



1 the Court may repeat some of the facts here to prevent unnecessary cross-referencing.

2 The United States Fish and Wildlife Service (“FWS”) and the United States Forest  
3 Service (“Forest Service”) consulted on Rosemont’s proposal for a large-scale  
4 open-pit-mining operation within the boundaries of the Coronado National Forest on the  
5 east side of the Santa Rita Mountains (“Rosemont Mine”). The Santa Rita Mountains lie to  
6 the south of Tucson, Arizona and are within the Coronado National Forest, which is  
7 managed by the Forest Service. The Rosemont Mine is projected to impact thousands of  
8 acres of the Santa Rita Mountains and many species in the surrounding area. The FWS and  
9 the Forest Service completed consultation when the FWS issued the 2016 Biological  
10 Opinion (“BiOp”).<sup>4</sup> In consultation with the FWS, the Forest Service issued a Final  
11 Environmental Impact Statement (“FEIS”) and a Record of Decision (“ROD”) approving  
12 the “Barrel Alternative” for the Rosemont Mine. This was the culmination of years of  
13 study, review, and analysis.

14 ***The Rosemont Mine***

15 The open-pit mine itself, which contains the valuable minerals (primarily copper)  
16 that Rosemont proposes to extract, will directly impact approximately 955 acres of land.<sup>5</sup>  
17 After Rosemont has completed extraction of material from the pit over the next 20 to 25  
18 years, the circular pit will measure approximately 3,000 feet in depth and 6,000 feet in  
19 diameter.<sup>6</sup> In the course of digging through 3,000 feet of geologic material, Rosemont will

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21 two cases that were consolidated with this one. The FEIS and ROD were vacated and  
22 remanded to the Forest Service. Defendants have filed notice of appeal with the Court of  
23 Appeals for the Ninth Circuit. A stay has been issued in the 2019 consolidated Corps case  
(CV 19-177).

24 <sup>4</sup> This was the second BiOp issued, and it incorporated portions of the 2013 BiOp. One  
25 reason for the 2016 BiOp is that “destruction or adverse modification” had been redefined  
26 within FWS regulations as the previous definition was invalidated by *Gifford Pinchot Task  
Force v. FWS*, 378 F.3d 1059, 1069 (9th Cir. 2004), *superseded on other grounds by* 81  
27 Fed. Reg. 7214 (Feb. 11, 2016).

28 <sup>5</sup> The 955 acres is a combination of private and public land. This includes 590 acres of  
private land and 365 acres of the Coronado National Forest (i.e., comprising a total of 955  
acres).

<sup>6</sup> Rosemont estimates that the pit will produce 5.3 billion tons of copper, 142 million tons

1 penetrate the wall of the groundwater table lying beneath the Santa Rita Mountains and  
2 will need to pump groundwater out of the pit to continue their mining operations. After  
3 Rosemont ceases its mining operations in 20 to 25 years, Rosemont will turn off the pumps,  
4 and the pit will act as a hydraulic sink such that the pit will fill with groundwater. To gain  
5 access to the valuable copper, molybdenum, and silver in the ore, Rosemont will have to  
6 extract approximately 1.2 billion tons of waste rock (i.e., geologic material without  
7 economic value) and approximately 700 million tons of tailings (i.e., waste material left  
8 over after extracting the valuable fraction from the uneconomic fraction of the ore)  
9 (collectively “1.9 billion tons of waste”). The Rosemont Mine will impact approximately  
10 3,653 acres of the Coronado National Forest. Outside of the 955-acre pit, Rosemont will  
11 dump approximately 1.9 billion tons of waste on approximately 2,447 acres<sup>7</sup> of the  
12 Coronado National Forest.

13 The Action Area of the Rosemont Mine includes portions of critical habitat, or  
14 proposed critical habitat, for listed species, including: the jaguar, northern Mexican  
15 gartersnake, Gila chub, Yellow-billed Cuckoo, Southwestern Willow Flycatcher,  
16 Chiricahua leopard frog, and Huachuca water umbel.

17 ***Findings about the Rosemont Mine***

18 The BiOp found that the Rosemont mine would affect a number of species that are  
19 listed as either endangered or threatened, and their respective habitats. However, the FWS  
20 concluded that none of the species would be jeopardized, and that none of the critical  
21 habitats were likely to be destroyed or adversely affected by the Rosemont Mine.

22 The FWS determined that the Rosemont Mine would result in incidental takings for  
23 a number of aquatic and riparian species; as it found that an individualized numerical limit  
24 was impractical, the FWS used a surrogate groundwater drawdown for the taking of these

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26 of molybdenum, and 79 million ounces of silver; at full production, Rosemont estimates  
27 that the mining project will produce 10% of the nation’s domestic copper supply.

28 <sup>7</sup> The 1.2 billion tons of waste rock will be dumped on approximately 1,460 acres of the  
Coronado National Forest, and the 700 million tons of tailings will be dumped on  
approximately 987 acres of the Coronado National Forest (i.e., comprising a total of  
approximately 2,447 acres).

1 species.

2 The Forest Service largely relied on the BiOp to satisfy its Endangered Species Act  
3 (“ESA”) obligations.

#### 4 ***Jaguar Critical Habitat***

5 The jaguar is a large nocturnal member of the cat family. It is “cinnamon-buff in  
6 color with many black spots; melanistic (dark coloration) forms are also known, primarily  
7 from the southern part of the range.” FWS046392. The jaguar was listed as endangered in  
8 1972 under the Endangered Species Conservation Act of 1969, which preceded the ESA.  
9 The jaguar was not listed in the United States under the ESA until 1997. At that time, the  
10 FWS determined that designating critical habitat was not prudent. This determination was  
11 challenged and set aside in 2009. *CBD v. Kempthorne*, 607 F. Supp. 2d 1078, 1091 (D.  
12 Ariz. 2009). The FWS then reevaluated and determined that it was prudent and beneficial  
13 to designate critical habitat for the jaguar.

14 In 2012, a Recovery Outline was created for the jaguar. The Recovery Outline  
15 explained how peripheral populations are essential for the conservation and evolution of  
16 the species. It included two recovery units: the Northwestern Recovery Unit (“NRU”) and  
17 the Pan American Recovery Unit, both of which are essential for the species’ recovery.  
18 The units also designate land as core, secondary, and peripheral. The United States only  
19 contains land within the Borderlands Secondary area of the NRU; it does not contain core  
20 habitat. As discussed in detail later in this Order, this land is still essential to the longevity  
21 of the jaguar because it provides connectivity and expansion habitat.

22 In 2014, the FWS designated 6 units of critical habitat in southern Arizona and  
23 southwestern New Mexico for the jaguar. The following units were determined to be  
24 occupied at the time of listing and met the requirements for designation as occupied habitat:  
25 1a, 2, 3, 4a, 5, and 6. Subunits 1b, 4b, and 4c were determined to be unoccupied, but  
26 essential. The FWS recognized the inherent uncertainty in the occupancy determination  
27 and considered if the occupied units qualified as critical habitat under the unoccupied  
28 standard.

1           The proposed mine is within this designated critical habitat; specifically, it is in Unit  
2 3, and affects Subunit 4b. The FWS found that there would be “direct loss of designated  
3 critical habitat,” “indirect effects to critical habitat and reduced connectivity,” but that there  
4 was not a high probability that the action would result in destruction or adverse  
5 modification.

6           In May 2018, the FWS initiated a status review for the jaguar.

7 **SECTION TWO: STANDARDS OF REVIEW; STATUTORY AND**  
8 **REGULATORY BACKGROUND**

9           Courts are obligated to “hold unlawful and set aside agency action, findings, and  
10 conclusions found to be—(A) arbitrary, capricious, an abuse of discretion, or otherwise not  
11 in accordance with law.” 5 U.S.C. § 706(2); *W. Watersheds Project v. Kraayenbrink*, 632  
12 F.3d 472, 496 (9th Cir. 2011)<sup>8</sup> (applying the standard of review from the APA to a citizen  
13 suit under the ESA). If the agency “relied on factors which Congress has not intended it to  
14 consider, entirely failed to consider an important aspect of the problem, offered an  
15 explanation for its decision that runs counter to the evidence before the agency, or is so  
16 implausible that it could not be ascribed to a difference in view or the product of agency  
17 expertise” then the action was arbitrary and capricious. *CBD v. FWS*, 807 F.3d 1031,  
18 1042-43 (9th Cir. 2015). Deference to the agency is at its highest when courts are reviewing  
19 an agency action requiring a high level of technical expertise. *Id.* at 1043. Courts must not  
20 substitute their own judgment for the agency’s judgment and expertise. *Id.* Courts may not  
21 “act as a panel of scientists that instructs the [agency] how to validate its hypotheses . . . ,  
22 chooses among scientific studies . . . , and orders the agency to explain every possible  
23 scientific uncertainty.” *Lands Council v. McNair*, 537 F.3d 981, 988 (9th Cir. 2008). While  
24 deference is high and courts presume regularity, courts must conduct a “searching and  
25 careful” inquiry. *CBD v. FWS*, 807 F.3d at 1043. Courts are not to supply “a reasoned basis  
26 for the agency’s action that the agency itself has not given.” *Motor Vehicle Mfrs. Ass’n of*

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28 <sup>8</sup> Unless otherwise noted by the Court, internal quotes and citations have been omitted  
when citing case law throughout this Order.

1 *U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). Courts must “uphold  
2 a decision of less than ideal clarity if the agency’s path may reasonably be discerned.” *Nat’l*  
3 *Ass’n of Home Builders v. Defs. of Wildlife*, 551 U.S. 644, 658 (2007).

4 When agencies have disagreement within their ranks or change position prior to the  
5 final action, courts must determine “whether the [agency], in reaching its ultimate finding,  
6 ‘considered the relevant factors and articulated a rational connection between the facts  
7 found and the choices made.’” *Nw. Ecosystem All. v. FWS*, 475 F.3d 1136, 1145 (9th Cir.  
8 2007) (quoting *Nat’l Ass’n of Home Builders v. Norton*, 340 F.3d 835, 841 (9th Cir. 2003)).  
9 Agencies are permitted to change their minds. *See CBD v. Zinke*, 868 F.3d 1054, 1060-61  
10 (9th Cir. 2017); *Defs. of Wildlife v. Zinke*, 856 F.3d 1248, 1262 (9th Cir. 2017); *Butte Env’tl.*  
11 *Council v. U.S. Army Corps of Engineers*, 620 F.3d 936, 946 (9th Cir. 2010). A  
12 disagreement between a draft written by staff members and the final agency document is  
13 not dispositive, but it is also not irrelevant. *CBD v. Zinke*, 868 F.3d at 1060-61. The Ninth  
14 Circuit has stated that it is the task of courts “to review the change of course to ensure that  
15 it is based on new evidence or otherwise based on reasoned analysis.” *Id.* at 1061.

16 *Chevron Deference*

17 If Congress’ intent is clear and unambiguous, then courts give effect to that clear  
18 and unambiguous meaning. *See N. Cal. River Watch v. Wilcox*, 633 F.3d 766, 772 (9th Cir.  
19 2011) (applying *Chevron* deference to the ESA). If there is an ambiguity and Congress  
20 delegated authority to the agency, courts must determine if the agency’s interpretation is  
21 reasonable, while affording the agency a high level of deference for their interpretation. *Id.*  
22 at 773.

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1 **THE ENDANGERED SPECIES ACT (“ESA”)**

2 “As we homogenize the habitats in which these plants and animals evolved, and as  
3 we increase the pressure for products that they are in a position to supply (usually  
4 unwillingly) we threaten their—and our own—genetic heritage. The value of this genetic  
5 heritage is, quite literally, incalculable. . . . Sheer self-interest impels us to be cautious.”  
6 *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 178 (1978) (quoting H.R. Rep. No. 93-412, pp.  
7 4-5 (1973)). It is with that background that Congress enacted the ESA to “halt and reverse  
8 the trend toward species extinction, whatever the cost.” *Id.* at 184.

9 The ESA works to accomplish its goals in several ways. The Secretary<sup>9</sup> is to list  
10 endangered or threatened species and shall publish the list of said species. 16 U.S.C.  
11 § 1533(c)(1). The Secretary must review listed species every five years. § 1533(c)(2)(A).  
12 Once a species is listed, it is afforded special protections. *See* §§ 1536, 1538. First, if it is  
13 prudent to do so, the Secretary is to designate critical habitat concurrent with the listing of  
14 a species. § 1533(a)(3)(i); 50 C.F.R. § 424.12(a).<sup>10</sup> Second, section 7 of ESA requires that  
15 federal agencies consult with the Secretary to “insure that any action authorized, funded,  
16 or carried out by such agency . . . is not likely to jeopardize the continued existence of any  
17 endangered species or threatened species or result in the destruction or adverse  
18 modification of [critical] habitat of such species.” 16 U.S.C. § 1536(a)(2). Third, the ESA  
19 makes it unlawful for anyone to “take” a member of a listed species absent an exception.  
20 § 1538(a)(1)(B).

21  
22 <sup>9</sup> “The ESA defines ‘Secretary’ to mean ‘the Secretary of the Interior or the Secretary of  
23 Commerce as program responsibilities are vested pursuant to the provisions of  
24 Reorganization Plan Numbered 4 of 1970.’ 16 U.S.C. § 1532(15). As a general matter,  
25 ‘marine species are under the jurisdiction of the Secretary of Commerce and all other  
26 species are under the jurisdiction of the Secretary of the Interior.’ 51 Fed. Reg. 19926  
27 (1986) (preamble to final regulations governing interagency consultation promulgated by  
the Fish and Wildlife Service and the National Marine Fisheries Service on behalf of the  
Secretary of the Interior and the Secretary of Commerce).” *Lujan v. Def. of Wildlife*, 504  
U.S. 555, 587 n. 3 (1992).

28 <sup>10</sup> The listing of critical habitat and endangered species follows the normal rule making  
procedures created under section 553 of title 5. § 1533(b)(4).

1 Section 7 Consultation

2 Section 7 of the ESA requires every federal agency to consult with the Secretary,  
3 which in this matter is effectively the FWS, to “insure that any action authorized, funded,  
4 or carried out by such agency [hereinafter, “agency action”, in this section] is not likely to  
5 jeopardize the continued existence of any endangered species or threatened species or  
6 result in the destruction or adverse modification of [previously designated critical] habitat  
7 . . . , unless such agency has been granted an exemption for such action by the Committee  
8 pursuant to subsection (h) of this section. In fulfilling the requirements of this paragraph  
9 each agency shall use the best scientific and commercial data available.” 16 U.S.C.  
10 § 1536(a)(2).

11 The consultation requirement applies to affirmative actions within the agency’s  
12 discretion. *Karuk Tribe of California v. Forest Service*, 681 F.3d 1006, 1011 (9th Cir.  
13 2012). Consultation typically begins with a biological assessment (“BA”). If the action is  
14 likely to adversely affect a listed species or its designated critical habitat, then formal  
15 consultation shall commence. 50 C.F.R. §§ 402.12(k), 402.14(a). Formal consultation  
16 concludes when the FWS issues a biological opinion (“BiOp”). 50 C.F.R. § 402.14(m).

17 If the FWS determines that the proposed action is likely to “jeopardize the continued  
18 existence of” any listed species or result in the destruction or adverse modification of its  
19 designated critical habitat, then the BiOp must include reasonable and prudent alternatives,  
20 if any. 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. § 402.14(g-h). “Jeopardize the continued  
21 existence of” means to engage in an action that reasonably would be expected, directly or  
22 indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed  
23 species in the wild by reducing the reproduction, numbers, or distribution of that species.”  
24 50 C.F.R. § 402.02 (2009). The BiOp is a final agency action subject to judicial review.  
25 *Nat’l Wildlife Fed’n v. NMFS* (“*NWF v. NMFS*”), 524 F.3d 917, 925 (2008).

26 If the FWS concludes that agency action is not likely to jeopardize a listed species,  
27 or result in destruction or adverse modification, but is likely to result in an incidental taking,  
28 an “incidental take statement” (“ITS”) must be included in the BiOp. 16 U.S.C.



1 § 1536(b)(4). An ITS acts as an exemption to the section 9 prohibition against “taking.”  
2 § 1536(o)(2).

3 Critical Habitat

4 “The term ‘critical habitat’ . . . means—(i) the specific areas within the geographical  
5 area occupied by the species, at the time it is listed in accordance with the provisions of  
6 section 1533 of this title, on which are found those physical or biological features (I)  
7 essential to the conservation of the species and (II) which may require special management  
8 considerations or protection; and (ii) specific areas outside the geographical area occupied  
9 by the species at the time it is listed in accordance with the provisions of section 1533 of  
10 this title, upon a determination by the Secretary that such areas are essential for the  
11 conservation of the species.” § 1532(5)(A). “The statute [and the regulations] thus  
12 differentiate[] between ‘occupied’ and ‘unoccupied’ areas, imposing a more onerous  
13 procedure on the designation of unoccupied areas by requiring the Secretary to make a  
14 showing that unoccupied areas are essential for the conservation of the species.” *Arizona*  
15 *Cattle Growers’ Ass’n v. Salazar*, 606 F.3d 1160, 1163 (9th Cir. 2010).

16 “The Secretary shall designate critical habitat, and make revisions thereto, under  
17 subsection (a)(3) on the basis of the best scientific data available and after taking into  
18 consideration the economic impact, the impact on national security, and any other relevant  
19 impact, of specifying any particular area as critical habitat.” § 1533(b)(2); *see* 50 C.F.R.  
20 § 424.12(a) (2012) (“A final designation of critical habitat shall be made on the basis of  
21 the best scientific data available, after taking into consideration the probable economic and  
22 other impacts of making such a designation in accordance with § 424.19.”).<sup>11</sup> The  
23 Secretary’s consideration of what features are essential for conservation shall include, but  
24 is not limited to, the following: “(1) Space for individual and population growth, and for  
25 normal behavior; (2) Food, water, air, light, minerals, or other nutritional or physiological  
26 requirements; (3) Cover or shelter; (4) Sites for breeding, reproduction, rearing of

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28 <sup>11</sup> Section 424.12 has been updated since the biological opinion and the critical habitat  
designation. The Court shall refer to the regulations as they were at the time of designation.

1 offspring, germination, or seed dispersal; and generally; (5) Habitats that are protected  
2 from disturbance or are representative of the historic geographical and ecological  
3 distributions of a species.”§ 424.12(b). “Primary constituent elements may include, but are  
4 not limited to, the following: roost sites, nesting grounds, spawning sites, feeding sites,  
5 seasonal wetland or dryland, water quality or quantity, host species or plant pollinator,  
6 geological formation, vegetation type, tide, and specific soil types.” § 424.12(b).

7 The ESA makes conservation crucial to understanding critical habitat. “Critical  
8 habitat . . . is defined in relation to areas necessary for the *conservation* of the species, not  
9 merely to ensure its survival.” *Arizona Cattle Growers’ Ass’n*, 606 F.3d at 1166 (emphasis  
10 in original); see *Gifford Pinchot Task Force v. FWS*, 378 F.3d 1059, 1070 (9th Cir. 2004),  
11 *superseded on other grounds by* 81 Fed. Reg. 7214 (Feb. 11, 2016) (“Clearly, then, the  
12 purpose of establishing ‘critical habitat’ is for the government to carve out territory that is  
13 not only necessary for the species’ survival, but also essential for the species’ recovery.”).  
14 “The terms ‘conserve’, ‘conserving’, and ‘conservation’ mean to use and the use of all  
15 methods and procedures which are necessary to *bring* any endangered species or threatened  
16 species *to the point at which the measures provided pursuant to this chapter are no longer*  
17 *necessary.*” 16 U.S.C. § 1532(3) (emphasis added). The purpose is not to simply maintain  
18 the status quo, but instead to recover or rebuild the species.

19 The determination as to whether land is occupied or unoccupied “is a highly  
20 contextual and fact-dependent inquiry.” *Arizona Cattle Growers’ Ass’n*, 606 F.3d at 1164.  
21 “Relevant factors may include how often the area is used, how the species uses the area,  
22 the necessity of the area for the species’ conservation, species characteristics such as degree  
23 of mobility or migration, and any other factors that may bear on the inquiry. Such factual  
24 questions are within the purview of the agency’s unique expertise and are entitled to the  
25 standard deference afforded such agency determinations” *Id.* at 1164-65. Courts must  
26 consider whether the proposed interpretation is permissible considering the particular  
27 species in question and the factors provided by the Ninth Circuit. *Id.* at 1165. The fact that  
28 an area might be suitable for future occupancy may not be used to determine that an unused

1 area is occupied. *Id.* at 1167.

2 “The Secretary shall designate as critical habitat areas outside the geographical area  
3 presently occupied by a species only when a designation limited to, its present range would  
4 be inadequate to ensure the conservation of the species.” 50 C.F.R. § 424.12(d-e).

5 Section 9 “Take”

6 Section 9 prohibits “taking” of any endangered species. 16 U.S.C. § 1538(a)(a). As  
7 discussed above, the FWS may provide an ITS as a part of a BiOp. § 1536(b)(4).  
8 “‘Incidental take’ refers to takings that result from, but are not the purpose of, carrying out  
9 an otherwise lawful activity conducted by the Federal agency or applicant.” 50 C.F.R.  
10 § 402.02 (2013). An ITS must include written statements that “(i) specifies the impact of  
11 such incidental taking on the species, (ii) specifies those reasonable and prudent measures  
12 that the Secretary considers necessary or appropriate to minimize such impact, (iii) in the  
13 case of marine mammals, specifies those measures that are necessary to comply with  
14 section 1371(a)(5) of this title with regard to such taking, and (iv) sets forth the terms and  
15 conditions (including, but not limited to, reporting requirements) that must be complied  
16 with by the Federal agency or applicant (if any), or both, to implement the measures  
17 specified under clauses (ii) and (iii).” 16 U.S.C. § 1536(b)(4). This statement then acts as  
18 an exemption to the prohibition for taking. § 1536(o)(2).

19 **SECTION THREE: ISSUES THAT MUST BE REMANDED TO THE AGENCY**

20 As discussed in detail below, Section Three of this Order examines the issues in  
21 which summary judgment is granted in favor of Plaintiff, and where remand to the agency  
22 for reconsideration is warranted.

23 **“LIKELY” STANDARD USED WITHIN THE JAGUAR’S CRITICAL HABITAT**

24 Plaintiff argues that the FWS improperly used a heightened standard of review in  
25 determining that the Rosemont Mine was not likely to result in the destruction or adverse  
26 modification of the jaguar critical habitat; the Court agrees.

27 As a part of the ESA’s “institutionalized caution” to protect species, “whatever the  
28 cost[,]” federal agencies must ensure that agency actions are “not likely to . . . result in the

1 destruction or adverse modification of” a species’ critical habitat. § 1536(a)(2); *Tennessee*  
2 *Valley Auth.*, 437 U.S. at 185, 194. The BiOp defined “likely” in the legal standards and  
3 definitions section of the proposed critical habitat within the jaguar section as follows:  
4 “*Merriam Webster’s Collegiate Dictionary, Tenth Edition*, defines ‘likely’ as ‘1: having a  
5 high probability of occurring or being true; very probable.’ Therefore, in order to reach a  
6 conclusion of destruction or adverse modification of critical habitat from a Federal action,  
7 we must determine that preclusion of recovery is ‘very probable’ due to that action.”  
8 FWS046437. The FWS used a high probability standard when considering whether the  
9 proposed action was “likely” to result in destruction or adverse modification to the jaguar’s  
10 designated critical habitat. FWS046437; FWS04649; FWS049637.

11 Plaintiff correctly highlights past regulations, rules, and litigation whereby both the  
12 FWS, and the National Marine Fisheries Service (“NMFS”), appropriately defined “likely”  
13 as: “more likely than not,” “probability of 50% or greater”, “probable”; the FWS’ and  
14 NMFS’ more likely than not definition is consistent with the ESA’s institutionalized  
15 caution to protect species. *See* Doc. 107 at 20-21 (citing *Alaska Oil & Gas Ass’n v. Pritzker*,  
16 840 F.3d 671, 684 (9th Cir. 2016); *In re Polar Bear Endangered Species Act Listing &*  
17 *Section 4(d) Rule Litig.* (“*In re Polar Bear*”), 709 F.3d 1, 14 (D.C. Cir. 2013); *Trout*  
18 *Unlimited v. Lohn*, 645 F. Supp. 2d 929, 945 (D. Or. 2007); *W. Watersheds Project v. U.S.*  
19 *Forest Serv.*, 535 F. Supp. 2d 1173, 1184 (D. Idaho 2007)).) When an agency changes their  
20 position, as it did in this case (i.e., increasing the standard from more likely than not, to  
21 highly probable), it must provide a reasoned explanation. *Nat’l Wildlife Fed’n v. Burford*,  
22 871 F.2d 849, 855 (9th Cir. 1989); *see NWF v. NMFS*, 524 F.3d at 928 (not deferring to an  
23 agency when they change approaches and the new approach is “completely at odds with  
24 [its] prior scientific approaches”). The record does not reflect any reasonable basis as to  
25 why the FWS applied a heightened standard that conflicts with the ESA’s institutionalized  
26 caution in favor of protecting listed species; the heightened standard impermissibly  
27 constrains the effectiveness of the ESA’s protections, which comes at a high, and  
28 potentially detrimental, cost to listed species and their habitat. *See Tennessee Valley Auth.*,

1 437 U.S. at 185, 194. Under the FWS’ heightened standard, for example, even if agency  
2 action is “more likely than not” to result in the destruction or adverse modification of a  
3 species’ critical habitat, such agency action would be proper as long as it was not “highly  
4 probable” to result in the destruction or adverse modification of a species’ critical habitat.  
5 Citing to a single dictionary without explanation for the shift in policy, which is contrary  
6 to the protectionist nature of the ESA, is arbitrary and capricious.

7 Even if the FWS used an unlawfully heightened standard of review, Defendants  
8 argue that the decision was harmless. Harmlessness analysis is limited and will only be  
9 used “when a mistake of the administrative body is one that *clearly had no bearing* on the  
10 procedure used or the substance of decision reached.” *Gifford Pinchot Task Force*, 378  
11 F.3d at 1071 (emphasis in original). The burden is on the agency to show that the error was  
12 harmless. *Id.* The record, however, reflects that there is a “plausible argument that jaguar  
13 movement . . . will be somewhat restricted[.]” FWS046439-40 (2013 BiOp stating that  
14 “[o]ur analysis makes a plausible argument that jaguar movement between units 3 and 4b  
15 will become somewhat restricted . . . “), FWS049637 (stating the same in the 2016 BiOp).  
16 The record reflects that the Rosemont Mine may likely result in the destruction or adverse  
17 modification of Unit 3 and Subunit 4b of the jaguar critical habitat. FWS047605<sup>12</sup>  
18 (“Adverse effects to jaguars were expected to occur from the proposed action by impeding  
19 jaguar movement between Mexico and the U.S., disturbing jaguars, and degrading their  
20 habitat.”); FWS047633-34 (finding that the Rosemont Mine will result in adverse  
21 modification based on “direct loss of proposed critical habitat,” “indirect loss of critical  
22 habitat” through constricted connectivity, “loss of connectivity,” “[a]ppreciably diminish  
23 the conservation value of critical habitat as a whole for survival and recovery of the jaguar

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24  
25 <sup>12</sup> Defendants argue that the Court cannot consider the agency’s preliminary, internal  
26 documents in evaluating these issues. However, as the final action used an unlawfully  
27 heightened standard of review, previous analysis (using a proper standard of review)  
28 certainly is not irrelevant in these unique circumstances; as previously referenced, while a  
disagreement between a draft written by FWS staff members and the final agency  
document may not be dispositive, it is also not irrelevant. *CBD v. Zinke*, 868 F.3d at  
1060-61.

1 due to the likely complete loss of function of Subunit 4b and partial loss of function of  
2 Units 3 and Subunit 4a[,]” and the area’s reduced ability to “contribute effectively to the  
3 recovery of jaguars in the NRU.”).

4 The agency unlawfully applied a heightened standard of review, and the Court  
5 cannot find that this error was harmless. On remand, the agency must reconsider whether  
6 the Rosemont Mine is “likely” to result in destruction or adverse modification of the  
7 jaguar’s critical habitat under the proper more likely than not standard. Summary judgment  
8 is granted in favor of Plaintiff as to this issue and denied as to Defendants.

### 9 **NORTHERN MEXICAN GARTERSNAKE JEOPARDY ANALYSIS**

10 Plaintiff argues that the FWS failed to assess the “tipping” point (as required by  
11 Ninth Circuit precedent) for the northern Mexican gartersnake (“NMGS”) in determining  
12 whether it would be jeopardized by the Rosemont Mine; the Court agrees.

13 The Ninth Circuit has found that jeopardy requires an agency to examine the effect  
14 on the species’ likelihood of recovery, in addition to the likelihood of survival. *NWF v.*  
15 *NMFS*, 524 F.3d at 931. “Because a species can often cling to survival even when recovery  
16 is far out of reach, [only examining survival when considering jeopardy] reads ‘and  
17 recovery’ entirely out of the text.” *Id.* Accordingly, an agency must logically know the  
18 rough survival and recovery needs (i.e., “tipping points”) to evaluate if a species will be  
19 jeopardized. *Id.* at 936. A tipping point analysis is often necessary to prevent a “death by a  
20 thousand pinpricks” by determining if an agency action with a small overall effect will  
21 push a species across the line to eventual extinction, or past a point from which recovery  
22 is impossible. *See Rock Creek All. v. U.S. Forest Serv.*, 703 F. Supp. 2d 1152, 1205 (D.  
23 Mont. 2010), *aff’d in part sub nom. Rock Creek All. v. FWS*, 663 F.3d 439 (9th Cir. 2011).

24 The NMGS was not a listed species when the 2013 BiOp was created, and therefore  
25 it was not substantively included. After it was listed as a threatened species in 2014, the  
26 NMGS was included in the 2016 BiOp. Section 7 consultation occurred  
27 contemporaneously with the listing of the NMGS as a threatened species.<sup>13</sup> The 2016 BiOp

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28 <sup>13</sup> Defendants argue that in light of the contemporaneous nature of the section 7

1 incorporated the final rule, 79 Fed. Reg. 38678, and the proposed critical habitat rule, 78  
2 Fed. Reg. 41500, FWS049491, and concluded that the proposed action will not jeopardize  
3 the NMGS.<sup>14</sup>

4 However, as FWS' record reflects, the Rosemont Mine will have extensive adverse  
5 impacts on the NMGS far into the future, including, but not limited to, decreased  
6 groundwater levels culminating in loss of prey and prey habitat for the NMGS, and loss of  
7 its own habitat. FWS049507 ("The primary cause of adverse effects from the proposed  
8 action is the long-term, permanent degradation to the gartersnakes' prey community due to  
9 the adverse, indirect effects from a lowering groundwater table[.]"); FWS049508-09 (The  
10 FWS anticipates "significant losses of [NMGS] as an indirect effect from the anticipated  
11 degradation and ultimate disappearance of Empire Spring. . . . The loss or significant  
12 degradation of the resident Chiricahua leopard frog metapopulation in the area, as a result  
13 of the loss of a critical source population, would place significant nutritional strain on  
14 [NMGS] and weaken the functionality of the habitat for recovery as a whole for [NMGS],  
15 in perpetuity."); FWS049514-15 ("This potential, irreversible, adverse effect to primary  
16 constituent element 3 presents a significant challenge for this proposed subunit in meeting

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17  
18 consultation and the section 4 listing, the FWS was not required to identify a tipping point.  
19 Defendants also argue that the FWS considered the impact of the Rosemont Mine in the  
20 section 4 listing, but only listed the NMGS as threatened (not endangered) such that the  
21 tipping point would not be reached in relation to the Rosemont Mine. This argument is  
22 unpersuasive; these are independent processes to protect threatened and endangered  
23 species, and section 4 procedures do not undermine or alleviate section 7 requirements,  
24 even if they occur contemporaneously.

25 <sup>14</sup> The FWS' reasons for the no jeopardy determination included: 1. The affected population  
26 and habitat is small compared to the unaffected population and habitat, 2. While Cienega  
27 Creek would be affected, including upper Empire Gulch, the area would provide sufficient  
28 habitat for leopard frogs elsewhere within and downstream thereby "maintaining general  
ecologic function," 3. Las Cienegas NCA and Pima County's Cienega Creek Natural  
Preserve are likely to preserve native prey base for the NMGS, 4. NMGS' prey bases of  
Chiricahua leopard frogs and Gila chub will receive conservation efforts and NMGS is a  
"prey generalist" and is likely to exploit alternative prey not affected by the proposed  
action, and 5. "The suite of conservation measures . . . is expected to substantially improve  
the baseline status for the NMGS and its native prey community on a subbasin-level."  
FWS049517-18.

1 its role in future recovery and conservation of the [NMGS].”); FWS131404 (“The best  
2 available scientific and commercial information indicates that any reduction in the presence  
3 or availability of water is a significant threat to the [NMGS], [its] prey base, and their  
4 habitat.”). The NMGS, for example, feeds primarily on ranid frogs, such as the Chiricahua  
5 leopard frog. FWS049508. Declining prey populations will likely result in a less resilient  
6 NMGS population. *Id.*; FWS049508 (“[E]xaggerated effects to chub and ranid frog  
7 populations will have exaggerated effects to the [NMGS] population.”); FWS131386  
8 (“Declines in prey base have led to subsequent declines in the distribution and density of  
9 [the NMGS] population, . . . . [The NMGS] may be particularly vulnerable to the loss of  
10 native prey species.”); FWS131391 (“A former large, local population of [NMGS] . . . in  
11 southeastern Arizona has also experienced a correlative decline of leopard frogs, and  
12 [NMGS] are now thought to occur at very low population densities or may be extirpated  
13 there.”); FWS049474-81 (further discussing Rosemont Mine’s negative impacts on the  
14 Chiricahua leopard frog—a key prey base for the NMGS).

15         Moreover, the affected area is uniquely important to the NMGS. FWS049517 (“We  
16 suspect that Empire Spring serves a critical and unique role in keeping metamorphosed  
17 frogs, which are exposed to Bd, alive over the winter to act as a source population of  
18 dispersing frogs within the metapopulation the next year. . . . The Las Cienegas NCA’s and  
19 Pima County’s Cienega Creek Natural Preserve’s most unique and important attribute  
20 contributing to the conservation and recovery of northern Mexican gartersnakes is that each  
21 of these areas provides a native prey base in the absence of harmful nonnative species.”);  
22 FWS131404. (“Cienegas, a unique and important habitat for [NMGS], have been adversely  
23 affected or eliminated by a variety of historical and current land uses in the United States  
24 and Mexico, including streambed modification, intensive livestock grazing, woodcutting .  
25 . . . and stream flow reduction from groundwater pumping and water diversions.”). The  
26 NMGS population at Las Cienegas NCA “has declined significantly.” FWS041605.

27         In light of the foregoing, the agency was required to consider the tipping point for  
28



1 the NMGS,<sup>15</sup> which it failed to do in this case. On remand, the agency must consider the  
2 tipping point for the NMGS. Summary judgment is granted in favor of Plaintiff as to this  
3 issue and denied as to Defendants.

#### 4 **INCIDENTAL TAKE STATEMENT; TAKE SURROGATE**

5 When the FWS concludes that an action (i.e., the Rosemont Mine) is not likely to  
6 jeopardize a listed species, but will likely result in incidental takings<sup>16</sup> of threatened or  
7 endangered species (as it did in this case),<sup>17</sup> an Incidental Take Statement (“ITS”) must be  
8 included in the BiOp. Plaintiff argues that the FWS’ ITS is unlawful as it failed to choose  
9 a proper take surrogate for seven threatened or endangered species. The Court agrees.

10 As previously referenced, the ESA prohibits the taking of any listed species; an ITS  
11 acts as an exemption to the ESA’s prohibition against taking. 16 U.S.C. § 1536(o)(2). An  
12 ITS must include a written statement that: “(i) specifies the impact of such incidental taking  
13 on the species, (ii) specifies those reasonable and prudent measures that the Secretary  
14 considers necessary or appropriate to minimize such impact, (iii) in the case of marine  
15 mammals, specifies those measures that are necessary to comply with section 1371(a)(5)  
16 of this title with regard to such taking, and (iv) sets forth the terms and conditions  
17 (including, but not limited to, reporting requirements) that must be complied with by the  
18 Federal agency or applicant (if any), or both, to implement the measures specified under  
19 clauses (ii) and (iii).” § 1536(b)(4). This statement then acts as an exemption to the  
20 prohibition against taking. § 1536(o)(2).

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21  
22 <sup>15</sup> As Plaintiff correctly emphasizes, counsel for the Department of Interior specifically  
23 advised FWS staff that “[t]ipping points need to be addressed, and internally consistent”;  
unfortunately, the FWS did not heed the advice of agency counsel. *See* FWS034829.

24 <sup>16</sup> “Take” of a listed species is “to harass, harm, pursue, hunt, shoot, wound, kill, trap,  
25 capture, or collect, or to attempt to engage in any such conduct.” 16 U.S.C. § 1532(19).  
“Incidental take” is “takings that result from, but are not the purpose of, carrying out an  
26 otherwise lawful activity conducted by the Federal agency or applicant.” 50 C.F.R.  
§ 402.02.

27 <sup>17</sup> The FWS found that the Rosemont Mine would result in decreased water flow to areas  
28 surrounding the Rosemont Mine, and this would adversely impact (incidentally take) listed  
species.

1           The Ninth Circuit has addressed the ITS process, stating in part: “[T]he permissible  
2 level of take ideally should be expressed as a specific number, [but a surrogate may be used  
3 if this is not possible] . . . The chosen surrogate, however, must be able to perform the  
4 functions of a numerical limitation. In particular, Incidental Take Statements [must] set  
5 forth a trigger that, when reached, results in an unacceptable level of incidental take,  
6 invalidating the safe harbor provision [of the ESA], and requiring the parties to re-initiate  
7 consultation . . . We have previously invalidated Incidental Take Statements that could not  
8 adequately trigger reinitiation of consultation. For example, . . . [W]e invalidated an  
9 Incidental Take Statement because it did not contain measurable guidelines to determine  
10 when incidental take would be exceeded . . . [E]cological conditions could be used as a  
11 surrogate for defining the amount or extent of take if the conditions were linked to the take  
12 of the protected species . . . If, however, the FWS chooses to employ a non-numerical  
13 surrogate, the surrogate must not be so general that the applicant or the action agency  
14 cannot gauge its level of compliance . . . [Where a federal agency] did not set a clear  
15 standard for determining when the authorized level of take had been exceeded, we held the  
16 Incidental Take Statement to be arbitrary and capricious . . . [The ITS] fails [in this case  
17 as] it fails to set forth a trigger that would invalidate the safe harbor provision [of the ESA]  
18 and reinitiate the consultation process.” *Or. Natural Res. Council v. Allen* (“*Allen*”), 476  
19 F.3d 1031, 1037-39 (9th Cir. 2007).

20           In the case at bar, the FWS found that it was impractical to use an individualized  
21 numerical limit on incidental takings of seven listed species. As such, the FWS instead  
22 relied on a groundwater drawdown surrogate for the species that the Rosemont Mine would  
23 adversely impact (i.e., the Gila chub, Gila topminnow, Desert pupfish, Chiricahua leopard  
24 frog, northern Mexican gartersnake, Yellow-billed cuckoo, and Southwestern willow  
25 flycatcher—the groundwater drawdown surrogate used by the FWS is the same for all  
26 seven species).<sup>18</sup> The FWS found that the amount of takings (pursuant to the groundwater

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27 <sup>18</sup> As to the Gila chub, for example, the FWS stated that it could not numerically quantify  
28 individual take of this species because: “[I]t is impossible to quantify the number of  
individual Gila chub taken because: (1) dead or impaired individuals are almost impossible

drawdown surrogate) for each species is as follows:

*FWS Table, based on Tetra Tech (2010) Model: Anticipated Amount of Take*

Location	0 years, post mining	20 years, post mining	50 years, post mining	150 years, post mining
Upper Empire Gulch springs	0.1 feet	0.5 feet	1.8 feet	5.0 feet
Upper Cienega Creek	< 0.1 feet	< 0.1 feet	0.15 feet	0.35 feet
Davidson/Cienega confluence	< 0.1 feet	0.15 feet	0.2 feet	0.2 feet
Lower Cienega Creek	< 0.1 feet	< 0.1 feet	< 0.1 feet	< 0.1 feet

In short, the FWS found that: the Rosemont Mine would result in decreased water flow to areas encompassing threatened or endangered species; this in turn would result in the take of these species through loss of habitat; determining individualized numerical take of these species was impractical; and therefore the FWS used water modeling (Tetra Tech

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to find (and are readily consumed by scavengers and predators) and losses may be masked by seasonal fluctuations in environmental conditions; (2) the status of the species will change over time through disease, natural population variation, natural habitat loss, or the active creation of habitat through management; and (3) the species is small-bodied, well camouflaged, and occurs under water of varying clarity.” 2016 BiOp at p. 99. As such, the FWS reasoned that groundwater drawdown was a proper take surrogate as: “It is reasonable to assume that the abundance of Gila chub is correlated with the extent of suitable aquatic habitat provided by surface flows in the affected streams . . . Baseflows maintain stream discharge when surface runoff is low or nonexistent, and these baseflows result from groundwater discharge. The discharge of groundwater to springs and streams is related to the elevation and gradient that regional groundwater exhibits relative to those surface waters. Decreases in groundwater elevation affect this gradient and thus, reduce the discharge of groundwater to streams . . . Reduced discharge equates with reduced habitat availability which could harm the species. Groundwater elevations, which can be readily measured, are therefore effective surrogate measures for the incidental take of Gila chub.” *Id.* at p. 100.

1 (2010)-reflected in the chart above) to estimate take via groundwater drawdown amounts  
2 in relevant areas (i.e., loss of habitat) as a surrogate for individualized numerical take. In  
3 addition, the FWS recognized that the water modeling at issue had limitations, and  
4 therefore identified “potential” groundwater monitoring wells closer to the Rosemont Mine  
5 that could serve as “proxies” for allowable incidental take. If these incidental take  
6 thresholds are exceeded in the future, the FWS would evaluate whether new agency  
7 consultation needed to be reinitiated to attempt to remedy the excessive take of these  
8 species.

9 As Plaintiff correctly argues, there are numerous fundamental problems with this  
10 proxy for a surrogate model advanced by the FWS which thereby invalidates the ITS as  
11 unlawful.

12 For example, the FWS uses Tetra Tech modeling to predict groundwater drawdown  
13 (stemming from the Rosemont Mine) at Upper Empire Gulch and Cienega Creek. The  
14 model largely estimates groundwater drawdowns for these areas as ranging from 1.2 inches  
15 (0.1 feet) to 0.5 feet. However, as the Forest Service (and experts relied upon by the federal  
16 agencies) emphasized, the water modeling used (including Tetra Tech) could not reliably  
17 predict groundwater drawdowns that were less than 5 feet. *See* FEIS, Volume 2 at p. 294  
18 (“The models used to predict impacts to groundwater availability have a level of  
19 uncertainty that must be considered when interpreting the model results. While the models  
20 can mathematically predict groundwater drawdown to thousandths of a foot, in reality this  
21 level of refinement is meaningless. The models were designed for the purpose of predicting  
22 the inflow of groundwater to the mine pit and the general drawdown that would occur in  
23 the regional aquifer; however, the farther the predictions are in terms of distance from the  
24 mine pit and the farther out in time the predictions occur, the less certain they become. The  
25 groundwater modeling experts contracted by the [Forest Service] determined that the  
26 reasonable limit of certainty of the groundwater models is the 5- to 10-foot drawdown  
27 contour. Within this contour, the groundwater models would be able to reasonably predict  
28 changes to wells, springs, and streams. Changes below this threshold are beyond the

1 capabilities of the models to accurately predict.”); FWS016593 (“[T]he groundwater levels  
2 in shallow aquifers along desert streams can fluctuate more than 0.1 feet over the course of  
3 a single day just due to evapotranspiration effects. As written, excessive take would happen  
4 within a few hours of the BO being signed.”) (emphasis in the original); FWS115191 (“The  
5 5-ft and 10-ft drawdown contours represent the precision of regional groundwater models  
6 that can be most relied upon. That is, the models can reliably predict impacts down to  
7 perhaps 5 feet of change . . . in the Tetra Tech model . . . the groundwater models would  
8 be reasonably able to predict changes in water levels and flows of surface-water bodies  
9 inside the 5-ft to 10-ft drawdown contours.”).

10 As referenced above, as the FWS was aware that there were limits to the Tetra Tech  
11 modeling, it also identified potential groundwater monitoring wells closer to the Rosemont  
12 Mine that could serve as proxies for groundwater drawdown, and it would re-run the Tetra  
13 Tech modeling with additional information. *See* 2016 BiOp at pp. 101-102. Nonetheless,  
14 re-running additional information from these potential wells with the Tetra Tech modeling  
15 would not change the hurdle that the modeling itself cannot reliably predict changes below  
16 5 feet, and the predicted ITS drawdowns largely range from 0.1 feet to 0.5 feet.

17 Moreover, as recognized by the Forest Service, the groundwater levels in the basin  
18 at issue fluctuate greatly, which further undercuts the reliability of the monitoring at issue.  
19 *See* FEIS at pp. 294-295 (“[I]mpacts to springs and intermittent or perennial stream reaches  
20 could occur as a result of very small changes in groundwater level. This suggests that  
21 although these small levels of drawdown are beyond our ability to predict with numerical  
22 models, they could still cause impacts . . . [T]he 5-foot threshold is also pertinent for a  
23 second reason, which is the natural seasonal variability of groundwater. Available data  
24 suggest that groundwater levels in the area naturally vary from year to year and from season  
25 to season. In a well in lower Davidson Canyon, groundwater levels have been observed to  
26 fluctuate by more than 10 feet in a single year . . . Two stock wells along Empire Gulch  
27 have been monitored . . . for three to four decades, and the results show that water levels  
28 have varied between 4 and 5 feet. Similar stock wells along Cienega Creek show variation

1 between 3 and 5 feet . . . Two wells immediately adjacent to lower Cienega Creek were  
2 monitored between 2007 and 2009 . . . and exhibited a fluctuation in water level of up to 5  
3 feet seasonally . . . [A] similar analysis on a much greater number of wells located  
4 throughout the basin (not just near streams) found that the average short-term fluctuation  
5 in groundwater levels was 7.1 feet and that the long-term fluctuation in groundwater levels  
6 was 19.7 feet . . . While drawdown of less than 5 feet could cause impacts to springs and  
7 surface waters, natural variability in groundwater levels is already causing changes of this  
8 magnitude in the vicinity of sensitive surface waters in the analysis area. This makes  
9 identification of drawdown that could be due to the mine dewatering impractical in the  
10 field because there is no reliable method for separating out ongoing seasonal or annual  
11 variation from impacts from the mine.”).

12 Even if the FWS could determine through this monitoring regime whether 0.1 feet  
13 to 0.5 feet of groundwater drawdown (i.e., incidental take) has been exceeded in the  
14 pertinent basin after the Rosemont Mine commences (mining operations are expected to  
15 last 20 to 25 years), it may be too late to mitigate the excess incidental take impacting the  
16 threatened and endangered species as the impacts to the water at issue become permanent  
17 when Rosemont’s mining operations intersect the groundwater table. *See* FEIS at p. 339  
18 (“The results of the groundwater modeling in the Davidson Canyon/Cienega Basin indicate  
19 that the mine pit would create a permanent drawdown of the water table. Groundwater  
20 would flow toward the mine pit in perpetuity from the time at which the excavation  
21 intersects the water table. At first, during active mining, groundwater would be pumped  
22 directly from the mine pit or from dewatering wells next to the mine pit. After final  
23 reclamation and closure, the pit is expected to gradually fill with groundwater, forming a  
24 mine pit lake. The mine pit lake would lose water through evaporation, and this water  
25 would be perpetually replenished in part by groundwater from the regional aquifer. In this  
26 way, the mine pit lake is expected to act as a permanent regional hydraulic sink . . .  
27 Pumping of the mine pit would draw down the level of groundwater in the regional aquifer,  
28 forming what is known as a cone of depression . . . Because the mine pit lake would act to

1 remove groundwater in perpetuity from the system, this cone of depression is expected to  
2 persist in perpetuity. The boundaries of the cone of depression would migrate outward for  
3 a very long period of time until they eventually reach equilibrium. The various models  
4 estimate equilibrium would be reached between 700 and 7,000 years after closure of the  
5 mine. The cone of depression would stop expanding, but the flow of groundwater toward  
6 the mine pit would be a permanent feature of the regional aquifer . . . The cone of  
7 depression extends many miles outward from the mine pit . . .”).

8         Furthermore, if and when the FWS discovers groundwater drawdowns greater than  
9 the allowable take figures at issue, it is unclear if this would be determined to be excess  
10 take requiring re-initiation of agency consultation to mitigate the excess take; the course of  
11 action in these circumstances encompasses a process of group consultations with separate  
12 agencies, scholars, and Rosemont to reach a consensus on the issues. *See* 2016 BiOp at p.  
13 105 (“If it is determined at any time via monitoring that the observed groundwater  
14 drawdowns exceed the upper bounds of the sensitivity analyses for the modeled  
15 groundwater drawdowns, including consideration of applicable daily and seasonal  
16 fluctuations, then it is possible that the take of Gila chub described in Table GC-4 has been  
17 exceeded. In this event, the USFS and Corps shall consult with Forest Service staff, FWS,  
18 Rosemont Copper, and/or the USGS, the University of Arizona, Bureau of Land  
19 Management, and/or other appropriate sources of expertise to seek consensus on whether  
20 the specific metrics identified in the take statement have been exceeded and whether the  
21 exceedance can be attributable to Rosemont’s activities and thus be considered an  
22 exceedance of the take authorized by this Incidental Take Statement. The USFS and Corps  
23 may convene any of these individuals as a team, in consultation with FWS, which may  
24 advise USFS and the Corps. The USFS, Corps, and/or FWS have ultimate responsibility to  
25 make the determination of whether reinitiation of consultation is appropriate.”).

26         The ITS in this case is unlawful as it fails to set forth a clear trigger that, when  
27 reached, results in an unacceptable level of incidental take (as to all seven listed species),  
28 invalidating the safe harbor provision of the ESA, and requiring the parties to re-initiate

1 consultation. *See Allen*, 476 F.3d at 1037-1039. On remand, the agency must consider and  
2 formulate a proper ITS. Summary judgment is granted in favor of Plaintiff as to this issue  
3 and denied as to Defendants.

4 **SECTION FOUR: ISSUES THAT DO NOT REQUIRE REMAND**

5 As discussed in detail below, Section Four of this Order examines the issues in  
6 which summary judgment is granted in favor Defendants<sup>19</sup> and where remand to the agency  
7 for reconsideration is unwarranted.

8 **MITIGATION MEASURES**

9 Plaintiff argues that the FWS erred by considering the Cienega Creek Watershed<sup>20</sup>  
10 conservation package, and the Sonoita Creek Ranch conservation measure, in assessing  
11 impacts to the Gila chub and the Gila topminnow, as they are uncertain and incapable of  
12 implementation. As Defendants correctly argue, however, both mitigation measures are  
13 binding and reasonable, and were properly considered by the FWS.

14 Improvements or mitigation should only be considered if they include “specific and  
15 binding plans,” and “a clear, definite commitment of resources for future improvement.”  
16 *NWF v. NMFS*, 524 F.3d at 936. If an agency lacks the authority to “guarantee” a mitigation  
17 action, then that action should not be included in the agency’s consideration. *NWF v.*  
18 *NMFS*, 524 F.3d at 936 n. 17. Mitigation measures must be “reasonably specific, certain to  
19 occur, and capable of implementation; they must be subject to deadlines or  
20 otherwise-enforceable obligations; and most important, they must address the threats to the  
21 species in a way that satisfies the jeopardy and adverse modification standards.” *CBD v.*

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22  
23 <sup>19</sup> As to Rosemont’s crossclaims, the Court notes that the Federal Defendants prevail  
24 inasmuch as the FWS’ pertinent critical habitat determinations are not impacted by this  
25 Order.

26 <sup>20</sup> The Cienega Creek Watershed Conservation Fund is a part of the Cienega Creek  
27 Watershed Conservation package, or the Cienega Creek conservation package.  
28 FWS049419; FWS046341-44; FWS041637. Plaintiff describes the fund and the water  
rights (Doc. 107 at 35-36); accordingly, the Court will consider this a challenge to the entire  
conservation package, including the fund and water rights acquisition. However, whether  
Plaintiff is challenging the Conservation Fund, the water rights acquisition plan, or both,  
does not alter the Court’s conclusion.



1 *Salazar*, 804 F. Supp. 2d 987, 1001 (D. Ariz. 2011) (mitigation measures were not specific  
2 as the agency failed to definitively define the measures, some measures were “conceptual  
3 in nature only and may be altered, replaced, or abandoned,” and approximately a third of  
4 the measures were unfunded). Otherwise, the mitigation is merely a suggestion and does  
5 not counteract harmful effects in a jeopardy analysis. *CBD v. Rumsfeld*, 198 F. Supp. 2d  
6 1139, 1144, 1153 (D. Ariz. 2002) (rejecting mitigation measures that did not have deadlines  
7 or stated objectives, and were “vague, entirely voluntary, and even if implemented [did]  
8 not come close to balancing the [adverse effects of the proposed action]”).

9 The conservation measures at issue are binding on Rosemont. *See* FS0259770;  
10 FS0259764. These are not mere suggestions or promises; they are binding plans with  
11 deadlines and repercussions. *See* FS0259768 (recordation of covenants or conservation  
12 must be completed prior to construction on Forest Service lands); FWS046342 (requiring  
13 payments on April 1 of each year following the initial production of copper from the  
14 project); FWS046343 (requiring Rosemont to file an application to sever the water rights  
15 under the Cienega Conservation package). If the plans are approved, Rosemont will be  
16 bound to undertake their mitigation obligations, including, but not limited to, purchasing  
17 water rights currently held by Del Lago Golf Course, creating a fund of \$2,000,000, placing  
18 a restrictive covenant or conservation easement on the Sonoita Creek Ranch property, and  
19 reestablishing the Sonoita Creek floodplain. These are binding, certain, and implementable.  
20 The BiOp and ROD bind Rosemont with sufficiently reasoned mitigation measures, and as  
21 such, if these mitigation measures fail, section 7 consultation must be reinitiated<sup>21</sup>;  
22 summary judgment is granted in favor of Defendants as to this issue and denied as to  
23 Plaintiff.

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24  
25 <sup>21</sup> To a large extent, Plaintiff objects to the FWS’ conclusions regarding the effects of the  
26 conservation measures; however, this is insufficient to find that the mitigation measures at  
27 issue were improperly considered by the FWS. *See NWF v. NMFS*, 524 F.3d at 936  
28 (requiring the mitigation measures to be binding, not the effects); *CBD v. Salazar*, 804 F.  
Supp. 2d at 1001-04 (requiring the mitigation measures to be certain to occur; guarantees  
as to the future effects or outcomes of those measures is not required).

1 **CONSIDERATION OF RELEVANT FACTORS AS TO AQUATIC SPECIES:**  
2 **PRIVATE WELLS AND WATER CONTAMINANTS**

3 Plaintiff argues that in the course of evaluating jeopardy and adverse modification  
4 of critical habitat as to various listed aquatic species impacted by the Rosemont Mine, the  
5 FWS failed to consider cumulative impacts of groundwater drawdown, in relation to  
6 existing and potential private wells in the area (Cienega Creek), and likewise failed to  
7 consider toxic heavy metal contaminants seeping into ground and surface water from  
8 materials at the Rosemont Mine. As these issues could have an impact on listed species or  
9 their critical habitat, Plaintiff argues they are relevant factors left unaddressed by the FWS,  
10 thereby undermining the BiOp.

11 Defendants argue that a review of the record reflects that these factors were  
12 considered throughout the ongoing consultation process between both the FWS and Forest  
13 Service, and therefore Plaintiff's claims on this ground fail; the Court agrees.

14 ***Private Wells***

15 As to private wells, Plaintiff primarily relies on comments made by a consulting  
16 agency (i.e., the Bureau of Land Management – “BLM”) whereby it raised concerns about  
17 private wells: proliferating the watershed over time, withdrawals exceeding recharge  
18 impacting groundwater levels, and the additive effect of these wells on top of the Rosemont  
19 Mine and climate change accelerating the decline of water in the area.

20 The record reflects that the FWS and Forest Service were aware of such issues, and  
21 considered them in the BiOp, FEIS, and the Forest Service's 2015 Supplemental  
22 Information Report (“SIR”).<sup>22</sup> For example, the Forest Service discussed how increased  
23 basin pumping in the area is likely, and that such increases could impact aquatic species.  
24 See SIR at p. 82 (“There is no doubt that the installation and pumping of nearby wells can  
25 impact the aquatic resources within the Las Cienegas NCA . . . Growth is as likely to occur  
26 . . . in Sonoita (the same groundwater basin as the Las Cienegas NCA), and it is as likely

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27 <sup>22</sup> The FWS specifically noted that the BiOp relied on and incorporated information from  
28 the Forest Service, including the FEIS, SIR, and other Forest Service materials throughout  
consultation. See 2016 BiOp at p. 2.

1 to consist of many widely distributed exempt wells as it is to consist of a few large-diameter  
2 irrigation wells located directly adjacent to the Las Cienegas NCA boundary. That  
3 additional water use will occur in the basin is highly likely . . .”).

4 While cognizant of the pumping issues from private wells, the Forest Service also  
5 recognized that quantifying such effects was very problematic,<sup>23</sup> especially considering  
6 that many other stressors were at play such as climate change. *See* SIR at p. 83 (“It is clear  
7 that a wide variety of additional stresses to the aquifer, both foreseen and unforeseen, could  
8 happen in the Cienega Creek basin: increased pumping and development, climate change,  
9 cyclic droughts, major fires, land use changes such as grazing, insect outbreaks,  
10 management decisions such as beaver reintroduction, and invasive species, just to name a  
11 few. Any or all of these could cause cumulative stress on top of predicted mine  
12 drawdown.”).

13 Nonetheless, the Forest Service considered well pumping along with other relevant  
14 factors in evaluating impacts to the area. *See* SIR at 84-85 (“Despite this uncertainty, the  
15 Forest Service has evaluated the application of [the stress scenario to the area] in  
16 conjunction with the mine drawdown . . . There is a shared understanding among Federal  
17 specialists that the riparian system along Cienega Creek . . . is currently stressed from  
18 ongoing drought conditions. There is also a shared belief that such conditions will only get  
19 worse in the future due to climate change or development pressure. Equally, there is a  
20 shared understanding that while the mine has no responsibility for these other potential  
21 stresses, the mine drawdown will not occur in a vacuum, but will occur in an environment  
22 where these other stresses are likely to be degrading the riparian system. The additional  
23 stresses that could impact the system are illustrated in figure 9 [at p. 85 of the SIR, which  
24 addresses] . . . . Range of estimated water demand from basin pumping [along with] . . .  
25 estimated range of current and future aquifer stresses in the Cienega Creek basin . . .”).

26 Likewise, these issues were considered by the FWS and Forest Service in the BiOps

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27 <sup>23</sup> For example, the Forest Service found that pumping impacts could not be reasonably  
28 quantified; it found it speculative to accurately predict locations of future pumping in the  
area. *See* SIR at pp. 82-85.

1 and FEIS. *See* FS0237049 (basin pumping, although speculative, has been analyzed in the  
2 FEIS as an ongoing trend); FS0237247 (discussing increasing domestic groundwater  
3 pumping as an exacerbating factor when analyzing potential impacts to perennial streams  
4 and riparian areas); FS0237268-70 (discussion of basin pumping as an exacerbating factor  
5 connected to perennial stream flows, and the overall qualitative effect of basin pumping on  
6 predictions of streamflow impact); FWS046553 (2013 BiOp discussing incremental effect  
7 of basin pumping on the Gila chub); FWS049421 (2016 BiOp discussion of cumulative  
8 effects of basin pumping and the Gila chub).

9 The record reflects that the FWS and Forest Service considered issues relating to  
10 private wells in the pertinent basin, and its potential impact on habitat and species;  
11 Plaintiff’s arguments as to this issue are denied. Summary judgment is granted in favor of  
12 Defendants as to this issue and denied as to Plaintiff.

13 ***Water Pollution***

14 As to the toxic heavy metals issue, Plaintiff primarily relies on comments made by  
15 consulting agencies (including the Arizona Game and Fish Department (“AGFD”), the  
16 EPA, and BLM) whereby concerns are raised about: contaminants escaping the Rosemont  
17 Mine site, that the Rosemont Mine pit would not adequately contain contaminants, that  
18 there would be seepage from the tailings and waste rock piles, and that contaminants from  
19 the Rosemont Mine site (such as silver, cadmium, arsenic, lead, mercury and selenium)  
20 could enter the groundwater and surrounding surface water, and exceed water quality  
21 standards.

22 The record reflects that the FWS and Forest Service considered these issues  
23 throughout the consultation process.

24 The FWS found that: “Discharges to groundwater are not expected to exceed water  
25 quality standards; if they occur, the cone of depression associated with the mine pit is  
26 predicted to capture water contaminants and prevent their movement to streams in the  
27 action area. In addition, the ADEQ [i.e., the Arizona Department of Environmental  
28 Quality] has issued their 401 water quality certification for the project and has determined

1 that the project is not expected to violate surface water quality standards. Therefore, no  
2 impacts to Gila chub or designated critical habitat due to potential water contaminants are  
3 anticipated given the information in the various [Biological Assessments]. As stated in the  
4 Environmental Baseline section, above, Gila chub occur in Cienega Creek and 22.9 mi (37  
5 km) of the mainstem and tributaries (Mattie Canyon and Empire Gulch) are designated as  
6 critical habitat.” FWS49403.<sup>24</sup>

7 The analysis of the ADEQ, who issued the Clean Water Act (“CWA”) certification  
8 for the Rosemont Mine, supports the FWS’ determination.

9 As to seepage, the ADEQ found that: “[S]eepage is not expected to occur from the  
10 waste rock facility or tailings . . . In the event that seepage would daylight [i.e., escape] in  
11 downstream surface waters, it is unlikely that it would exceed surface water quality  
12 standards . . . The placement of waste rock will be contained by perimeter buttresses,  
13 including the perimeter of the dry-stack tailings storage areas to provide structural and  
14 erosional stability of the tailings pile . . . . Tailings will be stored using a dry stack  
15 technique minimizing airborne releases and water seepage. Building the buttresses and  
16 encapsulating the dry stack tailings in waste rock is expected to be beneficial [for] the  
17 prevention of infiltration of precipitation through the tailings and provision of large  
18 volumes of acid neutralizing waste rock.” FWS049285-86.

19 In addition, to address any potential seepage from waste rock, the ADEQ  
20 emphasized that “the Forest Service has included mitigation measure[s] . . . which requires  
21 placement of lysimeters or other collection equipment within the waste rock facility in  
22 order to monitor the presence of seepage and allow for analysis of any leachate prior to  
23 reaching the aquifer or surface waters.” FWS049286.

24 As to surface water discharges related to stormwater, the ADEQ discussed how  
25 stormwater management would minimize such issues: “[T]he open pit and plant site are  
26 closed systems with direct rainfall contained on site in the lined process water/temporary  
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28 <sup>24</sup> The analysis related to the Gila Chub and water conditions also generally applies to other  
aquatic and riparian species. *See* FWS049349.

1 storage pond or the lined settling basin. Other stormwater design features include two  
2 diversion channels. The pit diversion channel will divert unimpacted stormwater around  
3 the west and south side sides of the open pit . . . Water in the channel will be directed to  
4 the perimeter containment area located along the west side of the waste rock storage area.”  
5 FWS049286.

6 To further control runoff from the Rosemont Mine, ADEQ noted that “Rosemont  
7 will employ sediment control structures to temporarily capture stormwater for the purpose  
8 of slowing velocities, reducing total suspended sediments, and serve as a location for  
9 sample collection for monitoring purposes, prior to releasing flows downstream.  
10 Downstream of the waste rock facility at the toe of the slope, separate sediment control  
11 structures will be placed on both the Barrel Canyon drainage and the Trail Creek drainage.”  
12 *Id.*

13 Furthermore, the ADEQ discussed how Synthetic Precipitation Leaching Procedure  
14 (“SPLP”) testing was done on a variety of core samples representing the major anticipated  
15 waste rock types from the Rosemont Mine; the SPLP testing is used to determine the  
16 mobility/“leachability” of contaminants in liquids, soils and wastes. *Id.* Based on that  
17 testing, the predicted water quality runoff would not exceed any applicable surface water  
18 quality standards except for potentially dissolved silver. *Id.* However, upon a more  
19 thorough review of the data and closer analysis of the samples and reported hardness values  
20 for those samples, the ADEQ found little likelihood that dissolved silver would exceed  
21 surface water quality standards; rather, based on its review of the data, ADEQ concluded  
22 that “it is unlikely that runoff from the waste rock facility will exceed any surface water  
23 quality standard.” FWS049287; *see also* FS0106495 (ADEQ certifying that: “[T]he  
24 Rosemont [Mine] will not violate applicable surface water quality standards (SWQS) . . .  
25 in the subject water bodies including McCleary, Wasp, Trail, Barrel and Davidson  
26 Canyons, and Cienega Creek in the Santa Cruz River Watershed . . .”).

27 Likewise, the Forest Service considered measures employed at the Rosemont Mine  
28 to reduce or eliminate contaminants being released into water sources. *See* FWS110520

1 (“[P]ermitted facilities must use the best available demonstrated control technology to  
2 minimize or eliminate discharges . . . Prescriptive control technologies are generally  
3 considered to be the more conservative and protective approach . . . Rosemont chose to  
4 adopt prescriptive best available control technologies in their permit application . . .  
5 Permitted facilities include the dry-stack tailings facility (unlined), the process water  
6 temporary storage pond (lined), the primary settling basin (lined), the raffinate pond  
7 (lined), the heap leach pad (lined), the pregnant leach solution pond (lined), the stormwater  
8 pond (lined), the waste rock facility (unlined), and the nonmunicipal solid waste landfill  
9 (lined).”). As to waste rock, and other geologic features at the Rosemont Mine, the Forest  
10 Service determined that: “As a whole, the body of waste rock is expected to have little  
11 potential for acid rock drainage, as there are significant quantities of acid-neutralizing rock  
12 and relatively little potentially acid-generating waste rock. However, proper placement of  
13 these two types of waste rock is necessary to take advantage of the acid neutralization  
14 potential. A waste rock segregation plan has been incorporated into the design of the  
15 facility and would be informed by continued monitoring and testing of waste rock for  
16 acid-generating potential as it is developed from the mine and placed into the waste rock  
17 facility. Proper implementation of the waste rock segregation plan would be effective at  
18 reducing the potential for impacts to surface water quality.” *Id.*; *see also* FWS110423  
19 (“[There will be] a cone of depression in the groundwater table around the mine pit as a  
20 result of active pumping of the mine pit during active mining and as a result of evaporation  
21 from the mine pit in perpetuity after mine closure. The cone of depression that occurs  
22 encompasses the area beneath the heap leach facility . . . While the liner and collection  
23 systems are designed to and are fully expected to capture all seepage . . . any seepage that  
24 inadvertently infiltrated to groundwater would move toward and be contained in the pit  
25 lake . . . [Even if there was seepage, it] is not expected to exceed any numeric Arizona  
26 Aquifer Water Quality Standard, [and] there would be no water quality impacts from  
27 seepage flow away from the mine site . . .”).

28 The Forest Service recognized that concerns had been raised by cooperating

1 agencies about tailings seepage entering the aquifer and entering Barrel Canyon  
2 downstream of the mine; this issue was analyzed in the “Groundwater Quality and  
3 Geochemistry” resource section of the FEIS, and it was determined that “the probability of  
4 tailings ‘daylighting’ in Barrel Canyon is low.” FWS110510; *see also* FWS110416-17  
5 (“Cooperating agencies have raised concerns about the potential for tailings seepage, which  
6 is expected to occur at a rate of about 8.4 gallons per minute, to migrate downstream as  
7 subsurface flow in shallow alluvial sediments, eventually returning to the surface as a seep  
8 or spring. The amount of tailings seepage equals about 13 acre-feet per year. This amount  
9 is less than 1 percent of the average annual runoff in Barrel Canyon. As no seeps or springs  
10 occur in the alluvial materials of Barrel Canyon upstream of SR 83 under current  
11 conditions, the addition of this amount of seepage is unlikely to result in new seeps.  
12 However, if tailings seepage were to daylight or appear at the surface downstream, none of  
13 the concentrations reported in the tailings seepage would exceed the applicable surface  
14 water quality standards in Barrel Canyon.”).

15         The Forest Service also considered design features at the Rosemont Mine that would  
16 minimize water infiltration and the spread of contaminants into surrounding waters. *See*  
17 FWS110053 (“The general design concept for managing stormwater from the dry-stack  
18 tailings facility is to minimize infiltration of water in the tailings and prevent discharge of  
19 stormwater that comes in contact with the tailings. This would be accomplished by  
20 constructing uniform lifts of dry tailings that are buttressed by waste rock. The buttresses  
21 would be built around the tailings surface for containment and erosion control. The top of  
22 the tailings facility would be relatively impervious. That is, all precipitation would remain  
23 on top of the tailings facility to evaporate. If water ponds on top of the tailings facility, it  
24 would be pumped to the process water temporary storage pond to limit infiltration into the  
25 tailings facility. Diversion channels would be constructed during the premining phase to  
26 direct surface runoff that has not contacted tailings from the outer waste rock shell slopes  
27 into either sediment ponds or to adjacent drainages and then to a sediment control structure  
28 . . . Stormwater from above the mine pit would be diverted around the pit and plant site.



1 During the active mining phase, stormwater that falls within the mine pit and associated  
2 disturbed areas, especially stormwater that comes into contact with ore, would be contained  
3 onsite and used for mining and processing purposes. Postclosure, any stormwater that  
4 enters the pit would be retained and would contribute to the pit lake.”); FWS110043  
5 (“[T]he tailings would be encapsulated, or covered completely, by a thick layer of waste  
6 rock.”).

7 Moreover, the Forest Service required continual monitoring for seepage of  
8 contaminants, and corrective action would be required to address any issues. *See*  
9 FWS110416 (“While the [Forest Service] has undertaken analysis that concludes it is  
10 unlikely that seepage would occur from the waste rock facility due to infiltration of  
11 precipitation, in consideration of the public concerns raised about this potential, a  
12 monitoring component has been incorporated into the mitigation and monitoring plan . . .  
13 Lysimeters or other collection equipment would be placed within the waste rock facility in  
14 order to monitor for the presence of seepage and allow for analysis of any leachate.”);  
15 FWS111735-36 (“The waste rock facility is not predicted to allow infiltration of  
16 precipitation and subsequent seepage. Monitoring equipment . . . would be encapsulated  
17 within the waste rock and allow for collection analysis of seepage if any is generated . . .  
18 [M]oisture content [would be monitored] on a quarterly basis to ensure lack of seepage . . .  
19 [There will be] groundwater quality sampling . . . [to determine] in situ changes in the  
20 quality of Coronado National Forest groundwater resources . . .”); FWS049284 (“The  
21 Forest Service is requiring monitoring of surface water and groundwater to determine  
22 impacts and installation of lysimeters in the water rock and tailings piles to monitor for  
23 possible seepage from facilities . . . [if necessary] corrective actions to address the issues  
24 [will be required].”).

25 The record is replete with discussions of ground and surface water controls,  
26 geochemistry and groundwater quality testing and monitoring, estimated water quality  
27 related to tailings and waste rock seepage, monitoring to assess acid rock drainage, and  
28 conclusions that mitigation would be effective, and that surface water quality standards

1 would be satisfied. *See, e.g.*, FWS110052, FWS110091, FWS110399-401, FWS110401,  
2 FWS110405, FWS110411-13, FWS110414-18, FWS0110423, FWS110433-34,  
3 FWS110481, FWS110483, FWS110505-10, FWS110516, FWS110520.

4 The record reflects that the FWS and Forest Service considered issues relating to  
5 contaminants impacting ground and surface water, and its potential impact on habitat and  
6 species; Plaintiff's arguments as to this issue are denied. Summary judgment is granted in  
7 favor of Defendants as to this issue and denied as to Plaintiff.

8 **DESTRUCTION OR ADVERSE MODIFICATION DEFINITION WITHIN THE**  
9 **2016 BIOP**

10 Plaintiff argues that the FWS impermissibly defined destruction or adverse  
11 modification as one term, and thereby unlawfully read "destruction" out of the definition  
12 of "destruction or adverse modification" in violation of *Gifford Pinchot Task Force v. FWS*,  
13 378 F.3d 1059 (9th Cir. 2004). The Court disagrees.

14 Prior regulations under the FWS defined "destruction or adverse modification" as a  
15 "direct or indirect alteration that appreciably diminishes the value of critical habitat for  
16 both the survival and recovery of a listed species. Such alterations include, but are not  
17 limited to, alterations adversely modifying any of those physical or biological features that  
18 were the basis for determining the habitat to be critical." *Gifford Pinchot Task Force*, 378  
19 F.3d at 1069 (quoting 50 C.F.R. § 402.02 (2004)). The Ninth Circuit held that this  
20 definition effectively read recovery out of the ESA's conservation goals; however, it did  
21 not comment on the fact that there was a single definition for "destruction or adverse  
22 modification." *See id.* at 1069-70. In 2016, the FWS adopted new regulations that  
23 superseded the prior regulation: "Destruction or adverse modification means a direct or  
24 indirect alteration that appreciably diminishes the value of critical habitat for the  
25 conservation of a listed species. Such alterations may include, but are not limited to, those  
26 that alter the physical or biological features essential to the conservation of a species or  
27 that preclude or significantly delay development of such features." 50 C.F.R. § 402.02

28

1 (2016).<sup>25</sup>

2 The FWS used the 2016 definition of destruction or adverse modification in the  
3 amended BiOp, stating: “Specifically, we finalized the following regulatory definition:  
4 ‘Destruction or adverse modification means a direct or indirect alteration that appreciably  
5 diminishes the value of critical habitat for the conservation of a listed species. Such  
6 alterations may include, but are not limited to, those that alter the physical or biological  
7 features essential to the conservation of a species or that preclude or significantly delay  
8 development of such features.’” FWS054335 (quoting 50 C.F.R. § 402.02 (2016)).  
9 Plaintiff argues that because there is an “or” between “destruction” and “adverse  
10 modification,” the FWS must construct two separate definitions. (Doc. 107 at 56.) Plaintiff  
11 argues that the current framework simply reads “destruction” out of the statute, and thereby  
12 permits partial destruction of a species’ critical habitat as long as the destruction does not  
13 “appreciably diminishe[] the value of critical habitat.” (Doc. 141 at 36-37 (citing *Butte*  
14 *Envtl. Council v. U.S. Army Corps of Engineers*, 620 F.3d 936, 948 (9th Cir. 2010)).) As  
15 Defendants emphasize, however, *Butte Environmental Council* included destruction when  
16 considering adverse modification, but concluded that the areas destroyed would not  
17 “appreciably diminish[] the value of the critical habitat for the species’ survival or  
18 recovery.” (Doc. 157 at 24 (citing 620 F.3d at 947-78).) Defendants argue that “destruction  
19 or adverse modification” presents overlapping terms, or a continuum, and to apply the  
20 terms separately would risk a gap in the ESA’s protective coverage. (Doc. 121 at 43.) This  
21 concern echoes the FWS’ response to comments in the Final Rule amending the definition.  
22 AMR-8570, 81 Fed. Reg. 7221 (“Independently defining ‘destruction’ and ‘adverse  
23 modification’ would unnecessarily complicate the process without improving it or  
24 changing the outcome.”).

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26 <sup>25</sup> On October 28, 2019, a new definition became effective. It is substantively the same,  
27 and is not implicated in the current litigation; the current definition is “Destruction or  
28 adverse modification means a direct or indirect alteration that appreciably diminishes the  
value of critical habitat as a whole for the conservation of a listed species.” 50 C.F.R.  
§ 402.02 (2019).

1 This challenge must be interpreted under the familiar *Chevron* framework. *Gifford*  
2 *Pinchot Task Force*, 378 F.3d at 1069 n. 6. The Ninth Circuit and Congress have used  
3 “adverse modification” as shorthand for “destruction or adverse modification.” See 16  
4 U.S.C. § 1536(b)(3)(A) (providing alternatives for jeopardy or adverse modification  
5 without mention of destruction); *Butte Env'tl. Council*, 620 F.3d at 947-48 (finding that  
6 destruction of an area of critical habitat does not necessarily rise to the regulatory definition  
7 of “adverse modification.”); *Gifford Pinchot Task Force*, 378 F.3d at 1069; Doc. 107 at 10  
8 (citing § 1536(b)(3)(A)) (using “adverse modification” as shorthand for “destruction or  
9 adverse modification”). The FWS’ definition of “destruction or adverse modification”  
10 comports with the intent of the ESA and the relevant language of the statute; a continuum  
11 guards against gaps in coverage under the ESA and ensures that destruction still receives  
12 consideration for reasonable and prudent alternatives under subsection 1536(b)(3)(A).  
13 Summary judgment is granted in favor of Defendants as to this issue<sup>26</sup> and denied as to  
14 Plaintiff.

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23 <sup>26</sup> On a closely related note, citing *Bennett v. Spear*, 520 U.S. 154 (1997), Plaintiff argues  
24 that the BiOp is an unlawful revision of the jaguar’s designated critical habitat inasmuch  
25 as it fails to follow statutory mandates to make such a revision. 520 U.S. at 172 (holding  
26 that courts may review a claim implicating a biological opinion that implicitly creates  
27 critical habitat without the procedures required for such a designation). *Bennett* is  
28 inapplicable; the holding in *Bennett* arose under materially different circumstances than  
those implicated in this case. *Id.* Rather, Plaintiff’s claim that the critical habitat has been  
revised is essentially a reiteration of its argument relating to “destruction or adverse  
modification”; summary judgment is granted in favor of Defendants as to this issue and  
denied as to Plaintiff.

1 **ROSEMONT’S CROSSCLAIMS: CRITICAL HABITAT ANALYSIS OF THE**  
2 **JAGUAR**

3 In 2014, the FWS issued a final rule designating critical habitat for the jaguar in  
4 Arizona and New Mexico. The jaguar critical habitat designation of Unit 3 and Subunit 4b  
5 falls within the action area of the Rosemont Mine and adds a layer of environmental  
6 protection that may impact operations of the mine. Rosemont brought crossclaims  
7 challenging the designation of the critical habitat potentially affected by the Rosemont  
8 Mine, Unit 3 and Subunit 4b.

9 Occupied (Unit 3)

10 As a threshold matter as to Unit 3, which was designated as occupied, Rosemont  
11 argues that the FWS unreasonably designated the northern Santa Rita Mountains in Unit 3  
12 as occupied. The Court agrees. The United States District Court for the District of New  
13 Mexico recently considered this very question in relation to other units in the jaguar critical  
14 habitat and held that the FWS’ occupation designation in the contested units was  
15 unreasonable. *N.M. Farm & Livestock Bureau v. U.S. Dep’t of Interior*, No.  
16 2:15-cv-00428-KG-CG, 2017 WL 4857444, at \*3 (D.N.M. Oct. 25), *appeal filed*, No.  
17 17-2211 (10th Cir. Dec. 12, 2017). The Court finds this persuasive.

18 As required by the ESA, the FWS focused on whether an area was occupied at the  
19 time of listing.<sup>27</sup> 79 Fed. Reg. 12581; *see* 16 U.S.C. § 1532(5)(A). The FWS must consider  
20 if Unit 3 was occupied within a reasonable time, which is often determined by the lifespan  
21 of the species, surrounding the listing decision. *N.M. Farm & Livestock Bureau*, 2017 WL  
22 4857444, at \*4; *see All. for Wild Rockies v. Lyder*, 728 F. Supp. 2d 1126, 1144-45 (D.  
23 Mont. 2010) (finding that an eight-year cutoff was appropriate because it was based on the  
24 lifespan of a lynx). It was reasonable for the FWS to consider sightings between 1962 and  
25 1982, as the time of listing was 1972, and the average lifespan of a jaguar is ten years.  
26 Sightings or evidence outside the reasonable timeframe, 1962 to 1982, should not have

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<sup>27</sup> For this matter, the Court will consider 1972 the date of listing. *See N.M. Farm & Livestock Bureau*, 2017 WL 4857444, at \*4.

1 been considered. *See N.M. Farm & Livestock Bureau*, 2017 WL 4857444, at \*3-4. The  
2 FWS based their occupied designation on one Class I<sup>28</sup> sighting in the Patagonia Mountains  
3 in 1965 and photos taken from October 2012 through September 2013 in the Santa Rita  
4 Mountains of a male jaguar. F000393. The Court agrees with the District Court for New  
5 Mexico and finds that this is insufficient for an occupied designation of the northern Santa  
6 Rita Mountains in Unit 3.

7 The Court finds that the FWS unreasonably relied on evidence that is counter to  
8 Congress' intention that the agency consider occupancy at the time of listing, not at the  
9 time of designation or some undefined period. The FWS acknowledged the "uncertainty"  
10 of the occupied designation for Unit 3. 79 Fed. Reg. 12582. Because critical habitat may  
11 be designated for occupied and unoccupied areas, the FWS considered if Unit 3 satisfied  
12 the unoccupied critical habitat requirements. 79 Fed. Reg. 12582. The designation of  
13 occupied or unoccupied affects what procedure the FWS must use to designate the area as  
14 critical habitat. *Salazar*, 606 F.3d at 1163 ("imposing a more onerous procedure on the  
15 designation of unoccupied areas"). The Court will, therefore, consider if Unit 3 and Subunit  
16 4b<sup>29</sup> were properly designated as critical habitat under the more onerous unoccupied  
17 procedure.

18 *Unoccupied (Unit 3 and Subunit 4b)*

19 Rosemont argues that the FWS impermissibly lowered the "essential" standard for  
20 unoccupied critical habitat to designate land that is not "indispensable" to the long-term  
21 survival and recovery of the entire jaguar species.<sup>30</sup> The Court disagrees.

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23 <sup>28</sup> The FWS defines a Class I record as those with physical evidence for verification and  
considered them "verified" or "highly probable."

24 <sup>29</sup> The FWS designated Subunit 4b as unoccupied in the final rule; its occupancy  
25 designation was not challenged.

26 <sup>30</sup> Rosemont argues that the FWS failed to find that the present range was inadequate for  
27 recovery. The Ninth Circuit has already dismissed this argument. *Bear Valley Mut. Water*  
28 *Co. v. Jewell*, 790 F.3d 977, 994 (9th Cir. 2015) ("[I]f certain habitat is essential, it stands  
to reason that if the [FWS] did not designate this habitat, whatever the [FWS] otherwise  
designated would be inadequate. . . . [T]he regulation provides only elaboration and not an  
additional requirement or restriction.") (fourth alteration in original). As discussed herein,

1           The ESA and its implementing regulations allow for unoccupied critical habitat if  
2 the area is “essential for the conservation of the species.” *Salazar*, 606 F.3d at 1163.  
3 Because critical habitat’s purpose is “for the government to carve out territory that is not  
4 only necessary for the species’ survival but also essential for the species’ recovery[,] . . .  
5 FWS [must] be *more generous* in defining area as part of the critical habitat designation.”  
6 *Home Builders Ass’n of N. Cal. v. FWS*, 616 F.3d 983, 989 (9th Cir. 2010) (emphasis in  
7 original) (finding that not every essential element must be in every critical habitat).

8           The record shows that the FWS applied the appropriate “essential” standard<sup>31</sup> to the  
9 jaguar. The FWS determined that Unit 3 is essential, including: (1) “recent (since 1996)  
10 occupancy”; (2) it contains “features that comprise suitable jaguar habitat”; and (3) it  
11 allows “the normal demographic function and possible range expansion of the proposed  
12 Northwestern Recovery Unit, which is essential to the conservation of the species.”  
13 F000388. The FWS determined that Subunit 4b is essential, including: “(1) Connect[s] an  
14 area that may have been occupied that is isolated within the United States to Mexico, either  
15 through a direct connection to the international border or through another area that may  
16 have been occupied; and (2) contain[s] low human influence and impact, either vegetative  
17 cover or rugged terrain.” F000389; F000394 (Subunit 4b “is essential to the conservation  
18 of the jaguar because it contributes to the species’ persistence by providing connectivity to  
19 occupied areas.”).

20           The record supports FWS’ determination that Unit 3 and Subunit 4b are essential to  
21 the recovery of the jaguar species. The FWS properly relied on the Jaguar Recovery Team’s  
22 Recovery Outline and Northwestern Recovery Unit (“NRU”).<sup>32</sup> F000374. The NRU is one

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23 the FWS correctly found that the unoccupied land is essential, and therefore implicitly  
24 found that the current habitat was inadequate.

25 <sup>31</sup> Rosemont argues that the appropriate definition of essential is “indispensable.” The  
26 Court finds that this higher standard would not be in accordance with the intent of the ESA.  
27 *See Home Builders Ass’n of N. Cal.*, 616 F.3d at 989 (stating the government is required to  
be “*more generous*” when designating critical habitat) (emphasis in original).

28 <sup>32</sup> Rosemont argues that reliance on the NRU effectively treats the jaguars within the unit  
as a subspecies. The Court disagrees; the NRU is for the benefit of the entire species, not  
just the jaguars within it, and supporting it is essential to the recovery of the entire species.

1 of two units, which were designed for recovery of the species as a whole. F000374  
2 (describing the preliminary strategy for recovery of the species and that the NRU “is  
3 essential for the conservation of the species[.]”); R003510 (“Ultimately, the long-term  
4 recovery needs for the jaguar throughout its range focus on the stabilization of core area  
5 populations, the expansion of the core areas, and the maintenance of secondary areas that  
6 provide connectivity between core areas and that could allow for range expansion and  
7 genetic exchange.”); R003512-14 (describing the importance of the NRU to the species).  
8 The designated critical habitat is within the NRU’s secondary habitat.

9         The secondary habitat in the United States is at the northern extreme of the jaguar  
10 range and is ecologically distinct. F000374 (describing the habitat in the United States as  
11 “the northernmost extent of the jaguar’s current range, with populations persisting in one  
12 of only four distinct xeric (extremely dry) habitats that occur within the species’ range.”);  
13 F000373 (describing the arid habitat in the borderlands area as “quite different from habitat  
14 in Central and South America.”). These relatively small areas, in proportion to the entire  
15 range, are essential to the survival of a species. Ecologically distinct habitat is essential to  
16 the jaguar’s recovery. R002484 (prioritizing protecting jaguars in “all the significantly  
17 ecological settings in which they occur”). It is essential that species are protected in all  
18 their ecological settings because this provides protection from climate change and more  
19 adaptability. F000374.

20         Periphery populations and habitats have benefits for conservation of the entire  
21 species and, accordingly, are important to the recovery of species. F000374 (citing to the  
22 TECHNICAL SUBGROUP OF THE JAGUAR RECOVERY TEAM, RECOVERY OUTLINE FOR THE  
23 JAGUAR 19-20, R003491-92 (2012) and TERRY B. JOHNSON, WILLIAM E. VAN PELT, AND  
24 JAMES N. STUART, JAGUAR CONSERVATION ASSESSMENT FOR ARIZONA, NEW MEXICO  
25 AND NORTHERN MEXICO 30-31 (2011); Rob Channell and Mark V. Lomolino, *Dynamic*

26 \_\_\_\_\_  
27 R003512 (“Each designated recovery unit is critical to recovering the jaguar throughout its  
28 entire current range.”); F000374; F000416; *see N.M. Farm & Livestock Bureau*, 2017 WL  
4857444, at \*4 (affirming the jaguar critical habitat and positively referring to the Recovery  
Outline).



1 *Biogeography and Conservation of Endangered Species*, 403 NATURE 84, 84-85 (2000));  
2 R002248 (discussing units of priority and effectiveness of effort, and listing the extreme  
3 northern parts of the jaguar range). These periphery areas provide dispersal area, buffer for  
4 reproduction zones, and area for cyclical expansion of the core areas. F000374; R003493  
5 (“secondary areas may contribute to jaguar persistence by providing habitat to support  
6 jaguars during dispersal movements, by providing small patches of habitat (perhaps in  
7 some cases with a few resident jaguars), and as areas for cyclic expansion and contraction  
8 of the core areas.”). Additionally, populations at the edge of a species’ range often hold the  
9 key to genetic diversity and persistence of the species. F000374; R001507-08.

10 Connecting land is essential for genetic diversity, especially in fragmented areas.  
11 *see Fisher v. Salazar*, 656 F. Supp. 2d 1357, 1367 (N. D. Fla. 2009). This land is used to  
12 connect different breeding populations in Mexico. R003485. The critical habitat is a  
13 mountainous area of Arizona with ranges separated by valley bottoms. F000383.  
14 Connection corridors are essential, but often under-protected. *Id.*; R002246 (discussing the  
15 importance of corridors and connectivity and the insufficiency in which they have been  
16 addressed).

17 In light of the foregoing, Unit 3 and Subunit 4b are essential to the jaguar species’  
18 conservation;<sup>33</sup> accordingly, summary judgment is granted in favor of the FWS as to this  
19 issue and denied as to Rosemont.<sup>34</sup>

## 20 **CONCLUSION**

21 As discussed above, the Court has identified several issues that require remand; the  
22 Court partially grants Plaintiff’s cross-motions for summary judgment, vacates the flawed  
23 agency actions, and remands them back to the appropriate agency in accordance with the  
24 findings of this Order. *See* 5 U.S.C. § 706(2)(A) (“[t]he reviewing court shall . . . hold

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25 <sup>33</sup> Assuming, *arguendo*, that Unit 3 is occupied, the Court would find that the FWS properly  
26 designated it as critical habitat.

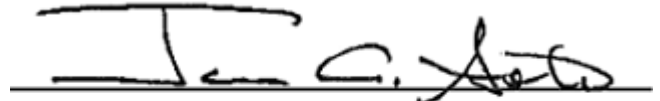
27 <sup>34</sup> Rosemont argues that the FWS failed to conduct 5-year reviews of the endangered status  
28 of jaguars as required by the ESA. The FWS initiated a review in May 2018. (Doc. 166 at  
44.) The FWS is presently conducting a status review; this issue is moot. Summary  
judgment is granted in favor of the FWS as to this issue and denied as to Rosemont.

1 unlawful and set aside” unlawful agency actions).<sup>35</sup>

2 Defendants’ cross-motions for summary judgment as to the Complaint are granted,  
3 in part, and denied, in part, in accordance with this Order. The Court denies Rosemont’s  
4 cross-motions for summary judgment on its crossclaims, and Plaintiff’s and the FWS’  
5 cross-motions for summary judgment on Rosemont’s crossclaims are granted.

6 The Clerk of the Court shall enter judgment in accordance with this Order, and close  
7 the file in this case.

8 Dated this 10th day of February, 2020.

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12 Honorable James A. Soto  
13 United States District Judge  
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<sup>35</sup> As referenced at the beginning of this Order, the motion for stay is denied.