mot. Summ. J. [#64] at 9; Defs.' Mot. Summ. J. [#67] at 6. Its breeding range is limited because it depends on the bark from Ashe juniper trees to construct its nests. *See* Defs.' Mot. Summ. J. [#67] at 6. During the late 1980s, planned developments in the City of Austin and Travis County led to the widespread removal of Ashe juniper trees, resulting in a significant reduction of the Warbler's available breeding habitat. *See id.* at 6; *see also* Pl.'s Mot. Summ. J. [#64] at 9.

II. Initial Listing Decision

In February 1990, an emergency petition was submitted to the United States Fish and Wildlife Service (the Service) seeking to add the Warbler to the endangered species list. Defs.' Mot. Summ. J. [#67] at 6. Based on this petition, the Service issued an emergency rule temporarily listing the Warbler as endangered under Section 4(b)(7) of the Endangered Species Act (ESA), codified as 16 U.S.C. § 1533(b)(7). *Id.*

In December 1990, the Service issued a final rule placing the Warbler on the endangered species list. *Id.* The Service determined the Warbler was endangered due to the present and threatened destruction of its range, the threat of nest predation, the inadequacy of existing regulatory mechanisms, and the threat of habitat fragmentation. *Id.* at 6–7. The Service declined to designate a critical habitat for the Warbler because it determined the specific elements of the Warbler's habitat critical to its survival were not known. Pl.'s Mot. Summ. J. [#64] at 11.

As part of the listing process, the Service was obligated to develop and implement a "Recovery Plan" for the Warbler. *See* 16 U.S.C. § 1533(f). The Warbler's Recovery Plan, which

was issued in 1992, set out five conditions to be met before the Service would consider the Warbler sufficiently recovered to justify removal from the endangered species list. Defs.' Mot. Summ. J. [#67] at 7. These five conditions were:

1. Sufficient breeding habitat has been protected to ensure the continued existence of at least one viable, self-sustaining population in each of eight regions outlined in the Recovery Plan;
2. The potential for gene flow exists across regions between demographically self-sustaining populations where needed for long-term viability;
3. Sufficient and sustainable non-breeding habitat exists to support the breeding populations;
4. All existing warbler populations on public lands are protected and managed to ensure their continued existence; and
5. All of the above criteria have been met for ten consecutive years.

Id. The Service also established a plan to achieve Warbler recovery by encouraging research on the species, increasing protections for Warblers on public lands, encouraging conservation by private landowners, protecting the Warbler's winter habitat and migratory route, and increasing public awareness about the Warbler. *See id.*

III. 2014 Five-Year Status Review

Although the Service was required to conduct a review of the Warbler's endangered status every five years, the first such status review did not occur until August 26, 2014 (2014 Review). Pl.'s Mot. Summ. J. [#64] at 12. The 2014 Review found that although progress had been made toward achieving the recovery criteria set out in the 1992 Recovery Plan, none of the criteria had yet been achieved,¹ AR 0067778, and the Warbler was still threatened by "the ongoing, wide-spread destruction of its habitat." AR 006789. The Service therefore concluded the Warbler remained in danger of extinction throughout its range and recommended no change to the Warbler's endangered status. *Id.*

¹ Somewhat contradictorily, the Service also found the recovery criteria outlined in the 1992 Recovery Plan did not adequately address all of the Warbler's threats or needs. This led the Service's to conclude that "revision to the recovery plan [was] warranted." AR 006667.

The 2014 Review concluded the destruction of the Warbler's habitat was largely due to "rapid suburban development" in Travis, Williamson, and Bexar Counties. AR 006782, 006789. In fact, the evidence cited by the 2014 Review suggested increases in residential and commercial development, highways, transmission corridors, reservoirs, and overall human population had reduced available Warbler habitat by 29% between 2001 and 2011 alone. AR 006782. Because the human population was projected to continue to increase throughout the Warbler's range, the 2014 Review concluded these threats would persist, thereby further reducing and fragmenting the Warbler's breeding habitat. AR 006783.

The 2014 Review also found these habitat threats exacerbated other threats to the Warbler's continued survival. For instance, increased habitat fragmentation was thought to increase Warbler nest predation to a "significant" degree. *See* AR 006785. The continued loss of habitat also led the Environmental Protection Agency to classify the Warbler as "critically vulnerable" to climate change, and the Warbler's breeding habitat was found to be particularly susceptible to catastrophic wildfires. AR 006787. Finally, a larger human population in the Warbler's breeding range created the possibility that recreational activities could threaten the Warbler. AR 006788.

Though the 2014 Review concluded threats to the Warbler's habitat justified its continued inclusion in the endangered species list, it also considered evidence suggesting the Warbler's survival chances were not as dire originally believed. For example, the 2014 Review noted that Warbler pairs could occupy smaller contiguous areas of habitat, or "patches," than initially believed, and it referred to a study that predicted the existing Warbler male population to be larger than 263,000 individuals. AR 006778-79. The 2014 Review concluded, however, that the scientific evidence demonstrated the importance of large patches to the Warbler's continued

survival, as Warbler reproductive success and occupancy rates both increased with increasing patch size. AR 006778. And it noted that the predicted population of 263,000 male Warblers might have been inflated, as that population estimate was 1.4 to 13 times larger than the estimates generated by an intensive survey conducted by the City of Austin in 2013. AR 006779. In light of the wide range of Warbler population estimates and the ample evidence demonstrating significant destruction and fragmentation of the Warbler's breeding habitat, the Service determined the best scientific and commercial data available showed the Warbler should remain on the endangered species list. *See* AR 006789.

IV. Petition to Delist

On June 29, 2015—less than one year after the 2014 Review concluded the Warbler should remain on the endangered species list—a petition was submitted requesting the removal of the Warbler from the list (Petition to Delist). Pl.'s Mot. Summ. J. [#64] at 12. Relying primarily on an “exhaustive survey” of the existing scientific literature prepared by the Texas A&M Institute of Renewable Natural Resources (2015 Texas A&M survey), the Petition to Delist contended the initial listing decision relied on evidence that underestimated the Warbler's population size and the extensiveness of its breeding habitat. AR 000015–18. According to the Petition to Delist, the best available research in 1990 suggested “there were only about 328,928 hectares² of potential warbler habitat in Texas” and that such habitat could potentially support 13,800 Warbler pairs.³ AR 000007. But the evidence described in the 2015 Texas A&M

² A hectare is equivalent to 2.471 acres. *E.g.*, Alastair Hazell, *Hectares-Acres Converter*, THE CALCULATOR SITE, <https://www.thecalculatorsite.com/conversions/area/hectares-to-acres.php> (last visited Dec. 20. 2018).

³ The precise language used in the Petition to Delist referred to “13,800 warbler territories.” AR 000007. A scientific evaluation of the 2014 Review, relying on the same studies as the Petition to Delist, noted that the research in 1990 concluded there was a “potential population of 27,600 individuals.” AR 002509. As this figure is exactly double the number of “warbler territories” noted in the Petition to Delist, the Court assumes the reference to “warbler territories” is to Warbler pairs.

survey—evidence that was also considered by the Service during the 2014 Review, AR 000442—demonstrated that the Warbler’s breeding habitat was more widely distributed and variable than was initially assumed and that the predicted Warbler population was much larger. AR 000019.

Regarding available Warbler habitat, the Petition to Delist contended there was between 1,578,281 and 1,678,053 hectares of available breeding habitat, a figure five times greater than the amount of available Warbler habitat the Service believed existed in 1990. AR 000015. The Petition to Delist offered two reasons to explain the dramatic increase in the estimate of available Warbler habitat. The first was technological advances. The studies relied on by the Petition to Delist benefitted from “improved classification techniques, better satellite image quality, and on-the-ground sampling,” which allowed scientists to better identify environments that could potentially contain Warblers. *Id.* The second was a shift in the understanding of what type of habitat Warblers require to breed successfully. For example, although the Service believed in 1990 that Warblers could not successful breed in patches of less than fifty hectares, studies compiled in the 2015 Texas A&M survey revealed Warblers were capable of breeding in patches as small as sixteen to eighteen hectares in rural areas and twenty-one hectares in urban areas. *See* AR 000011, 000030.⁴ And despite initial assumptions that any removal of Ashe juniper in Warbler habitat would have a negative impact on the bird’s survival, one recent study found Warblers experienced greater reproductive success in areas where Ashe juniper had been thinned. AR 000031.

Regarding Warbler population, the Petition to Delist cited the population study considered during the 2014 Review that indicated the predicted population of male Warblers was

⁴ The Petition to Delist also noted, however, that predicted occupancy, pairing success, and fledgling success all increased with increasing patch sizes. AR 000029–30.

between 223,927 and 302,260, roughly nineteen times larger than the Service initially believed it to be. AR 000021. The Petition to Delist contended the increased predicted population was a result of “improved imagery” technology and better statistical modeling practices. *Id.* In response to the 2014 Review’s conclusion that these predictions may have been inflated, the Petition to Delist stated the 2014 Review had misapplied the population study and it insisted the study “represent[ed] the best available warbler breeding population estimate.” AR 000021–22.

Based on these increased estimates of Warbler habitat and population, the Petition to Delist argued destruction of the Warbler’s habitat did not threaten the Warbler’s continued survival. *See* AR 000029. And because the primary reason for initially listing the Warbler was the potential for habitat destruction, the Petition to Delist contended the evidence strongly indicated the Warbler was not “endangered” under the ESA. AR 000031. The Petition to Delist concluded by explaining there were no other threats to justify keeping the Warbler on the endangered list. *See* AR 000024 (noting there was no evidence indicating disease, fire ant predation, or brood parasitism posed a significant threat to the Warbler); AR 000024–29 (arguing overlapping regulatory regimes ensured adequate protection for the Warbler even if it were removed from the endangered species list); AR 000030 (positing declines in the availability of oak foliage in Warbler’s breeding habitat are unrelated to reproductive success or habitat use).

V. 90-day Finding

On May 25, 2016, the Service issued a 90-day finding that concluded the Petition to Delist failed to present substantial information indicating that removing the Warbler from the endangered species list may be warranted. Defs.’ Mot. Summ. J. [#67] at 14; *see* 16 U.S.C. §1533(b)(3)(A). Although the Service acknowledged the Warbler’s population size and known potential range were both larger than was believed at the time of the initial listing decision, it

determined ongoing threats to the Warbler's habitat were expected to impact the Warbler's continued existence into the foreseeable future. *See* AR 000449. The 90-day finding also remarked that the Petition to Delist did not include any information the Service had not considered during the 2014 Review. *See id.*; *see also* Defs.' Mot. Summ. J. [#67] at 8.

Although the Service acknowledged that the Warbler's population was potentially much larger than assumed and conceded that the Warbler's known potential range was "geographically more extensive" that was believed at the time of the initial listing decision, AR 000442, the Service concluded this evidence alone did not constitute substantial information that the Warbler was no longer endangered. The 90-day finding first questioned the reliability of the population study, noting that "population estimates are very difficult to determine" and that the study relied on in the Petition to Delist tended to overestimate Warbler populations in areas of low Warbler density. *Id.* Furthermore, the Service concluded the Warbler was still confronted by the threats described in the original listing rule and noted that none of the recovery criteria enumerated in the 1992 Recovery Plan had been achieved. *Id.* The 90-day finding thus determined that although the Petition to Delist presented evidence that the Warbler's population and habitat were larger than initially assumed, such evidence did not demonstrate the Warbler was no longer endangered. *See id.*

The Service paid particular attention to the Petition to Delist's failure to include any new information on the nature and severity of various threats facing the Warbler. For instance, the 90-day finding observed that the Petition to Delist "fail[ed] to articulate whether or not habitat fragmentation is a significant threat to the warbler" despite scientific evidence showing that conservation of large, unfragmented habitat patches was "especially important" for ensuring the Warbler's long-term viability. AR 000443. The 90-day finding reiterated the 2014 Review's

conclusion that Warbler habitat fragmentation was “mostly driven by rapid suburban development and human population growth in Travis, Williamson, and Bexar Counties” and observed that such fragmentation was likely to persist because the human population of the thirty-five counties within the Warbler’s breeding range was predicted to increase by 64% by 2050.⁵ *Id.* Because the Petition to Delist failed to present any information regarding the threats of habitat destruction or fragmentation, the Service concluded the Petition to Delist failed to present substantial evidence suggesting delisting the Warbler may be warranted. *Id.*

Further, the Service found the Petition to Delist’s failure to consider habitat destruction and fragmentation affected its analysis of other potential threats to the Warbler. For instance, the Service concluded urbanization and habitat fragmentation had likely contributed to increased rates in Warbler nest predation by rat snakes and had exacerbated the threat of nest parasitism. AR 000444–45. The Service countered the Petition to Delist’s claim that the Warbler was adequately protected under other state and federal regulations by noting that an estimated 29% of existing Warbler breeding habitat was lost from 2001 to 2011 despite these regulations. AR 000446. And although the Service agreed with the Petition to Delist that the magnitude of threats such as oak wilt, vegetation management, noise, and decreased patch size was uncertain, the Service also found the Petition to Delist failed to present any information on other potential threats to the Warbler’s survival, including climate change, the likelihood of more destructive wildfires, and human recreational activities. AR 000447–48.

VI. Procedural Posture

On June 5, 2017, Texas filed this suit seeking declaratory judgment and injunctive relief. Compl. [#1]. Texas asserted three claims against Defendants: (1) Defendants violated the ESA

⁵ The figures were especially bleak in Williamson and Hays Counties, where the human population was expected to increase by 179% and 135%, respectively, by 2050. AR 004102.

and its implementing regulations by listing the Warbler as an endangered species without concurrently designating its critical habitat; (2) Defendants improperly denied the Petition to Delist when they failed to consider new and substantial scientific data and refused to designate critical habitat; and (3) Defendants violated the National Environmental Policy Act, 42 U.S.C. § 4321, *et seq.*, by failing to prepare an Environmental Assessment or an Environmental Impact Statement in conjunction with the initial listing decision, as part of the subsequent five-year review, or in connection with the 90-day finding. *See* Second Am. Compl. [#40]. Defendants moved to dismiss Texas's first and third claims. Mot. Partially Dismiss [#41] at 2–3. The Court granted the motion, leaving only Texas's claim that Defendants failed to remove the Warbler from the endangered species list despite substantial evidence in the Petition to Delist and the Service's continued refusal to designate critical habitat. Order of Nov. 30, 2017 [#47] at 15.

Texas now moves for summary judgment on its remaining claim, arguing the 90-day finding was arbitrary and capricious because it improperly reviewed the information presented in the Petition to Delist and failed to articulate a rational connection between the listing decision and the continued refusal to designate critical habitat. Pl.'s Mot. Summ. J. [#64] at 25. Defendants, in a cross-motion for summary judgment, argue that the 90-day finding properly reviewed the information presented in the Petition to Delist and that designating critical habitat is irrelevant to a listing determination. Defs.' Mot. Summ. J. [#67] at 10, 14. Both motions have been thoroughly briefed and are ripe for review.

Analysis

I. Standard of Review

A district court reviews whether the Service properly administered the ESA under the Administrative Procedure Act (APA). *See Bennett v. Spear*, 520 U.S. 154, 171–74 (1997). Under

the APA, a court must “set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). Although a court must review the entire administrative record in determining whether an agency’s action was arbitrary and capricious, *id.*, “there is a presumption that the agency’s decision is valid,” and it is the plaintiff’s burden to overcome this presumption. *La. Pub. Serv. Comm’n v. Fed. Energy Regulatory Comm’n*, 761 F.3d 540, 558 (5th Cir. 2014).

When considering whether the agency’s action was arbitrary and capricious, the court’s sole task is to determine whether the agency “has considered the relevant factors and articulated a rational connection between the facts found and the choice made.” *Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 105 (1983). “This inquiry must ‘be searching and careful,’ but ‘the ultimate standard of review is a narrow one.’” *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 378 (1989) (quoting *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416 (1971), *abrogated on other grounds by Califano v. Sanders*, 430 U.S. 99 (1977)). The court may not substitute its judgment for the agency’s, *Fed. Commc’ns Comm’n v. Fox Television Stations, Inc.*, 556 U.S. 502, 513 (2009), and the agency “must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find the contrary views more persuasive.” *Marsh*, 490 U.S. at 378.

II. Procedures for Listing and Delisting Species Under the Endangered Species Act.

The ESA was intended “to halt and reverse the trend toward species extinction, whatever the cost.” *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 184 (1978). To achieve this objective, the ESA requires the Secretary of the Interior to identify and list “endangered” and “threatened” species. 16 U.S.C. § 1533(a)(1). A species is “endangered” if it is determined to be in danger of becoming extinct throughout all or a significant portion of its range because of any of the

following factors: (1) the present or threatened destruction, modification, or curtailment of its habitat or range; (2) the overutilization of the species for commercial, recreational, scientific, or educational purposes; (3) disease or predation of the species; (4) the inadequacy of existing regulatory mechanisms; and (5) other natural or manmade factors affecting the continued existence of the species. *Id.* § 1532(6) (defining endangered species); *id.* § 1533(a)(1)(A)–(E) (outlining the five factors to be considered in determining whether a species is endangered).

In determining whether a species is endangered, the Service must consider “the best scientific and commercial data available.” *Id.* § 1533(b)(1)(A). This requirement merely prohibits the Service from “disregarding available scientific evidence that is in some way better than the evidence [it] relies on.” *Sw. Ctr. for Biological Diversity v. Babbitt*, 215 F.3d 58, 60 (D.C. Cir. 2000). “The obvious purpose of the requirement that each agency ‘use the best scientific and commercial data available’ is to ensure that the ESA not be implemented haphazardly, on the basis of speculation or surmise.” *Bennett*, 520 U.S. at 176.

When a species is placed on the endangered list, the Service must concurrently designate the critical habitat of the species “to the maximum extent prudent and determinable.” *Id.* § 1533(a)(3)(A)(i). A “critical habitat” consists of specific areas within the existing habitat containing physical and biological features essential to conservation that may require special protections, as well as specific areas beyond the existing habitat determined to be essential for conservation. *Id.* § 1532(5)(A). A critical habitat designation must account for the economic impact, the impact on national security, and “any other relevant impact” the designation might have. *Id.* § 1533(b)(2).

Once a species is placed on the endangered list, its status must be reviewed every five years. 16 U.S.C. § 1533(c)(2)(A). A species may be delisted if the best available scientific and

commercial data available demonstrates the species is no longer endangered based on any of § 1533's five factors. *Id.* § 1533(c)(2)(B); 50 C.F.R. § 424.11(d). There are three reasons why the best scientific and commercial data available may no longer support listing a species: (1) the species may have become extinct; (2) the species may have recovered to such a point that "protection under the Act is no longer required"; or (3) the original listing determination may have been based on erroneous data or an erroneous interpretation of the data. 50 C.F.R. § 424.11(d)(1)–(3).

The ESA also includes a provision under which any "interested person" may petition the Secretary of the Interior to delist a species. 16 U.S.C. § 1533(b)(3)(A). The Secretary must issue a finding within ninety days of receiving such a petition stating whether the petition presents "substantial scientific or commercial information indicating [delisting] may be warranted." *Id.* "Substantial information is that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted." 50 C.F.R. § 424.14(b)(1).⁶ If the Secretary determines the petition presents substantial information that delisting may be warranted, the Secretary must then commence a twelve-month status review to determine whether the species should be delisted. 16 U.S.C. § 1533(b)(3)(A), (B). The Secretary's determination that a petition does not present substantial information is considered final agency action that may be reviewed by the district court. *Id.* § 1533(b)(3)(C)(ii).

⁶ The definition for "substantial scientific or commercial information" was changed on October 27, 2016 to mean "credible scientific or commercial information in support of the petition's claims such that a reasonable person conducting an impartial scientific review would conclude that the action proposed in the petition may be warranted." 50 C.F.R. § 424.14(h)(1)(i). Because the earlier definition of "substantial scientific or commercial information" was in place when the Service issued its 90-day finding in this case, the Court applies that definition. *See* Pl.'s Mot. Summ. J. [#64] at 7 n.1; Defs.' Mot. Summ. J. [#67] at 11 n.1.

III. Application

Texas argues the Service's refusal to commence a twelve-month status review was arbitrary and capricious for two reasons. First, Texas contends the Service improperly reviewed the Petition to Delist by requiring conclusive evidence that delisting was warranted, ignoring evidence supporting delisting, and resolving reasonable scientific disputes in favor of keeping the Warbler on the endangered list. Pl.'s Mot. Summ. J. [#64] at 22, 25. Second, Texas contends the Service has failed to articulate a rational connection between its refusal to designate critical habitat for the Warbler and its determination that the Warbler is endangered because of significant threats to its habitat. *Id.* at 25. The Court considers each of Texas's arguments in turn.

A. Review of the Petition to Delist

Texas contends the Service's review of the Petition to Delist was overly stringent. *Id.* at 22. According to Texas, even though the Service did not explicitly require the Petition to Delist to present conclusive evidence indicating delisting may be warranted, it must have implicitly done so because "the information in the Petition to Delist unquestionably would lead a reasonable person to believe that delisting *may* be warranted." *Id.* at 23 (emphasis in original). Texas further argues the 90-day finding shows the Service either "ignored" the studies presented in the Petition to Delist "or resolved any disputes among the literature against the granting of the petition." *Id.* at 26. Each of these contentions, if true, would render the Service's refusal to proceed to the twelve-month status review arbitrary and capricious. *See, e.g., Humane Soc'y of U.S. v. Pritzker*, 75 F. Supp. 3d 1, 13–15 (D.D.C. 2014).

As to Texas's first argument, the parties agree that, at the 90-day stage, the Service may not require a petition to present substantial information that delisting may be warranted. *See* Defs.' Mot. Summ. J. [#67] at 11. Rather, the proper standard of review is whether a reasonable

person could have determined that delisting may be warranted. The Court therefore applies this standard in determining whether the Service acted arbitrarily and capriciously in concluding the Petition to Delist failed to present substantial evidence.

The Court concludes the Service's review of the Petition to Delist was not arbitrary and capricious. Texas's argument to the contrary is unpersuasive for three reasons.

First, Texas overstates the significance of the evidence presented in the Petition to Delist. The Petition to Delist argued delisting was warranted based on the increased predictions of the Warbler's known range and potential population. *See* AR 000056–57. But multiple studies demonstrate the Petition to Delist may have overstated the Warbler population.⁷ And the Petition to Delist failed to include any new information on a number of threats to the Warbler's survival, which the Service is required to consider when determining whether delisting may be warranted. *See* AR 000443 (“The petition does not provide any information on [habitat fragmentation or habitat loss].”); AR 000445 (“The petition does not provide any new information indicating that predation is no longer a threat to the warbler.”); AR 000448 (“The petition did not present any information to address [threats of climate change or human recreation].”). Because the Petition to Delist failed to include any evidence on threats, and because the scientific evidence demonstrated these threats jeopardized the Warbler's continued survival, *see* AR 000449, a reasonable person could have concluded the Warbler remained endangered despite promising population predictions and a greater known potential range. Indeed, this is precisely the conclusion the Service reached in the 2014 Review after considering *the same evidence* presented in the Petition

⁷ As previously noted, a 2013 survey conducted by the City of Austin concluded the population study presented in the Petition to Delist may have overestimated the Warbler population by 1.4 to 13 times. AR 006779. And a study published in 2016 found the population study overestimated Warbler density in fourteen of the twenty plots surveyed; in some of these plots, actual Warbler density was nearly *thirty times* smaller than the population study's predictions. AR 003865. The population study was also found to have consistently overestimated Warbler population in patches with low Warbler density, which represent the vast majority of patches in which the Warbler may be found. *See* AR 000442; AR 003865; AR 001595.

to Delist. *See* AR 000442 (noting the evidence presented in the Petition to Delist “was evaluated in the 2014 5-year review where [the Service] recommended that the species remain listed as in danger of extinction throughout its range”). Even assuming a larger population and range alone demonstrates a species is no longer endangered,⁸ and even ignoring the ESA’s requirements that the listing decision be made based on evidence of threats to a species, the 2014 Review belies Texas’s determination that the evidence presented in the Petition to Delist would have “unquestionably” led a reasonable person to conclude delisting may be warranted.

Texas seeks to avoid this conclusion by claiming the 2015 Texas A&M survey constitutes new information that would unquestionably lead a reasonable person to conclude delisting may be warranted. According to Texas, because the 90-day finding conceded the 2015 Texas A&M survey represents the most recent and comprehensive research on Warbler habitat and population size and because the 2015 Texas A&M survey was issued after the 2014 Review, the Service effectively admitted the 2014 Review did not consider the best available scientific data when it determined the Warbler should remain on the endangered list. *See* Pl.’s Mot. Summ. J. [#64] at 26–27.

There are two flaws with this argument. First, it misreads the 90-day finding, which “recognize[d] that *the modeling studies described* in the 2015 Texas A&M survey” represented the most recent and comprehensive estimates of Warbler habitat and population size. AR 000442 (emphasis added). Because these studies were considered by the Service during the 2014 Review, the 2014 Review considered the best available scientific data. Second, because the 2015

⁸ As history has shown, a species may be threatened with extinction even where its population is immense and its range expansive. For instance, there were an estimated 30–60 million American bison in the mid-1800s; fifty years later, the population was 300. *See, e.g.*, Gilbert King, *Where the Buffalo No Longer Roamed*, SMITHSONIAN.COM (July 17, 2012), <https://www.smithsonianmag.com/history/where-the-buffalo-no-longer-roamed-3067904/>. And over the past thirty years, the catch of Atlantic Cod in the Gulf of Maine has dropped by nearly 94%. Alana Semuels, *Cape Cod’s namesake fish population rapidly disappearing*, L.A. TIMES (Aug. 30, 2014, 9:06 P.M.), <https://www.latimes.com/national/la-na-cod-fishing-29140831-story.html>.

Texas A&M survey merely compiled the existing scientific literature on Warbler population and habitat, it did not present any new information to the Service. At most, the 2015 Texas A&M survey merely offered a differing interpretation of the information. For these reasons, the 2015 Texas A&M survey does not show the Service required conclusive evidence demonstrating delisting may be warranted.

The Court also concludes the Service's review was not arbitrary and capricious because there is no evidence the Service required the Petition to Delist to present conclusive evidence. As an initial matter, Texas does not dispute that the 90-day finding properly described the standard of review as ““that amount of information that would lead a reasonable person to believe that [delisting] may be warranted.”” AR 000440 (quoting 50 C.F.R. § 424.14(b)). Further, the 90-day finding did not deny the Petition to Delist for failing to “conclusively demonstrate” delisting the Warbler may be warranted, and there is no evidence in the administrative record that Service scientists believed the Petition to Delist presented substantial evidence. *Cf. Ctr. for Biological Diversity v. Kempthorne*, No. CV 07-0038-PHX-MHM, 2008 WL 659822, at *10 (D. Ariz. Mar. 6, 2008) (finding the Service required conclusive evidence where the 90-day finding noted the petitioner failed to “conclusively demonstrate” the petitioned action was warranted and where Service scientists admitted the petition contained substantial evidence). The Service did not “ignore simple probability” when it determined the Petition to Delist failed to present substantial evidence, *cf. Pritzker*, 75 F. Supp. 3d at 12, nor did it “weigh the information presented in the petition against information selectively solicited from third parties.” *Cf. Colorado River Cutthroat Trout v. Kempthorne*, 448 F. Supp. 2d 170, 176 (D.D.C. 2006); *see also Ctr. for Biological Diversity v. Morgenweck*, 351 F. Supp. 2d 1137, 1143 (D. Colo. 2004). In short,

Texas has failed to offer any evidence the Service applied the incorrect standard when it considered the Petition to Delist.

Finally, the Court concludes reversing the 90-day finding in this case would disregard the deference it is required to apply when reviewing agency action. Texas effectively contends that if the Court determines the information presented in the Petition to Delist would lead a reasonable person to conclude delisting may be warranted, the Service's finding to the contrary must be arbitrary and capricious. *See* Pl.'s Mot. Summ. J. [#64] at 23–25. But this argument elides the distinction between arbitrary-and-capricious analysis and de novo review. *Cf. Moden v. U.S. Fish & Wildlife Serv.*, 281 F. Supp. 2d 1193, 1204 (D. Or. 2003) (engaging in arbitrary-and-capricious analysis after concluding that information contained in a petition to delist could have led a reasonable person to conclude delisting may be warranted). The APA permits a court to overturn an agency's decision only where the plaintiff shows the decision was invalid because the agency failed to consider relevant factors or failed to articulate a rational connection between the facts found and the decision made. *See La. Pub. Serv. Comm'n*, 761 F.3d at 558; *Balt. Gas & Elec. Co*, 462 U.S. at 105. By contrast, Texas asks this Court to overturn the 90-day finding not because the Service failed to consider the relevant factors or to provide a rational basis for its decision, but simply because the 90-day finding was wrong. But a court may not overturn an agency's decision simply because it believes it to be wrong. *See, e.g., Fox Television Studios*, 556 U.S. at 513 (“We have made clear . . . that a court is not to substitute its judgment for that of the agency”) (quotation omitted); *see also Marsh*, 490 U.S. at 378 (“When specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its experts even if, as an original matter, a court might find contrary views more persuasive.”). Because Texas has not produced evidence that the Service failed to consider relevant factors or

failed to articulate a rational connection between the facts found and the decision made, the Court is not permitted to reverse the Service's 90-day finding.

Texas further contends the Service's review of the Petition to Delist was arbitrary and capricious because the Service either "ignored" the studies presented in the Petition to Delist in favor of other studies demonstrating the Warbler remained endangered "or resolved any disputes among the literature against the granting of the petition." Pl.'s Mot. Summ. J. [#64] at 26. These contentions are unsupported by the administrative record.

The Court first notes that nearly all the studies Texas claims the 90-day finding ignored are not cited in the Petition to Delist; indeed, many do not even appear in the Petition to Delist's enclosed bibliography. *Compare* Pl.'s Mot. Summ. J. [#64] at 27–33, *with* AR 000006–000031 (Petition to Delist), *and* AR 000033–37 (enclosed bibliography). Moreover, the 90-day finding acknowledged, based on the studies presented in the Petition to Delist, that the Warbler's "known potential range is geographically more extensive than when the [Warbler] was originally listed." AR 000442. The 90-day finding further admitted that the studies described in the 2015 Texas A&M survey "represent the most recent and comprehensive efforts to estimate range-wide warbler habitat and population size to date." *Id.* The 90-day finding therefore demonstrates that, rather than ignoring the evidence presented in the Petition to Delist, the Service considered it to be the best evidence available on Warbler population and habitat. The fact the Service nonetheless determined the Warbler remained in danger throughout its range does not prove it ignored the studies presented in the Petition to Delist.

There is also no evidence that the Service "resolved any disputes among the literature" against the Petition to Delist. To begin with, Texas points to no scientific dispute the 90-day finding resolved. *Compare* Zinke, 289 F. Supp. 3d at 110 (finding the Service acted arbitrarily

and capriciously when it determined there was no need to maintain two subpopulations of bison despite conflicting scientific studies on the existence of the subpopulations). Even assuming *arguendo* the 90-day finding resolved disputes about the size of the Warbler's population or range, the Service consistently favored those studies indicating the Warbler's population and range were larger than originally supposed. In other words, to the extent the Service resolved any scientific disputes in the 90-day finding, it resolved those disputes in favor of the Petition to Delist. And if the "dispute" Texas refers to is whether the Warbler should be delisted, the Service was entitled to rely on the opinions of its own experts in reaching this decision. *See Marsh*, 490 U.S. at 378. Given the Petition to Delist's failure to include information on threats to the Warbler's continued survival, it is unsurprising the Service concluded these threats were severe enough to justify keeping the Warbler on the list.

Thus, Texas has not shown that the Service required the Petition to Delist to present conclusive evidence indicating delisting may be warranted, that the Service ignored evidence in the Petition to Delist, or that the Service resolved scientific disputes against granting the Petition to Delist. The Court therefore concludes the Service's review of the Petition to Delist was not arbitrary or capricious.

B. Failure to Designate Critical Habitat

Texas also contends the Service acted arbitrarily and capriciously when it determined the Warbler was endangered while concurrently refusing to designate critical habitat for the Warbler. Texas claims this stance is "logically and legally inconsistent" because the Service considers habitat destruction as the primary threat facing the Warbler but is unable to identify the Warbler's critical habitat. Pl.'s Mot. Summ. J. [#64] at 25, 27. Texas concludes that for the Service's determination to be reasonable, "[e]ither critical habitat must be designated or the

warbler must be delisted.” *Id.* at 25. Defendants argue in response that designating critical habitat requires the Service to consider factors that are not part of the delisting analysis, and therefore the designation of critical habitat is entirely separate from, and irrelevant to, the listing determination. Defs.’ Mot. Summ. J. [#67] at 15.

The Court concludes that, under the plain text of the ESA, the Service’s refusal to designate critical habitat at the 90-day stage was neither arbitrary nor capricious. The ESA directs the Service to consider five factors—and only five factors—in determining whether delisting a species may be warranted: (1) the present or threatened destruction, modification, or curtailment of the habitat or range of the species; (2) overutilization of the species for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) the inadequacy of existing regulatory mechanisms; and (5) other natural or manmade factors affecting the continued existence of the species. 16 U.S.C. § 1533(a)(1). The ESA therefore “makes clear that the question of whether a species is endangered or threatened is a scientific decision in which economic factors must not play a part.” M. Lynne Corn et al., Cong. Research Serv., RL 31654, *The Endangered Species Act: A Primer*, at 5 (2012); *see* H.R. Rep. No. 97-567, at 12 (1982), *reprinted in* 1982 U.S.C.C.A.N. 2807, 2812 (explaining that economic considerations were eliminated from the listing process because “[w]hether a species has declined sufficiently to justify listing is a biological, not an economic, question”). By contrast, the Service may designate a critical habitat where prudent or determinable only after considering, *inter alia*, “the economic impact” of making such a designation. 16 U.S.C. § 1533(b)(2). The ESA therefore *requires* the Service to consider different factors in a listing determination than those considered in designating critical habitat. Consequently, the claim that the Service must either designate critical habitat or delist the Warbler finds no support in the statute. *See Alabama-*

Tombigbee Rivers Coal. v. Kempthorne, 477 F.3d 1250, 1270–71 (11th Cir. 2007) (refusing to delist a species despite the Service’s failure to designate critical habitat by reasoning that “[r]emoving one protection is not a fit remedy for the lack of another”).

The legislative history further supports this distinction between the listing determination and designating critical habitat. One of the primary reasons Congress amended the ESA in 1982 was “to divorce from the listing decisions the economic analysis that comes with critical habitat designation.” *Id.* at 1266. As Judge Carnes explained in *Kempthorne*, when prior iterations of the ESA required the Service to consider the economic impact of critical habitat in its listing determinations, the pace of listing species slowed “to a crawl.” *Id.* at 1265. Concerned by the significant delay in listing species that resulted from this requirement, Congress chose to remove it. *See id.* at 1265–66. The legislative history thus makes clear Congress amended the ESA precisely to avoid forcing the Service to consider critical habitat designation as part of its listing determination. *See id.* at 1266 (“Congress wanted to *prevent* [habitat] designation from influencing the decision on the listing of a species.”) (internal quotations omitted) (emphasis added).

Although the Court, like the Eleventh Circuit, is troubled by the Service’s consistent dilatoriness in designating critical habitat, *see id.* at 1268, it nonetheless determines nothing in the ESA compelled the Service to make a critical habitat designation concurrent with its 90-day finding that the Warbler remained endangered. It thus concludes the Service’s failure to designate critical habitat did not render its 90-day finding arbitrary and capricious.⁹

Conclusion

⁹ Defendants also contend Texas is precluded from claiming the Service acted arbitrarily and capriciously by failing to designate critical habitat concurrent with the 90-day finding because this claim was not presented in the Petition to Delist. Defs.’ Mot. Summ. J. [#67] at 14. Because the Court concludes the Service’s failure to designate critical habitat did not render the 90-day finding arbitrary and capricious, it does not consider whether the failure to present this argument in the Petition to Delist precludes Texas from making it here.

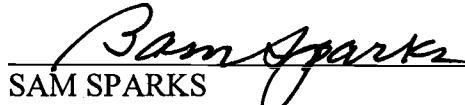
Because the Court concludes the Service's 90-day finding was not arbitrary and capricious, the Court denies Plaintiff's motion for summary judgment. Correspondingly, because the Court concludes the Service's 90-day finding accorded with the requirements of the Administrative Procedure Act, the Court grants Defendants' motion for summary judgment.

Accordingly,

IT IS ORDERED that Texas's Motion for Summary Judgment [#64] is DENIED, and

IT IS ORDERED that Defendants' Cross-Motion for Summary Judgment [#67] is GRANTED.

SIGNED this the 6th day of February 2019.



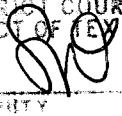
SAM SPARKS
SENIOR UNITED STATES DISTRICT JUDGE

EXHIBIT G

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION

FILED

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CLERK, U.S. DISTRICT COURT
WESTERN DISTRICT OF TEXASBY 
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GENERAL LAND OFFICE OF THE
STATE OF TEXAS,
PLAINTIFF,

V.

UNITED STATES DEPARTMENT OF
THE INTERIOR; RYAN ZINKE, IN
HIS OFFICIAL CAPACITY AS
SECRETARY FOR THE UNITED
STATES OF THE INTERIOR; UNITED
STATES FISH AND WILDLIFE
SERVICE; GREG SHEEHAN, IN HIS
OFFICIAL CAPACITY AS ACTING
DIRECTOR OF THE U.S. FISH AND
WILDLIFE SERVICE; AND AMY
LUEDERS, IN HER OFFICIAL
CAPACITY AS SOUTHWEST
REGIONAL DIRECTOR U.S. FISH
AND WILDLIFE SERVICE,
DEFENDANTS.

CAUSE NO. 1:17-CV-538-LY

FINAL JUDGMENT

Before the court is the above-styled and numbered cause. On November 30, 2017, the court dismissed two of Plaintiff General Land Office of the State of Texas's ("Texas") three claims (Doc. #47) by granting a motion to dismiss. The parties briefed summary judgment on the third claim, challenging the 90-day finding, and on February 6, 2018, the court granted summary judgment in favor of Defendants (Doc. #78). Texas appealed the court's orders on summary judgment and the motion to dismiss to the Fifth Circuit.

On January 15, 2020, the Fifth Circuit affirmed in part and reversed in part the district court's decisions. *General Land Office v. U.S. Dep't of Interior*, 947 F.3d 309 (5th Cir. 2020). The circuit affirmed the ruling on the two claims dismissed by the district court's November 30,

2017 Order but reversed as to Texas's challenge to the 90-day finding, ruling that the U.S. Fish and Wildlife Service (the "Service") had not applied the correct standard for evaluating the petition. The circuit vacated the 90-day finding and remanded to the Service for further proceedings without specifying a date certain.

On March 20, 2020, Texas filed a motion for attorneys' fees (Doc. #85). On September 18, 2020, the parties filed a Joint Stipulation and [Proposed] Order to Resolve Plaintiff's Claim for Attorney's Fees and Costs (Doc. #90) which stipulated, *inter alia*, that Texas would file a Notice of Satisfaction within 10 days of receipt of a payment of \$250,000.00 from the Service. Texas filed a Notice of Satisfaction on December 14, 2020 (Doc. #93) that affirmed that "payment in the amount of \$250,000.00 was received from the Service on December 10, 2020." All appeals have been exhausted and fees have been paid. Though Texas has not yet received results from the remand to the Service, neither the circuit nor this court ordered the Service to complete the remand by a date certain. As nothing remains to resolve, the court renders the following Final Judgment pursuant to Federal Rule of Civil Procedure 58.

IT IS ORDERED that the case is hereby **CLOSED**.

SIGNED this 26th day of January, 2021.


LEE YEAKEL
UNITED STATES DISTRICT JUDGE

EXHIBIT H

Federal Docket No. FWS-FWS-R2-ES-2016-0062

90-DAY FINDING ON A PETITION TO REMOVE THE GOLDEN-CHEEKED WARBLER FROM THE LIST OF ENDANGERED SPECIES

Background

Section 4(b)(3)(A) of the Endangered Species Act (Act) requires that we make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information indicating that the petitioned action may be warranted. At the time the petition was received, our standard for substantial scientific or commercial information with regard to a 90-day petition finding was “that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted.” 50 C.F.R. § 424.14(b) (2016).

The American Ornithologists’ Union adopted a new classification of the Parulidae based on a phylogenetic analysis that resulted in all *Dendroica* species being placed into a single clade for which the generic name *Setophaga* has taxonomic priority (Chesser et al. 2011, p. 608; Lovette et al. 2010, p. 763). Hereafter, the Service recognizes the golden-cheeked warbler as *Setophaga chrysoparia*, formerly placed in the genus *Dendroica*.

Petition History

On June 30, 2015, we received a petition dated June 29, 2015, from Nancie G. Marzulla (Marzulla Law, LLC – Washington DC) and Robert Henneke (Texas Public Policy Foundation – Austin TX) requesting that the golden-cheeked warbler be delisted under the Act due to recovery or error in information. The petition clearly identified itself as a petition and included the requisite identification information for the petitioner, as required by 50 C.F.R. § 424.14(a). This finding addresses the petition. No information is presented that would suggest that the species was originally listed due to an error in information. The golden-cheeked warbler is a taxonomically unique species and was shown to be in danger of extinction at the time of the listing. The petition does not present substantial information indicating that delisting the golden-cheeked warbler may be warranted.

On December 11, 2015, we received supplemental information from the petitioners that included additional published studies and an unpublished report. These studies, as well as readily available information in our files at the time the supplement was received, are addressed in this finding.

On June 3, 2016, we issued a 90-day finding denying the Petition to Delist. On June 5, 2017, the General Land Office of the State of Texas (GLO) filed a complaint challenging our decision in the U.S. District Court for the Western District of Texas. GLO amended its complaint twice. The District Court held in favor of the Service on all counts in the complaint and its subsequent amendments. GLO appealed the District Court’s decision to the Fifth Circuit Court of Appeals.

The Fifth Circuit held in favor of the Service on all counts, except one. The Fifth Circuit held that “the Service applied the incorrect standard when reviewing the delisting petition.” *Gen. Land Office v. U.S. Dep’t of the Interior*, No. 19-50178, 2020 WL 219012 (5th Cir. Jan. 15, 2020). The previous 90-day finding was vacated and remanded to the Service.

On remand in this case, the Service is applying the regulations that were in effect prior to October 27, 2016 because those were the applicable requirements when the original petition for the golden-cheeked warbler was received. This is consistent with the recent holding in *Am. Stewards of Liberty v. Dep’t of the Interior*, 370 F. Supp. 3d 711 (W.D. Tex. 2019).

In *Am. Stewards of Liberty v. Dep’t of the Interior*, the original petition to delist was filed in 2014. In 2015, the petitioners challenged the Service’s 90-day finding, which concluded that the delisting was not warranted. In 2016, the court remanded the 90-day finding, and the Service rendered a second 90-day finding, reaching the same conclusion that the delisting was not warranted. Again, the petitioners challenged the finding in court. Although the new regulations were already in effect at the time the Service was conducting its second 90-day finding on remand, the Service used the older version of the regulations for its evaluation because those were the requirements in effect at the time the petition was received. In *Am. Stewards of Liberty v. Dep’t of the Interior*, the court determined that the Service correctly articulated the proper standard in its finding, stating: “In considering the Stewards’ petition, the Service correctly articulates the standard required by its regulations, ‘[w]e evaluated this petition under the 50 C.F.R. 424.14 requirements that were in effect prior to October 27, 2016, as those requirements applied when the petition and supplemental information were received.’” *Am. Stewards of Liberty v. Dep’t of the Interior*, 370 F. Supp. 3d 711, 726 (W.D. Tex. 2019).

Evaluation of a Petition to Delist the Golden-cheeked Warbler Under the Act

Species and Range

Does the petition identify an entity that is eligible for removal from listing (delisting) (that is, is the entity a species, subspecies, or DPS)?

Yes
 No

If yes, list common name (scientific name); and range.

Golden-cheeked warbler (*Dendroica chrysoparia* = *Setophaga chrysoparia*, hereafter warbler), a migratory songbird breeding exclusively in Texas; wintering in the highlands of Mexico (Chiapas) and Central America (Guatemala, Honduras, Nicaragua, El Salvador).

Information in the Petition

Factor A

1. Does the petitioner claim the entity warrants delisting based on the present or threatened destruction, modification or curtailment of the species habitat or range (Factor A)?

Yes

No

a. If the answer to 1 is yes:

Do the sources cited in the petition provide substantial information to support the claim?

Yes

No

If yes, indicate for which activity(ies) present or threatened destruction, modification or curtailment of the species habitat or range (e.g., logging, agriculture, overgrazing, etc.) is a threat and list the citations with page numbers for each purpose. If no, please indicate for which activity(ies) and explain.

The range of the warbler, and the extent of its breeding habitat in central Texas and wintering habitat in Central America is discussed in the petition (Texans for Positive Economic Policy et al. 2015, pp. 14-20) and the summary that was referenced in the petition as Exhibit 1 (Texas A&M IRNR 2015, pp. 3-11).

The petition asserts that none of the statutory factors pose a significant threat to the continued existence of the warbler (Texans for Positive Economic Policy et al. 2015, p. 15). The petition also claims that listing the warbler was either originally an error or that the species has since recovered (Texans for Positive Economic Policy et al. 2015, p. 13). The petition states that because the numbers of warblers and extent of warbler habitat is far greater than the Service determined in 1990, the warbler should not have been listed as endangered, and further cites several studies (e.g. Mathewson et al. 2012; Collier et al. 2012; Duarte et al. 2013; Texas A&M IRNR 2015). The petition argues that these studies confirm that the species is not in danger of extinction throughout all or any significant portion of its range and requests that the warbler be removed from the federal endangered species list (Texans for Positive Economic Policy et al. 2015, p. 29).

The petition states that recent studies confirm there are more warblers and more warbler habitat than at the time the Service listed the warbler as endangered (Texans for Positive Economic Policy et al. 2015, p. 18). The petition cites studies that estimate the size of the warbler breeding population , including Mathewson et al. (2012, p. 1123) which employed a spatially-explicit model to estimate the range-wide population of male warblers to be 263,330 and the amount of warbler habitat to be 4,147,123 acres (1,678,281 hectares). The Mathewson et al. (2012, entire) study estimated a range-wide population number of warblers by applying warbler density estimates to the Collier et al. (2011, entire) model, which estimated the probability of warblers occupying given patches of woodland habitats throughout the breeding range of the warbler. Previous estimates of the total adult golden-cheeked warbler population range from 14,950 individuals to 26,978 pairs (Service 2014, p. 5 and references therein). Previous estimates of potential golden-cheeked warbler breeding habitat range from 326,000 to 4,378,148 acres with differences due primarily to varying

definitions of breeding habitat associated with vegetation types and habitat patch size, differing parameters included in habitat models, and remote sensing techniques and data sets (Service 2014, pp. 6-7 and references therein).

The petition asserts that the warbler is not currently, nor was it previously, endangered in Texas (Texans for Positive Economic Policy 2015, p. 14). The summary referenced in the petition as Exhibit 1 does not report any new data or study results regarding the warbler, but summarizes readily available information about the warbler and its habitat (Texas A&M IRNR 2015, entire). The modeling studies described in the summary (Texas A&M IRNR 2015, entire), including Mathewson et al. (2012), represent the most recent and comprehensive efforts to estimate range-wide warbler habitat and population size to date (Service 2014, p. 5). However, these efforts represent new estimates rather than indicators of positive trends in warbler habitat and population size, and thus do not imply recovery. Additionally, the Mathewson study indicated that a “liberal estimation of habitat” was used, which included “habitat often assumed as lower quality.” Mathewson noted that 59% of the habitat patches in its study (and Collier et al. (2012)) had less than a 10% probability of occupancy by Warblers. This indicates that the total potential habitat estimate used in these studies is not a reliable indicator of actual warbler range, and overestimated habitat area may have had some effect on the total population size estimates. Further, a recent study reported results of a similar modeling effort to infer warbler density from landscape and habitat relationships that performed well at sites with high known densities but tended to overestimate plots with lower known densities, and it is apparent that uncertainty still exists, especially for habitats occupied by warblers at lower densities (Reidy et al. 2016, p. 379). Nonetheless, the Service treats Mathewson et al. and the other studies described in the summary (Texas A&M IRNR 2015, entire) as reliable for the purposes of evaluating whether the petition (Texans for Positive Economic Policy 2015, p. 14) presents substantial information that delisting may be warranted. The Service does plan to apply these and other modeling efforts, in the context of all that is known about the warbler and warbler habitat, to help inform and guide recovery efforts for the warbler now and in the future (Service 2014, p. 16). A recent population modeling study found that movement rates were high among warbler breeding habitat patches; immigration (i.e., natal dispersal) appears to be an important driver of local warbler population dynamics, and because these complex processes occur on a landscape scale the authors recommended that future conservation efforts be implemented at a larger spatial scale (Duarte et al. 2015, pp. 70-72).

We acknowledge that the known potential range is geographically more extensive than when the golden-cheeked warbler was originally listed in 1990. Additionally, the petition cites studies showing higher warbler population numbers than estimated at the time of listing, which we consider to be accurate for purposes of evaluating the information in the petition. However, the ESA does not base listing determinations solely or predominantly on population and range size. Rather, it requires an evaluation of the five factors in 16 U.S.C. §

1533(a). The most serious threats described in the original listing rule, and which are well documented in the literature that is readily available in the Service’s files, remain, and recovery criteria have not been accomplished (Service 2014, pp. 8-15). The petition acknowledges that the golden-cheeked warbler has particular habitat needs (Texans for Positive Economic Policy 2015, p. 6). Habitat destruction, fragmentation, and degradation remain real and significant threats to the continued existence of the warbler (Service 2014, pp. 8-10). The petition does not present substantial information indicating that habitat destruction, fragmentation, and degradation may no longer threaten the species with extinction.

The petition discusses habitat fragmentation generally (Texans for Positive Economic Policy et al. 2015, pp. 27-28) but does not articulate whether or not habitat fragmentation is a significant threat to the warbler, instead stating that “studies emphasize the importance of large and small patches to sustain the warbler population on its breeding ground.” While all habitat patches are important because they provide potential habitat for the warbler, larger more connected habitat patches are especially important for supporting a viable warbler population, given that occupancy probability increases with patch size (Collier et al. 2010, Figure 4, p. 144) and reproductive success is positively associated with increased patch size (Coldren 1998, p. 28). Large patches are important for maintaining high rates of warbler occupancy, and small isolated patches have a lower probability of occupancy (McFarland et al. 2012, p. 438). Habitat connectivity is especially important in areas where habitat patches are small (McFarland et al. 2012, p. 438). Significant losses of warbler breeding habitat have occurred over the past decade, and warbler habitats are far more likely to be diminished than regenerated (Duarte et al. 2016, pp. 57-60). Duarte et al. (2016) states that habitat loss and fragmentation have continued across the warbler’s breeding range and concludes that “any change in the listing status of the species based on these projections is not warranted.” Dispersal of juvenile warblers among patches of breeding habitat is essential for maintaining local warbler populations, and the conservation of large blocks of habitat is especially important for ensuring the long-term viability of the species (Duarte et al. 2016, pp. 57-60).

The petition briefly mentions warbler habitat loss from 1992–2001 (Texans for Positive Economic Policy et al. 2015, pp. 27-28; citing Groce et al. 2010). The studies cited in the petition show that increasing urbanization, habitat loss, and habitat fragmentation within the range of the golden-cheeked warbler are adversely affecting the warbler. A 29% reduction in warbler habitat was detected from 2001 to 2011, and range-wide breeding habitat experienced large declines during that same timeframe (Duarte et al. 2013, pp. 5, 10). The petition cites documented habitat loss between 1992-2001 (Groce 2021, entire). Similarly, warbler occurrence declined as the proportion of large patches from south to north decreased (Collier et al. 2012). This decrease in patch size correlates with conditions that support fewer large patches with canopy closure (Collier et al. 2012, p. 163). Butcher et al. (2010, p. 136) report a minimum patch size

threshold for reproductive success. Warblers require a larger minimum patch-size for pairing success in an urban environment than warblers in a rural environment (Robinson 2013, p. 34). Each of these studies cited in the petition suggest that increasing habitat destruction and fragmentation negatively affect warblers and warbler populations (Duarte et al. 2013, Collier et al. 2012, Butcher et al. 2010, and Robinson 2013).

Warbler habitat loss and habitat fragmentation are primarily driven by rapid suburban development and human population growth in Travis, Williamson, Bexar and surrounding counties (Biological Advisory Team 1990, p. 19; Groce et al. 2010, 9 p. 142; Service 2014, pp. 8–9). In the warbler breeding range, the human population has increased by nearly 50 percent from 1990 to 2010 (Groce et al. 2010, p. 123). Further, human population projections from 2010 to 2050 for 35 counties within the warbler breeding range report a 64% increase in the human population from 4.7 to 7.8 million, and with the population of Williamson and Hays Counties expected to more than double (Potter and Hoque 2014, entire and data provided therein). The threat of habitat fragmentation is ongoing and is expected to threaten the continued existence of the warbler into the foreseeable future (Service 2014, p. 9). The petition does not address the threat of human population growth and increasing pressure from development.

The petition does not provide any scientific data or analysis of existing data that shows a decrease in threats to the warbler associated with present and future habitat destruction and fragmentation. Therefore, the petition does not provide substantial information that delisting the warbler may be warranted based on the present or threatened destruction, modification or curtailment of the species' habitat or range (Factor A).

- b. Provide additional comments, if any.

The Service considers habitat loss to be the primary threat to the warbler because of the ongoing declines in habitat area and continuing habitat destruction and habitat fragmentation (Service 2014, p. 10).

Factor B

2. Does the petitioner claim the entity warrants delisting based on overutilization for commercial, recreational, scientific, or educational purposes (Factor B)?

Yes

No

- a. If the answer to 2 is no:

Do sources cited in the petition provide substantial information indicating the entity may warrant delisting based on factor B, even though the petitioner does not make this claim?

Yes

No

If yes, indicate for which purpose(s) overutilization is a threat and list citations with page numbers for each purpose. If no, please explain.

Factor B (overutilization) is not specifically discussed in the petition, despite the assertion that none of the statutory factors apply and that the warbler should not be listed (Texans for Positive Economic Policy et al. 2015, p. 14). The Texas A&M summary discusses Factor B in Section VII (Texas A&M IRNR 2015, p. 12). Neither the petition nor the Texas A&M summary provide scientific data or analysis of data regarding the threat of overutilization. Therefore, the petition does not provide substantial information that delisting the warbler may be warranted based on overutilization for commercial, recreational, scientific, or educational purposes (Factor B).

c. Provide additional comments, if any.

The Service does not consider overutilization to be a significant threat to the warbler at this time (Service 2014, p. 10).

Factor C

3. Does the petitioner claim the entity warrants delisting based on disease or predation (Factor C)?

Yes

No

a. If the answer to 3 is yes:

Which does the petitioner claim is not a threat such that delisting may be warranted (check all that apply)

Disease

Predation

b. If the answer to 3 is yes:

Do the sources cited in the petition provide substantial information to support the claim?

Yes

No

If yes, indicate which (disease, predation, or both) is a threat and list the citations with page numbers for each. If no, please indicate disease and/or predation and provide an explanation.

Factor C is discussed in Section 4 of the petition (Texans for Positive Economic Policy et al. 2015, p.22), and Section VIII of the Texas A&M summary (Texas A&M IRNR 2015, pp. 12-13).

The petition states that neither disease nor predation constitutes a significant threat to the continued existence of the warbler and that the warbler should not be listed (Texans for Positive Economic Policy et al. 2015, p. 22). The petition cites several studies that document predation of nests and nestlings by predators including fire ants, snakes, mammals, and other birds (Stake et al. 2004; Reidy et al. 2008; Reidy et al. 2009a). Depredation rates above 20% have been estimated for eggs and nestlings (Stake et al., 2004). An important source of mortality may be predation of nesting females (Reidy 2009). Further, readily available information existing in the Service's files indicates that multiple factors such as urbanization and fragmentation have likely resulted in increased rates of predation of warbler nests by a wide variety of animal predators (Peak 2007, pp. 632; Arnold et al. 1996, p. 27; Fink 1996, p. 72; Coldren 1998, p. 77-79, 100, 103; Engels and Sexton 1994, p. 289; Engels 1995, p. 38-44, Service 2014, p. 11), especially rat snakes (*Elaphe* spp). This increase in nest predation by rat snakes and other predators has been proposed as a proximate explanation for the observed negative effects of forest edge on warbler nest survival and productivity (Peak and Thompson 2014, pp. 554-557).

While the threat from disease is not considered to be a significant threat to the warbler, nest parasitism and nest depredation, both of which vary across the range of the warbler, are exacerbated by habitat fragmentation and are considered a moderate threat (Service 2014, p. 11).

The petition does not reference any scientific data or analysis of existing data that calls into question threats to the warbler associated with disease and predation. Therefore, the petition does not provide substantial information that delisting the warbler may be warranted based on disease or predation (Factor C).

c. If the answer to 3 is no:

Do sources cited in the petition provide substantial information indicating the entity may warrant delisting based on factor C, even though the petitioner does not make this claim?

Yes

No

If yes, indicate which (disease, predation, both) is a threat and list citations with page numbers for each. If no, please explain.

d. Provide additional comments, if any.

No diseases in golden-cheeked warblers have been reported; therefore, we do not consider disease to be a threat to the warbler at this time (Service 2014, p.11). However, because warbler populations continue to be affected by predation and nest parasitism, and these threats are exacerbated by habitat destruction and habitat fragmentation, the Service considers the threat of predation to be significant (Service 2014, p. 11).

Factor D

4. Does the petitioner claim the entity warrants delisting based on the inadequacy of existing regulatory mechanisms (Factor D)?

Yes

No

a. If the answer to 4 is yes:

Do the sources cited in the petition provide substantial information to support the claim?

Yes

No

If yes, list the citations with page numbers. If no, please explain.

Factor D is discussed in Section 5 of the petition (Texans for Positive Economic Policy et al. 2015, pp. 22-27) and Section X of the Texas A&M summary (Texas A&M IRNR 2015, p. 15).

The petition asserts that, even with protections of the Act removed, the warbler will be protected by existing regulatory mechanisms including: the Migratory Bird Treaty Act of 1918¹, and the 1975 Texas Endangered Species law (Texans for Positive Economic Policy et al. 2015, pp. 22–25). However, while these regulations do provide some protections for individual birds, neither prohibits habitat destruction, which is an immediate threat to the warbler (Service 2014, p. 12).

The petition also claims that warbler habitat is protected by the Balcones Canyonlands National Wildlife Refuge, the Balcones Canyonlands Preserve, and approximately 160 habitat conservation plans (HCPs). While we do not consider these long-term land protections to be “existing regulatory mechanisms” under Factor D, we do consider these land protection efforts relevant to Factor A (Service 2014, p. 10). Many but not all of these protected lands are managed for the warbler, and there have been important strides in regional planning in Central Texas that include the county-wide HCPs that occur along the I-35 corridor from Williamson County to Bexar County. Despite these land protections and regional HCPs, an estimated 29 percent of existing breeding season habitat was lost between 1999-2001 and 2010–2011 (Duarte et al. 2013, p. 7) indicating that, but for protections of the Act, adequate regulatory mechanisms do not exist to prevent continued destruction of warbler breeding habitat in Texas. Given the projected human population growth in Central Texas (Potter and Hoque 2014, entire), the loss of warbler breeding habitat is expected to continue (Groce et al. 2010, p. 118, Service 2014, p. 9).

¹ Note that the most recent M-opinion (M-37050, issued December 22, 2017) on the Migratory Bird Treaty Act (MBTA) concluded that “the MBTA’s prohibition on pursuing, hunting, taking, capturing, killing or attempting to do the same applies only to the direct and affirmative purposeful actions that reduce migratory birds, their eggs, or their nests, by killing or capturing, to human control”

b. If the answer to 4 is no:

Do sources cited in the petition provide substantial information indicating the entity may warrant delisting based on Factor D, even though the petitioner does not make this claim?

Yes

No

If yes, list citations with page numbers. If no, please explain.

The petitioners did not provide any scientific data or analysis of existing data that show a decrease in threats to the warbler associated with adequate regulatory mechanisms. Therefore, the petition does not provide substantial information that delisting the warbler may be warranted based on inadequacy of existing regulatory mechanisms (Factor D).

c. Provide additional comments, if any.

The petition (Texans for Positive Economic Policy et al. 2015, p. 25) seems to confuse the Balcones Canyonlands National Wildlife Refuge, which is an approximately 24,000-acre federal land unit of which 19,079-acres are actively managed for the warbler (Service 2015, p. 40), with the Balcones Canyonlands Preserve (BCP), which is a system of preserves managed under a regional Habitat Conservation Plan (rHCP) by the City of Austin and Travis County (Texas) to benefit multiple species, including the warbler, as well as several species of karst invertebrates and the black-capped vireo. To date, the BCP has protected 30,540-acres of golden-cheeked warbler and black-capped vireo habitat (Travis County-City of Austin 2014, p. 1). Both the Balcones Canyonlands National Wildlife Refuge and the Balcones Canyonlands Preserve represent important warbler populations receiving some degree of protections, consistent with the recovery strategy for the species (Service 1992, p. 40).

Factor E

5. Does the petitioner claim the entity warrants delisting based on other natural or manmade factors affecting its continued existence (Factor E)?

Yes

No

a. If the answer to 5 is yes:

Identify the other natural or manmade factors claimed by the petitioner to not be a threat such that delisting may be warranted.

- Habitat fragmentation (Texans for Positive Economic Policy 2015, pp. 27–28)
- Habitat degradation (Texans for Positive Economic Policy 2015, pp. 28–29)

- Forest management practices (Texans for Positive Economic Policy 2015, p. 29)
- Noise (Texans for Positive Economic Policy 2015, p. 29)

b. If the answer to 5 is yes:

Do the sources cited in the petition provide substantial information to support the claim?

Yes

No

If yes, indicate for which other natural or manmade factors (e.g., climate change, road mortality, or small population dynamics) are a threat and list the citations with page numbers for each factor. If no, please indicate for which factor(s) and explain.

Factor E is discussed in Section 6 of the petition (Texans for Positive Economic Policy et al. 2015, pp. 27-29) and Section IX of the Texas A&M summary (Texas A&M IRNR 2015, pp. 13-15).

As discussed in part in our consideration of Factor A above, habitat fragmentation, habitat degradation, inappropriate habitat management practices, and excessive noise all contribute to reductions in overall warbler habitat quantity and quality and present a significant threat to the long-term viability of the species (Service 2014, p. 15). The quality of breeding habitat for warblers is reduced by small patch sizes (Brett 1989, pp. 7-8; Reville et al. 1990, p. 23; Saunders et al. 1991, p. 18, 22, 24), reduced oak recruitment (Groce et al. 2010, pp. 137-139, 141), and unsustainable forestry practices (Dinerstein et al. 1995, p. 87; Redo et al. 2009, p. 95; Groce et al. 2010, p. 131; Service 2014, p. 9). The petition discusses some of these threats by describing research (e.g. Russell and Fowler 2002, 2004; Appel and Camilli 2010; Yao et al. 2012; Murray et al. 2013; Stewart et al. 2014a,b) on warbler habitat quality that has resulted in conflicting conclusions about the effects of oak wilt, fire, vegetation management, road and construction noise, and patch size on warbler reproductive success (Texans for Positive Economic Policy et al. 2015, p. 28). However, the research cited, (Russell and Fowler 2002, 2004; Appel and Camilli 2010; Yao et al. 2012; Murray et al. 2013; Stewart et al. 2014a,b) and other readily available information in the Service's files, describes how these factors adversely affect the warbler to varying degrees (Service 2014, pp. 12-14).

Oak wilt is a fungal infection that can affect all oak species, frequently occurs in warbler habitat, and has the potential to negatively affect warblers and their habitat by reducing oak canopy cover, an important component of warbler breeding habitat (Stewart et al. 2014a, entire). The petition cites this study, which reports that “pairing success was 27% lower for males whose territories contained >10% affected forest” and that warblers “avoided establishing territories within affected forest” (Stewart et al. 2014a, pp. 1, 6).

Fire is known to be an important process for maintaining oak-dominated ecosystems throughout eastern North America (Brose et al. 2014, entire). However, catastrophic wildfires do have the potential to significantly diminish occupancy by warblers in previously occupied habitat for over a decade (Reemts and Hansen 2008, p.8). The petition discusses the role of fire in maintaining oak woodlands (Texans for Positive Economic Policy et al. 2015, p. 28). However, fire reduces mature tree density, and negatively impacts habitat suitability (Yao et al. 2012, p. 48). Further, a lack of appropriate fire management (i.e., prescribed fire) is a threat to the long-term health of mixed juniper-oak woodlands that support warbler breeding (Yao et al. 2012, p. 48).

Vegetation management designed specifically to benefit warblers and warbler habitat is encouraged by state and federal agencies (Campbell 1995, pp. 23-27). However, inappropriate conversion of potential warbler habitat to other vegetation types for agricultural and other practices remains a threat to the species. A recent study cited in the supplement to the petition found that warbler breeding habitats, once lost, were not likely to be restored (Duarte et al. 2016, p. 56.)

The petition cites two studies that failed to detect an effect of noise disturbance on golden-cheeked warbler abundance, survival, or reproduction (Lackey et al. 2012 and Lopez et al. 2012). Birds that responded to simulated road noise were located in areas that had not previously been subjected to road noise, indicating that birds in the noisiest areas habituate to construction noise, or that noise does affect warblers and warblers do avoid areas subjected to anthropogenic noise (Lackey et al. 2012, p. 98). Lopez et al. (2012, pp. 26, 31, 72) failed to detect any relationship between noise levels and warbler singing characteristics. While the literature on other songbird species has demonstrated profound behavioral responses to manmade noise pollution (Ortega 2012, entire), we currently have no evidence that noise pollution is directly affecting golden-cheeked warbler populations beyond edge effects. We do not consider noise to be a significant threat beyond the observed negative effects of edge on warbler occupancy and productivity, and other impacts to habitat quality.

Patch size is an important aspect of warbler habitat in that nest survival decreases as forest edge increases (Peak 2007, pp. 7-8). The probability of warbler occupancy declines significantly in the smaller, more fragmented patches found in northern portions of the range (Collier et al. 2011, p.7). The combined effects of reduced patch size and increased forest edge result in reduced nest survival (Peak and Thompson 2014, p. 554). Nest depredation is one causal factor that may help explain this phenomenon. Fragmentation of woodland habitats, resulting in reduced patch size and increased forest edge, continues to be a threat to the warbler.

The petition provides information and cites data indicating that the warbler faces some threats associated with other natural or manmade factors. However, the petition does not provide substantial information that delisting the warbler may be

warranted based on other natural or manmade factors affecting its continued existence (Factor E).

c. Provide additional comments, if any.

The warbler is subject to additional threats including the potential consequences of climate change (that is, increased risk of catastrophic wildfire and range shifts or restrictions; Service 2014, pp. 12–14) and recreation (Service 2014, p. 14), which were not discussed in the petition.

Cumulative Effects

6. Does the petitioner claim that the threats they have identified may have synergistic or cumulative effects such that the entity may warrant delisting?

Yes

No

a. If the answer to 6 is yes:

Do the sources cited in the petition provide substantial information to support the claim?

Yes

No

If yes, indicate which threats the petitioner claims may have synergistic or cumulative effects and list the citations with page numbers. If no, please indicate which threats and explain.

Cumulative effects are not discussed the petition.

The petitioners did not provide any scientific data or analysis of existing data indicating that the cumulative effects to the warbler from all existing threats may not place the species in danger of extinction. Therefore, the petition does not provide substantial information that delisting the warbler may be warranted based on synergistic or cumulative effects.

b. Provide additional comments, if any.

Petition Finding

The petition provided information indicating that the warbler population is larger now than it was estimated at the time of listing and argues that threats considered at the time of listing no longer threaten the species. This argument is refuted by readily available information, in the Service's files, including many studies cited in the petition itself. The petition does not provide any scientific data or analysis of existing data showing that threats to the warbler are minimal enough that the petitioned action to delist the warbler may be warranted. We acknowledge that the known potential range is more extensive than when the golden-cheeked warbler was originally listed in 1990. However, the warbler has very particular habitat needs and important threats, especially those associated with habitat destruction and habitat fragmentation, that are

See enclosed

References

U.S. Fish and Wildlife Service
Exercising the Delegated Authority of the Director
Principal Deputy Director
Martha Williams

 MARTHA WILLIAMS
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The primary authors of this notice are the staff members of the Austin Ecological
Services Field Office, U.S. Fish and Wildlife Service.

Author

Based on our review of the petition, sources cited in the petition, and other information in
our files, we find that the petition does not provide substantial scientific or commercial
information indicating that the petitioned action may be warranted.

Those threats are likely to be exacerbated by future human development and climate change
ongoing and expected to impact the continued existence of the warbler in the foreseeable future.
(Service 2014, p. 15).