

April 12, 2023

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**RE: Notice of Violations of the Endangered Species Act in Connection with the U.S. Fish and Wildlife Service's Critical Habitat Designations for the Northern Mexican Gartersnake and the Narrow-Headed Gartersnake**

On behalf of our client, the Center for Biological Diversity ("the Center"), we are writing to give notice of violations of the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531-1544, in connection with the designation of critical habitat for the northern Mexican gartersnake and the narrow-headed gartersnake.

In designating critical habitat for these two species, the U.S. Fish and Wildlife Service ("FWS") failed to rely on the best available science. Specifically, the agency revised the list of physical and biological features essential to the conservation of the species, as well as the criteria for identifying areas of critical habitat, in a manner inconsistent with the best available scientific evidence. FWS also failed to meaningfully respond to the expert comments and scientific evidence that highlighted these defects and the ways that they would harm these species in contravention of the ESA. In addition, FWS failed to adequately address the question of genetic and population health or to provide a rational explanation as to why unoccupied habitat was not essential to species conservation, particularly in response to well-reasoned comments and studies provided by subject matter experts. Finally, FWS applied its 2019 critical habitat regulations to the unoccupied areas for these gartersnake species in a manner that runs counter to the ESA's conservation goals, violates the plain language of the ESA, and are otherwise arbitrary and capricious.

The Center hopes FWS will take this opportunity to immediately reevaluate critical habitat for both species. However, our client's first priority is the health and recovery of these imperiled gartersnakes. Therefore, this letter shall serve as formal notice, pursuant to 16 U.S.C. §

1540(g)(2), of our client's intent to compel compliance with the terms of the ESA through litigation in federal court at the conclusion of the statutory 60-day notice period.

## LEGAL BACKGROUND

### *Statutory Framework*

The ESA is the “most comprehensive legislation for the preservation of endangered species ever enacted by any nation.” *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 180 (1973). “The plain intent of Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost.” *Id.* at 184. Indeed, the ESA was enacted not merely to forestall the extinction of species, but also to allow a species to recover to the point where it may be delisted. *See* 16 U.S.C. § 1532(3) (defining “conservation” as all methods that can be employed to “bring any endangered species or threatened species to the point at which the measures provided pursuant to this [Act] are no longer necessary”).

An “endangered species” is defined by the Act as one that is presently “in danger of extinction throughout all or a significant portion of its range,” and a threatened species” means “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(6), (20). Once listed as such, both endangered and threatened species are entitled to broad legal protections under the ESA.

One of the key protections afforded to listed species is the designation of critical habitat. *See* 16 U.S.C. § 1533(a)(3). “In fashioning the ESA, it was Congress’ understanding that the preservation of species’ habitat is essential to the preservation of the species itself.” *Ctr. for Biological Diversity v. Kempthorne*, 607 F.Supp.2d 1078, 1086 (D. Ariz. 2009) (internal citations and quotations omitted). Critical habitat designations must be made “on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impact, of specifying any particular area as critical habitat.” 16 USC § 1533(b)(2). Critical habitat can include both occupied and unoccupied areas; it is defined in the statute as both “the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 1533 of this title, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection,” as well as areas that are unoccupied at the time the species is listed, “upon a determination by the Secretary that such areas are essential for the conservation of the species.” 16 U.S.C. § 1532(5)(A)(i), (ii).

### *Regulatory Framework*

FWS promulgated regulations implementing section 4 of the ESA and enumerating the criteria for designating critical habitat, which are codified at 50 C.F.R. § 424.12. These regulations have undergone substantial revision in recent years and only the relevant provisions are discussed below.

After determining that designation of critical habitat is “prudent and determinable,” *see* 50 C.F.R. § 424.12(a), the Secretary “will identify specific areas within the geographical area occupied by the species at the time of listing and any specific areas outside the geographical area occupied by the species to be considered for designation as critical habitat.” *Id.* at § 424.12(b).

In making this designation, the Secretary first “will identify the geographical area occupied by the species at the time of listing,” *id.* at § 424.12(b)(1)(i), and will also “[i]dentify physical and biological features essential to the conservation of the species at an appropriate level of specificity using the best available scientific data,” noting further that “[t]his analysis will vary between species and may include consideration of the appropriate quality, quantity, and spatial and temporal arrangements of such features in the context of the life history, status, and conservation needs of the species.” *Id.* at § 424.12(b)(1)(ii). The agency will then “[d]etermine the specific areas within the geographical area occupied by the species that contain the physical or biological features essential to the conservation of the species,” as well as “which of these features may require special management considerations or protection.” *Id.* at § 424.12(b)(1)(iii)-(iv).

In addition, section 424.12(b)(2) specifies the conditions under which the Secretary may designate “specific areas outside the geographical area occupied by the species” as critical habitat. Notably, in 2019, the Trump administration substantially revised this subsection, thereby modifying the approach to designating unoccupied areas as critical habitat. The agency previously evaluated occupied and unoccupied areas *concurrently* in developing an effective critical habitat designation. Under the 2019 revisions, however, it may not evaluate unoccupied areas unless several conditions are first satisfied:

The Secretary will designate as critical habitat, at a scale determined by the Secretary to be appropriate, specific areas outside the geographical area occupied by the species only upon a determination that such areas are essential for the conservation of the species. When designating critical habitat, the Secretary will first evaluate areas occupied by the species. The Secretary *will only consider unoccupied areas to be essential where a critical habitat designation limited to geographical areas occupied would be inadequate to ensure the conservation of the species*. In addition, for an unoccupied area to be considered essential, the Secretary *must determine that there is a reasonable certainty both that the area will contribute to the conservation of the species and that the area contains one or more of those physical or biological features essential to the conservation of the species*.

50 C.F.R. § 424.12(b)(2) (emphasis added); *see also* Final Rule, 84 Fed. Reg. 45,020 (Aug. 27, 2019) (finalizing and explaining this revision).

The 2019 revisions thus significantly curtailed FWS’s authority and discretion to designate unoccupied areas as critical habitat. The updated regulations instituted a two-step approach that prevents FWS from even considering unoccupied areas in its initial evaluation. In addition, it further narrowed FWS’s discretion by requiring both that any unoccupied areas ultimately included in the critical habitat designation contain “one or more of the physical or biological features essential to the conservation of the species” *and* that there is a “reasonable

certainty . . . that the area will contribute to the conservation of the species.” 50 C.F.R. § 424.12(b)(2). Although currently under review, these regulations remain in effect.<sup>1</sup>

## FACTUAL SUMMARY

In April 2020, FWS issued a revised proposed rule designating critical habitat for the northern Mexican gartersnake (*Thamnophis eques megalops*) and the narrow-headed gartersnake (*Thamnophis rufipunctatus*) under the critical habitat regulations as revised in 2019.<sup>2</sup> These snakes are both native to Arizona and New Mexico and were listed as threatened throughout their range in July 2014 (which for the northern Mexican gartersnake also extends into Mexico).<sup>3</sup>

The revised proposed critical habitat rule drastically reduced the amount of proposed critical habitat from what was originally proposed, but never finalized, in July 2013.<sup>4</sup> For the northern Mexican gartersnake, FWS proposed to designate only 27,784 acres—a 93% reduction from the original proposal of 421,423 acres. 85 Fed. Reg. at 23,608. For the narrow-headed gartersnake, FWS proposed to designate only 18,701 acres—a 91% reduction from the original proposal of 210,289 acres. *Id.*

These sweeping reductions resulted from a number of changes to both the list of physical and biological features (“PBFs”) developed by the agency—comprising those elements that are considered essential to the conservation of the species—as well as the criteria used by FWS to delineate specific critical habitat areas. One critical effect of these changes was that large areas were reclassified as “unoccupied,” which had previously been considered “occupied” under the original proposed rule only seven years earlier. In conjunction with the agency’s revision of the regulations governing unoccupied areas, this all but guaranteed that large, purportedly “unoccupied” areas would be excluded from the final designation.

These key changes, along with the relevant comments received and FWS’s response, are addressed briefly below. Each of the issues are also discussed in greater detail—and with supporting materials—in the attached comments submitted separately to FWS during the 2020 rulemaking by the Center and Dr. Erika Nowak, respectively. Dr. Nowak is an expert snake biologist whose own work was cited and relied upon repeatedly by FWS in this rulemaking.

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<sup>1</sup> See Office of Information and Regulatory Affairs, Regulatory Review Dashboard, <https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=202210&RIN=1018-BF95> (last visited Mar. 29, 2023).

<sup>2</sup> See Revised Proposed Rule, Designation of Critical Habitat for the Northern Mexican Gartersnake and Narrow-Headed Gartersnake, 85 Fed. Reg. 23,608 (Apr. 28, 2020).

<sup>3</sup> See Final Rule, Threatened Status for the Northern Mexican Gartersnake and Narrow-Headed Gartersnake, 79 Fed. Reg. 38,678 (July 8, 2014).

<sup>4</sup> See Proposed Rule, Designation of Critical Habitat for the Northern Mexican Gartersnake and Narrow-Headed Gartersnake, 78 Fed. Reg. 41,550 (July 10, 2013).

The agency ultimately finalized protection for only 20,326 acres as critical habitat for the northern Mexican gartersnake on April 28, 2021.<sup>5</sup> FWS separately finalized protection for only 23,785 acres as critical habitat for the narrow-headed gartersnake on October 21, 2021. For each species, FWS concluded that these critical habitat designations were sufficient to satisfy its obligations under the ESA to conserve these species.<sup>6</sup>

### Changes to Physical and Biological Features

#### *Stream Flow*

The revised proposed rule “clarif[ied] the spectrum of stream flow regimes” by defining perennial, spatially intermittent, and ephemeral reaches of streams. 85 Fed. Reg. at 23,613. For the northern Mexican gartersnake, FWS determined that only streams with perennial or spatially intermittent flow would be considered to serve as habitat. Thus, unlike the original proposed rule, ephemeral streams were excluded from being considered habitat except for those ephemeral reaches that “connect perennial or spatially intermittent perennial streams to lentic wetlands.” 86 Fed. Reg. at 22,536 (enumerating PBF #7).

Both the Center and Dr. Nowak submitted comments expressing concern over the exclusion of these biologically important stream reaches. The Center explained that even those ephemeral streams not lying between perennial stretches “are used on a seasonable basis by gartersnakes” and should be included as habitat for both snakes.<sup>7</sup> Dr. Nowak similarly expressed that removing the ephemeral stream reaches rendered the PBF incomplete; specifically, “[g]iven the findings of Cotten et al. (2013), Cotten et al. (2017), Myrand (2019), and Nowak et al. (2019) demonstrating both species’ use of ephemeral or intermittent stream reaches, it is not clear why end reaches of ephemeral or intermittent streams have been removed as critical habitat for *T. e. megalops* and *T. rufipunctatus*.”<sup>8</sup>

Ultimately, in the final critical habitat rule, FWS declined to make any change to this PBF and all ephemeral streams that did not link to perennial reaches were excluded from in the final designation. See 86 Fed. Reg. at 22,536. In doing so, the agency failed to address or discuss

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<sup>5</sup> See Final Rule, Designation of Critical Habitat for the Northern Mexican Gartersnake, 86 Fed. Reg. 22,518 (Apr. 28, 2021).

<sup>6</sup> See Final Rule, Designation of Critical Habitat for the Narrow-Headed Gartersnake, 86 Fed. Reg. 58,474 (Oct. 21, 2021).

<sup>7</sup> See Letter from Center for Biological Diversity to U.S. Fish and Wildlife Service, Comments on Revised Proposed Rule for Designation of Critical Habitat for the Northern Mexican Gartersnake and Narrow-Headed Gartersnake at 2 (June 29, 2020) (hereinafter “Center Comment Letter”).

<sup>8</sup> See Letter from Erika M. Nowak, PhD, Comments on Revised Proposed Rule for Designation of Critical Habitat for the Northern Mexican Gartersnake and Narrow-Headed Gartersnake at 6, 9 (hereinafter “Nowak Comment Letter”).

the studies provided by Dr. Nowak showing that these ephemeral stream reaches do indeed serve as habitat for both species of gartersnakes. Nor did FWS specifically respond to Dr. Nowak's comments on this issue, despite her status as a leading subject matter expert on the species.

### *Overland Areas*

While the original proposed rule recognized the importance of overland areas for both the northern Mexican and narrow-headed gartersnake for a number of essential life functions and included this additional terrestrial space, the 2020 rule specifically excluded this habitat from the list of PBFs. This change alone reduced the proposed critical habitat designation for northern Mexican gartersnake by 285,837 acres or 68 percent. 85 Fed. Reg. at 23,617.

The original proposed rule emphasized that both the northern Mexican and narrow-headed gartersnakes “rely on terrestrial habitat for thermoregulation, gestation, shelter, protection from predators, immigration, emigration, and brumation.” 78 Fed. Reg. at 41,553-41,554. As such, at the time, FWS determined that the critical habitat designation would “provide terrestrial space required by northern Mexican and narrow-headed gartersnakes to engage in normal behaviors such as foraging, basking, gestation, brumation, establishing home ranges, dispersal, and so forth.” 78 Fed. Reg. at 41,556-57. In fact, 5 of the 14 critical habitat units in the original proposal included additional terrestrial space—beyond what was already included from the incorporated 600-foot lateral extent—into critical habitat. 85 Fed. Reg. at 23,616 (discussing original proposed rule).

The 2020 revised proposed rule, however, excluded these overland areas in their entirety. Even after noting that “[d]ata are still lacking to explain how the species moves through the overland areas between perennial or intermittent aquatic features,” FWS undertook a series of attenuated steps to “deduce that it is more likely that gartersnakes are using these more densely vegetated areas that provide more cover to successfully move between aquatic sites in these grasslands. Based on this information, we are not including the overland terrestrial space between springs, seeps, streams, and stock tanks.” 85 Fed. Reg. at 23,617.

Comments from the Center and Dr. Nowak each expressed alarm that these vital habitat areas would be left unprotected. The Center discussed and submitted with their comments scientific studies showing that these overland areas are important to semi-aquatic snakes and are essential to several life-history functions, including brumation (overwintering), dispersal, and thermoregulation for gestating females.<sup>9</sup> Dr. Nowak shared these concerns and noted that the agency's analysis “appears to be predicated on the active season activity patterns” and that “specific upland habitats used during the overwinter period . . . are not included.”<sup>10</sup> Dr. Nowak provided citations to a number of telemetry studies documenting this overwintering use. She concluded by noting that, due to FWS's failure to include overland terrestrial space, “features critical to the survival of the species have been omitted” and the agency's assertion that the new

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<sup>9</sup> See Center Comment Letter at 5-8.

<sup>10</sup> See Nowak Comment Letter at 3.

designation “better represents our current understanding of the life history of the northern Mexican gartersnake” was “factually incorrect.”<sup>11</sup>

In the end, FWS left this portion of the rule unchanged, failed to address the studies raised in comments by the Center and Dr. Nowak showing the important life-history function of these overland areas, and simply referred back to its original, cursory justification in the revised proposed rule. *See* 86 Fed. Reg. at 22,529.

#### *Absence of Nonnative Species*

The revised proposed rule set forth PBF 4 for each species, describing the absence or low level of nonnative species as essential for the conservation of both the northern Mexican and narrow-headed gartersnakes. For both gartersnake species, PBF 4 required “[a]n absence of nonnative fish species of the families . . . , bullfrogs, and/or crayfish, or occurrence of these nonnative species at low enough levels such that recruitment of northern Mexican gartersnakes is not inhibited and maintenance of viable prey populations is still occurring.” 85 Fed. Reg. 23,624.

During the rulemaking, both the Center and Dr. Nowak submitted comments that PBF 4 was not based on the best available science. As the Center explained, FWS itself has observed that while predation by and competition with nonnative species has impacted these gartersnakes, in some instances they have survived despite these threats and the impact is not uniform across all populations.<sup>12</sup> Dr. Nowak pointed out that there is documentation of both species “in stream reaches with aquatic communities dominated by non-native vertebrates and crayfish,” cited to multiple studies supporting this observation, and concluded that therefore “the ‘best available science’ does not support excluding potential or occupied habitat based on the habitat containing ‘an abundance of non-native predators.’”<sup>13</sup>

Despite these concerns, the agency failed to meaningfully address the studies raised by Dr. Nowak and failed to coherently respond to the legal and biological criticisms directed at this PBF. Instead, FWS left this PBF unchanged in the final designation for each species. *See* 86 Fed. Reg. at 22,536; 86 Fed. Reg. at 58,490.

#### Changes to Criteria to Identify Critical Habitat

##### *Occupancy*

The revised proposed rule made two significant changes to how the agency determined whether a particular area was occupied. Together, these changes substantially reduced the size of the proposed designation.

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<sup>11</sup> *Id.*

<sup>12</sup> *See* Center Comment Letter at 9-10.

<sup>13</sup> *See* Nowak Comment Letter at 5-6.

First, FWS replaced the chronological basis for determining occupancy at the time of listing from 1980 or later to 1998 or later. 85 Fed. Reg. at 23,619. FWS justified changing the chronological cut-off primarily by emphasizing the lifespan of individual gartersnakes: “[b]ased on this information, we estimate maximum longevity for each gartersnake species is 15 years, so that it is reasonable to conclude that a gartersnake detected in 1998 or later represents a population that could still be present at the time of proposed listing in 2013, depending on the extent of threats in the area. Although it is possible that gartersnakes are still extant in areas where they were detected only during the 1980s, we have determined that the best available information reflecting occupancy at the time of listing supports a more recent date of records since 1998.” 85 Fed. Reg. at 23,618. In addition, FWS observed that there had been a “significant decline in both species over the past 50 years” and that therefore, “we conclude that many areas that were occupied by the species in surveys during the 1980s are likely no longer occupied because those populations have disappeared.” *Id.*

Second, the agency adopted stricter guidelines for *how many* PBFs would be required in any given stream in order for it to be deemed “occupied” at the time of listing—which, in turn, serves as a basis for it to be included in the ultimate critical habitat designation. In the 2013 original proposed rule, FWS stated that it would “consider[] a stream or geographic area as occupied if it is within the historical range of the species, contains suitable habitat, and meets both of the following: (1) [h]as a last known record for either species dated 1980 or later, and (2) has at least one native prey species also present.” 78 Fed. Reg. at 41,556. However, in the 2020 revised proposed rule, the agency stated that “we determined that a stream, stream reach, or lentic water body was occupied at the time of listing for each gartersnake species if it is within the historical range of the species, *contains all PBFs for the species*, (although the PBFs concerning prey availability and presence of nonnative predators are often in degraded condition), and a last known record of occupancy in 1998 or later.” 85 Fed. Reg. at 23,619 (emphasis added). This rigidity effectively magnified the flaws in PBF 4, discussed above, regarding the presence of nonnative species: in addition to PBF 4 not being based on the best available science, it also served to single-handedly exclude a number streams, stream reaches, and lentic water bodies with nonnative species that would have been considered occupied absent this new requirement that *all* PBFs must be present to be deemed “occupied” habitat.

During the rulemaking, both the Center and Dr. Nowak submitted comments explaining that each of these changes ignored the best available science. First, the Center explained that the cut-off year should not be pushed forward to 1998 and that frequent discoveries of “new” gartersnake populations and the FWS’s own cautionary words from the original proposed rule acknowledged that these gartersnakes are “cryptic, secretive, difficult to detect, quick to escape underwater, and capable of persisting in low or very low population densities,” thus supporting maintaining the earlier 1980 cut-off year.<sup>14</sup> Dr. Nowak shared these concerns and explained, with supporting studies, that “in fact, it does not seem reasonable to conclude that streams that were not documented as occupied at the time of listing are truly not occupied. Instead, given the

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<sup>14</sup> See Center Comment Letter at 8-9.



cryptic nature of both species . . . , a current lack of documented occupancy may be more of a reflection of incomplete survey effort than of true non-occupancy.”<sup>15</sup>

In addition, the Center noted that by rigidly excluding critical habitat solely on the basis of the proliferation of nonnative species (by finding these areas of habitat unoccupied on the basis of flimsy science that failed to support that conclusion), the 2020 proposed rule arbitrarily—and in a manner inconsistent with the agency’s own findings about the variability of this threat—eliminated areas from consideration that should be included as critical habitat.<sup>16</sup> Dr. Nowak, as already noted above, also explained that “the best available science’ does not support excluding potential or occupied habitat based on the habitat containing ‘an abundance of non-native predators.’”<sup>17</sup>

FWS dismissed these concerns, failed to respond directly to these well-reasoned comments by subject matter experts, and maintained the 1998 cutoff in the final designations. *See* 86 Fed. Reg. 22,529; 86 Fed. Reg. 58,485.

### *Stream Length*

The revised proposed rule also instituted new criteria for how much of the *length* of an occupied stream would be included in critical habitat. Under the 2013 proposed rule, if a stream had at least one known record for the gartersnake and at least one record of a native prey species currently present, the entire stream length would be included in the critical habitat designation. *See* 85 Fed. Reg. at 23,619 (discussing original proposed rule). However, the 2020 revised proposed rule imposed a number of additional criteria to exclude portions of streams. First, the agency determined that it would only include the length of stream 2.2 miles upstream and downstream “from a known gartersnake observation record.” 85 Fed. Reg. at 23,619. In addition, the new rule eliminated stream reaches that had previously been included for, among other reasons, having a prey base where “nonnative aquatic predators outnumbered native prey species.” *Id.* Only stream reaches that “have positive observation records of the species dated 1998 or later both upstream and downstream of the stream reach and have all of the PBFs” were considered occupied. *Id.*

The Center expressed concern that the stream length criteria were arbitrarily based on “a rigid interpretation of individual snake movements, rather than the population at large.”<sup>18</sup> Specifically, the Center pointed out that, as applied, this criteria would effectively sever large river stretches, including on the Gila River with some of the highest-quality remaining riparian habitat, simply because an individual snake had not been observed in particular stretch since

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<sup>15</sup> *See* Nowak Comment Letter at 3-4.

<sup>16</sup> *Id.* at 8-10.

<sup>17</sup> *See* Nowak Comment Letter at 5-6.

<sup>18</sup> *See* Center Comment Letter at 10-11.

1998—even if the river was otherwise qualifying habitat. *Id.* Dr. Nowak agreed that “the idea of dividing a short (e.g. < 6km) perennial headwater stream . . . into occupied and ‘unoccupied’ reaches based on limited survey data seems odd” and “it is entirely conceivable that the species would use an [sic] stream’s entire wetted length, rather than sticking to certain reaches.”<sup>19</sup> Indeed, for this purpose “it is more robust to consider the distance that all individuals in a local population *could* move.”<sup>20</sup>

Notwithstanding these serious scientific and legal concerns, and without meaningfully responding them, FWS maintained the stream length criteria in the final designations, allowing it to effectively sever otherwise intact streams based solely on limited observational data. *See* 86 Fed. Reg. at 22,529; 86 Fed. Reg. at 58,485.

### Unoccupied Areas

Having arbitrarily reduced the amount of habitat deemed occupied, the revised proposed rule also opted not to include *any* unoccupied areas in its critical habitat proposal for either species. In doing so, the Service offered the same convoluted explanation:

We are not currently proposing to designate any areas outside the geographical area occupied by the species because we have not identified any unoccupied areas that meet the definition of critical habitat. We are not aware of any other areas within the historical range of the species that maintain perennial water, have suitable prey, and support an aquatic community that is not dominated by nonnative predators. Therefore, although there may be a future need to expand the area occupied by one or both gartersnake species to reach recovery, there are no unoccupied areas that are currently essential to the species conservation and that should be designated as critical habitat.

85 Fed. Reg. 23,608 at 23,624 (discussing determination to exclude unoccupied areas for both species).

Both the Center and Dr. Nowak explained that, even assuming the validity of the FWS’s rationale for deeming so much of the species’ habitat as presently unoccupied, the failure to designate these areas as critical undermines the survival and recovery of the species, contrary to the fundamental purpose of critical habitat designation. . For example, the Center cited and added to the administrative record a 2018 genomic study of both gartersnakes (Wood, et al. 2018) providing compelling evidence of a lack of genetic diversity and connectivity, as well as low effective population sizes at almost all sites, indicating a risk of inbreeding depression.<sup>21</sup> The

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<sup>19</sup> *See* Nowak Comment Letter at 4.

<sup>20</sup> *Id.* (emphasis added).

<sup>21</sup> *See* Center Comment Letter at 11-13 (June 29, 2020) (citing Wood, D.A., Emmons, I.D., Nowak, E.M., Christman, B.L., Holycross, A.T., Jennings, R.D., and Vandergast, A.G., 2018,

Center explained that “without designating [the purportedly] unoccupied habitat, the northern Mexican gartersnake and narrow-headed gartersnake will each remain in highly fragmented and isolated population segments that will diminish and wink out through low genetic diversity, high inbreeding and/or stochastic misfortunes that befall very small populations.” *Id.* at 14.

Dr. Nowak echoed these concerns. She also cited the Wood et al. 2018 study as the best available scientific evidence on this point, and explained that “[r]estricting designation of critical habitat to that which is currently occupied may contribute to the extinction of both species, due to currently highly fragmented populations,” particularly in light of other changes to the protected critical habitat in the revised proposed rule.<sup>22</sup>

Ultimately, FWS declined to include *any* unoccupied habitat in its designations. Notably, FWS’s final designations did not cite or discuss the 2018 Wood et al. study raised by both Dr. Nowak and the Center. The agency’s only response on the issue of unoccupied habitat was cursory, superficial, and contrary to the best available science. Despite recognizing the threat presented by such small populations, the agency stated only that:

While we know the conservation of the species will depend on increasing the number and distribution of populations of the northern Mexican gartersnake, not all of its historical range will be essential to the conservation of the species, and we are *unable to delineate any specific unoccupied areas that are essential at this time*. . . . Any specific areas essential to the species’ conservation within these watersheds *are not currently identifiable due to our limited understanding regarding the ideal configuration for the development of future habitat to support the northern Mexican gartersnake’s persistence, the ideal size, number, and configuration of these habitats*.

86 FR 22,518 at 22,530 (emphases added); *see also* 86 FR 22,518 at 22,537 (repeating the same justification in presenting the agency’s final critical habitat designation).

FWS provided the identical response in the Final Rule for the narrow-headed gartersnake. *See* 86 Fed. Reg. 58,474 at 58,486; *see also* 86 Fed. Reg. 58,474 at 58,491 (repeating the same justification in presenting FWS’s final critical habitat designation).

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Conservation genomics of the Mogollon narrow-headed gartersnake (*Thamnophis rufipunctatus*) and northern Mexican gartersnake (*Thamnophis eques megalops*)).

<sup>22</sup> Nowak Comment Letter at 1 (citing Wood, et al. 2018) (emphasis added).

## LEGAL VIOLATIONS

### **A. FWS Failed to Consider the Best Available Science in Designating Critical Habitat, Including by Declaring Areas With Recent Documented Species Presence to be “Unoccupied.”**

In violation of 16 U.S.C. § 1533(b)(2), FWS failed to rely on the best available science in revising the list of PBFs and in designing the criteria to identify occupied critical habitat. *See, e.g. Bennett v. Spear*, 520 U.S. 154, 176 (1997) (“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.”); *Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv.*, No. 5:09-CV-90, 2011 WL 73494, at \*6 (C.D. Cal. Jan. 8, 2011) (“While this Court owes substantial deference to the Service’s use of technical analysis in its decisionmaking, the Service must be able to demonstrate that such analysis actually took place and that the decisionmaking process may be fairly described as rational.”).

Specifically, and as described above, FWS failed to rely on the best available science by excluding ephemeral reaches of streams that do not connect to perennial streams despite evidence that both species using these reaches on a seasonable basis; by excluding the overland terrestrial habitat vital to several of the gartersnakes’ life history functions including brumation, foraging, gestation, and dispersal based merely on a series of attenuated and unsupported deductions; by including as a PBF the absence or low-level of nonnative predators despite studies showing that these gartersnakes currently occupy areas that are dominated by such species; by rigidly requiring the presence of all PBFs, including the PBF requiring few or no nonnative predators, for a stream to be deemed occupied at the time of listing, without coherently explaining this requirement or the agency’s change in practice applying this criterion; by arbitrarily shifting the cut-off year for observational records from 1980 to 1998 despite it being widely acknowledged that these gartersnakes are difficult to detect; by excluding stream lengths in otherwise healthy, intact streams simply because an individual snake had not been observed there in the limited surveys conducted to date; and by failing even to respond meaningfully to well-reasoned criticisms calling into question FWS’s assertions, analyses, and conclusions.<sup>23</sup>

Each of these changes, actions, or omissions runs counter to the best available science, which was provided in comments by the Center and Dr. Nowak, but never meaningfully addressed by FWS. Accordingly, the final critical habitat designations for the northern Mexican gartersnake and the narrow-headed gartersnake violate the ESA and are arbitrary and capricious.

### **B. FWS Failed to Consider the Best Available Science in Excluding Purportedly Unoccupied Areas from Designation**

As above, FWS must rely on the best available science in designating critical habitat and is not entitled to deference where it ignores relevant scientific information. Here, the agency failed to undertake a scientifically or legally defensible evaluation of the genetic health of these gartersnake populations and the necessity of including purportedly unoccupied areas in its

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<sup>23</sup> *See supra* pp. 5-10.

critical habitat designations and its determinations are therefore arbitrary and capricious. *See, e.g., Defs. of Wildlife v. U.S. Fish & Wildlife Serv.*, 584 F. Supp. 3d 812, 825-26 (N.D. Cal. 2022), judgment entered, No. 21-CV-00344-JSW, 2022 WL 503662 (N.D. Cal. Feb. 10, 2022) (finding FWS’s decision to combine two wolf populations to be arbitrary and capricious because “the record does not reflect that the Service’s conclusion about the genetic distinctiveness of West Coast wolves was the result of a thoughtful and comprehensive evaluation of the best available science about the genetic relationships between the wolf populations analysis of a genetically distinct population”); *Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv.*, No. 5:09-CV-90, 2011 WL 73494, at \*9 (C.D. Cal. Jan. 8, 2011) (finding the Service failed to demonstrate a “rational connection between the facts found and the choice made” in its decision not to include any unoccupied areas because “[t]he final rule does not give any account of how the Service decided that conservation could be achieved by focusing purely on areas occupied by the [species]. The final rule is silent as to what facts or analysis forms the basis of this belief, and as was explained above, a court reviewing an agency action ‘may not infer an agency’s reasoning from mere silence.’”).

Here, expert comments from Dr. Nowak, as well as the scientific study discussed and provided by the Center (Wood, et al. 2018), put FWS on notice that the agency’s failure to include purportedly unoccupied habitat in its designation for the northern Mexican gartersnake and the narrow-headed gartersnake would likely increase the risk of jeopardizing the survival and recovery prospects of these species. The agency effectively ignored this scientific information. It did not respond to any of the specific genetic concerns raised, and it failed to cite, let alone discuss, the Wood et al. 2018 study. The agency also failed to provide any reasoned explanation for how these gartersnake species could not only survive, but recover, without unoccupied habitat serving as part of the critical habitat designation, in light of the troubling (and well-established) evidence of habitat fragmentation and poor genetic health. Instead, FWS offered only a superficial statement that it was simply “unable to delineate any specific unoccupied areas that are essential at this time,” 86 FR 22,518 at 22,530, without explaining which purportedly unoccupied habitat areas it evaluated and the rationale(s) FWS applied to ascertain whether those areas are essential to the species’ survival or recovery.

Because FWS failed to adequately analyze and respond to the relevant genetic studies and expert comments, the agency’s cursory evaluation and ultimate determination to exclude unoccupied areas in both the northern Mexican gartersnake critical habitat designation and the narrow-headed gartersnake critical habitat designations violates the ESA and is arbitrary and capricious.

### **C. FWS’s Interpretation of Critical Habitat Contravenes the Purposes of the ESA**

Even assuming all of the areas identified as unoccupied are properly considered unoccupied—something the Center vigorously disputes—FWS’s decision to exclude all unoccupied areas from its designation is nevertheless based on a flawed and arbitrary interpretation of the ESA.

FWS’s rigid definition of critical habitat in the 2019 implementing regulations—as applied to these two critical habitat designations—contravenes the Act’s conservation purposes and runs roughshod over the plain terms of the ESA and the policies its implements. In fact,

when FWS first moved away from this rigid step-wise approach to critical habitat designations in 2016 (before the approach was revived at the end of the Trump administration), the agency itself recognized that the requirement that occupied habitat must first be deemed inadequate runs counter to and frustrates the Act's conservation goals. *See* 81 Fed. Reg. at 7,426-27.

The guiding purpose of the ESA is to “provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species.” 16 U.S.C. § 1531(b). The protection of critical habitat is central to this purpose: “In fashioning the ESA, it was Congress’ understanding that the preservation of species’ habitat is essential to the preservation of the species itself.” *Ctr. for Biological Diversity v. Kempthorne*, 607 F.Supp.2d 1078, 1086 (D. Ariz. 2009) (internal citations and quotations omitted).

Accordingly, the goal in designating critical habitat is not just species’ survival, but recovery: “the whole point behind designating critical habitat is to identify those physical and biological features of the occupied area and/or those unoccupied areas that are essential to the conservation of a species with the aim of arriving at the point where the species is recovered, i.e., no longer in need of the measures provided for in the ESA.” *Ctr. for Biological Diversity v. Kelly*, 93 F. Supp. 3d 1193, 1201 (D. Idaho 2015) (rejecting FWS’s interpretation that its critical habitat designation must “prove” that it will “ensure” the recovery of the species and finding it to be contrary to the plain language and purpose of the ESA). Indeed, this emphasis on recovery “requires FWS to be *more* generous in defining area[s] as part of the critical habitat designation.” *Home Builders Ass’n of N. Cal. v. FWS*, 616 F.3d 983, 989 (9th Cir. 2010) (emphasis in original); *see also id.* (finding that not every essential element must be contained in every area designated critical habitat); *Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv.*, 441 F. Supp. 3d 843, 873 (D. Ariz. 2020) (same).

FWS may not implement and apply regulations that frustrate the ESA’s clear conservation purpose. *Cf. Ctr. for Biological Diversity v. Jewell*, 248 F. Supp. 3d 946, 958 (D. Ariz. 2017) (rejecting FWS regulation interpreting a different provision of section 4 because the rule “give[s] as little substantive effect as possible to the [statutory provision] in order to avoid providing range-wide protection to a species . . . [which] is arguably at odds with the conservation purposes of the ESA”); *see also Kelly*, 93 F. Supp. 3d at 1201 (holding that failing to make critical habitat designations with species recovery in mind is arbitrary and capricious and, further, where FWS’s “interpretation of the ESA’s critical habitat designation is contrary to both the plain language and a permissible construction of the statute,” it is entitled to no deference).

By artificially constraining the consideration and analysis of unoccupied habitat as critical habitat—through the application of the 2019 regulations to these two critical habitat designations—in a manner that unduly limits FWS’s discretion, the agency has in effect undercut the statute’s authority for FWS to “specify[] *any* particular area as critical habitat,” 16 U.S.C. § 1533(b)(2), and in the process subverted the explicit conservation purposes of the Act. This is fundamentally inconsistent with the purposes of the ESA, inhibits FWS from fulfilling its conservation mandate, and therefore violates the ESA and is arbitrary and capricious.

## CONCLUSION

FWS's drastic, unsupported reduction in the amount of habitat the agency itself previously recognized as critical is a patently result-oriented undertaking designed to afford the species as little protection as possible. The Service accomplished this objective in two steps: first by declaring thousands of acres with recent evidence of species presence to be "unoccupied," and then by declaring, with no rational explanation, all purportedly unoccupied habitat off the table for purposes of designation. Neither step is consistent with the law or the science.

Rather, the highly flawed critical habitat designations for the northern Mexican and narrow-headed gartersnakes violate the ESA in numerous ways, and place the survival and recovery of these species in jeopardy. FWS failed to rely on the best available science both in revising the list of PBFs and in designing the criteria for identifying specific areas of critical habitat; the agency also failed to meaningfully respond to expert comments and scientific evidence set forth by the Center and Dr. Nowak on these myriad issues. In addition, the 2019 critical habitat regulations as applied are counter to the ESA's conservation mandate and FWS failed to adequately address the question of genetic and population health or provide a rational explanation as to why unoccupied habitat was not essential to species conservation, particularly in response to well-reasoned comments and studies provided by subject matter experts. In light of the serious legal defects detailed above, FWS must immediately reevaluate its critical habitat designations for the northern Mexican and narrow-headed gartersnakes to ensure that the designations are based on the best available science and actually provide for—rather than undercut—the species' survival *and* recovery.

The recovery of these two gartersnakes is of the utmost importance to the Center. Therefore, please do not hesitate to contact me if I can provide additional information or otherwise assist in this matter. We look forward to your prompt response.

Sincerely,

/s/ Jessica F. Townsend

Jessica F. Townsend  
Associate Attorney

/s/ William S. Eubanks II

William S. Eubanks II  
Owner & Managing Attorney

EUBANKS & ASSOCIATES, PLLC

**Enclosures (2):**

Attachment 1: Letter from Center for Biological Diversity to U.S. Fish and Wildlife Service,  
Comments on Revised Proposed Rule for Designation of Critical Habitat for the  
Northern Mexican Gartersnake and Narrow-Headed Gartersnake (June 29, 2020)

Attachment 2: Letter from Erika M. Nowak, PhD, Comments on Revised Proposed Rule for  
Designation of Critical Habitat for the Northern Mexican Gartersnake and  
Narrow-Headed Gartersnake

**CC (via E-mail):**

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