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24 IN THE UNITED STATES DISTRICT COURT
25 FOR THE DISTRICT OF ARIZONA

)	
Center for Biological Diversity, <u>et al.</u> ,)	No. 4:15-cv-00019 TUC-JGZ
Plaintiffs,)	(consolidated with Nos.
v.)	4:15-cv-00179-TUC-JGZ and
Sally Jewell, Secretary of the Interior, <u>et al.</u> ,)	4:15-cv-00285-TUC-JGZ)
Defendants.)	PLAINTIFFS' MEMORANDUM IN
)	SUPPORT OF MOTION FOR
)	INTERIM INJUNCTIVE RELIEF
)	
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NOTE REGARDING ADMINISTRATIVE RECORD CITATIONS

Plaintiffs cite the administrative record by subject and Bates-stamped page number, with an explanatory parenthetical where necessary to aid the Court in identifying the document cited. “N” indicates National Environmental Policy Act documents and emails.

1 Plaintiffs in Case No. 15-cv-00019-TUC-JGZ, Center for Biological Diversity and
2 Defenders of Wildlife (collectively, “Plaintiffs”), hereby request that the Court order
3 interim injunctive measures during the U.S. Fish and Wildlife Service’s (“FWS”) remand
4 process in this case. As set forth below, Plaintiffs essentially ask the Court to require
5 FWS to achieve the agency’s own stated objectives for releasing more genetically diverse
6 wolves from the captive Mexican wolf population into the wild population during
7 remand. Although Plaintiffs do not agree that FWS’s release objectives are sufficient to
8 rehabilitate the wild Mexican wolf population’s genetic diversity, achieving them would
9 at least begin to address the Mexican wolf’s genetic imperilment during the two-plus-year
10 remand period. However, FWS’s conduct demonstrates that it will not achieve even
11 these objectives absent judicial action. Such judicial action is necessary to prevent
12 irreparable harm from FWS’s established violation of the Endangered Species Act
13 (“ESA”) in failing to lawfully address the Mexican wolf’s genetic imperilment in the
14 Revised 10(j) Rule. Plaintiffs further request that the Court issue instructions to ensure
15 that FWS’s remand process includes consideration of expert scientific guidance regarding
16 an appropriate genetic diversity objective for the wild Mexican wolf population.

17 BACKGROUND

18 I. THE WILD MEXICAN WOLF POPULATION’S SEVERE GENETIC 19 IMPERILMENT

20 As this Court is aware, “one of the chief threats” to the survival and recovery of
21 Mexican wolves “is loss of genetic diversity.” Order (ECF No. 200) at 23 (“Summary
22 Judgment Order”). All Mexican wolves alive today trace their ancestry to only seven
23 wolves placed in a captive breeding program to save the species from extinction in the
24 1980s. *Id.* at 13. As explained by Dr. Philip W. Hedrick, an expert geneticist who has
25 submitted a declaration supporting this motion, due to subsequent genetic deterioration,
26 the captive Mexican wolf population as of 2017 retained only 83% of the species’ initial
27 genetic diversity, “well below” the 90-percent retention objective that is customary when
28 a captive population is established from a wild population. Hedrick Decl. ¶ 5 (Ex. 1).

1 The reintroduced, wild Mexican wolf population in the United States¹ is in even
2 worse shape. In 2014, the wild population “had 33 percent less genetic representation
3 than the captive population,” and its members “were, on average, as related to each other
4 as full siblings.” Summary Judgment Order at 23. The genetic threats to this wild
5 Mexican wolf population “appear to be as extreme as in any reintroduced population of
6 an endangered species, and portend severe genetic problems.” Hedrick Decl. ¶ 7 (Ex. 1).
7 “Genetically depressed wolves have lower reproductive success, including smaller litter
8 sizes, low birth weights, and higher rates of pup mortality, as well as lowered disease
9 resistance and other accumulated health problems.” Summary Judgment Order at 22.
10 Indeed, a recent modeling analysis by Dr. Carlos Carroll, summarized in another
11 declaration supporting this motion, predicts that the level of inbreeding now afflicting the
12 wild population would reduce the litter size for a prime-age female Mexican wolf by 0.72
13 pups per litter. Carroll Decl. ¶ 7 (Ex. 2); see Hedrick Decl. ¶ 10 (Ex. 1).²

14 Compounding this already severe genetic threat is the fact that most individuals in
15 the reintroduced population today trace their genetic heritage to a single breeding female
16 wolf. See FWS, Mexican Wolf Experimental Population Area, Initial Release and
17 Translocation Proposal for 2018 (Nov. 21, 2017), at 1-2 & Fig. 1 (“2018 Release and
18 Translocation Proposal”) (Preso Decl. Ex. 1). “All current known wild breeding pairs are
19 producing pups related” to this female. Id. at 1. As Dr. Hedrick explains, “[t]his is
20 particularly worrisome and could result in fast genetic deterioration” because further
21 breeding among descendants of this single wolf “could result in lowered survival,
22 fecundity, etc. and a high proportion of ancestry from this female could greatly reduce
23 genetic variation in the population.” Hedrick Decl. ¶ 7 (Ex. 1). This “combination of a
24 small number of animals with low genetic variation is particularly harmful, as it can lead

25
26 ¹ All references to the wild Mexican wolf population mean wolves in the United States.

27 ² Drs. Hedrick and Carroll have substantial experience with Mexican wolf recovery and
28 FWS has extensively relied on their work in “major agency publications on Mexican wolf
recovery since 1998.” Summary Judgment Order at 20 n.8.

1 to an ‘extinction vortex,’ a self-amplifying cycle which results in decreased fitness and
2 lower survival rates.” Summary Judgment Order at 24; accord Carroll Decl. ¶ 16 (Ex. 2).

3 These dire genetic threats to the only wild Mexican wolf population in the United
4 States “highlight[] the importance of a prompt, effective response to the Mexican wolf’s
5 genetic imperilment.” Hedrick Decl. ¶ 8 (Ex. 1). In particular, “[r]eleasing more
6 genetically diverse wolves from the captive Mexican wolf population is essential to
7 positively influence the genetic diversity of the wild population.” Id. ¶ 11; see also
8 N042673-74 (FWS: “We are able to influence the maintenance or improvement of the
9 genetic variation in the experimental population by the selection for initial release of
10 genetically appropriate wolves from the captive population.”). Further, as this Court has
11 concluded, the scientific evidence establishes that “forestalling genetic degradation and
12 reducing the high relatedness of the population are actions that must be taken early on,
13 while the population is still small, ‘in order for this population to contribute to
14 recovery.’” Summary Judgment Order at 27 (quoting N057618) (emphasis omitted);
15 accord Hedrick Decl. ¶ 15 (Ex. 1); Carroll Decl. ¶ 16 (Ex. 2).

16 Despite this urgent need for action, FWS’s administration of the Mexican wolf
17 recovery program has been marked by repeated establishment of inadequate standards to
18 address the severe genetic imperilment of the wild Mexican wolf population, coupled
19 with insufficient efforts to meet even those deficient standards.

20 **II. THE REVISED 10(j) RULE**

21 The Revised 10(j) Rule that was challenged in this case constituted a critical
22 agency failure in this regard. In promulgating the Revised 10(j) Rule, FWS claimed it
23 would “substantially improve[]” the genetic diversity of the wild Mexican wolf
24 population by “integrat[ing] two effective migrants into the population each generation
25 while the population is around 100-250 animals.” N042674 (FEIS). FWS said that it
26 “would expect to achieve this target by releasing 2 packs, each with an adult pair and
27 several pups (estimated as~3 pups), during years 1-4 and 4-8, and 1 or 2 packs during the
28 next three successive generations until year 20, or for 5 generations”—i.e., releasing at

1 least seven breeding pairs with pups over 20 years. N043052 (FEIS App. D). However,
2 key scientists upon whose work FWS purported to rely in establishing this objective—
3 including Drs. Hedrick and Carroll—responded that FWS’s effective migration objective
4 was too low, “failed to prevent long-term erosion in the genetic health” of the wild
5 population, and “would therefore hinder the recovery of the species.” Summary
6 Judgment Order at 20; see also N057615-19 (scientist letter).

7 Upon reviewing this record, this Court observed that “this case is unique in that
8 the same scientists that are cited by the agency publicly communicated their concern that
9 the agency misapplied and misinterpreted findings in such a manner that the recovery of
10 the species is compromised.” Summary Judgment Order at 31 (footnote omitted). The
11 Court concluded that “[t]o ignore this dire warning was an egregious oversight by the
12 agency,” id., and ruled that, “by failing to provide for the population’s genetic health,
13 FWS has actively imperiled the long-term viability of the species in the wild,” and
14 thereby violated the ESA, id. at 26.

15 **III. FWS’S SUBSEQUENT GENETIC ANALYSES**

16 Following the Revised 10(j) Rule, FWS’s treatment of Mexican wolf genetics has
17 been characterized by a confusion of divergent statements and standards that again fail to
18 provide an adequate response to the species’ severe genetic imperilment. FWS took up
19 the issue of genetic rescue of the wild Mexican wolf population in the context of
20 developing—pursuant to this Court’s order in a separate action—its November 2017
21 Mexican Wolf Recovery Plan. See Order (ECF No. 55), Defs. of Wildlife v. Jewell, No.
22 14-cv-02472-TUC-JGZ (D. Ariz. Oct. 18, 2016). In that Recovery Plan, FWS stated an
23 objective of ensuring that the wild Mexican wolf population attains “approximately 90%
24 of the gene diversity retained by the captive population.” FWS, Mexican Wolf Recovery
25 Plan, First Revision 22-23 (Nov. 2017) (“Recovery Plan”) (Preso Decl. Ex. 2).

26 However, as the agency’s underlying analysis revealed, the devil was in the details
27 and FWS was aiming significantly lower than its stated objective would suggest. FWS
28 assessed strategies to achieve its objective through a November 2017 modeling exercise

1 entitled “Population Viability Analysis for the Mexican Wolf” prepared by Dr. Philip S.
2 Miller (“Miller (2017)”). See FWS, Biological Report for the Mexican Wolf, App. A
3 (Nov. 2017) (“Biological Report”) (Preso Decl. Ex. 3). Miller (2017) evaluated the
4 ability of various wolf release strategies to meet an objective for the wild Mexican wolf
5 population to achieve approximately 90 percent of the genetic diversity that is predicted
6 to be retained by the captive population after 100 years—i.e., after a century of further
7 erosion of the captive population’s genetic integrity. See, e.g., id. at 19 (Table 4), 25
8 (Table 7). This unusual approach significantly diminishes the ultimate genetic diversity
9 outcome for the wild population. See Carroll Decl. ¶ 15 (Ex. 2). As discussed, today the
10 captive Mexican wolf population retains approximately 83 percent of the species’ initial
11 genetic diversity. Hedrick Decl. ¶ 5 (Ex. 1). By contrast, Miller (2017) predicted that the
12 genetic diversity of the captive population would deteriorate to a level of 0.785—i.e.,
13 78.5 percent of the species’ initial diversity—in 100 years. Biological Report, App. A at
14 19 (Table 4) (Preso Decl. Ex. 3). Thus, the objective utilized in the analysis relied upon
15 by FWS was for the wild population to attain 90 percent of the captive population’s 0.785
16 genetic diversity in 100 years, amounting to 0.7065 genetic diversity, rather than 90
17 percent of its 0.83 genetic diversity today, amounting to 0.747 genetic diversity.

18 Nevertheless, Miller (2017) confirmed that the Mexican wolf release strategy
19 established by FWS with the Revised 10(j) Rule—releasing seven adult pairs of captive
20 Mexican wolves with pups over 20 years—would fail to meet even this reduced standard.
21 See id. at 37 (recognizing that releases “recommended in our 2014 EIS ... would be
22 insufficient for attaining the approximately 90% guideline we consider for recovery”);
23 id., App. A. at 23-25, 44. Miller (2017) therefore evaluated a strategy of doubling that
24 number of releases—releasing 14 adult pairs of captive Mexican wolves with pups over
25 20 years—and determined that it would almost meet the reduced standard, achieving
26 genetic diversity in the wild population equating to 89.7 percent of the deteriorated
27 diversity of the captive population after 100 years. Id., App. A at 38-39.

28

1 Reviewing these results, FWS in the November 2017 Recovery Plan did not adopt
2 the genetic goal evaluated in Miller (2017) but instead chose an entirely different
3 objective that appeared to aim even lower. Specifically, FWS ignored the Miller (2017)
4 objective to incorporate 90 percent of the captive population’s genetic diversity into the
5 wild population by year 100 and instead aimed “to achieve 90% gene diversity of the
6 captive population in the wild by model year 20 (2035).” Recovery Plan at 23 (emphasis
7 added) (Preso Decl. Ex. 2). As Dr. Carroll explains, the genetic benefit of a 20-year-long
8 Mexican wolf release strategy is near its apex at year 20, see Carroll Decl. ¶ 13 (Ex. 2),
9 so this choice allowed FWS to aim for a short-term genetic rehabilitation victory despite
10 subsequent deterioration that would leave the wild population with less than 90 percent of
11 the captive population’s reduced genetic diversity by year 100.

12 **IV. FWS’S CROSS-FOSTERING STRATEGY**

13 In an apparent effort to achieve this 20-year objective, FWS chose an
14 implementation strategy for the Recovery Plan that did not adopt any of the Mexican
15 wolf release scenarios analyzed in Miller (2017). Instead, to “[i]mprove gene diversity,”
16 the strategy called for FWS to “[c]ross-foster 12 wolf pups/year” for 16 years and to
17 “[r]elease pairs with pups” only “if cross-fostering is deemed unsuccessful.” FWS,
18 Mexican Wolf Recovery Implementation Strategy, Table 1 at 6 (Nov. 2017)
19 (“Implementation Strategy”) (Preso Decl. Ex. 4). Cross-fostering is an alternative
20 strategy to release captive Mexican wolves into the wild population that “occurs when
21 offspring are removed from their biological parents and placed with surrogate parents.”
22 N043052 (FEIS). FWS offered no analysis of this objective or its genetic impact.

23 Notwithstanding FWS’s choice to rely primarily on cross-fostering to salvage the
24 wild Mexican wolf population’s severely compromised genetic integrity, the practice
25 presents numerous challenges. As FWS admits, successful cross-fostering “depends on
26 complex coordination of logistics between captive facilities and the wild population.”
27 2018 Release and Translocation Proposal at 5 (Preso Decl. Ex. 1). Specifically,
28

1 [c]ross-fostering requires a series of specific events to occur
2 simultaneously (e.g. packs den in Zones 1 or 2 in the MWEPA, both
3 the donor and wild packs have pups within ten days of each other, the
4 cross-foster event occurs within the first 14 days of life, wild pack den
5 sites are located within 10 days of whelping, it is logistically feasible
6 to transport the donor pups to the wild den, etc.). Thus, we are limited
7 in the number of opportunities to cross-foster within a whelping
8 season, and we cannot specify individual recipient or donor packs
9 until the time that key information is available.

10 Id. at 7.

11 Not surprisingly given these challenges, FWS's cross-fostering results to date have
12 never approached the "12 wolf pups/year" objective stated in the Implementation
13 Strategy. Implementation Strategy, Table 1 at 6 (Preso Decl. Ex. 4). FWS cross-fostered
14 two Mexican wolf pups in 2014, six in 2016, and four in 2017. See 2018 Release and
15 Translocation Proposal at 4 (Preso Decl. Ex. 1). Following release of the Implementation
16 Strategy, FWS proposed to cross-foster "a maximum of 12 pups" in 2018, but achieved
17 only eight. Id. at 2; see Mexican Wolf Interagency Field Team ("IFT"), May 2018
18 Monthly Update at 4-5 (Preso Decl. Ex. 5); IFT, April 2018 Monthly Update at 3 (Preso
19 Decl. Ex. 6). Nevertheless, FWS has not conducted significant releases of adult wolves
20 from the captive population since 2006. N042666-67 (FEIS Table 1-1).

21 **ARGUMENT**

22 As the foregoing makes clear, the wild Mexican wolf population faces severe
23 genetic imperilment that threatens the survival and recovery of the species. Time is of
24 the essence to address that peril while releases of wolves from the captive population can
25 yield maximum impact, yet FWS's response has been both misdirected and inadequate to
26 achieve even the agency's own insufficient objectives. The Revised 10(j) Rule, with its
27 deficient release target, was a leading example of this agency failure.

28 Now the two-plus-year remand process in this case threatens further delay and
irretrievable loss of the dwindling opportunity to remedy this dire situation through
timely and adequate releases—and FWS's management direction raises serious doubt that
the agency will ever formulate an adequate response absent judicial action. To prevent

1 irreparable harm during the remand period, and to vindicate Congress’s direction “to halt
2 and reverse the trend toward species extinction, whatever the cost,” Tenn. Valley Auth. v.
3 Hill, 437 U.S. 153, 184 (1978), this Court should order interim injunctive relief as
4 requested in this motion.

5 I. STANDARD OF REVIEW

6 In the ordinary case, a plaintiff seeking a permanent injunction must demonstrate

7 (1) that it has suffered an irreparable injury; (2) that remedies
8 available at law, such as monetary damages, are inadequate to
9 compensate for that injury; (3) that, considering the balance of
10 hardships between the plaintiff and defendant, a remedy in equity is
warranted; and (4) that the public interest would not be disserved by a
permanent injunction.

11 Monsanto Co. v. Geertson Seed Farms, 561 U.S. 139, 157 (2010) (quotation omitted).

12 However, this test is modified where, as here, plaintiffs seek interim injunctive
13 relief for an agency’s established violation of the ESA. See Nat’l Wildlife Fed’n v. Nat’l
14 Marine Fisheries Serv., 886 F.3d 803 (9th Cir. 2018). Regarding irreparable harm,

15 because the injunction may be lifted after federal defendants issue a
16 new [decision] and comply with [the ESA,] ... the first prong of the
17 injunction test should be modified to match the analogous prong in the
18 preliminary injunction test: plaintiffs must show that they are likely to
suffer irreparable harm in the absence of preliminary relief.

19 Id. at 817 (quotation and citation omitted). Further, “[t]he ESA removes the latter three
20 factors in the four-factor injunctive relief test from [the Court’s] equitable discretion.”

21 Id. Thus, “[w]hen considering an injunction under the ESA, [the Court] presume[s] that
22 remedies at law are inadequate, that the balance of interests weighs in favor of protecting
23 endangered species, and that the public interest would not be disserved by an injunction.”

24 Id. In sum, injunctive relief should issue upon a demonstration by the plaintiff “that
25 irreparable injury is likely in the absence of an injunction.” Id. at 818 (quotation,
26 citation, and emphasis omitted). In this regard, “a threat of harm to a listed species that
27 falls below an imminent extinction threat can justify an injunction.” Id. at 819.

28

1 Also, at this remedial stage of this case, the scope of judicial review is not limited
2 to the administrative record defined by the Administrative Procedure Act, 5 U.S.C. § 706,
3 but instead may encompass competent extra-record evidence such as expert declarations.
4 See Idaho Watersheds Project v. Hahn, 307 F.3d 815, 823, 833-34 (9th Cir. 2002)
5 (affirming district court’s solicitation of and reliance on extra-record declaration in
6 adjudicating request for interim injunctive relief), abrogation on other grounds
7 recognized by Monsanto Co., 561 U.S. 139. Finally, where, as here, a remedial
8 proceeding concerns a field such as “[e]cology” that is not “within the unique expertise of
9 the federal government,” this Court need accord no deference to agency assertions
10 “concerning the equitable prerequisites for an injunction,” including irreparable harm.
11 Sierra Forest Legacy v. Sherman, 646 F.3d 1161, 1185-86 (9th Cir. 2011).

12 **II. THE COURT SHOULD ISSUE INTERIM INJUNCTIVE RELIEF** 13 **REQUIRING MEXICAN WOLF RELEASES DURING REMAND**

14 To remedy FWS’s violation of the ESA in the Revised 10(j) Rule, this Court
15 should order interim injunctive relief to require FWS to conduct at least a bare minimum
16 number of Mexican wolf releases from the captive to the wild population annually during
17 remand to begin to address the species’ severe genetic imperilment. Specifically,
18 Plaintiffs request that the Court issue an injunction requiring that:

19 1. FWS shall, to the maximum extent possible, conduct cross-fostering of 12
20 pups/year from the captive population into the wild population in the United States
during the remand process; and

21 2. To the extent FWS falls short of meeting that cross-fostering objective in
22 any year, FWS shall compensate in the following year by planning and implementing
23 releases of adult breeding pairs with pups from the captive population into the wild
24 population in the United States in an amount sufficient to at least equal the prior year’s
shortfall in meeting the 12 pups/year cross-fostering objective; and

25 3. In implementing these requirements, FWS shall consider opportunities to
26 select wolves for release that will maximize the release strategy’s impact in improving
27 the genetic diversity, founder genome equivalent, and/or mean kinship of the wild
28 population in the United States; and

1 4. FWS shall report annually to the Court and the parties regarding its
2 compliance with these requirements. Such reporting shall be due no later than January 1
3 of each year following the required cross-fostering and/or release activities.

4 As set forth below, all requirements for issuance of this injunction are satisfied.

5 **A. Irreparable Harm is Likely Absent an Injunction**

6 The requested relief is necessary to remedy irreparable harm that is “likely in the
7 absence of an injunction.” Nat’l Wildlife Fed’n, 886 F.3d at 818 (quotation, citation, and
8 emphasis omitted). Specifically, the requested injunction is essential to prevent the
9 irretrievable loss of the opportunity to conduct sufficient releases to begin to materially
10 improve the Mexican wolf’s severe genetic imperilment during the immediate timeframe
11 when such releases can have maximum beneficial impact.

12 As this Court has already determined, scientific evidence establishes that
13 “forestalling genetic degradation and reducing the high relatedness of the population are
14 actions that must be taken early on, while the population is still small.” Summary
15 Judgment Order at 27 (emphasis added). As further explained by Dr. Hedrick, “it would
16 take 20 wolves released into a population of size 200 to have the same impact as 10
17 wolves released into a population of size 100.” Hedrick Decl. ¶ 15(b) (Ex. 1); see also
18 2018 Release and Translocation Proposal at 2 (“[I]t is easier to affect the gene diversity
19 of the wild population when it is small, and it will become more difficult as the
20 population increases.”) (Preso Decl. Ex. 1). Yet FWS has allowed years to pass without
21 adequate releases; as a result, the available opportunity to address the Mexican wolf’s
22 genetic imperilment has diminished. See Hedrick Decl. ¶ 15 (Ex. 1). Nevertheless,
23 “there remains an opportunity to positively influence the Mexican wolf’s genetic
24 diversity,” but “time is of the essence to begin an adequate release program and the
25 window of opportunity to maximize the impact of any such program will be irretrievably
26 lost if not immediately pursued.” Id. ¶ 15, 15(b); see also id. ¶ 15(c) (explaining
27 consequences of delay). Dr. Carroll’s modeling results confirm the importance of such
28 releases, demonstrating that the impact of “decisions as to the rate of releases from

1 captivity ... may be difficult to discern in the first two decades of recovery in terms of
2 extinction risk[, but] this initial release rate strongly influences extinction risk several
3 decades later, as populations which received few releases show increased inbreeding
4 depression and enter an ‘extinction vortex.’” Carroll Decl. ¶ 16 (Ex. 2).

5 This evidence amply demonstrates that immediate action to address the Mexican
6 wolf’s genetic imperilment is essential to promote recovery. See Recovery Plan at 13-15;
7 Hedrick Decl. ¶ 15 (Ex. 1). In addition, failure to take such timely action threatens the
8 Mexican wolf’s very survival. Indeed, in its January 2015 decision to list the Mexican
9 wolf as endangered under the ESA, FWS itself found that the Mexican wolf “is in danger
10 of extinction throughout all of its range due to” factors including “inbreeding, loss of
11 heterozygosity, [and] loss of adaptive potential.” Final Rule, Endangered Status for the
12 Mexican Wolf, 80 Fed. Reg. 2,488, 2,510 (Jan. 16, 2015); see also Summary Judgment
13 Order at 26 (“[B]y failing to provide for the population’s genetic health, FWS has
14 actively imperiled the long-term viability of the species in the wild.”).³

15 This threat of irreparable harm to the survival and recovery of a critically
16 endangered species absent initiation of an adequate release program is more than enough
17 to justify an injunction under governing standards. In National Wildlife Federation, the
18 Ninth Circuit rejected an argument that it was improper to base an order for interim
19 injunctive relief only on “findings concern[ing] recovery of listed species.” 886 F.3d at
20 821 (emphasis in original). The Ninth Circuit reiterated that “the district court did not

21
22 ³ Subsequently, FWS asserted that “inbreeding depression is impacting the probability of
23 a breeding pair producing a litter, but not to a degree that is hindering annual population
24 growth in the United States population.” Recovery Plan at 7 (Preso Decl. Ex. 2). As
25 explained by Drs. Hedrick and Carroll, this assertion relies on modeling that overlooks
26 the impact of supplemental feeding of Mexican wolf packs in the wild population, which
27 FWS has extensively undertaken since 2009 and which significantly counteracts
28 inbreeding effects on Mexican wolf litter size. Hedrick Decl. ¶ 10 (Ex. 1); Carroll Decl.
¶¶ 5-10 (Ex. 2); see also Biological Report at 25 (Preso Decl. Ex. 3). Recent modeling by
Dr. Carroll documented statistically significant inbreeding impacts on litter size in unfed
Mexican wolf packs in the wild population. Carroll Decl. ¶¶ 6-7 (Ex. 2).

1 need to find an extinction-level threat to the listed species in the short-term” to justify an
2 injunction and held that, even if that were not so, the district court appropriately relied on
3 record documents demonstrating that “impeding a species’ progress toward recovery
4 exposes it to additional risk and so reduces its likelihood of survival.” Id. (quotations and
5 citation omitted). Here, the evidence supporting injunctive relief is even greater, as
6 failure to take timely action to remedy the Mexican wolf’s genetic imperilment would not
7 only “impede the species’ progress toward recovery” but would affirmatively worsen
8 threats that FWS itself has found to endanger the species’ survival. Id.; 80 Fed. Reg. at
9 2,510. Accordingly, “irreparable injury is likely in the absence of an injunction” and the
10 requested relief should be ordered. Nat’l Wildlife Fed’n, 886 F.3d at 818 (quotation,
11 citation, and emphasis omitted); see also S. Yuba River Citizens League v. Nat’l Marine
12 Fisheries Serv., 804 F. Supp. 2d 1045, 1064-65 (E.D. Cal. 2011) (finding interim
13 injunctive relief justified pending remand in ESA case where plaintiffs demonstrated that
14 “interbreeding poses a threat to the survival of the species” and a plan to address this
15 threat “is required in order to prevent irreparable harm”).⁴

16 **B. The Requested Injunction Appropriately Responds to FWS’s ESA**
17 **Violation**

18 In addition to being essential to prevent irreparable harm, the requested injunction
19 represents an appropriate remedial response to FWS’s ESA violation in this case. See S.
20 Yuba River Citizens League, 804 F. Supp. 2d at 1054 (holding that requested interim
21 injunctive measures “must bear some relation to the deficiencies ... for which the court
22 held that the defendants were liable for violation of the ESA”). This Court found that
23 FWS committed an “egregious oversight” in the Revised 10(j) Rule by ignoring warnings
24 of scientists upon whom FWS relied—including Drs. Hedrick and Carroll—that the
25 agency’s chosen rate of releases from the captive population was inadequate to provide

26 _____
27 ⁴ Because of their documented interests in Mexican wolf conservation, Plaintiffs face
28 “irreparable harm to their own interests stemming from the irreparable harm to the listed
species.” Nat’l Wildlife Fed’n, 886 F.3d at 822.

1 for genetic viability of the Mexican wolf in the wild. Summary Judgment Order at 26,
2 31-32. The requested interim injunctive measures provide a remedy for that violation
3 that appropriately prioritizes the urgent survival and recovery needs of the Mexican wolf
4 while according due respect to FWS's institutional experience and capabilities.

5 The requested injunction demands in the first instance only that FWS shall, to the
6 maximum extent possible, implement its own Recovery Implementation Strategy
7 objective of "[c]ross-foster[ing] 12 wolf pups/year" during the remand period.
8 Implementation Strategy, Table 1 at 6 (Preso Decl. Ex. 4). Thus, Plaintiffs do not ask the
9 Court to establish their or the Court's own objective for an annual release target, but
10 rather only to require FWS to actually implement its own chosen objective to the
11 maximum extent possible. As discussed above, FWS has never yet done so, having
12 achieved no more than eight cross-fostered Mexican wolf pups in any year to date.

13 In this regard, Plaintiffs do not concede that FWS's cross-fostering objective
14 represents an appropriate response to the wild Mexican wolf population's dire genetic
15 imperilment. By FWS's own admission, cross-fostering is a logistically challenging
16 process that requires multiple "stars to align" on a tight timeframe to produce appropriate
17 donor and recipient wolf families during the limited cross-fostering season. See 2018
18 Release and Translocation Proposal at 7 (Preso Decl. Ex. 1). For this reason, Dr. Hedrick
19 concludes that the "labor-intensive and very time-dependent" cross-fostering option
20 would appear to "have less effect than the planned, and inadequate" Mexican wolf release
21 strategies evaluated in Miller (2017). Hedrick Decl. ¶ 14 (Ex. 1). Further, releases of
22 adult wolves may have greater genetic impact than cross-fostering because cross-fostered
23 pups generally require two or more years to become breeders while released adults "may
24 make a genetic contribution as breeders right away." Id. Nevertheless, given the
25 duration of the remand period and FWS's apparent existing capacity to conduct releases,
26 and solely for purposes of this injunction request, Plaintiffs ask the Court to require
27 implementation, to the maximum extent possible, of FWS's chosen cross-fostering
28

1 objective—but only if that mandate is combined with a backstop requirement for adult
2 breeding pair releases to compensate for any failure to meet the cross-fostering target.

3 Specifically, Plaintiffs ask the Court to impose a conditional requirement for FWS
4 to release adult breeding pairs of Mexican wolves with pups as an essential fail-safe for
5 any inability by the agency to meet its own cross-fostering objective during the remand
6 period. This requirement too essentially tracks FWS’s Recovery Plan Implementation
7 Strategy, which calls for FWS to “[r]elease pairs with pups if cross-fostering is deemed
8 unsuccessful.” Implementation Strategy, Table 1 at 6 (Preso Decl. Ex. 4). Yet despite
9 this direction—and despite the admitted logistical challenges of cross-fostering and
10 FWS’s inadequate cross-fostering outcomes to date—the agency has failed to release
11 adult wolves with pups to make up for its deficient cross-fostering results.

12 Notwithstanding FWS’s apparent reticence, there does not appear to be any
13 practical impediment to releases of adult Mexican wolves with pups. FWS’s own
14 experience shows that 66 percent of “initial released breeding animals with dependent
15 pups in areas of adequate native prey have been successful.” 2018 Release and
16 Translocation Proposal at 3 (Preso Decl. Ex. 1). As recently as 2017, FWS itself mapped
17 out a strategy to release two breeding pairs of wolves with pups in New Mexico, stating
18 that “[c]urrent distribution of Mexican wolves suggest[s] that there will be adequate
19 sites” for releasing these family groups into the Gila and Aldo Leopold Wilderness Areas
20 of the Gila National Forest, and that potential conflicts with humans could be minimized
21 and/or managed. FWS, Mexican Wolf Experimental Population Area, Initial Release and
22 Translocation Proposal for 2017 (Feb. 2, 2017) at 3-4, 6-7 (“2017 Release and
23 Translocation Proposal”) (Preso Decl. Ex. 7); see also id., Figs. 2 & 3 (mapping potential
24 wolf release sites). Nevertheless, FWS failed to conduct the planned family releases.
25 Instead, FWS limited its 2017 release activities to a cross-fostering effort that fell short of
26 the agency’s target—FWS sought to cross-foster as many as 10 pups but achieved only
27 four. 2018 Release and Translocation Proposal at 4 (Preso Decl. Ex. 1); 2017 Release
28 and Translocation Proposal at 2, 4 (Preso Decl. Ex. 7).

1 FWS should not be permitted to subvert an essential element of Mexican wolf
2 conservation by a persistent refusal to pursue urgently needed releases through any means
3 other than a cross-fostering program that is logistically daunting and has consistently
4 failed to meet its objectives. The Court should break this logjam by requiring FWS to
5 compensate for any shortfall in cross-fostering during remand by releasing adults with
6 pups in an amount sufficient to at least compensate for the cross-fostering shortfall.
7 Plaintiffs specifically request that the Court order FWS to conduct such compensatory
8 family releases in the year following a cross-fostering shortfall to ensure that FWS has
9 sufficient time to adequately plan for and successfully implement such releases.

10 The Court should also impose a requirement to ensure that, in conducting cross-
11 fostering or releases, FWS shall consider opportunities to select wolves that will
12 maximize any release's impact in improving the genetic integrity of the wild population.
13 FWS selects wolves for release "based on their genetic value relative to both the captive
14 and wild Mexican wolf populations, as well as other desirable characteristics (e.g. fear of
15 humans)." 2018 Release and Translocation Proposal at 3 (Preso Decl. Ex. 1). However,
16 within this framework there are opportunities to maximize the genetic benefit of releases,
17 such as cross-fostering unrelated pups, if available, rather than pups from the same litter.
18 Hedrick Decl. ¶ 14 (Ex. 1). Given the Mexican wolf's severe genetic imperilment, it is
19 essential that such opportunities be considered, and the requirement requested by
20 Plaintiffs will ensure that FWS factors such opportunities into its decisions.

21 In sum, Plaintiffs seek an injunction that will ensure that FWS conducts sufficient
22 releases to at least begin to materially improve the genetic integrity of the wild Mexican
23 wolf population without further delay by essentially requiring FWS to adhere to its own
24 stated objectives, which the agency has to date failed to do. "Congress intended
25 endangered species to be afforded the highest of priorities." Tenn. Valley Auth., 437
26 U.S. at 174. The fate of the Mexican wolf should not be left to the vagaries of FWS's
27 inadequate release efforts. The Court should issue the requested injunction.

28

1 III. THE COURT SHOULD ISSUE INSTRUCTIONS TO FWS ON REMAND

2 Finally, in addition to remanding the Revised 10(j) Rule as specified in this
3 Court's March 31 and June 7, 2018 Orders (ECF Nos. 200 & 215), this Court should
4 issue instructions to FWS to ensure that the agency's remand includes consideration of
5 expert scientific guidance regarding an appropriate objective to remedy the Mexican
6 wolf's genetic imperilment. Upon issuance of a remand order, a court may, in
7 appropriate circumstances, "provide the agency with specific instructions to address its
8 errors." All. for the Wild Rockies v. Zinke, 265 F. Supp. 3d 1161, 1181 (D. Mont. 2017);
9 see Ctr. for Biological Diversity v. Kempthorne, No. CV 07-0038-PHX-MHM, 2008
10 WL 659822, at *13-15 (D. Ariz. Mar. 6, 2008) (remanding with instructions). Such
11 circumstances are "rare" but arise where, as here, "the continued vitality" of an
12 endangered species is at stake. Ctr. for Biological Diversity, 2008 WL 659822, at *15.

13 In this case, this Court should instruct FWS to consider Dr. Hedrick's expert
14 guidance on an objective for genetic rehabilitation of the wild Mexican wolf population,
15 which focuses on significantly closing the genetic diversity gap between the wild and
16 captive populations. See Hedrick Decl. ¶ 15(a) (Ex. 1). As Dr. Hedrick describes, the
17 Mexican wolf release strategies analyzed in Miller (2017), upon which FWS relied in
18 recovery planning, would mark "very small progress" in moving the wild population's
19 genetic diversity closer to that of the captive population. Id. ¶ 12. The Revised 10(j)
20 Rule release strategy would "move the gene diversity of the [wild] population only 15%
21 of the way to that in the captive population," and even doubling that program would close
22 the genetic diversity gap by only 29 percent. Id. ¶¶ 12-13. By contrast, based on his
23 knowledge and experience, Dr. Hedrick recommends that FWS should plan releases that
24 would increase the wild population's genetic diversity "to a level at least 50% between
25 that expected in the captive population and that expected in the wild population, given no
26 releases." Id. ¶ 15(a). Achieving this objective would yield a genetic diversity of 0.725
27 in the wild population, equating to 87 percent of the captive population's current genetic
28 diversity and 92 percent of its expected genetic diversity in 100 years. Id.

1 Although this is a “minimum” objective, and it would place the wild population’s
2 genetic diversity at less than 90 percent of the captive population’s current diversity, it is
3 still more ambitious than any objective yet considered by FWS. See id. & Ex 3; Carroll
4 Decl. Ex. 3 (Table 2, Fig. 1) (Ex. 2). As characterized by Dr. Hedrick, it offers “a
5 reasonable and achievable target” that “could relieve some of the deleterious impacts of
6 inbreeding” in the wild population. Hedrick Decl. ¶ 15(a) (Ex. 1). The Court should
7 instruct FWS to consider Dr. Hedrick’s recommended objective and means to achieve it.

8 Such an instruction is necessary because the record of this case demonstrates “an
9 egregious oversight” by FWS in ignoring the warnings of scientists upon whom FWS
10 purported to rely, including Dr. Hedrick, that the agency’s chosen objective for genetic
11 rescue of the wild Mexican wolf population was deficient. Summary Judgment Order at
12 31. Now FWS must embark on a Court-ordered remand to address, among other things,
13 that error. To ensure that this two-plus-year remand process does not mirror the Revised
14 10(j) Rule process in disregarding critical scientific advice and yielding only further
15 delay in developing an adequate release program, FWS should be required to at least
16 consider Dr. Hedrick’s expert recommendation and means to achieve it.⁵

17 To ensure that FWS legitimately considers these matters on remand, this Court
18 should instruct FWS to (1) consider Dr. Hedrick’s recommended objective; (2) consider
19 and examine available opportunities to achieve that objective through a program of
20 releasing captive Mexican wolves into the wild population; and (3), to the extent that
21 FWS declines to adopt Dr. Hedrick’s recommended objective and/or declines to adopt a
22 release program that is adequate to achieve Dr. Hedrick’s recommended objective,
23 provide a rational explanation for any such decision. See All. for the Wild Rockies, 265
24 F. Supp. 3d at 1181-82 (issuing similar instruction).

25 _____
26 ⁵ Modeling by Dr. Carroll demonstrates that Dr. Hedrick’s recommended objective could
27 be nearly achieved by combining the Recovery Plan Implementation Strategy’s objective
28 of 12 cross-fostered pups annually with releases of 14 breeding pairs with pups over 20
years. Carroll Decl. ¶¶ 13-14 & Ex. 3 (Table 2, Fig. 1) (Ex. 2).

1 Respectfully submitted this 20th day of July, 2018,

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CERTIFICATE OF SERVICE

I hereby certify that on July 20, 2018, I electronically transmitted the attached document to the Clerk’s Office using the CM/ECF System, which caused all ECF registered counsel to be served by electronic means, as more fully reflected on the Notice of Electronic Filing.

/s/ Timothy J. Preso
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