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**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF ARIZONA**

CENTER FOR BIOLOGICAL)	
DIVERSITY <i>et al.</i> ,)	Case No. CV-20-00106-TUC-RCC
Plaintiffs,)	
)	DEFENDANTS' COMBINED CROSS-
v.)	MOTION FOR SUMMARY JUDGMENT
)	AND OPPOSITION TO PLAINTIFFS'
DEBRA HAALAND, Secretary of the)	MOTION FOR SUMMARY JUDGMENT
Interior, <i>et al.</i> ,)	
Defendants,)	
_____)	

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MOTION

Pursuant to Rule 56 of the Federal Rules of Civil Procedure, Defendants¹ Debra Haaland, in her official capacity as the Secretary of the Interior, the United States Fish and Wildlife Service (“FWS”); Martha Williams in her official capacity as the Principal Deputy Director FWS; Amy Lueders, in her official capacity as Regional Director of the FWS Southwest Region; Lloyd J. Austin III, in his official capacity as Secretary of Defense; John E. Whitley, in his official capacity as Acting Secretary of the Army; and Major General Anthony R. Hale, in his official capacity as the Senior Commander of Fort Huachuca respectfully move this Court to enter summary judgment in their behalf, deny Plaintiffs’ Summary Judgment Motion, and dismiss the Complaint with prejudice. There are no genuine issues of material fact and Defendants are entitled to judgment as a matter of law. This motion is based on the enclosed Combined Memorandum of Points and Authorities in Support of Summary Judgment and in Opposition to Plaintiffs’ Motion for Summary Judgment, the Administrative Records lodged by FWS and the U.S. Army in this matter, the pleadings and records on file in this matter, and on such argument of counsel as may be presented at any hearing on this motion.

¹ The current agency officials named as Defendants in their official capacity are automatically substituted for their predecessors pursuant to Federal Rule of Civil Procedure 25(d).

MEMORANDUM OF LAW

INTRODUCTION

This case challenges a consultation and conference between the U.S. Fish and Wildlife Service (“FWS”) and the U.S. Army under Section 7 of the Endangered Species Act (“ESA”), 16 U.S.C. § 1536, undertaken to consider the military operations and activities at Fort Huachuca, Arizona. The inter-agency process concluded with FWS’s issuance on March 31, 2014 of a Biological and Conference Opinion (“BiOp”) that the Army has since relied upon for its ESA Section 7 compliance. Plaintiffs’ belated challenge now misconstrues and misapplies core ESA legal standards. And, most fatally, Plaintiffs’ arguments ignore and directly contradict the wealth of information and analyses contained in the agencies’ administrative records that support the BiOp. At bottom, Plaintiffs simply disagree with FWS’s reasoned conclusions. But FWS is the expert, not Plaintiffs, and its rational and well-supported scientific determinations are entitled to the highest level of deference.

STANDARD OF REVIEW

Agency compliance with the ESA is reviewed under the deferential standard of review of the Administrative Procedure Act, 5 U.S.C. § 706. *San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 601 (9th Cir. 2014). The Court may only set aside the agency’s actions if they are “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A); *Karuk Tribe of Cal. v. U.S. Forest Serv.*, 681 F.3d 1006, 1017 (9th Cir. 2012) (*en banc*). Where an agency decision is based on scientific and technical expertise, a reviewing Court must be “at its most deferential” and defer to the agency’s decision if the agency “has considered the relevant factors and articulated a rational connection between the facts found and the choice made.” *Balt. Gas & Elec. Co. v. Nat. Res. Def. Council*, 462 U.S. 87, 103-105 (1983).

BACKGROUND

I. Legal Background

A. Endangered Species Act Section 7

The ESA provides for the listing of species as threatened or endangered, 16 U.S.C. § 1533, and it protects listed species in several ways. As pertinent here, ESA Section 7(a)(2) directs each federal agency to insure, in consultation with FWS, that “any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of” any listed species or destroy or adversely modify designated critical habitat. *Id.* § 1536(a)(2). If the agency proposing to act determines its action “may affect” listed species or critical habitat, the agency must pursue either informal or formal consultation with FWS. 50 C.F.R. 402.13-402.14. Formal consultation concludes with FWS’s issuance of a Biological Opinion, in which it determines whether the proposed action is likely to “jeopardize the continued existence of” any listed species or destroy or adversely modify critical habitat. 16 U.S.C. § 1536(a)(2); 50 C.F.R. 402.14(h)(iv); *see also* 50 C.F.R. 402.02 (defining “jeopardize the continued existence of” and “destruction or adverse modification”).

An agency must reinitiate consultation where one of four conditions is met, including: “[i]f new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered.” 50 C.F.R. 402.16(a)(2). The ESA also extends protections to species that FWS has proposed for listing. For such candidate species, an agency must “confer” with FWS if its proposed action will jeopardize a candidate species pursuant to procedures established by regulation. 16 U.S.C. § 1536(a)(4); 50 C.F.R. 402.10.

B. Section 321 of the National Defense Authorization Act of 2004

Section 321 of the 2004 National Defense Authorization Act, Pub. L. No. 108-136, 117 Stat 1392, 1437, (“2004 NDAA”) amended ESA Section 7 to mandate a uniquely narrow analysis of whether Fort Huachuca’s usage of water complies with ESA Section 7(a)(2). Section 321(a) provides as follows:

(a) LIMITATION ON FEDERAL RESPONSIBILITY FOR CIVILIAN WATER CONSUMPTION IMPACTS.

(1) LIMITATION. For purposes of section 7 of the Endangered Species Act of

1973 (16 U.S.C. §1536), concerning any present and future Federal agency action at Fort Huachuca, Arizona, water consumption by State, local, and private entities off of the installation that is not a direct or indirect effect of the agency action or an effect of other activities that are interrelated or interdependent with that agency action, shall not be considered in determining whether such agency action is likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat.

(2) VOLUNTARY REGIONAL CONSERVATION EFFORTS. Nothing in this subsection shall prohibit Federal agencies operating at Fort Huachuca from voluntarily undertaking efforts to mitigate water consumption.

(3) DEFINITION OF WATER CONSUMPTION. In this subsection, the term “water consumption” means all water use off of the installation from any source.

(4) EFFECTIVE DATE. This subsection applies only to Federal agency actions regarding which the Federal agency involved determines that consultation, or reinitiation of consultation, under section 7 of the Endangered Species Act of 1973 (16 U.S.C. § 1536) is required with regard to an agency action at Fort Huachuca on or after the date of the enactment of this Act.

117 Stat. 1392, 1437. This provision was intended to “clarify the categories of water consumption that may be considered at Fort Huachuca.” Rep. No. 108-354, at 670 (2003)(Conf. Rep.), *as reprinted* in 2004 U.S.C.C.A.N. 1407, 1448. Under Section 321, the Army remains responsible under ESA Section 7(a)(2) for the direct and indirect effects associated with the Fort, including civilian water use by persons located in the action area as a result of the Fort (i.e. the Fort-attributable, off-base population). However, review of the Army’s compliance with ESA Section 7 may not take into account any effects of water consumption by any other source, such as the cumulative effects of state or private activities independent of the Fort.

II. Factual Background

A. Fort Huachuca Operations²

² The Proposed Action and Action Area are described in Defendants’ Statement of Facts (“SOF”) 10, 64, and 101, submitted herewith in accordance Local Rule 56.1.

Fort Huachuca is a major military installation of approximately 73,142 acres in southeastern Arizona, adjacent to the city of Sierra Vista and near Huachuca City in the foothills of the Huachuca Mountains about eight miles north of the border with Mexico. ARMY000065. The Fort hosts several large organizations, including the U.S. Army Intelligence Center of Excellence, Network Enterprise Technology Command, and components of the Arizona and Missouri Air National Guard. The Fort's major missions currently include testing and training for communications, intelligence and electronic warfare equipment, unmanned aerial systems, and operation and management of the Army's computer network. ARMY000019-64. Other activities, including the operation of Libby Army Airfield, are described in detail in the Army's November 2013 Programmatic Biological Assessment ("PBA"). *Id.*

Fort Huachuca has pursued a rigorous water conservation plan, working over the past three decades to reduce groundwater consumption in the Upper San Pedro River watershed. Its efforts have focused primarily on reductions in groundwater demand both on-post and off-post, increased artificial recharge of the groundwater system, and acquisition of conservation easements. ARMY000055-61. Annual pumping from Fort Huachuca's production wells decreased by over 65% from 1993 to 2012.³ ARMY000048; ARMY000055. Fort Huachuca's efforts have resulted in the Fort changing its net groundwater demand from a deficit to a surplus, as analyzed in the March 31, 2014 BiOp and the incorporated PBA. ARMY000526.

B. Prior Litigation

Plaintiffs have brought multiple lawsuits against the Army over the Fort. Of note, the Court found FWS's 1999 BiOp concluding that continued activities at the Fort would not cause jeopardy to the Huachuca water umbel or southwest willow flycatcher to be arbitrary and contrary to law. *Ctr. for Biological Diversity v. Rumsfeld*, 198 F. Supp. 2d 1139 (D. Ariz. 2002). Plaintiffs next challenged the sufficiency of a subsequent BiOp

³ See SOF 43, 49, 51, 57, and 76 (concerning mitigation measures).

issued in June 2007. In May 2011 the Court held that BiOp erred “by failing to analyze the effects of the Fort’s actions on recovery [of the Huachuca water umbel], relying on uncertain and unspecific mitigation measures, and failing to articulate a rational connection between its findings in the BiOp and its no jeopardy and no adverse modification conclusions.” *Ctr. for Biological Diversity v. Salazar*, 804 F. Supp. 2d 987, 1010 (D. Ariz. 2011).

C. The 2013 Consultation and Current Biological Opinion

Following the 2011 ruling, the Army prepared the PBA to support a new ESA consultation. FWS004612-13. The Army submitted the PBA to FWS in November 2013, with the agencies’ thereafter initiating consultation. ARMY000001-0674; FWS004613. The Army defined its agency action as the “ongoing and future military operations and activities at or near Fort Huachuca,” including “all actions currently planned by the Installation for the foreseeable future (through 2022).” ARMY000017. The ten-year period was revised during consultation to run from the conclusion of formal consultation in March 2014 through March 31, 2024. FWS004630.

The Army used a ten-year period to define its agency action; it is not able to project the Fort’s activities for any longer period with reasonable certainty due to “federal fiscal laws, the nature of the budget process, and uncertainty of mission requirements.” FWS04630; ARMY000049. Though the duration of the action is restricted to a 10-year period through March 2024, the agencies evaluated the effects of this action on ESA-listed species beyond the 10-year period, to at least 2030, where such effects were reasonably certain to occur. FWS004764.

Analysis of the Fort’s action included consideration of groundwater withdrawals from wells located at the Fort and water consumption by the off-base population attributable to the Fort. FWS004629; FWS004758-59. The PBA also considered the Fort’s many species-specific mitigation measures and water-related projects to mitigate the effects of groundwater pumping. The Army has expended over \$38 million in total

for the purchase of conservation easements and implementation of a series of effluent reuse and recharge projects. FWS004655; FWS004630-643.

Formal ESA consultation concluded in March 2014 with FWS' issuance of the BiOp. FWS04609-05022. The BiOp evaluated the effects of the Fort's operations through March 31, 2024 on numerous species, including the Huachuca water umbel and its critical habitat, Mexican spotted owl and critical habitat, the lesser long-nosed bat, Chiricahua leopard frog, ocelot, jaguar, and Sonora tiger salamander, as well as then-candidate species northern Mexican gartersnake and yellow-billed cuckoo. FWS004611; FWS004630. The BiOp explained FWS's detailed findings that the Fort's operation would not jeopardize any of these species, nor adversely modify or destroy critical habitat where designated or proposed.⁴

The BiOp adopted the information in the PBA, especially of the Fort's potential effects to groundwater, to delineate and analyze the Fort's effects on each ESA-listed species. The BiOp concluded that, by 2014, the Fort would have a positive groundwater budget balance and that its conservation measures would drive an increase in baseflows in the San Pedro River that would endure through at least 2030.⁵ FWS004775-76; FWS004763-64; FWS004771.

The PBA and BiOp each analyzed the Fort's potential effects, both adverse and beneficial, to ESA-listed species and their habitat. The agencies analyzed how the Fort's activities might affect the regional groundwater of the Upper San Pedro River basin and the regional groundwater component of baseflows in the Upper San Pedro River and its tributary the Babocomari River. It is these analyses that are at the heart of Plaintiffs' suit.

⁴ See SOF 10-24, 31-36, and 98-114 (concerning the subject species and their habitat).

⁵ See SOF 1-8 (concerning the San Pedro and Babocomari Rivers) and 25-30, 37 (concerning baseflow).

The agencies evaluated the Fort's expected impact on baseflows in the San Pedro River with two primary analyses: (1) a groundwater model simulation of the Fort's projected net effect on baseflows in the San Pedro and Babocomari Rivers through 2030, accounting for spatial and temporal patterns in pumping and recharge that could locally affect groundwater or baseflows in specific areas, and (2) a groundwater demand accounting to aggregate the volume of the Fort's annual groundwater withdrawals with the volumes artificially recharged into groundwater and amounts attributed to water savings from conservation measures.⁶ The PBA provides a detailed description of the groundwater modeling in Appendix G and the groundwater demand accounting in Appendix K. ARMY000555-587; ARMY000653-660. The FWS considered both of these lines of evidence, along with other available evidence and analyses, in its findings.

In the PBA the Army presented a groundwater model that analyzed two model simulations - a "With Fort-attributable" ("WFA") and a "No Fort-attributable" ("NFA") scenarios. Comparison of the differences in the two simulations provides a measure of the impact of the projected pumping and artificial recharge attributable to the Fort on the regional groundwater component of baseflow in the San Pedro and Babocomari Rivers and the potential timing and location of future baseflow impacts. FWS004763-765; ARMY000555-587; ARMY000561-573; FWS004681-82; FWS004761-765; FWS028326-396. The Army conducted these simulations using the most current groundwater flow model for the Upper San Pedro Basin. ARMY000561-566. This underlying model was subject to peer-review and found reasonable and valid for this purpose. FWS004761; FWS028572.

The Army's PBA adapted this model, as updated, to isolate the effects to the regional groundwater system caused by Fort operations by running the two WFA and

⁶ See SOF 41, 53-56, 58, 61-63, 66-71, 82, 102 and 121 (concerning the model used for the consultation). See SOF 50-51, 76, 81-84, 86, 97-98, 115-118, and 125 (concerning the groundwater demand accounting).

NFA simulations, adjusting the well pumping and recharge variables for a modeling period from 2003 to 2030. ARMY000574-77. In incorporating this analysis into the BiOp, FWS found this application of the groundwater model to represent the best available scientific information. FWS004765. The WFA simulation included all estimated Fort-attributable groundwater withdrawals and all completed and in-progress mitigation measures that could feasibly be modeled (though thousands of acre-feet in groundwater pumping precluded by conservation easements were not modeled). ARMY000567-585; FWS004763. The NFA simulation removed all Fort-attributable pumping and recharge both on-Fort and off-Fort while maintaining all other estimated groundwater pumping and recharge within the Basin. FWS004763. The difference between the WFA and NFA simulations is the model's representation of the Fort's projected impacts to the regional groundwater component of baseflows in the San Pedro and Babocomari rivers through at least 2030. *Id.*

Overall, the groundwater model predicted positive impacts of Fort-attributable activities on the net regional groundwater component of baseflow in the Upper San Pedro River from 2012 to 2030, even without considering additional benefits of conservation easements acquired by the Fort. FWS004763; FWS004776-778; ARMY000176-79; ARMY000580-85. The groundwater modeling simulations demonstrate that Fort-attributable activities are likely to increase the regional groundwater component of baseflow in the San Pedro River by 0.3 to 0.4 cubic-feet/second by 2030. FWS004763-764; ARMY000177-79; ARMY000585. In other words, at no point from 2012 to 2030 are Fort-attributable groundwater withdrawals likely to reduce baseflows in the mainstem of the San Pedro River. *Id.*

The Army PBA also presented a groundwater demand accounting system as a second line of evidence to evaluate the Fort's potential impacts to the San Pedro baseflows. ARMY000653-660. FWS adopted, with slight revision, the Army's calculation of its overall contributions to the sustainability of the regional aquifer, considering both positive and negative contributions. FWS004760-61; FWS004774-75.

The agencies used this groundwater demand accounting to aggregate the Fort's net groundwater demand, including both the Fort-attributable groundwater demand as well as recharge and credits for water savings (e.g. future avoided pumping) that replenish groundwater or reduce withdrawals elsewhere in the aquifer. FWS004774-75; FWS004683-87; FWS004691; FWS004759-761; ARMY000655.

The groundwater demand accounting concluded there would be a net annual groundwater surplus resulting from the Fort's acquisition of conservation easements beginning in 2014, which will continue at least through the consultation period. FWS004774-75. The demand accounting complements the groundwater modeling that did not fully evaluate these beneficial effects. FWS004762-63. "[T]he groundwater modeling does not include approximately 2,400 acre-feet of credits in 2012 and over 5,500 acre-feet of mitigation credits by 2022." ARMY000175; FWS004763.

Both of these analyses of effects to water resources seek to isolate the Fort's impacts from the impacts caused by other water users in order to comply with Section 321 of the 2004 NDAA. This statutory provision mandates that the ESA Section 7 jeopardy analysis for the Fort's operation may not consider water usage that is not a consequence of the Fort. *See, e.g.*, FWS004684; FWS004712; FWS004766-769.

ARGUMENT

I. The Fort's water usage is fully mitigated over time.

A. FWS considered all available groundwater modeling information.

One of Plaintiffs' primary arguments is that FWS and Army ignored one of the several groundwater modeling reports in their administrative records, a report prepared for the Army by GeoSystems Analysis, Inc., in 2010 ("GSA 2010"). Pl. Br. 25. Plaintiffs claim this study shows that Fort-attributable groundwater pumping will adversely impact baseflows in the San Pedro River in 2050 and thereafter, but that FWS ignored this

information in favor of groundwater modeling that focused on the Fort's potential effects to baseflows only through 2030.⁷

This argument is easily refuted. Both the BiOp and PBA reviewed the GSA 2010 report, and even borrowed elements for use in the modeling reported in the PBA. But the agencies adopted GSA 2010's own caveats in finding that at least one key assumption about future groundwater usage, among other concerns about long-term modeling, render its long-term projections unreliable. To put it more bluntly, in ignoring the limitations to the GSA 2010 modeling Plaintiffs essentially misrepresent its results.

Plaintiffs ground their argument that FWS ignored the GSA 2010 simulations in the ESA requirement that agencies use "the best scientific and commercial data available." 16 U.S.C. § 1536(a)(2). Under this standard, an agency may not "disregard[] available scientific evidence that is in some way better than the evidence [it] relies on." *San Luis & Delta-Mendota Water Auth. v. Locke*, 776 F.3d 971, 995 (9th Cir. 2014) (alterations in original) (citations omitted); *Kern Cnty. Farm Bureau v. Allen*, 450 F.3d 1072, 1076, 1081 (9th Cir. 2006) (rejecting argument that FWS violated the best available science standard when it cited but allegedly misinterpreted three studies); *see also Conner v. Burford*, 848 F.2d 1441, 1454 (9th Cir.1988) ("FWS cannot ignore available biological information[.]").

The agencies considered GSA 2010 in their groundwater modeling analyses, satisfying this standard. The groundwater modeling the Army presented in its PBA is based in part on model modifications first presented in GSA 2010. ARMY000575 (e.g., "[t]he same [spatial] distribution of Fort-attributable pumping developed by GeoSystems Analysis (2010) is utilized in the NFA simulation."); ARMY000561; ARMY000567.

⁷ See SOF 48, 52, 53, 55-62, 67, 69-70, 74-75, 102, 106-107, and 110 (concerning GSA 2010 and the modeling period). A second draft of GSA 2010, cited by Plaintiffs, is at FWS022542-611. The final draft of the report is at ARMY008146-217, with no substantive differences to the points discussed here.

FWS incorporated by reference the Army's groundwater modeling, including these elements from GSA 2010, and found the Army's modeling to represent the best available scientific information. FWS004763; FWS004765.

Plaintiffs ignore that the Army expressly decided to not accept other elements of the GSA 2010 model (and hence its results) because it disagreed with the population growth estimates the GSA 2010 iteration of the groundwater model used to estimate future pumping volumes. ARMY000574-75. The GSA 2010 and other models based their estimates of future groundwater pumping on a projection of increased population growth that was demonstrably inaccurate by the time the Army drafted the PBA. *Id.*; see *infra* at 15. The Army's groundwater modeling instead used a constant value for Fort-attributable pumping from 2011 through 2030, rather than the GSA 2010 report's simulation of ever-increasing future groundwater withdrawals in the Sierra Vista subwatershed. ARMY000575-76. FWS relied on the Army's groundwater modeling in its analyses, and agreed with the "cautionary narrative" in the PBA about the use of the modified USGS model and its limitations. FWS004762-63.

This is the key reasoned decision that defeats Plaintiffs' argument. The agencies are entitled to choose the data sets upon which they rely. *See San Luis*, 747 F.3d at 602 (what constitutes best data available belongs to agency's special expertise); *Fishermen's Finest, Inc. v. Locke*, 593 F.3d 886, 893, 896-97 (9th Cir. 2010) (upholding agency's decision to rely on some data and disregard other data); *Nat'l Fam. Farm Coal. v. EPA*, 966 F.3d 893, 925 (9th Cir. 2020) (upholding EPA analytic approach in the face of known deficiencies); see also *All. for the Wild Rockies v. Bradford*, 864 F. Supp. 2d 1011, 1018-19 (D. Mont. 2012) (upholding "no effect" determination because agency had not committed a clear error of judgment when interpreting contradictory studies). In applying this standard to the agency's scientific judgments and technical analyses, the Court should be at its most deferential. *San Luis*, 747 F.3d at 592-93.

FWS explained in the BiOp (and Army explained in the PBA) their choice of data. They further explained the several reasons why GSA 2010 simulations of baseflow in the

San Pedro River in 2050 and the Fort-attributable impacts to baseflows that far into the future are not reasonably certain and, accordingly, do not factor into an ESA Section 7 analysis. Plaintiffs raise, at best, a disagreement with the agencies' exercise of professional judgment in deciding that the GSA 2010 simulations contained too many uncertainties to reliably estimate Fort-attributable impacts to baseflows in 2050, or anytime past 2030.

Groundwater models, and GSA 2010 specifically, "do not necessarily accurately predict real conditions." FWS004762. Plaintiffs ignore the agencies' admonitions that "the groundwater model results should always be interpreted with awareness of the limitations of the model" and cautioning against "applying model results to predict absolute changes in the wet or dry conditions of the San Pedro River." ARMY000564; ARMY000566; FWS0004762. "Caution is therefore advised when interpreting the absolute change predicted by the model in the future." ARMY000576. In other words, even beyond its inaccuracies in estimating future groundwater withdrawals, the GSA 2010 modeling was never intended to quantify baseflows in the San Pedro or Babocomari Rivers in 2050 or 2105.

The agencies used the groundwater modeling instead to identify "the relative difference between model scenarios that is most informative." ARMY000564; ARMY000576. The agencies used the groundwater modeling, including GSA 2010, "to simulate the relative change from the current conditions to future years . . . [and] estimates of the relative temporal and spatial trends for the regional groundwater component of baseflow on the San Pedro River between different scenarios or periods." ARMY000566; FWS004764. Plaintiffs' reliance on GSA 2010 to quantify baseflows in 2050 and later is an inappropriate use of this groundwater modeling, utilizing the model for a function it is not designed to perform.

The GSA 2010 report states that its modeling is not an estimate of absolute baseflows, and even acknowledges that the simulations likely overstate future pumping

(and hence baseflow depletions).⁸ FWS022580; FWS022585. It notes, for example, that the groundwater model “has only rudimentary capacity to simulate stream baseflow” and “is virtually incapable of simulating total streamflow” because it omits surface runoff and bank storage components. FWS022580. The GSA 2010 report warned that “little stock should be placed in absolute values of stream stage or discharge,” and the primary value of the simulations is characterizing “trends over time” and “spatial distributions of stream impacts.” FWS022580; FWS022585-86; *see also* ARMY000566; FWS004764.

A further defect in Plaintiffs’ argument is that the agency action at issue here is Fort operations until 2024, not Fort operations and groundwater usage for a century thereafter, as the GSA 2010 model presumes. The simulations of baseflow impacts out to 2050 or 2105 presented in GSA 2010, and a 2011 report by Dr. Laurel Lacher (“Lacher 2011”) assume that Fort-attributable groundwater pumping will continue and even increase through 2050 and 2105. This assumption expands the agency action well beyond Fort operations occurring until 2024, and thereby expands the agency action beyond any reasonably certain bounds.

This limitation is important because an ESA consultation must evaluate the reasonably certain consequences of the proposed agency action, not everything that *could* happen in the future. 50 C.F.R. § 402.02 (definition of “effects of the action”). Here, the agency action analyzed in the BiOp runs through March 2024, and included the reasonably certain effects caused by Fort-attributable water usage through 2030. FWS004613; FWS004764. Ten years is a reasonable period of time for the Army to forecast its activities at the Fort because there is significant uncertainty in predicting government programs, budgets, and missions more than ten years into the future. ARMY00049; ARMY000531-33; ARMY000573; FWS004764.

⁸ *See* SOF 40, 43, 55, 58, 59, 63, 66, and 68 (concerning modeling limitations).

The Army and FWS have consistently used a ten-year agency action period in prior consultations. *Salazar*, 804 F. Supp. 2d at 994; *Rumsfeld*, 198 F. Supp. 2d at 1147. The two prior judicial decisions on Fort Huachuca upheld the choice of a ten-year agency action period against Plaintiffs' arguments. The Court found fault with the certainty of the Fort's mitigation activities within the ten-year period in *Rumsfeld*, though the ten-year action period itself was unobjectionable. 198 F. Supp. 2d at 1155-56. In *Salazar*, Plaintiffs argued that the 2007 BiOp ignored the long-term effects of increasing groundwater deficits. 804 F. Supp. 2d at 1006. The Court upheld the agency's analyses of the reasonably certain, indirect hydrologic effects "anticipated to occur in both groundwater and base flows over time (2005–2016)," based on a ten-year proposed action. *Id.*

More importantly, the scenarios in GSA 2010 and Lacher 2011 of groundwater usage rates through 2050 or 2105 are based on estimates of population growth that exceed actual population growth. These models used regional population forecasts that proved to be eight percent higher than the actual population in 2010. ARMY0574-76; FWS028375 (noting that simulated pumping rates for 2002-2003 were increased throughout the 2003 to 2105 simulation period based on population growth rate projections.) An inaccurate estimate of increased groundwater usage drives inflated, and hence inaccurate, prediction of baseflow impacts. ARMY000564; ARMY000575-76.

The GSA 2010 analysis amplified this bias in assuming that the Fort-attributable off-post population and hence the Fort-attributable pumping would increase in lockstep with this inflated estimate of overall regional population growth. ARMY000575; FWS022567. The GSA 2010 report stated that a "key assumption, and possibly a significant weakness, in this process is that the Fort-attributable population grows at the same rate as the total basin population." FWS022585. This assumption of an ever-increasing Fort-attributable population and associated water usage is contradicted by the most current data during consultation showing a decline in Fort-attributable water demand. FWS004691. The Army thus conservatively modeled Fort-attributable

groundwater demand using a fixed 6,000 acre-feet per year (“afy”), based on an estimated 5,928 afy in 2005. The Fort-attributable demand, however, declined in 2011 and 2012 to an estimated 5,648 afy and 5,446 afy. FWS004629; FWS004774; ARMY000575; ARMY000659-60.⁹ Since that time, Fort-attributable water usage has continued declining, averaging 4,662 afy. ARMY025748; ARMY025762; ARMY025780; ARMY025802; ARMY025821; *See also* SOF 97 and 125.

The GSA 2010 simulation also conflicts with Section 321, dooming Plaintiffs’ argument. The Court held in *Salazar* that increasing the Fort-attributable population in lockstep with growth in the general non-Fort attributable population in the region violates Section 321 “because it would leave the Fort responsible for mitigating impacts from a segment of the civilian population that is not attributable to the Fort.” *Salazar*, 804 F. Supp. 2d at 1006. This shortcoming in the GSA 2010 analysis is a sufficient reason to reject Plaintiffs’ argument.

Contrary to Plaintiffs’ argument (Pl. Br. 24-29), the agencies did not ignore estimated baseflows in 2050. The Army’s PBA sets out the full groundwater modeling performed, explaining the many steps in the simulation and analysis. The agencies’ discussion of the GSA 2010, Lacher 2011, and other groundwater reports, and their explanations of how the agencies used the information in those model simulations prove that the agencies fully understood and considered those modeling exercises. *See, e.g.*, FWS004761-762; ARMY000561; ARMY000575.

Judicial deference to agency determinations is at its greatest when an agency is choosing between various scientific models, as the FWS did in the present instance. *Nw. Coal. for Alts. to Pesticides v. EPA*, 544 F.3d 1043, 1048, 1050 (9th Cir. 2008). The Court may “reject an agency’s choice of a scientific model only when the model bears no rational relationship to the characteristics of the data to which it is applied.” *San Luis*, 747 F.3d at 620–21 (internal quotation marks omitted) (quoting *Nat’l Wildlife Fed’n v.*

⁹ *See* SOF 49, 84, 97, and 125 (concerning estimated Fort-attributable water demand).

EPA, 286 F.3d 554, 565 (D.C. Cir. 2002)(per curiam)). Plaintiffs fall far short of this demanding burden. The GSA 2010 report fails to show that the BiOp irrationally misstated the potential impacts on the regional groundwater component of baseflow in the San Pedro River of Fort-attributable groundwater usage, especially in light of the unique analysis required by Section 321.

Notwithstanding the agencies' reasonable choice of a ten-year agency action period, Plaintiffs argue that analysis of regional groundwater conditions decades after 2030 is required by *Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 525 (9th Cir. 2010). Pl. Br. 27. This argument fails because, unlike the Hatchery in *Wild Fish Conservancy*, the Army explained why it is not able to project the Fort's activities and effects decades into the future because its missions and appropriated funding to implement these activities are too uncertain to project more than ten years into the future.

The cases also have very different facts. In *Wild Fish Conservancy*, the Hatchery had already designed and funded the construction project at issue and expected its completion in 2010. *Wild Fish Conservancy*, 628 F.3d at 519, 524. The panel found that a BiOp issued in 2008 should have evaluated that future activity. Plaintiffs stretch that logic too far in demanding that the agencies had to prepare model scenarios predicated on tenuous assumptions about future water usage occurring many decades in the future.

Plaintiffs' argument is an indirect attack on the Army's choice to define the agency action as Fort operations and activities for a ten-year period. Under their view, the agencies must analyze the effect of groundwater pumping at current rates essentially into eternity. In *Salazar*, Plaintiffs made a variation of the same argument presented here, that the 2007 BiOp ignored the long-term effects of increasing groundwater deficits. 804 F. Supp. 2d at 1006. The Court upheld the agency's analyses of the reasonably certain, indirect hydrologic effects "anticipated to occur in both groundwater and base flows over time (2005–2016)," and did not require longer term analyses. *Id.*

Another court more recently distinguished *Wild Fish Conservancy*, and upheld an agency choice of a ten-year agency action period for a long-standing commercial fishery.

Oceana, Inc. v. Pritzker, 125 F. Supp. 3d 232, 247 (D.D.C. 2015). The court there also rejected the argument that the agencies should evaluate the agency action assuming the agency action there would take a constant rate of sea turtle over the next century, similar to the argument here. *Oceana*, 125 F. Supp. 3d at 249.

The agencies here made even longer projections of future effects than in *Salazar*, and analyzed the effects of Fort water usage through 2030, past the ten-year Fort operation period ending in 2024. They considered groundwater modeling results for 2030 specifically to “account for the time lag between when changes in pumping or recharge initially would occur and when they may have an effect on the regional groundwater component of baseflow in the San Pedro River.” ARMY000574; FWS004764.

In arguing the agencies failed to consider issues related to expanding cones of depression in regional groundwater levels (Pl. Br. 28), Plaintiffs ignore that the Army’s groundwater modeling did consider the spatial and temporal impacts of groundwater pumping. The groundwater modeling also incorporated elements of the GSA 2010 model modifications that spatially distributed Fort-attributable pumping throughout the watershed specifically to consider these issues. ARMY000575. FWS also evaluated how the Fort-attributable artificial recharge in specific locations served to reduce regional groundwater declines around the major groundwater wells. ARMY000580. The agencies presented a reasonable analysis of these issues, belying Plaintiffs’ assertion that the only way to consider this issue is with more uncertain modeling based on long-term guesstimates.

Plaintiffs challenge the agencies’ analyses by pointing out that FWS did, in one instance, use an estimate of a capture fraction simulated to occur in 50 years. Pl. Br. at 28. This is classic case of comparing apples and oranges. FWS drew this estimate not from GSA 2010, but from a different groundwater modeling effort reported in Leake et al. (2008). FWS004905. The fact that a different study proposed these fracture caption metrics at a 50-year time stop (i.e. 2053), based on simulated groundwater conditions

from 1902 through 2003, has no bearing on whether any model could reliably simulate future baseflows based on estimates of future pumping rates.

FWS explicitly acknowledged that the “various data sources we have employed [in this specific analysis of the effect of conservation easements on the lower Babocomari] are not consistent in their timelines.” FWS004904-05. However, FWS used the available information to estimate the effect of conservation easements on “modeled declines in stream discharge” on the lower Babocomari River only because the groundwater modeling did not consider this effect. FWS004907; FWS004902. Plaintiffs point to no data in Leake et al. (2008) that would enable FWS to do the long-term, basin-wide groundwater modeling they argue FWS omitted in the BiOp.

The agencies provided a reasonable explanation why they did not adopt the groundwater modeling simulation in GSA 2010 for 2050 or later. Plaintiffs, in contrast, distort the GSA 2010 long-term modeling results in conflict with the authors’ own caveats about those results and in conflict with Section 321. The groundwater modeling in the BiOp required sophisticated evaluation of complicated and imperfect data. The Court does not now sit as a scientific body reviewing the approach FWS employed, but should accord the utmost deference to the agencies’ expertise. *Conservation Cong. v. Finley*, 774 F.3d 611, 620 (9th Cir. 2014) (“Under our deferential standard of review, we are not permitted to substitute our judgment for the agency’s in determining which scientific data to credit, so long as the conclusion is supported by adequate and reliable data.”); *Balt. Gas & Elec. Co.*, 462 U.S. at 103 (emphasizing deference to expert agency predictions); *Env’t Def. Ctr. v. EPA*, 344 F.3d 832, 869 (9th Cir. 2003); *United States v. Alpine Land & Reservoir Co.*, 887 F.2d 207, 213 (9th Cir. 1989). Plaintiffs’ challenge to the agencies’ use of groundwater modeling fails.

B. The groundwater demand accounting has a reasonable basis.

Plaintiffs also contest the agencies’ net groundwater demand accounting for the Fort, challenging the calculation of the volume of agricultural groundwater pumping precluded by the Army’s acquisition of three conservation easements, the Preserve

Petrified Forest Easement and the Clinton and Drijvers Easements. Pl. Br. 34-38. The agencies used the amounts of foregone water usage attributable to these conservation easements in the groundwater demand accounting to offset the Fort's total gross groundwater demand and determine the Fort's net annual groundwater demand. ARMY000658. FWS adopted the Army's net groundwater demand accounting in the BiOp. FWS004760-61.

In this net demand accounting, the Fort's groundwater demand was reduced by, inter alia, the groundwater pumping permanently retired by the Preserve Petrified Forest easement and the Clinton and Drijvers Easements. FWS004774-75. Due in significant part due to the acquisition of the Preserve Petrified Forest easement and other mitigation measures, the Fort's net groundwater demand changed from a negative net groundwater deficit in 2012 and 2013 to a projected positive net groundwater surplus in 2014 and thereafter. FWS004774-75; ARMY000173.

1. The Army has permanently prevented future groundwater pumping for agricultural uses on the Preserve Petrified Forest property.¹⁰

In 2013 the Army spent \$2.6 million to purchase an easement on a 480-acre parcel called the Preserve Petrified Forest parcel, in partnership with Cochise County's purchase of the parcel subject to the easement. ARMY000519. The parcel is close to the San Pedro River in the Palominas area (i.e. upstream of all modeled impacts). FWS004639; FWS004663. The Army's easement limited future development of the parcel to 12 residential homes, allowing the annual use of only four acre-feet/acre of groundwater thereafter and prohibiting future agricultural use and irrigation. ARMY000519; Exhibit B, Deed of Perpetual Conservation Easement for the Three Canyons/Palominas Parcel, dated November 19, 2013. The easement permanently precludes groundwater pumping to irrigate 480 acres historically used to grow alfalfa, i.e. hay or forage. ARMY000519;

¹⁰ See SOF 51 and 76-93 (concerning Preserve Petrified Forest and Clinton/Drijvers' conservation easements).

ARMY000535; FWS004639. The agencies calculated a net overall savings of 2,588 acre feet of retired groundwater pumping per year for this easement, based on a “water duty” for agricultural irrigation of 5.4 acre-feet/acre (“af/a”), less the water use for the permissible residential homesites. ARMY000535; ARMY000519; ARMY000527; ARMY000513; FWS002774; FWS001609.

This acquisition implemented a key strategy of the Upper San Pedro Partnership to acquire easements that retire irrigation or limit development to avoid future increases in water use. ARMY019089; ARMY019107; ARMY000527; ARMY023358-61. Moreover, “[v]arious modeling efforts have shown that reducing water used for agriculture, particularly in the southern part of the basin [where the Preserve Petrified Forest property is located], can inordinately benefit the base flow of the San Pedro River when compared to other reductions downstream.” ARMY000535-36; FWS002774-75. The acquisition of conservation easements near the Upper San Pedro River, including those limiting agricultural irrigation, has been a part of the long-term mitigation strategy in the Upper San Pedro Basin by the Army and others, and instrumental in permanently retiring the legal right to use groundwater in critical areas within the basin. ARMY002514-15.

As a result, according to the Arizona Department of Water Resources (“ADWR”), Upper San Pedro Basin Active Management Area Review Report, March 2005, (“ADWR 2005 Report”), irrigated agricultural land had been reduced from more than 6,600 acres prior to 1980 in the Sierra Vista subwatershed to about 2,500 acres as of 2005. ARMY002575-77. ADWR also noted: “It is anticipated that there will be a further reduction in agricultural use due to several factors. The BLM, Nature Conservancy, [FWS,] and Fort Huachuca are working together to establish conservation easements to reduce irrigation and other pumpage near the San Pedro River.” ARMY002577.¹¹ The

¹¹ The ADWR 2005 report discusses the four center-pivot irrigation fields at the Preserve Petrified Forest parcel, noting the fields were tilled and ready for irrigation during a

BiOp noted the potential fruits of these efforts in its discussion of wet and dry mapping of the Upper San Pedro River, which had found a segment of the river appeared to be getting wetter over time. “While wet/dry mapping cannot prove causality of changes in hydrologic conditions in a complex system, a likely explanation of the increase in Segment 2 is conservation easement purchases retiring irrigation of farm fields near or adjacent to the river in Segments 1 and 2, likely reducing water consumption there (Turner and Richter 2011)”. FWS004678; FWS004705.

Plaintiffs complain that this \$2.6 million easement is worthless in mitigating a groundwater deficit, because the center pivot irrigation ceased in 2005 and the center pivots for irrigation were no longer on the property at the time of the transaction. Pl. Br. 31-33. This argument lacks any legal or factual basis.

First, Plaintiffs set too high a legal burden in demanding the agencies prove that future irrigation was certain to occur on this parcel by “specific plans” and “a clear, definite commitment of resources.” Pl. Br. 31-32 (citing *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 524 F.3d 917 (9th Cir. 2008); *Salazar*, 804 F. Supp. 2d at 1002; *Rumsfeld*, 198 F. Supp. 2d at 1152). Their cited caselaw holds only that the agency mitigation project must be reasonably certain to occur, not that third parties (such as alternate buyers of the land) would have acted in provable ways. *Salazar*, 804 F. Supp. 2d at 1002; *Rumsfeld*, 198 F. Supp. 2d at 1152; *Nat’l Wildlife Fed’n*, 524 F.3d at 935-36; *Nat’l Wildlife Fed’n v. Nat’l Marine Fisheries Serv.*, 839 F. Supp. 2d 1117, 1128 (D. Or. 2011); *see also* 84 Fed. Reg. 44,976, 45,002-04 (Aug. 27, 2019) (rejecting Plaintiffs’ interpretation); 50 C.F.R. 402.17. These cases require only that the mitigation measures be binding; while guarantees as to the future effects or outcomes of those measures are not required. *Ctr. for Biological Diversity v. U.S Fish & Wildlife Serv.*, 441 F. Supp. 3d 843, 865 n. 21 (D. Ariz. 2020) (rejecting similar argument about conservation easement).

January 2003 field investigation and had expanded from 2 ½ center pivot fields since satellite imagery in 1997. *See* ARMY002672-73; ARMY002679.

Here, there is no dispute that the Army obtained a conservation easement for the Preserve Petrified Forest parcel and the easement precludes future agricultural uses and associated irrigation. FWS004639; ARMY000519; Exhibit B.

There is no basis in the ESA for Plaintiffs' test that third-party conduct must be proven by definite plans. The ESA Consultation Handbook cites the Fifth Circuit decision in *National Wildlife Federation v. Coleman* as the textbook example of private development as an indirect effect of a federal highway project "even though the private development had not been planned at the time the highway project was proposed." FWS015974 (ESA Consultation Handbook at 4-29). In *Coleman*, the court accepted agency predictions of future private development as an adequate basis that this indirect effect would occur, without requiring proof of binding plans. *Nat'l Wildlife Fed'n v. Coleman*, 529 F.2d 359, 373-74 (5th Cir. 1976). Applying that holding here, the future agricultural irrigation use on the Preserve Petrified Forest parcel need not be proven to any higher standard, or with any more tangible proof, for FWS to consider the easement beneficial in preserving baseflows in the San Pedro River.

Plaintiffs also ignore Arizona water law. Under Arizona law, agricultural wells located within an Active Management Area ("AMA") or an Irrigation Non-Expansion Area ("INA") are subject to restrictions, such as prohibiting the irrigation if not within five years of the designation, which would effectively stop their future use. ARMY002601-3. "Similar restrictions do not exist outside AMAs as long as the water is put to reasonable and beneficial use." ARMY002601. The Upper San Pedro Basin is not an AMA or INA.¹² ARMY002505-07; ARMY002628-29. Accordingly, but for the Army's conservation easement, there would be no limit or restriction on a private owner pumping as much groundwater as necessary for reasonable and beneficial use, such as the amount necessary to grow alfalfa or another crop.

¹² See SOF 4 and 6 (concerning the location of the Upper San Pedro Basin).

Third, Plaintiffs' standard that this mitigation measure can only be reasonably certain to occur if the immediate predecessor in interest was irrigating this parcel prior to acquisition and retirement of that legal right by purchase simply makes no sense. A conservation easement looks forward in time, not backwards. Although prior use of the property is useful to ascertain what potential uses of the property should be estopped, a conservation easement has the intended purpose of stopping future uses of the property. A.R.S. § 33-271 (defining "conservation easement" as a property interest "imposing limitations or affirmative obligations for conservation purposes").

Plaintiffs also set too high a standard in arguing that FWS failed to demonstrate the actual retirement of groundwater usage because at the time of the transaction, the parcel lacked the four center pivots used in earlier pivot irrigation, and irrigation of alfalfa had not occurred for several years. Pl Br. 30-33. Plaintiffs' argument ignores the clear history of agricultural irrigation and the potential use of the property for a variety of agricultural uses.

The agencies estimated the precluded groundwater usage attributable to the easement based, in part, on a standard of 5.4 af/a, the standard and long-established regional water duty factor for all agricultural crops in the Upper San Pedro River watershed. FWS004639.¹³ This water duty value is based on "the complete mix of crops and irrigation systems" in the watershed, and is an amount less than the water required for alfalfa, the highest water use crop grown in the San Pedro River watershed. FWS006237-38; FWS004639.

Thus, assuming that the agencies must show future groundwater usage on the Preserve Petrified Forest parcel (though, as explained above, such proof is not necessary), the standard here would not require specific proof that center pivot irrigation of alfalfa

¹³ ADWR used this value "for determining the quantity of water use for a potential water right such as irrigation." FWS006161. The use of a uniform water duty for the region was "derived from average cropping patterns and efficiencies within" the watershed. *Id.*

would resume.¹⁴ Rather, the only proof necessary would be that any agricultural irrigation would resume. That agricultural use might include, for example, irrigated pasture for livestock or orchards. FWS006179, FWS006184. FWS, for its part, was concerned that future use of this parcel without an easement might entail “irrigation of orchards or alfalfa fields for horse pastures.” FWS001696. And the record here demonstrates that “[p]asture is the predominant crop irrigated in the Basin.” ARMY002674.

Plaintiffs’ own extra-record evidence shows that, at the time of the transaction, the property was actually leased and occupied for “agricultural grazing use.”¹⁵ ECF 19-1 at 3, 4 (noting 187 head of cattle and one horse grazing in October 2013). The agencies had a sufficient basis in the historical use of the parcel for growing hay and livestock forage and pasture, and the history of agricultural irrigation uses throughout the watershed, to predict future agricultural irrigation on the parcel, without needing to prove a third party’s specific plans for a specific agricultural use.

Plaintiffs also seize on the fact that the Army’s groundwater modeling simulation did not include a specific future date when the irrigation usage associated with the

¹⁴ Plaintiffs argue that the center pivot system was no longer installed on the parcel around the time of the transaction. Pl. Br. 32. This is beside the point, as alfalfa and most crops do not require center pivot irrigation, but can be flood irrigated. FWS026920 (“Alfalfa responds well to water application regardless of the type of irrigation system used.”); ARMY002573 (“Irrigation [in the Basin] is primarily flood irrigation.”). The irrigation infrastructure, i.e. wells and pumps, remained in place and in use on the property at the time of its acquisition. FWS004639; ARMY000519. Plaintiffs’ own evidence notes that the three existing agricultural wells, with pads and piping remained on the property, and that one was in current use for stock watering. ECF 19-1 at 11, 23. And the cost of center pivot equipment is an ordinary business expense in farming and ranching. *See* Exhibit C, Tom Scherer, NDSU Extension, *Selecting a Sprinkler Irrigation System*.

¹⁵ Plaintiffs also rely on inadmissible hearsay (or double hearsay) in a 2007 newspaper article. ECF 19-3.

easement would resume in the NFA scenario. Pl. Br. 32. First, this was merely a reasonable assumption to include in a model, given that it would be inconsistent with the goal of an accurate simulation to assume the resumption of groundwater pumping that was no longer permissible. ARMY000567. Second, there is no basis to suggest the perpetual conservation easements would be removed in the future.

Moreover, there is no inconsistency in the agencies' use of two complementary lines of evidence in the net groundwater demand accounting and groundwater modeling. The demand accounting is one means to calculate the net groundwater demand attributable to the Fort using an annualized metric of acre-feet of groundwater usage. This metric is useful in the overall assessment of the Fort's potential effects on ESA-listed species, especially under Section 321, in providing "a reasonable estimate of the Fort's continuing groundwater demands and its contribution (positive or negative) to the sustainable yield of the regional aquifer." ARMY000105-06.

The groundwater modeling complements this annualized approach and assesses the Fort's impacts on the regional component of baseflow by considering spatial and temporal patterns in pumping and recharge. ARMY000173. The Court should defer to the agencies' decision to utilize both approaches in tandem. In their expert judgment, the groundwater impacts of various mitigation measures could not be feasibly modeled, such as precisely "when agricultural pumping would recommence without the conservation easements." ARMY0175. Their use of more conservative model scenarios, and to limit adjustments to the groundwater model, is a reasonable choice to narrow the uncertainty in the modeled estimate of Fort-attributable impacts to the regional groundwater component of baseflow. FWS004762-64; ARMY000176; ARMY000568.

Deference is owed here to the agencies' expertise and their factual record. If the Court were to adopt Plaintiffs' argument that the conservation easement is illusory, the resulting precedent could also have a significant chilling effect on governmental agencies' and others' use of funds, as done here, to foreclose future development and water use.

2. The Agencies' had a reasonable basis to exclude assumed return flows in the groundwater demand accounting for three conservation easements.

Plaintiffs also argue that the amounts of water saved from agricultural irrigation on the Clinton, Drijvers and Preserve Petrified Forest parcels are overstated. Pl. Br. 34-38. Plaintiffs argue that the correct consumptive use for alfalfa is 3.4 af/a, and that return flows of approximately 2 af/a should not be included in any groundwater demand accounting. Pl. Br. 35.

The agencies calculated the water savings for the agricultural land easements by multiplying the 480 historically irrigated acres by a water duty of 5.4 af/a, which is the regional water duty for all agricultural crops. ARMY000517; ARMY000519; ARMY000527. In making this calculation, the agencies had numerous variables to balance and used an approach consistent with their approach in 2002 to calculating the credit attributable to acquisition of the Clinton and Drijvers easements. ARMY008633. Plaintiffs' approach demands re-opening of the calculation of a 2002 conservation credit that Plaintiff has heretofore never challenged and should remain closed.

Plaintiffs cite to the ADWR 2005 Report as support for their preferred consumptive use figure. ARMY002495-713. Plaintiffs overlook however that the calculation of credit for the conservation easement is an exercise in professional judgment. This 2005 report is not a work of primary science on the quantification of return flows in the Upper San Pedro. Rather, the report states the return flow estimates as an assumption: "[w]ater applied in excess of the consumptive use is assumed to recharge the shallow aquifer underlying the fields along the river." ARMY002548. And the metric Plaintiffs frame as superior - consumptive use - is defined as "the volume of water used by plants for growth and transpiration" that "does not reflect the amount of water diverted, pumped or applied to irrigated acres." ARMY002546.

The ADWR's assumption of the consumptive use amount is not binding on the agencies here. As described above, the agencies here based their demand accounting credit for these conservation easements on the water duty amounts established in

ADWR's 1991 Hydrographic Survey Report, "which were derived based on local weather and cropping practices at the time of that investigation" and that ADWR did not reinvestigate or recalculate in its 2005 report. ARMY002674. The water duties set in 1991 "reflect the amount of water diverted or delivered for irrigation purposes." ARMY001785. Given the narrow purpose of the ADWR 2005 Report, the agencies are not obligated to choose a consumptive use calculation derived for an unrelated state regulatory analysis over the water duty number established for the state's water adjudication.

Although Defendants dispute Plaintiffs' argument concerning agricultural irrigation return flows or the use of the consumptive use rate from the ADWR 2005 Report, if that rate were used it should be 3.43 af/a, not Plaintiffs' lower number. ARMY002674-75. It should also be noted, however, that other sources provide different assumptions as to return flows. *See, e.g.*, ARMY011655 (Pool & Dickinson 2007, assuming 30% of irrigation withdrawals return to aquifer, which would result in a 3.78 af/a rate).

Further, on their larger point, Plaintiffs are wrong to conclude that ascribing a lower af/a value to precluded groundwater usage negates the agencies' conclusion that the Fort would likely generate a net groundwater surplus beginning in 2014. Plaintiffs fail to consider that other values in the net groundwater demand accounting have also changed, which can offset any reduction in the water savings from the agricultural conservation easements. When the Army and FWS conduct their next consultation, they will account for all of the changes since 2014, to include the significantly reduced Fort-attributable groundwater demand discussed above and additional conservation easements acquired by the Army since the BiOp was issued. The table at SOF 125 provides some updated data from 2015-2019, showing the Fort still demonstrates a continued net surplus.

C. FWS reasonably considered the effects of climate change.¹⁶

Plaintiffs argue that FWS failed to adequately consider climate change, particularly how precipitation changes may affect natural recharge of groundwater. Pl. Br. 38-42. This argument fails because the agencies presented qualitative analyses of the likely impacts of climate change to surface flows in the San Pedro River and species' habitats. Plaintiffs' argument also lacks any legal basis in demanding that the agencies were obligated to incorporate varying estimates of future precipitation declines predicted under various climate change scenarios into their groundwater modeling. The agencies explained why that step was infeasible and not appropriate. That demand also goes well beyond any requirements of the ESA or rational basis judicial review.

FWS began its discussion of the likely effects of climate change risks in the environmental baseline section of the BiOp in recognition that climate change trends (and other climatic variables) are already affecting southeastern Arizona through ongoing phenomena such as multi-year drought and warmer temperatures. FWS004668-71. FWS was candid in its recognition that:

Climate change trends are highly likely to continue (Overpeck et al. 2012), and the impacts on species will likely be complicated by interactions with other factors (e.g., interactions with nonnative species and other habitat-disturbing activities). Drought and climate change will also impact watersheds and subsequently the water bodies in those watersheds. Drought and especially long-term climate change will affect how ecosystems and watersheds function. These changes will cause a cascade of ecosystem changes, which may be hard to predict and are likely to occur non-linearly (Seager et al. 2007).

FWS004669; FWS004676-77 (Noting that San Pedro streamflows have declined in the 20th century and that studies suggest that “decreases in streamflow are largely attributable to changes in the precipitation patterns and more vigorous and expansive riparian vegetation.”); FWS004683 (same); FWS004749 (same); ARMY000072; ARMY000082; ARMY000180-81. This analysis is based on the Army's PBA that

¹⁶ See SOF 38-47, 95-96, and 119-120 (concerning analysis of climate change).

included significant review of climate change science and the potential impacts on recharge of the Upper San Pedro River aquifer. ARMY000180; ARMY000545-53.

FWS reviewed the available scientific literature forecasting that future impacts of climate change will likely include further decreased precipitation, decreased streamflow, a changing hydrograph, and reduction in the amount of habitat available for water-dependent species. FWS004670-71. FWS even highlighted the one study Plaintiffs claim it ignored, Serrat-Capdevila et al. 2007 (FWS0035308), and its estimate that “recharge in the San Pedro Basin would decrease [four] to [six percent] by 2020, [six] to [eight] percent by 2030, and 17 to 30 percent by the end of the 21st century (based upon the range of IPCC GHG emission scenarios considered).” FWS004671; ARMY000072-73.

FWS acknowledged that these predictive trends come with “large uncertainty if and how regional precipitation may change,” especially in the summer monsoon season when the Upper San Pedro area receives most of its annual precipitation (though perhaps not most of its natural recharge of groundwater). FWS004670 (citing Garfin et al. 2013, FWS021743); FWS002217-18; FWS003512; ARMY000072. Importantly for Plaintiffs’ argument here, the data on recent annual precipitation rates is not consistent with estimates of decreasing precipitation. *See* FWS021773; ARMY000070-74. Precipitation patterns are also affected by natural decadal temperature variations in the Pacific and Atlantic Oceans. ARMY000073; ARMY000550. Thus the agencies are faced with conflicting information about precipitation patterns in the watershed that are not easily reconciled or projected into the future.

This discussion of climate change as a significant cause of a worsening environmental baseline demonstrates that the agencies did not disregard available scientific information on this issue. That is all the ESA requires. *San Luis*, 747 F.3d at 602 (FWS cannot ignore available biological information.) The BiOp is clear that these “still-deteriorating baseline conditions” will continue to worsen in the future due in large part to climate change. FWS004766; FWS004770. FWS explained that the Fort’s effects on baseflows over time “will not worsen the deteriorating baseline conditions and are

thus unlikely to result in significantly increased adverse effects” to the Huachuca water umbel and other species that utilize the riparian areas of the San Pedro River. FWS004766; FWS004770.

Plaintiffs claim the agencies were obligated to use quantitative estimates of declining precipitation estimates in their groundwater modeling. Pl. Br. 39-40. This point fails because the ESA does not require this quantitative analysis. The ESA “simply requires that [the Service] appropriately consider the effects of [agency] actions within the context of other existing human activities that impact the listed species.” *Nat’l Wildlife Fed’n*, 524 F.3d at 930. The agency need only address “the totality of factors affecting the species[.]” 51 Fed. Reg. 19,926, 19,932 (June 3, 1986); *see also, e.g., Conservation Cong. v. U.S. Forest Serv.*, 720 F.3d 1048, 1055 (9th Cir. 2013) (discussing baseline that addresses “aggregate effects of past activities”); *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1067 (9th Cir. 2004) (noting that “the ESA does not prescribe how the jeopardy prong is to be determined”). FWS’s qualitative analysis of how climate change affects water resources in the San Pedro River is not deficient for lacking any sort of “specific numerical analysis.” *Sierra Club v. U.S. Dep’t of Interior*, No. 20-60299, 2021 WL 911184, at *6 (5th Cir. Mar. 10, 2021) (rejecting demand for quantitative analysis).

Plaintiffs are also wrong in arguing that FWS had to consider the Fort’s effects on groundwater and baseflows in the San Pedro River in the context of “combined declines” or “synergistic effects” on the rivers. Pl Br. 39-41. This cryptic argument misconstrues the jeopardy analysis under ESA Section 7(a)(2) because the analytical focus under Section 7(a)(2) is whether the action itself is the cause of the appreciable reduction of a species’ likelihood of survival and recovery. *See Nat’l Wildlife Fed’n*, 524 F.3d at 930 (“[T]he suffix ‘-ize’ in ‘jeopardize’ indicates some active change of status . . . Agency action can only ‘jeopardize’ a species’ existence if that agency action causes some deterioration in the species’ pre-action condition.”); *see also Ctr. for Biological Diversity v. FWS*, 807 F.3d 1031, 1052 (9th Cir. 2015) (“[J]eopardy caused by cumulative effects

[does not] obviate the requirement that the federal action itself must cause some incremental deterioration in the species' pre-action condition.”). FWS utilized the appropriate analysis here in parsing the effects to baseflow in the San Pedro and Babocomari Rivers (and other effects) that are attributable to the Fort from the effects of other activities and phenomena that are not attributable to the Fort, including climate change.

FWS relied on the groundwater modeling forecast demonstrating the Fort's action “is anticipated to result in a net increase in groundwater available for discharge to the San Pedro River . . . [and] that Fort Huachuca's actions will eventually increase groundwater elevations and increase in Fort-associated contributions to stream flows the San Pedro River[.]” FWS004766 (emphasis added) (discussing effects to the Huachuca water umbel); FWS004901 (discussing, e.g., “modest, beneficial effects to the habitat supporting those yellow-bellied cuckoos that occur along the mainstem San Pedro River”). This finding is reasonable because FWS also recognized that these beneficial effects will occur against a worsening backdrop, “will not worsen the still-deteriorating baseline conditions,” and mean only that the Fort's action is “unlikely to result in significantly increased adverse effects.” FWS004766.

This general review of the likely impacts of climate change is all that the ESA and its implementing regulations require. *See, e.g., WildEarth Guardians v. FWS*, 416 F. Supp. 3d 909, 934-35 (D. Ariz. 2019) (upholding general discussion of effect on species). If Plaintiffs are suggesting that additional procedures are required to consider climate change risks, neither the ESA nor the implementing regulations require them, and this Court should not impose them. *See, e.g., Wilderness Soc'y v. Tyrrel*, 918 F.2d 813, 816 (9th Cir. 1990) (court “may not fashion procedural obligations beyond those explicitly enumerated in the pertinent statutes”); *All. for Wild Rockies & Native Ecosystems Council v. Marten*, 455 F. Supp. 3d 956, 962 (D. Mont. 2020) (citing *Butte Env't Council v. U.S. Army Corps of Eng'rs*, 620 F.3d 936, 948 (9th Cir. 2010)). There is no legal basis for Plaintiffs' demand, Pl. Br. 40, that the agencies were obligated to consider the impacts

of declining precipitation rates specifically through simulations in the groundwater modeling.

In FWS's judgment the most current and accurate regional groundwater flow model was the model first presented in Pool and Dickinson 2007. FWS04681-82; ARMY0011631; ARMY000173. The agencies caveated the modeling exercise with the general caution that models must distill complicated relationships to more simplified assumptions to be practical and useful. FWS004682. FWS explained the several simplifying assumptions in the groundwater model, including the exclusion of "stormflow or baseflow from bank storage in the alluvial aquifer from rainfall events," as well as use of a constant value for the natural recharge component. FWS004682; ARMY000098. As a result, the groundwater model the agencies used "does not deal with wetter or drier precipitation patterns." *Id.*

The now-dated climate change modeling cited by Plaintiffs (Serrat-Capdevila) has several limitations as well. FWS035323. Further, it relied on an outdated model that used calibration data from 1940 to 2000. FWS035317. Since that time, the Army has dramatically reduced its water consumption. And the authors of the Serrat-Capdevila Report cautioned against using it to predict impacts far out in time, as the Plaintiffs want to do. FWS035322.

The groundwater model the agencies used here is still superior to prior models due to its more accurate representation of the actual hydrogeology in the San Pedro watershed, especially the regional groundwater component of baseflow. ARMY011639; ARMY011682-83; FWS004682; FWS028578 ("[U]se of the U.S. Geological Survey five-layer groundwater flow model by the [Army's] consultant are reasonable and valid."). In considering the weight to place on groundwater model results, the agencies recognized the model "assumed a constant annual precipitation rate," not "seasonal and annual changes in precipitation to predict changes in recharge." ARMY000550-51; ARMY00097-98; ARMY000073. However, "[d]ue to uncertainties that exist in G[lobal] C[limite] M[odel] precipitation predictions for Southeast Arizona and given that the

Upper San Pedro Basin groundwater model does not use seasonal and annual changes in precipitation to predict changes in recharge, it is not reasonable to quantify future changes to the San Pedro River baseflow.” ARMY000073-74; ARMY000551 (“[I]t is not feasible to reasonably quantify future changes to the San Pedro River baseflow related to climate change.”). As FWS explained:

Estimating stormflow and including climatic variations would require substantial revisions and recalibration of the model. Understanding model limitations and assumptions adds context to the results and, despite these limitations, the model does provide a reasonable indication of the potential magnitude, timing, and the spatial distribution of the impacts of groundwater withdrawals on baseflow.

FWS004682. Plaintiffs wholly ignore the tradeoffs involved in the choice of groundwater model and design of the modeling simulations. The agencies also explained why such tradeoffs led them to consider the effects of climate change on the Upper San Pedro Basin in a qualitative analysis.

FWS was nonetheless able to use the model simulations to assess “the Fort’s impacts on the regional component of baseflow,” by estimating “the relative temporal and spatial trends” and “the relative change from the current conditions to future years or between scenarios with the Fort’s attributable pumping and without the Fort’s attributable pumping.” FWS004762; FWS004764. FWS clearly distinguished the specific use it made of the modeling results - to identify the specific effects attributable to the Fort from other impacts to the aquifer and San Pedro River baseflows - from Plaintiffs’ indiscriminate and incorrect description of the modeling as reliably predicting actual surface flows in the San Pedro River at points in the future. FWS explained that “[c]aution was exercised in applying the aforementioned model results to the predictions of absolute changes in the wet or dry conditions of the San Pedro and Babocomari Rivers, the key component in the analysis of effects to [the] Huachuca water umbel” and other species and habitats depended on riparian conditions. FWS004764.

The BiOp provides complete analyses of the effects of the Fort’s activities and demonstrates a reasonable application of FWS’s regulatory definition of “[j]eopardize the

continued existence of’ at 50 C.F.R. § 402.02. The no-jeopardy and no-adverse modification analyses in the BiOp are determinations that are made about the effects of the Fort’s activities, not determinations made about the environmental baseline for the proposed action or about the overall condition of the species. FWS sufficiently identified the reasons underlying its conclusions that the Fort’s operations would not jeopardize any species’ continued existence or be likely to adversely modify or destroy any critical habitat.

D. FWS reasonably analyzed any short-term adverse effects occurring prior to issuance of the BiOp.

Plaintiffs also challenge the no-jeopardy conclusion for the Huachuca water umbel on the rationale that the BiOp failed to adequately address short-term effects that FWS thought likely to occur in 2012 and 2013. Pl. Br. 42-44. This is a curious argument because FWS issued the BiOp in March 2014, after this period had already elapsed. Plaintiffs took six years to file suit to challenge the BiOp, and make no contention now that monitoring of Huachuca water umbel populations since 2014 shows these projected short-term effects ever came to pass. Thus, this argument is almost purely abstract.

This issue arises from the fact that Army’s net groundwater demand accounting showed that in 2012 and 2013 there was a negative net groundwater demand attributable to the Fort because it had not yet completed enough mitigation and conservation projects to balance its consumptive use of groundwater in those years. FWS004764; FWS004774-75. FWS was clear that this potential for adverse effects was a low risk insofar as the water demand accounting “is not spatially or temporally explicit” and could not be used “to definitively determine where or when the supposed impacts will take place.” FWS004765. In another line of evidence that does generate spatially and temporally explicit results, the groundwater model scenarios calculated that “[a]t no point during the period from 2012 to 2030 does the Fort-attributable groundwater reduce the baseflow in the mainstem of the San Pedro River,” even without considering additional benefits from conservation easements. FWS004763-64; FWS004776-78.

FWS's ultimate concern was that the groundwater model had enough uncertainty around its spatial and temporal projections to impair FWS's ability to determine exactly when the "surplus of conservation measure-driven water savings overtakes the negative influence of Fort Huachuca's water demands on baseflows." FWS004765. Given this uncertainty in its quantitative analyses, FWS addressed "qualitatively, rather than quantitatively, . . . the residual adverse effects to Huachuca water umbel that may exist during the early portion of implementation of the proposed action," i.e. in the 2012 through 2014 window. *Id.*

FWS concluded that that these adverse effects would be "of short duration and more than completely ameliorated," and that the adverse effects to baseflows would be "small," and modeled to be as little as 0.01 cubic foot/second. FWS04767. FWS applied its expertise to conclude that the umbel might suffer "some minor, unquantifiable decrease" due to reduced baseflows of this magnitude, while competition from more xeric plants might temporarily increase. FWS004768. FWS ultimately concluded that the effects of that magnitude were "small," would be "brief," and well within the range of the highly variable baseflows and "disturbance-prone habitats" that the Huachuca water umbel is adapted to. FWS004766; FWS004771. Such effects were "unlikely to appreciably or permanently diminish the riparian community or cause a transition to a more-xeric community) over the longer term." FWS004768. And thus also "unlikely to result in a contraction of the species' occurrence in the San Pedro River, much less extirpate the species." FWS004771

FWS based this conclusion on an expansive review of the species, its habitat, and life history, including the fact that the length of habitat occupied by water umbel is actually trending up. FWS004770-72; FWS004746. FWS's review of the status of the species spanned over 11 pages in the BiOp. FWS004736-47. The fact remains that the Huachuca water umbel "is able to persist, and perhaps even flourish, through disturbances such as fire and prolonged drought." FWS014635. This feature of the umbel's life history provides a more than sufficient basis for FWS's consideration of the

short-term effects to the umbel that it may have experienced before 2015, and that are now past.

Plaintiffs also challenge the no-jeopardy opinion for the umbel based on their argument that the agencies' groundwater modeling and net groundwater demand accounting are arbitrary. This point fails for the same reasons argued *supra*. The Army is able to rely on the beneficial effects of its many conservation measures, and FWS used these two lines of analysis in the BiOp as reasonable means to evaluate those beneficial effects and aggregate them with the Fort-attributable adverse effects.

II. The Army did not violate the ESA by accepting the 2014 Biological and Conference Opinion.

Plaintiffs argue that the Army committed an independent violation of the ESA by relying on the BiOp. Pl. Br. 45-46. As detailed *supra*, the BiOp is not arbitrary or capricious and complies with the ESA. For those same reasons, the Army's reliance on the BiOp is also lawful. *See San Luis*, 747 F.3d at 640 (rejecting claim of arbitrary reliance on a BiOp); *Pyramid Lake Paiute Tribe of Indians v. U.S. Dep't of Navy*, 898 F.2d 1410, 1416 (9th Cir. 1990) (agency may rely on BiOp where no other data undermines seriously the BiOp).

III. The Army had a reasonable basis for its no-effect finding for the southwestern willow flycatcher.

Plaintiffs challenge the Army's failure to consult with FWS over potential effects to the ESA-listed southwestern willow flycatcher ("flycatcher"). Pl Br. 46-48. The Army's PBA found that the Fort's activities for the ten-year period would have no effect on the flycatcher and that consultation with FWS over potential effects to the species was not required. ARMY000224; *Karuk Tribe of Cal.*, 681 F.3d at 1027 ("An agency may avoid the consultation requirement only if it determines that its action will have 'no effect' on a listed species or critical habitat."). The Army based this finding largely on the groundwater modeling and net groundwater demand accounting, discussed *supra*, concluding that the Fort is anticipated to have positive impacts to the Upper San Pedro

River “and a positive net baseflow leaving the Sierra Vista Subwatershed through 2030.” ARMY000224; ARMY000187-88. The Army has regularly surveyed the Fort and Upper San Pedro River over the past two decades, detecting few flycatchers along the river, and leading it to conclude that the riparian habitat along the Upper San Pedro River is primarily used for migration and lacks suitable nesting habitat. ARMY000187-89; ARMY000224; ARMY000128-30.

Plaintiffs assert (Pl. Br. 47) that the Army’s no-effect finding for the flycatcher is inconsistent with its separate finding that the Fort would have an adverse effect on the yellow-bellied cuckoo that occupies the same types of riparian habitats. This difference is explained by two factors. The first is that the Army found the cuckoo might possibly be adversely affected by the Fort’s activities largely due to a modeled groundwater decline “in the groundwater component of baseflow to the lower Babocomari River downstream from Huachuca City by 2030.” ARMY000190. This finding is consistent with the no-effect finding for the flycatcher because repeated surveys along the Babocomari River have not detected the presence of flycatchers, in contrast to the surveys’ consistent detection of cuckoos along the Babocomari River. ARMY000130; ARMY000132.

The difference in the level of analysis of both species is also explained by the different listing status of the two species in 2013 and the regulatory procedures available to document compliance with ESA Section 7 for listed species versus species proposed for listing. The Army’s no-effect finding for the flycatcher meant that no further consultation was required. 50 C.F.R. 402.14(a). In 2013, the cuckoo was only proposed for listing. ARMY000131. Thus, the Army conferenced with FWS and secured the FWS’ conference opinion confirming that the Fort would not jeopardize this candidate species pursuant to 50 C.F.R. 402.10, and to document compliance with ESA Section 7(a)(4). The more detailed analysis in the BiOp finding no-jeopardy to the cuckoo does not undermine the Army’s no-effect finding for flycatcher because the agencies’ analysis

of both species comes to the same conclusion finding that the Fort's net effects to baseflows in the Upper San Pedro River through 2030 are positive or insignificant.

IV. The Army may rely on the Conference Opinions for the cuckoo and gartersnake after FWS listed those species.

The BiOp contained separate conference opinions for the northern Mexican gartersnake ("gartersnake") and the yellow-billed cuckoo ("cuckoo"). FWS004860-887 (gartersnake); FWS004888-4922 (cuckoo). The gartersnake conference opinion found that Fort operations were not likely to jeopardize the species nor adversely modify proposed critical habitat. FWS004882-84. The cuckoo's conference opinion also found the Fort's proposed action not likely to jeopardize the cuckoo. FWS004913-15.

These two species were only candidates for ESA-listing when FWS issued the BiOp in March 2014, but were formally listed shortly after the BiOp was finalized. 79 Fed. Reg. 38,678 (July 8, 2014) (gartersnake); 79 Fed. Reg. 192 (Oct. 3, 2014) (cuckoo). Plaintiffs now claim that the Army and FWS are obligated to reinitiate consultation on the conference opinions under the terms of either 50 C.F.R. 402.10(d) or 402.16(b), and may no longer rely on the conference opinions. Pl. Br. 48-49. This argument fails because neither regulation imposes a mandatory obligation on either agency in these circumstances.¹⁷

The conferencing regulation at Section 402.10(d) creates a discretionary process to convert a conference opinion into a formal biological opinion. But the process provided under subsection (d) is not mandatory because it is written as permissive, providing only that "[a]n opinion issued at the conclusion of the conference may be adopted as the biological opinion when the species is listed or critical habitat is designated[.]" 50 C.F.R.

¹⁷ The reinitiation claim is not cognizable against FWS under the ESA citizen suit provision, 16 U.S.C. § 1540(g)(1)(A), on a theory of maladministration of ESA Section 7. See *Bennett v. Spear*, 520 U.S. 154, 174-75 (1997) (limiting availability of ESA citizen suit for claims against FWS). Nor is there any articulated violation by FWS of APA Section 706, 5 U.S.C. § 706. *Norton v. S. Utah Wilderness All.*, 542 U.S. 55 (2004) (limiting availability of claims to compel agency action).

§ 402.10(d)(emphasis added). The subparagraph provides further that “[a]n incidental take statement provided with a conference opinion does not become effective unless the Service adopts the opinion once the listing is final.” *Id.* This sentence identifies the singular purpose for converting a conference opinion to a biological opinion, i.e. to obtain incidental take coverage for any take of the newly listed species caused by the agency action. Notably, the regulation does not state that the no-jeopardy finding in the conference opinion otherwise loses force and effect if not converted.

Likewise, the plain language of the reinitiation regulation at section 402.16 is clear that it is inapplicable here to establish any mandatory duty. That regulation applies to the “reinitiation of consultation.” 50 C.F.R. 402.16. But here, the agencies did not complete a consultation on the cuckoo or garter snake; they completed a conference on proposed species and proposed critical habitat that resulted in two conference opinions. *Id.* § 402.10. The conferencing regulation states that the only consultation procedures potentially applicable to conferencing are in section 402.14, when it provides that “the conference may be conducted in accordance with the procedures for formal consultation in § 402.14.” *Id.* § 402.10(d).

In its recent amendment to the reinitiation regulation at section 402.16, FWS also addressed this general issue in the rulemaking preamble, where it said:

One comment suggested that, if the species proposed for listing were already included in the consultation on the programmatic land management plan, such plans should not have to be reinitiated when the species becomes listed. Response: We agree with this comment.

84 Fed. Reg. at 45,011. This colloquy supports the agencies’ position that a conference opinion remains valid after ESA listing.

The agencies complied with their duty under ESA Section 7(a)(4), 16 U.S.C. § 1536(a)(4), to conference on the gartersnake and cuckoo. Plaintiffs have identified no mandatory duty under either regulation for them to redo that entire process as an ESA Section 7(a)(2) consultation solely because the species were ESA-listed several months

after issuance of the conference opinions. Furthermore, these species will be consulted upon as listed species in the agencies' upcoming ESA consultation.

V. The no-jeopardy findings in the Conference Opinions are reasonable and valid.

Plaintiffs also attack the reasoning in the Conference Opinions. Pl. Br. 50. These points fail because they misrepresent FWS's full reasoning and do not show it to be arbitrary. Plaintiffs repeat again their misleading arguments that the agencies' groundwater modeling is unreasonable and overstate again the GSA 2010 study as predicting certain baseflow reductions far past 2030. These points are refuted above and not repeated here.

They also argue, with respect to the gartersnake, that the possibility of a small decline in baseflows in the lower Babocomari River would make that reach uninhabitable for the species due to extirpation of fish as prey. Pl. Br. 51. The conference opinion makes no finding that any prey species will be extirpated due to Fort-attributable baseflow reductions. FWS004869. Rather, the gartersnake's native prey base is already depleted due to the presence of nonnative species. FWS004874-75; FWS004880. If foraging areas, i.e. wetted areas, along the Babocomari River are reduced, that may concentrate both prey and nonnative competitors, with mixed effects for any gartersnake. FWS004880. But this will only be a "small effect," because the flow reductions will be small (and smaller than Plaintiffs state). FWS004881; FWS004883; FWS004879-880.

Plaintiffs dispute FWS's finding that any gartersnakes would disperse upstream or downstream if foraging conditions significantly deteriorated. Pl. Br. 51. They ignore that the last known sighting of a northern Mexican gartersnake on the Babocomari River dates to 1986, and FWS's finding that gartersnakes could disperse to this area "from regional source populations along the San Pedro River" or other locations to "intermittently exist as low density populations." FWS004872-73. If it is reasonable for FWS to predict dispersal from miles away to populate the Babocomari River, it is equally reasonable to assume that individuals could disperse out of the area – up or downstream - in search of better habitat.

For the cuckoo, Plaintiffs argue that FWS arbitrarily downplayed the adverse effects to the species if declining streamflows in the Babocomari River caused the riparian habitat to include more mesquite and less willows and cottonwood. Pl. Br. 52, citing to a FWS rule issued after the BiOp was issued. *See* 79 Fed. Reg. 48,548, 48,551-52 (Aug. 15, 2014). Their point ignores that cuckoos are not dependent on any one species of insect, and its diet varies by year, location, and life stage; thus in Arizona, “cicadas are an important food source.” *Id.* at 48,551; FWS004889 (tying fledging of cuckoos to cicada peaks in Arizona). The BiOp explains these factors at FWS004889-890. Likewise, cuckoos successfully nest and breed in various woodlands, including mesquite. 79 Fed. Reg. at 48,551, 48,554; FWS013078; FWS025313. Plaintiffs’ point fails because cuckoos readily inhabit mesquite, and the potential shift from willow/cottonwoods to mesquite on the Babocomari will be “insignificant (functionally immeasurable)” and “discountable (unlikely to occur)” FWS004913.

VI. Reinitiation is not required where the Army is planning a new consultation.

In response to Plaintiffs’ notice of their intent to bring suit, the Army explained that “the consultation period for the current BiOp ends March 31, 2024. Given the time required to budget for and conduct the next consultation, and subject to the availability of funds, the Army was already planning to begin work in fiscal year 2021.” *See* Exhibit A, Letter from Colonel Chad Rambo to Dr. Robin Silver, January 30, 2020, at 2. The Army continues to work toward completing a new consultation well before the BiOp expires. The post-decisional evidence Plaintiffs offer in support of their reinitiation claim supplies no basis for a quicker reinitiation of consultation. Pl. Br. 52-55.

Plaintiffs are mistaken that reinitiation is necessary because the Fort has fallen short of the artificial recharge amounts estimated to occur as part of the Fort’s 2013 mitigation measures plan. FWS004774-75; ARMY000526; ARMY000659-660. First, reinitiation is not triggered for “every modification of or uncertainty in a complex and lengthy project.” *Conservation Cong.*, 774 F.3d at 619 (quoting *Sierra Club v. Marsh*, 816 F.2d 1376, 1388 (9th Cir.1987)). Obviously the volume of stormwater recharge will

vary with actual precipitation rates, and effluent recharge will decline if water use declines. The Army provides annual reports to FWS documenting implementation of all conservation and mitigation measures. ARMY025714-832. As the Army told Plaintiffs prior to this lawsuit and as its annual reports demonstrate, while some artificial recharge has been less than anticipated, other water-related mitigation measures the Army implemented still support a net groundwater surplus. *See* Exhibit A. The table at SOF 125 provides updated data from 2015-2019, which reflects this continued net surplus. This fuller picture demonstrates that the Fort's net groundwater demand has not returned to a deficit as Plaintiffs assert, nor does their cherry-picked data reveal effects that were not previously considered. Of course the agencies' next consultation will take account of updated information, such as artificial recharge volumes.

Likewise, the agencies' forthcoming consultation will include consideration of the best available information on climate change impacts. But Plaintiffs' mere citation (Pl. Br. 54) to newer projections of even greater temperature increases by 2050 or 2100 presents no argument that reinitiation of consultation on the Fort's operation must occur sooner than the agencies' current schedule. As explained above, the Army consults on the Fort's operations for ten-year periods, not the effects of climate change in 2050 or 2100. Plaintiffs fail to explain how the one excerpted document they proffer, among the steady release of new analyses of climate change and related effects, is the one new analysis that triggers reinitiation here and now. The information Plaintiffs cite discusses expected temperature increases across large geographic areas, without consideration of the issues discussed above regarding the complexities in factoring such estimates into forecasts of localized conditions. ECF19-5 at 19. The agencies are well aware of this important issue. And their forthcoming consultation will address it.

Finally, Plaintiffs' proffer of a report authored by their retained hydrologist (Pl. Br. 54) does not support a reinitiation claim. Again, projections of possible impacts to surface flows in 2100 are so uncertain that they cannot trigger immediate reinitiation

before the Army and FWS complete a new consultation and a new BiOp before March 2024.

Plaintiffs' report does not, in any event, satisfy the reinitiation trigger under 50 C.F.R 402.16(a)(2) because it does not present any new facts. This report presents modeling scenarios based on the Plaintiffs' consultant's assumptions and opinions about Fort activities after 2011, among other modeling variables.¹⁸ The ESA's reinitiation regulation cannot reasonably be construed to require the agencies to divert limited resources and reinitiate consultation to analyze every dissenting expert's post-hoc opinion, especially expert opinion prepared for litigation. "To do so would put an impossible burden on agencies." *San Luis*, 747 F.3d at 621 ("[T]hat some or many [experts] would disapprove [of the FWS's] approach does not answer the question presented to us.")(alterations in original)

CONCLUSION

For the foregoing reasons, the Court should grant summary judgment in favor of Defendants and deny Plaintiffs' cross motion.

Dated this 26th day of March, 2021.

Respectfully submitted,

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¹⁸ Plaintiffs' report is inadmissible in support of summary judgment as hearsay under Federal Rule of Evidence ("FRE") 802, for lack of foundation, for noncompliance with the rules on expert opinion evidence (FRE 702 and 705), and Federal Rule of Civil Procedure 26(a)(2)(B). *Cox v. Amerigas Propane, Inc.*, No. CV-04-101-PHX-SMM, 2005 WL 2886022, at *2 (D. Ariz. Oct. 28, 2005) (evidence on summary judgment must be admissible).

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CERTIFICATE OF COMPLIANCE

This memorandum complies with the applicable word-count limitation because it contains 13,997 words, including headings, footnotes, and quotations, but excluding the caption, table of contents, table of cases and authorities, motion, signature block, and certificates of counsel.

CERTIFICATE OF SERVICE

I hereby certify that I have caused the foregoing to be served upon counsel of record through the Court's electronic service system which caused all parties or counsel to be served by electronic means as reflected on the Notice of Electronic Filing.

Dated: March 26, 2021

/s/ John H. Martin