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United States District Court, D. Arizona.

Center for Biological Diversity, et al., Plaintiffs,

v.

United States Fish and Wildlife
Service, et al., Defendants.

No. CV-17-00475-TUC-JAS (L)

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No. CV-17-00576-TUC-JAS (C)

|

No. CV-18-00189-TUC-JAS (C)

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02/10/2020

No. CV-17-00475-TUC-JAS (L) No.
CV-17-00576-TUC-JAS (C) No. CV-18-00189-
TUC-JAS (C) **CONSOLIDATED ORDER**

*1 Pending before the Court are the parties' cross-motions for summary judgment as to the Complaint (Docs. 106, 119, 121),¹ the parties' cross-motions for summary judgment as to Rosemont Copper Company ("Rosemont")'s crossclaims (Docs. 103, 114, 116), and the Federal Defendants' Motion to Stay (Doc. 252).² The Motion to Stay (Doc. 252) is denied. The Court finds that the *Landis* test, as applied in the Ninth Circuit, does not support a stay in this case. Accordingly, the Court will issue a ruling on the remaining matter.

SECTION ONE: FACTUAL AND PROCEDURAL BACKGROUND

The facts are well known to the parties and were discussed in the Court's previous Order (Doc. 248).³ The Court will not provide an extensive recitation of the facts; however, the Court may repeat some of the facts here to prevent unnecessary cross-referencing.

The United States Fish and Wildlife Service ("FWS") and the United States Forest Service ("Forest Service") consulted on Rosemont's proposal for a large-scale open-pit-mining operation within the boundaries of the Coronado National Forest on the east side of the Santa Rita Mountains ("Rosemont Mine"). The Santa Rita Mountains lie to the south of Tucson, Arizona and are within the Coronado

National Forest, which is managed by the Forest Service. The Rosemont Mine is projected to impact thousands of acres of the Santa Rita Mountains and many species in the surrounding area. The FWS and the Forest Service completed consultation when the FWS issued the 2016 Biological Opinion ("BiOp").⁴ In consultation with the FWS, the Forest Service issued a Final Environmental Impact Statement ("FEIS") and a Record of Decision ("ROD") approving the "Barrel Alternative" for the Rosemont Mine. This was the culmination of years of study, review, and analysis.

The Rosemont Mine

The open-pit mine itself, which contains the valuable minerals (primarily copper) that Rosemont proposes to extract, will directly impact approximately 955 acres of land.⁵ After Rosemont has completed extraction of material from the pit over the next 20 to 25 years, the circular pit will measure approximately 3,000 feet in depth and 6,000 feet in diameter.⁶ In the course of digging through 3,000 feet of geologic material, Rosemont will penetrate the wall of the groundwater table lying beneath the Santa Rita Mountains and will need to pump groundwater out of the pit to continue their mining operations. After Rosemont ceases its mining operations in 20 to 25 years, Rosemont will turn off the pumps, and the pit will act as a hydraulic sink such that the pit will fill with groundwater. To gain access to the valuable copper, molybdenum, and silver in the ore, Rosemont will have to extract approximately 1.2 billion tons of waste rock (i.e., geologic material without economic value) and approximately 700 million tons of tailings (i.e., waste material left over after extracting the valuable fraction from the uneconomic fraction of the ore) (collectively "1.9 billion tons of waste"). The Rosemont Mine will impact approximately 3,653 acres of the Coronado National Forest. Outside of the 955-acre pit, Rosemont will dump approximately 1.9 billion tons of waste on approximately 2,447 acres⁷ of the Coronado National Forest.

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

The BiOp found that the Rosemont mine would affect a number of species that are listed as either endangered or threatened, and their respective habitats. However, the FWS

concluded that none of the species would be jeopardized, and that none of the critical habitats were likely to be destroyed or adversely affected by the Rosemont Mine.

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

species.

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

Jaguar Critical Habitat

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

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

In 2014, the FWS designated 6 units of critical habitat in southern Arizona and southwestern New Mexico for the jaguar. The following units were determined to be occupied at the time of listing and met the requirements for designation as occupied habitat: 1a, 2, 3, 4a, 5, and 6. Subunits 1b, 4b, and 4c were determined to be unoccupied, but essential. The

FWS recognized the inherent uncertainty in the occupancy determination and considered if the occupied units qualified as critical habitat under the unoccupied standard.

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

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

SECTION TWO: STANDARDS OF REVIEW; STATUTORY AND REGULATORY BACKGROUND

Courts are obligated to “hold unlawful and set aside agency action, findings, and conclusions found to be (A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2); *W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 496 (9th Cir. 2011)⁸ (applying the standard of review from the APA to a citizen suit under the ESA). If the agency “relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise” then the action was arbitrary and capricious. *CBD v. FWS*, 807 F.3d 1031, 1042-43 (9th Cir. 2015). Deference to the agency is at its highest when courts are reviewing an agency action requiring a high level of technical expertise. *Id.* at 1043. Courts must not substitute their own judgment for the agency’s judgment and expertise. *Id.* Courts may not “act as a panel of scientists that instructs the [agency] how to validate its hypotheses..., chooses among scientific studies..., and orders the agency to explain every possible scientific uncertainty.” *Lands Council v. McNair*, 537 F.3d 981, 988 (9th Cir. 2008). While deference is high and courts presume regularity, courts must conduct a “searching and careful” inquiry. *CBD v. FWS*, 807 F.3d at 1043. Courts are not to supply “a reasoned basis for the agency’s action that the agency itself has not given.” *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). Courts must “uphold a decision of less than ideal clarity if the agency’s path may reasonably be discerned.”

 *Nat'l Ass'n of Home Builders v. Defs. of Wildlife*, 551 U.S. 644, 658 (2007).

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

Chevron Deference

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

THE ENDANGERED SPECIES ACT (“ESA”)

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

The ESA works to accomplish its goals in several ways. The Secretary⁹ is to list endangered or threatened species and shall publish the list of said species.  16 U.S.C. § 1533(c)(1). The Secretary must review listed species every five years.  § 1533(c)(2)(A). Once a species is listed, it is afforded special protections. See §§ 1536, 1538. First, if it is prudent to do so, the Secretary is to designate critical habitat concurrent with the listing of a species.  § 1533(a)(3)(i); 50 C.F.R. § 424.12(a).¹⁰ Second, section 7 of ESA requires that federal agencies consult with the Secretary to “insure that any action authorized, funded, or carried out by such agency...is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat of such species.”  16 U.S.C. § 1536(a)(2). Third, the ESA makes it unlawful for anyone to “take” a member of a listed species absent an exception. § 1538(a)(1)(B).

Section 7 Consultation

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

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

If the FWS determines that the proposed action is likely to “jeopardize the continued existence of” any listed species or result in the destruction or adverse modification of its

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

If the FWS concludes that agency action is not likely to jeopardize a listed species, or result in destruction or adverse modification, but is likely to result in an incidental taking, an “incidental take statement” (“ITS”) must be included in the BiOp. 16 U.S.C. § 1536(b)(4). An ITS acts as an exemption to the section 9 prohibition against “taking.” § 1536(o)(2).

Critical Habitat

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

“The Secretary shall designate critical habitat, and make revisions thereto, under subsection (a)(3) on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impact, of specifying any

particular area as critical habitat.” § 1533(b)(2); see 50 C.F.R. § 424.12(a) (2012) (“A final designation of critical habitat shall be made on the basis of the best scientific data available, after taking into consideration the probable economic and other impacts of making such a designation in accordance with § 424.19.”).¹¹ The Secretary’s consideration of what features are essential for conservation shall include, but is not limited to, the following: “(1) Space for individual and population growth, and for normal behavior; (2) Food, water, air, light, minerals, or other nutritional or physiological requirements; (3) Cover or shelter; (4) Sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and generally; (5) Habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.” § 424.12(b). “Primary constituent elements may include, but are not limited to, the following: roost sites, nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality or quantity, host species or plant pollinator, geological formation, vegetation type, tide, and specific soil types.” § 424.12(b).

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

The determination as to whether land is occupied or unoccupied “is a highly contextual and fact-dependent inquiry.” *Arizona Cattle Growers’ Ass’n*, 606 F.3d at 1164. “Relevant factors may include how often the area is used, how the species uses the area, the necessity of the area for the species’ conservation, species characteristics such as degree of mobility or migration, and any other factors that may

bear on the inquiry. Such factual questions are within the purview of the agency's unique expertise and are entitled to the standard deference afforded such agency determinations" *Id.* at 1164-65. Courts must consider whether the proposed interpretation is permissible considering the particular species in question and the factors provided by the Ninth Circuit. *Id.* at 1165. The fact that an area might be suitable for future occupancy may not be used to determine that an unused area is occupied. *Id.* at 1167.

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

Section 9 "Take"

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

SECTION THREE: ISSUES THAT MUST BE REMANDED TO THE AGENCY

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

"LIKELY" STANDARD USED WITHIN THE JAGUAR'S CRITICAL HABITAT

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

*7 As a part of the ESA's "institutionalized caution" to protect species, "whatever the cost[,] federal agencies must ensure that agency actions are "not likely to...result in the destruction or adverse modification of" a species' critical habitat. § 1536(a)(2); *Tennessee Valley Auth.*, 437 U.S. at 185, 194. The BiOp defined "likely" in the legal standards and definitions section of the proposed critical habitat within the jaguar section as follows: "*Merriam Webster's Collegiate Dictionary, Tenth Edition*, defines 'likely' as '1: having a high probability of occurring or being true; very probable.' Therefore, in order to reach a conclusion of destruction or adverse modification of critical habitat from a Federal action, we must determine that preclusion of recovery is 'very probable' due to that action." FWS046437. The FWS used a high probability standard when considering whether the proposed action was "likely" to result in destruction or adverse modification to the jaguar's designated critical habitat. FWS046437; FWS04649; FWS049637.

Plaintiff correctly highlights past regulations, rules, and litigation whereby both the FWS, and the National Marine Fisheries Service ("NMFS"), appropriately defined "likely" as: "more likely than not," "probability of 50% or greater," "probable"; the FWS' and NMFS' more likely than not definition is consistent with the ESA's institutionalized caution to protect species. *See* Doc. 107 at 20-21 (citing *Alaska Oil & Gas Ass'n v. Pritzker*, 840 F.3d 671, 684 (9th Cir. 2016); *In re Polar Bear Endangered Species Act Listing & Section 4(d) Rule Litig. ("In re Polar Bear")*, 709 F.3d 1, 14 (D.C. Cir. 2013); *Trout Unlimited v. Lohn*, 645 F. Supp. 2d 929, 945 (D. Or. 2007); *W. Watersheds Project v. U.S. Forest Serv.*, 535 F. Supp. 2d 1173, 1184 (D. Idaho 2007)).) When an agency changes their position, as it did in this case (i.e., increasing the standard from more likely than not, to highly probable), it must provide a reasoned explanation. *Nat'l Wildlife Fed'n v. Burford*, 871 F.2d 849, 855 (9th Cir. 1989); *see NWF v. NMFS*, 524 F.3d at 928 (not deferring to an agency

when they change approaches and the new approach is “completely at odds with [its] prior scientific approaches”). The record does not reflect any reasonable basis as to why the FWS applied a heightened standard that conflicts with the ESA’s institutionalized caution in favor of protecting listed species; the heightened standard impermissibly constrains the effectiveness of the ESA’s protections, which comes at a high, and potentially detrimental, cost to listed species and their habitat. See [Tennessee Valley Auth., 437 U.S. at 185, 194](#). Under the FWS’ heightened standard, for example, even if agency action is “more likely than not” to result in the destruction or adverse modification of a species’ critical habitat, such agency action would be proper as long as it was not “highly probable” to result in the destruction or adverse modification of a species’ critical habitat. Citing to a single dictionary without explanation for the shift in policy, which is contrary to the protectionist nature of the ESA, is arbitrary and capricious.

Even if the FWS used an unlawfully heightened standard of review, Defendants argue that the decision was harmless. Harmlessness analysis is limited and will only be used “when a mistake of the administrative body is one that *clearly* had *no bearing* on the procedure used or the substance of decision reached.” [Gifford Pinchot Task Force, 378 F.3d at 1071](#) (emphasis in original). The burden is on the agency to show that the error was harmless. *Id.* The record, however, reflects that there is a “plausible argument that jaguar movement...will be somewhat restricted[.]” FWS046439-40 (2013 BiOp stating that “[o]ur analysis makes a plausible argument that jaguar movement between units 3 and 4b will become somewhat restricted...”), FWS049637 (stating the same in the 2016 BiOp). The record reflects that the Rosemont Mine may likely result in the destruction or adverse modification of Unit 3 and Subunit 4b of the jaguar critical habitat. FWS047605¹² (“Adverse effects to jaguars were expected to occur from the proposed action by impeding jaguar movement between Mexico and the U.S., disturbing jaguars, and degrading their habitat.”); FWS047633-34 (finding that the Rosemont Mine will result in adverse modification based on “direct loss of proposed critical habitat,” “indirect loss of critical habitat” through constricted connectivity, “loss of connectivity,” “[a]ppreciably diminish the conservation value of critical habitat as a whole for survival and recovery of the jaguar due to the likely complete loss of function of Subunit 4b and partial loss of function of Units 3 and Subunit 4a[.]” and the area’s reduced ability to “contribute effectively to the recovery of jaguars in the NRU.”).

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

NORTHERN MEXICAN GARTERSNAKE JEOPARDY ANALYSIS

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

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

The NMGS was not a listed species when the 2013 BiOp was created, and therefore it was not substantively included. After it was listed as a threatened species in 2014, the NMGS was included in the 2016 BiOp. Section 7 consultation occurred contemporaneously with the listing of the NMGS as a threatened species.¹³ The 2016 BiOp incorporated the final rule, [79 Fed. Reg. 38678](#), and the proposed critical habitat rule, [78 Fed. Reg. 41500](#), FWS049491, and concluded that the proposed action will not jeopardize the NMGS.¹⁴

*9 However, as FWS' record reflects, the Rosemont Mine will have extensive adverse impacts on the NMGS far into the future, including, but not limited to, decreased groundwater levels culminating in loss of prey and prey habitat for the NMGS, and loss of its own habitat. FWS049507 ("The primary cause of adverse effects from the proposed action is the long-term, permanent degradation to the gartersnakes' prey community due to the adverse, indirect effects from a lowering groundwater table[.]"); FWS049508-09 (The FWS anticipates "significant losses of [NMGS] as an indirect effect from the anticipated degradation and ultimate disappearance of Empire Spring....The loss or significant degradation of the resident Chiricahua leopard frog metapopulation in the area, as a result of the loss of a critical source population, would place significant nutritional strain on [NMGS] and weaken the functionality of the habitat for recovery as a whole for [NMGS], in perpetuity."); FWS049514-15 ("This potential, irreversible, adverse effect to primary constituent element 3 presents a significant challenge for this proposed subunit in meeting its role in future recovery and conservation of the [NMGS]."); FWS131404 ("The best available scientific and commercial information indicates that any reduction in the presence or availability of water is a significant threat to the [NMGS], [its] prey base, and their habitat."). The NMGS, for example, feeds primarily on ranid frogs, such as the Chiricahua leopard frog. FWS049508. Declining prey populations will likely result in a less resilient NMGS population. *Id.*; FWS049508 ("[E]xaggerated effects to chub and ranid frog populations will have exaggerated effects to the [NMGS] population."); FWS131386 ("Declines in prey base have led to subsequent declines in the distribution and density of [the NMGS] population,....[The NMGS] may be particularly vulnerable to the loss of native prey species."); FWS131391 ("A former large, local population of [NMGS]...in southeastern Arizona has also experienced a correlative decline of leopard frogs, and [NMGS] are now thought to occur at very low population densities or may be extirpated there."); FWS049474-81 (further discussing Rosemont Mine's negative impacts on the Chiricahua leopard frog—a key prey base for the NMGS).

Moreover, the affected area is uniquely important to the NMGS. FWS049517 ("We suspect that Empire Spring serves a critical and unique role in keeping metamorphosed frogs, which are exposed to Bd, alive over the winter to act as a source population of dispersing frogs within the metapopulation the next year....The Las Cienegas NCA's and Pima County's Cienega Creek Natural Preserve's most unique and important attribute contributing to the

conservation and recovery of northern Mexican gartersnakes is that each of these areas provides a native prey base in the absence of harmful nonnative species."); FWS131404. ("Cienegas, a unique and important habitat for [NMGS], have been adversely affected or eliminated by a variety of historical and current land uses in the United States and Mexico, including streambed modification, intensive livestock grazing, woodcutting . . .and stream flow reduction from groundwater pumping and water diversions."). The NMGS population at Las Cienegas NCA "has declined significantly." FWS041605.

In light of the foregoing, the agency was required to consider the tipping point for the NMGS,¹⁵ which it failed to do in this case. On remand, the agency must consider the tipping point for the NMGS. Summary judgment is granted in favor of Plaintiff as to this issue and denied as to Defendants.

INCIDENTAL TAKE STATEMENT; TAKE SURROGATE

When the FWS concludes that an action (i.e., the Rosemont Mine) is not likely to jeopardize a listed species, but will likely result in incidental takings¹⁶ of threatened or endangered species (as it did in this case),¹⁷ an Incidental Take Statement ("ITS") must be included in the BiOp. Plaintiff argues that the FWS' ITS is unlawful as it failed to choose a proper take surrogate for seven threatened or endangered species. The Court agrees.

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

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

In the case at bar, the FWS found that it was impractical to use an individualized numerical limit on incidental takings of seven listed species. As such, the FWS instead relied on a groundwater drawdown surrogate for the species that the Rosemont Mine would adversely impact (i.e., the Gila chub, Gila topminnow, Desert pupfish, Chiricahua leopard frog, northern Mexican gartersnake, Yellow-billed cuckoo, and Southwestern willow flycatcher—the groundwater drawdown surrogate used by the FWS is the same for all seven species).¹⁸ The FWS found that the amount of takings (pursuant to the groundwater 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 (2010)-reflected in the chart above) to estimate take via groundwater drawdown amounts in relevant areas (i.e., loss of habitat) as a surrogate for individualized numerical take. In addition, the FWS recognized that the water modeling at issue had limitations, and therefore identified “potential” groundwater monitoring wells closer to the Rosemont Mine that could serve as “proxies” for allowable incidental take. If these incidental take thresholds are exceeded in the future, the FWS would evaluate whether new agency consultation needed to be reinitiated to attempt to remedy the excessive take of these species.

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

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

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

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

Moreover, as recognized by the Forest Service, the groundwater levels in the basin at issue fluctuate greatly, which further undercuts the reliability of the monitoring at issue. *See* FEIS at pp. 294-295 (“[I]mpacts to springs and intermittent or perennial stream reaches could occur as a result of very small changes in groundwater level. This suggests that although these small levels of drawdown are beyond our ability to predict with numerical models, they could still cause impacts...[T]he 5-foot threshold is also pertinent for a second reason, which is the natural seasonal variability of groundwater. Available data suggest that groundwater levels in the area naturally vary from year to year and from season to season. In a well in lower Davidson Canyon, groundwater levels have been observed to fluctuate by more than 10 feet in a single year...Two stock wells along Empire Gulch have been monitored...for three to four decades, and the results show that water levels have varied between 4 and 5 feet. Similar stock wells along Cienega Creek show variation between 3 and 5 feet...Two wells immediately adjacent to lower Cienega Creek were monitored between 2007 and 2009...and exhibited

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

*12 Even if the FWS could determine through this monitoring regime whether 0.1 feet to 0.5 feet of groundwater drawdown (i.e., incidental take) has been exceeded in the pertinent basin after the Rosemont Mine commences (mining operations are expected to last 20 to 25 years), it may be too late to mitigate the excess incidental take impacting the threatened and endangered species as the impacts to the water at issue become permanent when Rosemont’s mining operations intersect the groundwater table. *See* FEIS at p. 339 (“The results of the groundwater modeling in the Davidson Canyon/Cienega Basin indicate that the mine pit would create a permanent drawdown of the water table. Groundwater would flow toward the mine pit in perpetuity from the time at which the excavation intersects the water table. At first, during active mining, groundwater would be pumped directly from the mine pit or from dewatering wells next to the mine pit. After final reclamation and closure, the pit is expected to gradually fill with groundwater, forming a mine pit lake. The mine pit lake would lose water through evaporation, and this water would be perpetually replenished in part by groundwater from the regional aquifer. In this way, the mine pit lake is expected to act as a permanent regional hydraulic sink...Pumping of the mine pit would draw down the level of groundwater in the regional aquifer, forming what is known as a cone of depression...Because the mine pit lake would act to remove groundwater in perpetuity from the system, this cone of depression is expected to persist in perpetuity. The boundaries of the cone of depression would migrate outward for a very long period of time until they eventually reach equilibrium. The various models estimate equilibrium would be reached between 700 and 7,000 years after closure of the mine. The cone of depression would stop expanding, but the flow of groundwater toward the mine pit would be a permanent feature of the regional aquifer...The cone

of depression extends many miles outward from the mine pit...”).

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

The ITS in this case is unlawful as it fails to set forth a clear trigger that, when reached, results in an unacceptable level of incidental take (as to all seven listed species), invalidating the safe harbor provision of the ESA, and requiring the parties to re-initiate consultation. *See* [Allen](#), 476 F.3d at 1037-1039. On remand, the agency must consider and formulate a proper ITS. Summary judgment is granted in favor of Plaintiff as to this issue and denied as to Defendants.

SECTION FOUR: ISSUES THAT DO NOT REQUIRE REMAND

As discussed in detail below, Section Four of this Order examines the issues in which summary judgment is granted in favor Defendants¹⁹ and where remand to the agency for reconsideration is unwarranted.

MITIGATION MEASURES

Plaintiff argues that the FWS erred by considering the Cienega Creek Watershed²⁰ conservation package, and the Sonoita Creek Ranch conservation measure, in assessing impacts to the Gila chub and the Gila topminnow, as they are uncertain and incapable of implementation. As Defendants correctly argue, however, both mitigation measures are binding and reasonable, and were properly considered by the FWS.

*13 Improvements or mitigation should only be considered if they include “specific and binding plans,” and “a clear, definite commitment of resources for future improvement.”

[NWF v. NMFS](#), 524 F.3d at 936. If an agency lacks the authority to “guarantee” a mitigation action, then that action should not be included in the agency’s consideration.

[NWF v. NMFS](#), 524 F.3d at 936 n. 17. Mitigation measures must be “reasonably specific, certain to occur, and capable of implementation; they must be subject to deadlines or otherwise-enforceable obligations; and most important, they must address the threats to the species in a way that satisfies the jeopardy and adverse modification standards.” *CBD v.*

[Salazar](#), 804 F. Supp. 2d 987, 1001 (D. Ariz. 2011) (mitigation measures were not specific as the agency failed to definitively define the measures, some measures were “conceptual in nature only and may be altered, replaced, or abandoned,” and approximately a third of the measures were unfunded). Otherwise, the mitigation is merely a suggestion and does not counteract harmful effects in a jeopardy analysis.

CBD v. [Rumsfeld](#), 198 F. Supp. 2d 1139, 1144, 1153 (D. Ariz. 2002) (rejecting mitigation measures that did not have deadlines or stated objectives, and were “vague, entirely voluntary, and even if implemented [did] not come close to balancing the [adverse effects of the proposed action]”).

The conservation measures at issue are binding on Rosemont. *See* FS0259770; FS0259764. These are not mere suggestions or promises; they are binding plans with deadlines and repercussions. *See* FS0259768 (recordation of covenants or conservation must be completed prior to construction on Forest Service lands); FWS046342 (requiring payments on April 1 of each year following the initial production of copper from the project); FWS046343 (requiring Rosemont to file an application to sever the water rights under the Cienega Conservation package). If the plans are approved, Rosemont will be bound to undertake their mitigation obligations, including, but not limited to, purchasing water rights currently

held by Del Lago Golf Course, creating a fund of \$2,000,000, placing a restrictive covenant or conservation easement on the Sonoita Creek Ranch property, and reestablishing the Sonoita Creek floodplain. These are binding, certain, and implementable. The BiOp and ROD bind Rosemont with sufficiently reasoned mitigation measures, and as such, if these mitigation measures fail, section 7 consultation must be reinitiated²¹; summary judgment is granted in favor of Defendants as to this issue and denied as to Plaintiff.

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

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

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

Private Wells

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

*14 The record reflects that the FWS and Forest Service were aware of such issues, and considered them in the BiOp, FEIS, and the Forest Service's 2015 Supplemental Information Report (“SIR”).²² For example, the Forest Service discussed how increased basin pumping in the area is likely, and that such increases could impact aquatic species.

See SIR at p. 82 (“There is no doubt that the installation and pumping of nearby wells can impact the aquatic resources within the Las Cienegas NCA...Growth is as likely to occur ...in Sonoita (the same groundwater basin as the Las Cienegas NCA), and it is as likely to consist of many widely distributed exempt wells as it is to consist of a few large-diameter irrigation wells located directly adjacent to the Las Cienegas NCA boundary. That additional water use will occur in the basin is highly likely....”).

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

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

Likewise, these issues were considered by the FWS and Forest Service in the BiOps and FEIS. See FS0237049 (basin pumping, although speculative, has been analyzed in the FEIS as an ongoing trend); FS0237247 (discussing increasing domestic groundwater pumping as an exacerbating factor

when analyzing potential impacts to perennial streams and riparian areas); FS0237268-70 (discussion of basin pumping as an exacerbating factor connected to perennial stream flows, and the overall qualitative effect of basin pumping on predictions of streamflow impact); FWS046553 (2013 BiOp discussing incremental effect of basin pumping on the Gila chub); FWS049421 (2016 BiOp discussion of cumulative effects of basin pumping and the Gila chub).

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

Water Pollution

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

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

The FWS found that: "Discharges to groundwater are not expected to exceed water quality standards; if they occur, the cone of depression associated with the mine pit is predicted to capture water contaminants and prevent their movement to streams in the action area. In addition, the ADEQ [i.e., the Arizona Department of Environmental Quality] has issued their 401 water quality certification for the project and has determined that the project is not expected to violate surface water quality standards. Therefore, no impacts to Gila chub or designated critical habitat due to potential water contaminants are anticipated given the information in the various [Biological Assessments]. As stated in the Environmental Baseline section, above, Gila chub occur in Cienega Creek and 22.9 mi (37 km) of the mainstem and tributaries (Mattie Canyon and Empire Gulch) are designated as critical habitat." FWS49403.²⁴

The analysis of the ADEQ, who issued the Clean Water Act ("CWA") certification for the Rosemont Mine, supports the FWS' determination.

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

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

*16 As to surface water discharges related to stormwater, the ADEQ discussed how stormwater management would minimize such issues: "[T]he open pit and plant site are closed systems with direct rainfall contained on site in the lined process water/temporary storage pond or the lined settling basin. Other stormwater design features include two diversion channels. The pit diversion channel will divert unimpacted stormwater around the west and south side sides of the open pit...Water in the channel will be directed to the perimeter containment area located along the west side of the waste rock storage area." FWS049286.

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

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

Likewise, the Forest Service considered measures employed at the Rosemont Mine to reduce or eliminate contaminants being released into water sources. *See* FWS110520 (“[P]ermitted facilities must use the best available demonstrated control technology to minimize or eliminate discharges ...Prescriptive control technologies are generally considered to be the more conservative and protective approach...Rosemont chose to adopt prescriptive best available control technologies in their permit application...Permitted facilities include the dry-stack tailings facility (unlined), the process water temporary storage pond (lined), the primary settling basin (lined), the raffinate pond (lined), the heap leach pad (lined), the pregnant leach solution pond (lined), the stormwater pond (lined), the waste rock facility (unlined), and the nonmunicipal solid waste landfill (lined).”). As to waste rock, and other geologic features at the Rosemont Mine, the Forest Service determined that: “As a whole, the body of waste rock is expected to have little potential for acid rock drainage, as there are significant quantities of acid-neutralizing rock and relatively little potentially acid-generating waste rock. However, proper placement of these two types of waste rock is necessary to take advantage of the acid neutralization potential. A waste rock segregation plan has been incorporated into the design of the facility and would be informed by continued monitoring and testing of waste rock for acid-generating potential as it

is developed from the mine and placed into the waste rock facility. Proper implementation of the waste rock segregation plan would be effective at reducing the potential for impacts to surface water quality.” *Id.*; *see also* FWS110423 (“[There will be] a cone of depression in the groundwater table around the mine pit as a result of active pumping of the mine pit during active mining and as a result of evaporation from the mine pit in perpetuity after mine closure. The cone of depression that occurs encompasses the area beneath the heap leach facility...While the liner and collection systems are designed to and are fully expected to capture all seepage...any seepage that inadvertently infiltrated to groundwater would move toward and be contained in the pit lake...[Even if there was seepage, it] is not expected to exceed any numeric Arizona Aquifer Water Quality Standard, [and] there would be no water quality impacts from seepage flow away from the mine site...”).

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

The Forest Service also considered design features at the Rosemont Mine that would minimize water infiltration and the spread of contaminants into surrounding waters. *See* FWS110053 (“The general design concept for managing stormwater from the dry-stack tailings facility is to minimize infiltration of water in the tailings and prevent discharge of stormwater that comes in contact with the tailings. This would be accomplished by constructing uniform lifts of dry tailings

that are buttressed by waste rock. The buttresses would be built around the tailings surface for containment and erosion control. The top of the tailings facility would be relatively impervious. That is, all precipitation would remain on top of the tailings facility to evaporate. If water ponds on top of the tailings facility, it would be pumped to the process water temporary storage pond to limit infiltration into the tailings facility. Diversion channels would be constructed during the premining phase to direct surface runoff that has not contacted tailings from the outer waste rock shell slopes into either sediment ponds or to adjacent drainages and then to a sediment control structure ...Stormwater from above the mine pit would be diverted around the pit and plant site. During the active mining phase, stormwater that falls within the mine pit and associated disturbed areas, especially stormwater that comes into contact with ore, would be contained onsite and used for mining and processing purposes. Postclosure, any stormwater that enters the pit would be retained and would contribute to the pit lake.”); FWS110043 (“[T]he tailings would be encapsulated, or covered completely, by a thick layer of waste rock.”).

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

***18** The record is replete with discussions of ground and surface water controls, geochemistry and groundwater quality testing and monitoring, estimated water quality related to tailings and waste rock seepage, monitoring to assess acid rock drainage, and conclusions that mitigation would be effective, and that surface water quality standards would be satisfied. *See, e.g.*, FWS110052, FWS110091, FWS110399-401, FWS110401, FWS110405, FWS110411-13, FWS110414-18, FWS0110423, FWS110433-34, FWS110481, FWS110483, FWS110505-10, FWS110516, FWS110520.

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

DESTRUCTION OR ADVERSE MODIFICATION DEFINITION WITHIN THE 2016 BIOP

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

Prior regulations under the FWS defined “destruction or adverse modification” as a “direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. Such alterations include, but are not limited to, alterations adversely modifying any of those physical or biological features that were the basis for determining the habitat to be critical.”

 *Gifford Pinchot Task Force*, 378 F.3d at 1069 (quoting  50 C.F.R. § 402.02 (2004)). The Ninth Circuit held that this definition effectively read recovery out of the ESA’s conservation goals; however, it did not comment on the fact that there was a single definition for “destruction or adverse modification.” *See*  *id.* at 1069-70. In 2016, the FWS adopted new regulations that superseded the prior regulation: “Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat for the conservation of a listed species. Such alterations may include, but are not limited to, those that alter the physical or biological features essential to the

conservation of a species or that preclude or significantly delay development of such features.” 50 C.F.R. § 402.02 (2016).²⁵

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

*19 This challenge must be interpreted under the familiar *Chevron* framework. *Gifford Pinchot Task Force*, 378 F.3d at 1069 n. 6. The Ninth Circuit and Congress have used “adverse modification” as shorthand for “destruction or adverse modification.” See 16 U.S.C. § 1536(b)(3)(A) (providing alternatives for jeopardy or adverse modification without mention of destruction); *Butte Envtl. Council*, 620 F.3d at 947-48 (finding that destruction of an area of critical habitat does not necessarily rise to the regulatory definition

of “adverse modification.”); *Gifford Pinchot Task Force*, 378 F.3d at 1069; Doc. 107 at 10 (citing 16 U.S.C. § 1536(b)(3)(A)) (using “adverse modification” as shorthand for “destruction or adverse modification”). The FWS’ definition of “destruction or adverse modification” comports with the intent of the ESA and the relevant language of the statute; a continuum guards against gaps in coverage under the ESA and ensures that destruction still receives consideration for reasonable and prudent alternatives under subsection 1536(b)(3)(A). Summary judgment is granted in favor of Defendants as to this issue²⁶ and denied as to Plaintiff.

ROSEMONT’S CROSSCLAIMS: CRITICAL HABITAT ANALYSIS OF THE JAGUAR

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

Occupied (Unit 3)

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

As required by the ESA, the FWS focused on whether an area was occupied at the time of listing.²⁷ 79 Fed. Reg. 12581; see 16 U.S.C. § 1532(5)(A). The FWS must consider if Unit 3 was occupied within a reasonable time, which is often determined by the lifespan of the species, surrounding the listing decision. *N.M. Farm & Livestock Bureau*, 2017 WL 4857444, at *4; see *All. for Wild Rockies v. Lyder*, 728 F. Supp. 2d 1126, 1144-45 (D. Mont. 2010) (finding that

an eight-year cutoff was appropriate because it was based on the lifespan of a lynx). It was reasonable for the FWS to consider sightings between 1962 and 1982, as the time of listing was 1972, and the average lifespan of a jaguar is ten years. Sightings or evidence outside the reasonable timeframe, 1962 to 1982, should not have been considered.

See [N.M. Farm & Livestock Bureau, 2017 WL 4857444, at *3-4](#). The FWS based their occupied designation on one Class I²⁸ sighting in the Patagonia Mountains in 1965 and photos taken from October 2012 through September 2013 in the Santa Rita Mountains of a male jaguar. F000393. The Court agrees with the District Court for New Mexico and finds that this is insufficient for an occupied designation of the northern Santa Rita Mountains in Unit 3.

***20** The Court finds that the FWS unreasonably relied on evidence that is counter to Congress' intention that the agency consider occupancy at the time of listing, not at the time of designation or some undefined period. The FWS acknowledged the "uncertainty" of the occupied designation for Unit 3. [79 Fed. Reg. 12582](#). Because critical habitat may be designated for occupied and unoccupied areas, the FWS considered if Unit 3 satisfied the unoccupied critical habitat requirements. [79 Fed. Reg. 12582](#). The designation of occupied or unoccupied affects what procedure the FWS must use to designate the area as critical habitat. [Salazar, 606 F.3d at 1163](#) ("imposing a more onerous procedure on the designation of unoccupied areas"). The Court will, therefore, consider if Unit 3 and Subunit 4b²⁹ were properly designated as critical habitat under the more onerous unoccupied procedure.

Unoccupied (Unit 3 and Subunit 4b)

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

The ESA and its implementing regulations allow for unoccupied critical habitat if the area is "essential for the conservation of the species." [Salazar, 606 F.3d at 1163](#). Because critical habitat's purpose is "for the government to carve out territory that is not only necessary for the species' survival but also essential for the species' recovery[,...]FWS [must] be *more generous* in defining area as part of the critical habitat designation." [Home Builders Ass'n of N. Cal. v. FWS,](#)

[616 F.3d 983, 989 \(9th Cir. 2010\)](#) (emphasis in original) (finding that not every essential element must be in every critical habitat).

The record shows that the FWS applied the appropriate "essential" standard³¹ to the jaguar. The FWS determined that Unit 3 is essential, including: (1) "recent (since 1996) occupancy"; (2) it contains "features that comprise suitable jaguar habitat"; and (3) it allows "the normal demographic function and possible range expansion of the proposed Northwestern Recovery Unit, which is essential to the conservation of the species." F000388. The FWS determined that Subunit 4b is essential, including: "(1) Connect[s] an area that may have been occupied that is isolated within the United States to Mexico, either through a direct connection to the international border or through another area that may have been occupied; and (2) contain[s] low human influence and impact, either vegetative cover or rugged terrain." F000389; F000394 (Subunit 4b "is essential to the conservation of the jaguar because it contributes to the species' persistence by providing connectivity to occupied areas.").

***21** The record supports FWS' determination that Unit 3 and Subunit 4b are essential to the recovery of the jaguar species. The FWS properly relied on the Jaguar Recovery Team's Recovery Outline and Northwestern Recovery Unit ("NRU").³² F000374. The NRU is one of two units, which were designed for recovery of the species as a whole. F000374 (describing the preliminary strategy for recovery of the species and that the NRU "is essential for the conservation of the species[.]"); R003510 ("Ultimately, the long-term recovery needs for the jaguar throughout its range focus on the stabilization of core area populations, the expansion of the core areas, and the maintenance of secondary areas that provide connectivity between core areas and that could allow for range expansion and genetic exchange."); R003512-14 (describing the importance of the NRU to the species). The designated critical habitat is within the NRU's secondary habitat.

The secondary habitat in the United States is at the northern extreme of the jaguar range and is ecologically distinct. F000374 (describing the habitat in the United States as "the northernmost extent of the jaguar's current range, with populations persisting in one of only four distinct xeric (extremely dry) habitats that occur within the species' range."); F000373 (describing the arid habitat in the borderlands area as "quite different from habitat in Central and South America."). These relatively small areas,

in proportion to the entire range, are essential to the survival of a species. Ecologically distinct habitat is essential to the jaguar's recovery. R002484 (prioritizing protecting jaguars in "all the significantly ecological settings in which they occur"). It is essential that species are protected in all their ecological settings because this provides protection from climate change and more adaptability. F000374.

Periphery populations and habitats have benefits for conservation of the entire species and, accordingly, are important to the recovery of species. F000374 (citing to the TECHNICAL SUBGROUP OF THE JAGUAR RECOVERY TEAM, RECOVERY OUTLINE FOR THE JAGUAR 19-20, R003491-92 (2012) and TERRY B. JOHNSON, WILLIAM E. VAN PELT, AND JAMES N. STUART, JAGUAR CONSERVATION ASSESSMENT FOR ARIZONA, NEW MEXICO AND NORTHERN MEXICO 30-31 (2011); Rob Channell and Mark V. Lomolino, *Dynamic Biogeography and Conservation of Endangered Species*, 403 NATURE 84, 84-85 (2000)); R002248 (discussing units of priority and effectiveness of effort, and listing the extreme northern parts of the jaguar range). These periphery areas provide dispersal area, buffer for reproduction zones, and area for cyclical expansion of the core areas. F000374; R003493 ("secondary areas may contribute to jaguar persistence by providing habitat to support jaguars during dispersal movements, by providing small patches of habitat (perhaps in some cases with a few resident jaguars), and as areas for cyclic expansion and contraction of the core areas."). Additionally, populations at the edge of a species' range often hold the key to genetic diversity and persistence of the species. F000374; R001507-08.

Connecting land is essential for genetic diversity, especially in fragmented areas. *see Fisher v. Salazar*, 656 F. Supp. 2d 1357, 1367 (N. D. Fla. 2009). This land is used to connect different breeding populations in Mexico. R003485. The critical habitat is a mountainous area of Arizona with ranges

separated by valley bottoms. F000383. Connection corridors are essential, but often under-protected. *Id.*; R002246 (discussing the importance of corridors and connectivity and the insufficiency in which they have been addressed).

*22 In light of the foregoing, Unit 3 and Subunit 4b are essential to the jaguar species' conservation;³³ accordingly, summary judgment is granted in favor of the FWS as to this issue and denied as to Rosemont.³⁴

CONCLUSION

As discussed above, the Court has identified several issues that require remand; the Court partially grants Plaintiff's cross-motions for summary judgment, vacates the flawed agency actions, and remands them back to the appropriate agency in accordance with the findings of this Order. *See*  5 U.S.C. § 706(2)(A) ("[t]he reviewing court shall...hold unlawful and set aside" unlawful agency actions).³⁵

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

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

Dated this 10th day of February, 2020.

All Citations

Slip Copy, 2020 WL 620834

Footnotes

- 1 All citations to the docket are to the lead case, 17-cv-00475. Any citation to a page within the docket is based on the page stamp automatically created by CM-ECF on the top of the page in blue.
- 2 The Court collectively refers to the Federal Defendants and Rosemont as "Defendants" throughout this Order.
- 3 The Court previously entered judgment for Save the Scenic Santa Ritas and the Tribes in two cases that were consolidated with this one. The FEIS and ROD were vacated and remanded to the Forest Service.

Defendants have filed notice of appeal with the Court of Appeals for the Ninth Circuit. A stay has been issued in the 2019 consolidated Corps case (CV 19-177).

4 This was the second BiOp issued, and it incorporated portions of the 2013 BiOp. One reason for the 2016 BiOp is that “destruction or adverse modification” had been redefined 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 Fed. Reg. 7214 (Feb. 11, 2016).

5 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).

6 Rosemont estimates that the pit will produce 5.3 billion tons of copper, 142 million tons of molybdenum, and 79 million ounces of silver; at full production, Rosemont estimates that the mining project will produce 10% of the nation’s domestic copper supply.

7 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).

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

9 “The ESA defines ‘Secretary’ to mean ‘the Secretary of the Interior or the Secretary of Commerce as program responsibilities are vested pursuant to the provisions of Reorganization Plan Numbered 4 of 1970.’ 16 U.S.C. § 1532(15). As a general matter, ‘marine species are under the jurisdiction of the Secretary of Commerce and all other species are under the jurisdiction of the Secretary of the Interior.’ 51 Fed. Reg. 19926 (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).

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

11 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.

12 Defendants argue that the Court cannot consider the agency’s preliminary, internal documents in evaluating these issues. However, as the final action used an unlawfully heightened standard of review, previous analysis (using a proper standard of review) 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.

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

14 The FWS’ reasons for the no jeopardy determination included: 1. The affected population and habitat is small compared to the unaffected population and habitat, 2. While Cienega Creek would be affected, including upper Empire Gulch, the area would provide sufficient 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.

- 15 As Plaintiff correctly emphasizes, counsel for the Department of Interior specifically 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.
- 16 “Take” of a listed species is “to harass, harm, pursue, hunt, shoot, wound, kill, trap, 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 otherwise lawful activity conducted by the Federal agency or applicant.” 50 C.F.R. § 402.02.
- 17 The FWS found that the Rosemont Mine would result in decreased water flow to areas surrounding the Rosemont Mine, and this would adversely impact (incidentally take) listed species.
- 18 As to the Gila chub, for example, the FWS stated that it could not numerically quantify 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 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.
- 19 As to Rosemont’s crossclaims, the Court notes that the Federal Defendants prevail inasmuch as the FWS’ pertinent critical habitat determinations are not impacted by this Order.
- 20 The Cienega Creek Watershed Conservation Fund is a part of the Cienega Creek Watershed Conservation package, or the Cienega Creek conservation package. 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.
- 21 To a large extent, Plaintiff objects to the FWS’ conclusions regarding the effects of the conservation measures; however, this is insufficient to find that the mitigation measures at issue were improperly considered by the FWS. *See* [NWF v. NMFS](#), 524 F.3d at 936 (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).
- 22 The FWS specifically noted that the BiOp relied on and incorporated information from the Forest Service, including the FEIS, SIR, and other Forest Service materials throughout consultation. *See* 2016 BiOp at p. 2.
- 23 For example, the Forest Service found that pumping impacts could not be reasonably quantified; it found it speculative to accurately predict locations of future pumping in the area. *See* SIR at pp. 82-85.
- 24 The analysis related to the Gila Chub and water conditions also generally applies to other aquatic and riparian species. *See* FWS049349.
- 25 On October 28, 2019, a new definition became effective. It is substantively the same, and is not implicated in the current litigation; the current definition is “Destruction or 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).

- 26 On a closely related note, citing [Bennett v. Spear, 520 U.S. 154 \(1997\)](#), Plaintiff argues that the BiOp is an unlawful revision of the jaguar's designated critical habitat inasmuch as it fails to follow statutory mandates to make such a revision. [520 U.S. at 172](#) (holding that courts may review a claim implicating a biological opinion that implicitly creates critical habitat without the procedures required for such a designation). *Bennett* is 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.
- 27 For this matter, the Court will consider 1972 the date of listing. See [N.M. Farm & Livestock Bureau, 2017 WL 4857444, at *4](#).
- 28 The FWS defines a Class I record as those with physical evidence for verification and considered them "verified" or "highly probable."
- 29 The FWS designated Subunit 4b as unoccupied in the final rule; its occupancy designation was not challenged.
- 30 Rosemont argues that the FWS failed to find that the present range was inadequate for recovery. The Ninth Circuit has already dismissed this argument. [Bear Valley Mut. Water 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, the FWS correctly found that the unoccupied land is essential, and therefore implicitly found that the current habitat was inadequate.
- 31 Rosemont argues that the appropriate definition of essential is "indispensable." The Court finds that this higher standard would not be in accordance with the intent of the ESA. 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).
- 32 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. R003512 ("Each designated recovery unit is critical to recovering the jaguar throughout its 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).
- 33 Assuming, *arguendo*, that Unit 3 is occupied, the Court would find that the FWS properly designated it as critical habitat.
- 34 Rosemont argues that the FWS failed to conduct 5-year reviews of the endangered status 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.
- 35 As referenced at the beginning of this Order, the motion for stay is denied.