FOR PUBLICATION

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

CENTER FOR BIOLOGICAL DIVERSITY; MARICOPA AUDUBON SOCIETY; SIERRA CLUB, Grand Canyon Chapter,

Plaintiffs-Appellants,

v.

DEBRA HAALAND, in her official capacity as Secretary of the Interior; UNITED STATES FISH AND WILDLIFE SERVICE; MARTHA WILLIAMS, in her official capacity as the Director of 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; CHRISTINE E. WORMUTH, in her official capacity as Secretary of the Army; ANTHONY R. HALE, in his official capacity as the Senior Commander of Fort Huachuca,

Defendants-Appellees.

No. 22-15809

D.C. No. 4:20-cv-00106-RCC

OPINION

Appeal from the United States District Court
for the District of Arizona
Raner C. Collins, District Judge, Presiding

Argued and Submitted May 16, 2023
Phoenix, Arizona

Filed December 4, 2023

Before: Jacqueline H. Nguyen, Daniel P. Collins, and Kenneth K. Lee, Circuit Judges.

Opinion by Judge Lee;
Partial Concurrence by Judge Collins

SUMMARY*

Endangered Species Act

In an action brought by environmental organizations challenging a U.S. Fish and Wildlife Service Biological Opinion (BiOp) concerning the use of water from the San Pedro River Basin in Arizona, the panel vacated the BiOp, reversed the district court's summary judgment for the government on the Preserved Petrified Forest easement, and remanded with instructions for the Service and the U.S. Army to reevaluate its water-savings analysis in a new biological opinion.

* This summary constitutes no part of the opinion of the court. It has been prepared by court staff for the convenience of the reader.

The U.S. Army pumps and uses water from the San Pedro River Basin, which also houses several plant and animal species protected under the Endangered Species Act. To compensate for the water use, the federal government proposed a conservation easement—a promise not to use nearby land for water-intensive agricultural purposes—that would hypothetically save water and not jeopardize wildlife that depend on the basin.

The panel agreed with plaintiffs' contention that the Service's BiOp lacked evidence to support its water-savings analysis. The panel held that the government must show that the benefit from the conservation easement would be "reasonably certain" under the relevant regulations. Here, the government provided little evidence and relied mostly on speculation to claim water savings. Consequently, the government's no-jeopardy determination about the protected wildlife was arbitrary and capricious.

The panel further held that the government's conclusion that the reduction in the baseflow of the Babocomari River (a tributary of the San Pedro River) would not jeopardize the northern Mexican gartersnake was not arbitrary and capricious, and thus the issue need not be reconsidered on remand.

Judge Collins concurred in part and concurred in the judgment. He concurred in the majority's judgment to the extent that it partially reversed and remanded to the district court with instructions to remand for preparation of a new BiOP that rested on a revised water-savings analysis, but would reach that conclusion on narrower grounds than the majority. He concurred in Part II of the court's opinion, which rejected plaintiffs' further contentions that are

specific to the government's challenged determinations as to the northern Mexican gartersnake.

COUNSEL

Stuart Gillespie (argued), Heidi McIntosh, and Thomas Delehanty, Earthjustice, Denver, Colorado, for Plaintiffs-Appellants.

John E. Bies (argued), Andrew C. Mergen, and Rachel Heron, Attorneys; Todd Kim, Assistant Attorney General; Environment and Natural Resources Division, United States Department of Justice, Washington, D.C.; Benhamin Hillner and Mark Holycross, Attorneys, United States Department of the Army, Washington, D.C.; Kim Bannerman, Attorney, Fish and Wildlife Service, United States Department of the Interior, Albuquerque, New Mexico; for Defendants-Appellees.

OPINION

LEE, Circuit Judge:

Water is a vital resource for humans and wildlife alike. At Fort Huachuca in Arizona, the U.S. Army pumps and uses water from the San Pedro River Basin. But that basin also houses several plant and animal species protected under the Endangered Species Act (ESA), 16 U.S.C. §§ 1531–44. To compensate for this water use, the federal government proposed (among other things) a "conservation easement"—a promise not to use nearby land for water-intensive agricultural purposes—that would hypothetically save water and thus not jeopardize wildlife that depend on the basin.

The Center for Biological Diversity (CBD) brings this challenge under the Administrative Procedure Act (APA), 5 U.S.C. §§ 551–59, contending that the U.S. Fish and Wildlife Service's biological opinion (BiOp) lacks evidence to support its water-savings analysis.

We agree with CBD. We hold that the government must show that the benefit from the conservation easement would be "reasonably certain" under the relevant regulations. While the ESA does not impose a high bar to claim conservation benefits, the government here provided little evidence and relied mostly on speculation to claim water savings. And because the government cannot claim these water savings, its no-jeopardy determination about the protected wildlife is arbitrary and capricious. We thus reverse the district court's partial summary judgment for the government and remand for the government to reassess in a new BiOp.

CBD also challenges the government's conclusion that the reduction in the baseflow of the Babocomari River (a tributary of the San Pedro River) will not jeopardize the northern Mexican gartersnake. The district court did not address this issue, but we conclude that the agency's decision was not arbitrary and capricious. It thus need not be reconsidered on remand.

BACKGROUND

I. Statutory and Regulatory Background

The ESA directs the U.S. Fish and Wildlife Service (the Service) to develop a list of threatened or endangered species as well as a list of critical habitats for those species. 16 U.S.C. § 1533(a). It then requires each federal agency to "insure," in consultation with the Service, 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 their designated critical habitat. *Id.* § 1536(a)(2).

To comply with the ESA, an agency must start by preparing a biological assessment of a proposed action's impact on any listed species and their critical habitats. 50 C.F.R. § 402.12 (2009). If the biological assessment concludes that the proposed action is likely to harm the species or habitats, the agency will consult the Service, which will then issue a BiOp. 50 C.F.R. § 402.14; 16 U.S.C. § 1536(a)(2). In the BiOp, the Service provides the final determination of whether the proposed action is likely to "jeopardize the continued existence of" any listed species or

destroy or adversely modify critical habitats. 50 C.F.R. § 402.14(h)(1)(iv).[1]

II. Factual Background

A. Fort Huachuca pumps water from the San Pedro River Valley.

Fort Huachuca is a major Army garrison in the Upper San Pedro River Basin of southeastern Arizona. The river basin is also home to four listed species or species proposed for listing: the Huachuca water umbel, the northern Mexican gartersnake, the western yellow-billed cuckoo, and the southwestern willow flycatcher.

The Fort pumps groundwater from this river basin. But to limit the impact on the river basin and ultimately the protected species, the Fort has pursued various mitigation measures. These include the development of water conservation programs and methods to capture and return water to the basin. The Fort has also obtained water conservation easements, which limit water use by restricting agricultural and residential development.

B. The Service in its BiOp credits water savings and finds no jeopardy for wildlife and their habitat.

Because the Fort's pumping could threaten the protected species and their habitat, the Army engaged in the consultation and assessment requirements of the ESA. The Army has faced multiple rounds of litigation over the impact

[1] Technically, a BiOp examines the effects of an agency action on listed species, while the effects on proposed species are examined in a conference opinion. *See* 50 C.F.R. § 402.10. The Service included its BiOp and conference opinion in the same document, so we treat the opinions as one.

of the Fort's pumping, but this appeal concerns the environmental assessment that began with the Army's Programmatic Biological Assessment (PBA) from May 2013 and concluded with the Service's BiOp from March 2014.

The PBA set out to determine how the Fort's pumping affected the river basin's groundwater and in turn the protected species and their habitat. First, it conducted a "groundwater demand accounting," which balances the amount of water used by the Fort against the amount that the Fort returns to the groundwater through recharge measures and water savings. In 2012, the PBA observed that the Fort had a net groundwater demand of -1,180 acre-feet (AF).[2] But the PBA estimated that, beginning in 2014, the Fort would have a net groundwater surplus of at least 1,419 AF.

The estimated water savings from the Preserve Petrified Forest (PPF) easement contributed substantially to this expected surplus. Even though the land at issue in the PPF easement has remained largely dormant since 2005, the PBA assumed that, but for the easement, someone would have resumed agricultural irrigation on 480 acres of the land beginning on January 1, 2014. Thus, the PBA credited the PPF easement with 2,588 AF/year of water savings, turning the Fort's groundwater deficit into a surplus from 2014 onward.

Second, the PBA employed a "groundwater flow model" to study the effects of the Fort's pumping. The groundwater flow model takes the estimates for groundwater withdrawal and recharge from the groundwater demand accounting and

[2] An acre-foot is the volume of water that would cover one acre to the depth of one foot, or about 325,851 gallons.

uses them as inputs to predict how the Fort's pumping will affect the baseflow of surrounding rivers. The model, however, does not incorporate the groundwater demand accounting's predictions about the water savings from the PPF and other water conservation easements. Even without including the effects of water conservation easements, the model predicted that Fort-attributable activities would boost baseflow for some parts along the San Pedro River. But it also predicted that the Fort would have a slight negative impact (-.1 cubic feet-per-second) on the baseflow of the Babocomari River.

After completing the PBA, the Army decided to seek formal consultation with the Service. In its BiOp, the Service first estimated the Fort's effect on baseflow, incorporating the groundwater demand accounting and its baseflow predictions from the groundwater model. The Service then conducted its jeopardy and adverse-modification determinations for the protected species. Despite decreased baseflows in the Babocomari River, the BiOp concluded that the Fort would have a minimal effect on the protected species and therefore would not jeopardize them or adversely modify their habitats.

C. CBD sues the government and challenges the water-savings analysis.

CBD challenged the BiOp under the APA, asserting that the Service violated the ESA. CBD moved for summary judgment on all its claims, and the government cross-moved. For the most part, the district court granted summary judgment for the government. Relevant here, the district court rejected CBD's claim that the Service lacked sufficient support for its conclusion that the PPF easement would yield water savings. Instead, the court found that it was

reasonably likely that the land would have been used for agricultural use but for the easement and that the Service did not err in determining that the easement saved water.

The district court, however, granted summary judgment for one of CBD's claims. The district court held that the Service overestimated the PPF easement's water savings because the groundwater demand accounting glossed over the reabsorption of water used in irrigation. Thus, the court held that the Service's jeopardy and adverse-modification determinations were arbitrary and capricious. The district court remanded for the Army and the Service to engage in formal consultation to formulate a superseding BiOp that addresses this issue.

CBD timely filed this appeal, asking us to expand the scope of issues the Service must address on remand.

STANDARD OF REVIEW

We review de novo a district court's denial of summary judgment. *Karuk Tribe of Cal. v. U.S. Forest Serv.*, 681 F.3d 1006, 1017 (9th Cir. 2012) (en banc) (citing *Russell Country Sportsmen v. U.S. Forest Serv.*, 668 F.3d 1037, 1041 (9th Cir. 2011)).

The APA governs our review of agency decisions under the ESA. *Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, 698 F.3d 1101, 1109 (9th Cir. 2012) (citing *Karuk Tribe*, 681 F.3d at 1017). Under the APA, an agency action is valid unless it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." *Id.*

(quoting 5 U.S.C. § 706(2)(A)). An agency action is arbitrary and capricious if the agency has:

> relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Pac. Coast Fed'n of Fishermen's Ass'ns, Inc. v. Nat'l Marine Fisheries Serv., 265 F.3d 1028, 1034 (9th Cir. 2001) (quoting *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)).

DISCUSSION

I. The BiOp's Jeopardy and Adverse-Modification Determinations Were Arbitrary and Capricious Because the Analysis of the Easement Was Speculative.

A. If the groundwater demand accounting is flawed, we must remand.

To start, we address the lurking interplay between and among the groundwater demand accounting (which credited the PPF easement's water savings), the groundwater flow model (which did not consider it), and the BiOp (which included the jeopardy and adverse-modification determinations for the protected species). Put another way, we need to figure out if flaws in the PPF easement's expected water savings would cast doubt on the BiOp's jeopardy and adverse-modification determinations. *See Ctr. for*

Biological Diversity v. Bernhardt, 982 F.3d 723, 747 (9th Cir. 2020) ("Our conclusion that the mitigation measures in the BiOp are insufficiently specific to enforce has no legal consequence unless we separately conclude that [the Service] relied on those measures."); *see also Nat'l Ass'n of Home Builders v. Defs. of Wildlife,* 551 U.S. 644, 659 (2007) (holding that administrative law has a harmless-error rule).

At oral argument, the government conceded that the BiOp relied on the groundwater demand accounting—and thus the PPF easement's water savings—to make its jeopardy and adverse-modification determinations for all the protected species at issue. We can thus jump straight to addressing whether there are any flaws with the estimates of the PPF easement's water savings. If there are, that would undermine the groundwater demand accounting and render the jeopardy and adverse-modification determinations arbitrary and capricious.

B. The groundwater demand accounting was flawed because the PPF easement's claimed water savings were not reasonably certain.

We hold that to receive credit for the PPF easement's claimed water savings, the government must show that the benefits were "reasonably certain" to occur. This standard comes from 50 C.F.R. §§ 402.14 and 402.02, which implement the statutory requirement for the government to ensure that listed species are not "likely" to face jeopardy or to have their habitat adversely modified. 16 U.S.C. § 1536(a)–(d). The regulation requires the Service to assess the "effects of the action on listed species or critical habitat." 50 C.F.R. §§ 402.14(g)(3), (h)(1)(iii). At the time the BiOp

was issued, the regulation defined the "effects of the action" as:

> the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline. . . . *Indirect effects are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur.* Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration.

Id. § 402.02 (emphasis added). The parties categorize the effects of the PPF easement as indirect effects, which explicitly incorporate the reasonably certain standard.[3]

The government contends, however, that the actual effects of the mitigation measures need not be reasonably certain. So long as the *mitigation measures* are reasonably certain to occur, the Service's assessment of the effects of those measures need only a rational basis in record evidence. Under the government's proposed standard, the Service must be reasonably certain that it will acquire the PPF

[3] We take no position as to whether the "reasonably certain" standard in 50 C.F.R. §§ 402.14 and 402.02 differs from or exceeds the statutory "likely" standard of 16 U.S.C. § 1536(a)(2). Neither party briefed this issue, and in any event the outcome in this case will be the same, regardless of the standard.

easement and that it will have the ability, on paper, to limit agricultural irrigation. *Cf. Bernhardt*, 982 F.3d at 747 ("Mitigation measures relied upon in a [BiOp] must constitute 'a clear, definite commitment of resources,' and be 'under agency control or otherwise reasonably certain to occur.'" (quoting *Nat'l Wildlife Fed. v. Nat'l Marine Fisheries Serv.*, 524 F.3d 917, 936 & n.17 (9th Cir. 2008))). Thus, according to the government, the Service's assessment of the easement's estimated water savings must only be rational.

The government's proffered standard conflicts with the language of the regulation. Under the government's interpretation, the regulation says only that the Service must be reasonably certain that the agency will engage in proposed mitigation measures. But the regulation requires that the "*effects*" of the "proposed action" be reasonably certain—not the action itself. 50 C.F.R. § 402.02.[4] True,

[4] Since the BiOp was issued here, 50 C.F.R. § 402.02 and its definition for "effects of the action" have been revised. This new language was not meant to change how the regulation operates but clarifies and simplifies the regulation. *See* Endangered and Threatened Wildlife and Plants; Regulations for Interagency Cooperation, 84 Fed. Reg. 44,976, 44,976–77 (Aug. 27, 2019) (codified at 50 C.F.R. § 402). To that end, the regulation now defines "effects of an action" as:

> all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur *but for* the proposed action and it is *reasonably certain* to occur.

50 C.F.R. § 402.02 (2019) (emphasis added). This clarification makes it even clearer that "reasonably certain" language applies to the benefits of an action and not the action itself. 50 C.F.R. § 402.02 (2019).

whether the mitigation measures are "reasonably certain to occur" is relevant in determining whether the effects of those measures are reasonably certain to occur. *See Bernhardt*, 982 F.3d at 743, 747; *Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv.* (*NWF*), 524 F.3d 917, 935–36 (9th Cir. 2008). But that is true for the simple reason that if a mitigation measure is not reasonably certain to occur, it is not reasonably certain to lead to tangible benefits. The converse, however, does not follow—just because a mitigation measure is reasonably certain to occur does not mean that it is reasonably certain to yield tangible benefits. So neither text nor logic supports the government's contention that only the mitigation measures must be reasonably certain. In short, we must assess whether the effects of the mitigation measures—here, water savings—were reasonably certain to occur.

We, however, still must determine what it means for an effect to be "reasonably certain." We hold that an effect is reasonably certain to occur if its occurrence is based on "clear and substantial information," 50 C.F.R. § 402.17(b) (2019), not "speculation or conjecture," 84 Fed. Reg. at 44,977. Although the effect need not be "guaranteed to occur," there must be a "degree of certitude" it will happen. 84 Fed. Reg. at 44,977. This is not a particularly stringent standard to meet, but the government must do more than rely on speculation sprinkled with dabs of evidence. So, unlike what CBD implies, this does not mean that the Service could credit the PPF easement for water savings only if the easement were to interrupt a specific, identified deal to use the land for agricultural purposes. Rather, there must be "solid information" that agricultural use would have occurred in the counterfactual world in which the easement did not exist. *Id.*

That reasonable certainty is missing here. To start, the BiOp struggles to provide evidence that the land covered by the easement would have ever been used for agriculture. The government wants us to believe that the land at issue would have been used for agriculture because of its historical use. By the time the BiOp was assessing the water savings of the easement, however, that history was stale—the land had not been used for agricultural purposes for almost a decade, and some (though not all) of the irrigation infrastructure had been removed from the land. And even though it was legally feasible for irrigation to resume, the extended dormant period renders speculative the BiOp's conclusion that the land would resume agricultural use. The reasonably certain standard is not met when speculation and not "solid information" undergirds the agency action's claimed effects. *See id.* at 44,993. Thus, the groundwater demand accounting is flawed as it relies on water savings from the PPF easement that were not reasonably certain to occur.

The BiOp also assumed that water savings would begin immediately in 2014. But the Service failed to show that it was reasonably certain that agricultural pumping would have otherwise occurred as soon as the calendar flipped over into 2014. Indeed, the BiOp acknowledged that the Service was unsure "when agricultural pumping would recommence without the conservation easement." This uncertainty kept the Service from including the effects of the PPF easement in the groundwater model. Yet, without citing any more evidence, the Service depended on the PPF easement in the groundwater demand accounting to establish a groundwater surplus beginning in 2014. *Cf. State Farm*, 463 U.S. at 43 ("Normally, an agency rule would be arbitrary and capricious if the agency . . . offered an explanation for its decision that runs counter to the evidence before the

agency."). The Service's reliance on the uncertain timing of the PPF easement's water savings further undermines the groundwater demand accounting.

In sum, the Service was not reasonably certain about whether and when the PPF easement would produce water savings.[5] The groundwater demand accounting was thus flawed, rendering the jeopardy and adverse-modifications determinations for the protected species arbitrary and capricious. *See Bernhardt*, 982 F.3d at 748.

II. CBD's Challenge to the BiOp's Jeopardy Determination for the Northern Mexican Gartersnake Fails.

Beyond its challenge of the PPF easement, CBD argues that the BiOp's jeopardy determination for the northern Mexican gartersnake was arbitrary and capricious because: (1) the BiOp irrationally concluded that the gartersnake would migrate when faced with decreased baseflows in the Babocomari River, (2) the BiOp overlooked the Service's past statements about the species-wide consequences for losing low-density gartersnake populations, and (3) the BiOp impermissibly minimized the Fort's expected effects on the gartersnake by comparing any losses against the baseline of an already-depleted population. These arguments fail.

[5] CBD also argues that the BiOp miscalculated how much water the PPF easement would have saved, assuming that the land would have been used for agriculture but for the easement. We need not decide whether the BiOp's calculation was erroneous because we hold that, on the record below, it was not reasonably certain whether and when the PPF easement would provide water savings.

A. The BiOp did not err in relying on the gartersnake's ability to migrate.

The BiOp concluded that the depleted baseflow in the Babocomari River will minimally affect the gartersnake population partly because the gartersnakes can move up- or downstream into more suitable habitats. CBD maintains that this conclusion lacks scientific support and contradicts the Service's previous findings on the gartersnake's migration habits. Neither of CBD's contentions is correct.

The BiOp concluded that gartersnakes would migrate when confronted with depleted baseflow in the Babocomari River because they are considered "opportunistic foragers, meaning they will move on the landscape to areas that present the best foraging potential." According to the proposed rule, migration is an important part of the gartersnake's habitat distribution. 78 Fed. Reg. at 41,508. This provides a sufficient scientific explanation for the Service's conclusion. *See State Farm*, 463 U.S. at 43 ("We will, however, 'uphold a decision of less than ideal clarity if the agency's path may reasonably be discerned.'" (quoting *Bowman Transp., Inc. v. Ark.-Best Freight Sys., Inc.*, 419 U.S. 281, 286 (1974))).

But this is not enough for CBD. Instead, it argues that the BiOp's analysis incorporated scientific evidence that contradicts its conclusion that the snakes could migrate if faced with depleted baseflows. CBD points out that the proposed rule cited one study finding gartersnakes "'wandering' only 'hundreds of meters' from water" and another finding them 600 feet from water. App. Br. at 59 (quoting Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Northern Mexican Gartersnake and Narrow-Headed Gartersnake, 78 Fed. Reg.

41,550, 41,554, 41,557 (July 7, 2013) (codified at 50 C.F.R. § 17)). CBD points out that these distances are far shorter than the ten kilometers that the snakes might have to migrate if the Babocomari River's baseflow is depleted. The BiOp, however, acknowledged this evidence, explaining that the cited distances represented the lateral distance from permanent water that the gartersnake will travel, not the maximum distance along a body of water that a gartersnake could move. *See id.* at 41,557.

Not to be discouraged, CBD maintains that the lateral distance is the better measurement when considering the garternsnake's ability to migrate if faced with the Babocomari River's depleted baseflow. But the decision of what is the best measurement to support a conclusion is typically left up to the Service. *See San Luis & Delta-Mendota Water Auth. v. Locke*, 776 F.3d 971, 997 (9th Cir. 2014) (citing *San Luis & Delta-Mendota Water Auth. v. Jewell*, 747 F.3d 581, 610 (9th Cir. 2014)). Thus, the record supports that the Service considered the relevant factors and articulated a rational connection. For our purposes, that is enough to maintain its jeopardy determination. *State Farm*, 463 U.S. at 43.

B. The BiOp did not err in concluding that the effects on the gartersnakes near the Babocomari River would have minimal species-wide effects.

CBD also argues that the Service failed to address its own findings when it concluded that the negative effects on the low-population habitat near the Babocomari River would not jeopardize the species as a whole. The Service must assess whether the agency action "reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery" of the species.

50 C.F.R. § 402.02. When making this jeopardy determination, the Service is generally concerned with the proposed action's impact on the whole species. *See Wild Fish Conservancy v. Salazar*, 628 F.3d 513, 529 (9th Cir. 2010). But where the agency has identified that protecting individual populations is important to protecting the entire species, the agency should elaborate on why the loss of an individual population would not tip the species into jeopardy. *See id*. Here, the Service noted that any loss of this population of gartersnakes was concerning because it would reduce the species' genetic resiliency. 78 Fed. Reg. at 41,536. According to CBD, by disregarding this connection between losing a few gartersnakes and species-wide jeopardy, the BiOp's determination overlooked an important fact.

But the BiOp's conclusion was not arbitrary and capricious. To begin, the BiOp explicitly incorporated the proposed rule on which CBD relies, establishing that the Service considered the species-wide effect that would be caused by any loss of gartersnakes. *Cf. Wild Fish*, 628 F.3d at 529–30. There is also a rational connection between the facts and the jeopardy determination. The Service stressed that it expected the Fort to have minimal effect on the gartersnakes near the Babocomari River—indeed, it expected it to help some—and the estimate of lost gartersnakes was small compared to the total population. Given the BiOp's findings about the minimal effect on gartersnakes, it was rational for the Service to conclude that the Fort would not "reduce *appreciably* the likelihood of both the survival and recovery" of the gartersnake, even assuming each lost gartersnake creates an external threat on the total population. 50 C.F.R. § 402.02 (emphasis added); *see also Turtle Island Restoration Network v. U.S. Dep't of*

Com., 878 F.3d 725, 750–51 (9th Cir. 2017) (Callahan, J., dissenting in part).

C. The BiOp did not err in concluding that the Fort would only minimally impact the gartersnake population because the population near the Babocomari River was already depleted.

Finally, CBD maintains that the BiOp rested on a legal error. Under 50 C.F.R. § 402.14(g)(4), the Service must "[a]dd the effects of the action . . . to the environmental baseline and in light of the status of the species." This court has interpreted this language to mean that the jeopardy determination must assess whether, given the ongoing threat to the species, the proposed action will tip the species into deeper jeopardy. *NWF*, 524 F.3d at 930 ("[E]ven where baseline conditions already jeopardize a species, an agency may not take action that deepens the jeopardy by causing additional harm."). The jeopardy determination cannot, however, rest on the conclusion that the agency action only minimally contributes to the species' ongoing jeopardy. *Id.* That is, an agency action can still cause jeopardy even if it is only one small part of the overall threat to the species. But the Service may conclude that the agency will not contribute to the species' jeopardy based on its minimal impact on an already-depleted subpopulation. *Cf. id.* ("Agency action can only 'jeopardize' a species' existence if that agency action causes some deterioration in the species' pre-action condition."). Stated simply, if there are no longer any snakes there, then the Service can reasonably conclude that the proposed action will not affect any snakes.

The BiOp did just that. The BiOp did not say that the Fort's effect is small when compared to other ongoing threats to the gartersnake population. Instead, it recognized

that, at the baseline, there are few (if any) gartersnakes near the Babocomari River. Because the population of gartersnakes in that area is already low, any decreased baseflows would not affect enough gartersnakes to tip the species into jeopardy. *See id.* That is a rational and appropriate conclusion that does not warrant a remand.

CONCLUSION

We **VACATE** the 2014 BiOp, **REVERSE** the district court's decision to grant the government's motion for summary judgment on the PPF easement, and **REMAND** with instructions for the Army and the Service to reevaluate its water-savings analysis in a new biological opinion consistent with this opinion.

COLLINS, Circuit Judge, concurring in part and concurring in the judgment:

I concur in the majority's judgment to the extent that it partially reverses and remands this case to the district court with instructions to remand the matter back to the relevant agencies for the preparation of a new "Biological Opinion" that rests on a revised water-savings analysis. However, I reach that conclusion on somewhat narrower grounds than the majority.

The Endangered Species Act ("ESA") requires each federal agency, in consultation with the appropriate Secretary or his or her delegee, to "insure that any action authorized, funded, or carried out by such agency . . . is not *likely* to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such

species" that has been determined to be "critical." 16 U.S.C. § 1536(a)(2) (emphasis added). As the majority notes, the relevant regulations implementing this directive and related ESA provisions require the identification and assessment of both direct and indirect effects of agency action. *See*, *e.g.*, 50 C.F.R. §§ 402.02, 402.14(g)(3), (h)(1)(iii). At the time that the Biological Opinion in this case was issued, those regulations defined "indirect effects" as "those that are caused by the proposed action and are later in time, but still are reasonably certain to occur." 50 C.F.R. § 402.02 (2013). In their briefs in this court, Plaintiffs and the Government vigorously contest whether this "reasonably certain to occur" standard for identifying future effects is more demanding than the statutory "likely" standard for assessing effects. I agree with the majority that we need not resolve this issue. *See* Opin. at 13 n.3. Even assuming that the Government only had to show that the groundwater demand accounting's projected water savings from the Preserve Petrified Forest ("PPF") easement were "likely," the Biological Opinion fails to adequately make that showing.

In explaining why the benefits from the PPF easement were excluded from the groundwater flow *model*, the Biological Opinion states that there was "uncertainty in when agricultural pumping would recommence without the conservation easement." Despite acknowledging that uncertainty, the Biological Opinion's groundwater demand *accounting* nonetheless simply assumes—without appropriate explanation—that actual agricultural use was prevented by the easement nearly from the moment the easement took effect. Moreover, the record reflects that the prior agricultural use of the relevant property stopped in 2005, and the Biological Opinion does not explain why it thought that such use would likely recommence absent the

easement. Indeed, the groundwater modeling report merely states that, "[w]ithout the Fort's purchase of the easement, the pumping *could* recommence." The Government now has an explanation for why it is reasonable to conclude that agricultural use would likely have resumed after so many years—namely, that after 2005, the property was caught up in the alleged land speculation scheme at issue in *United States v. Renzi*, 769 F.3d 731 (9th Cir. 2014)—and Plaintiffs have counterarguments on that score. However, it does not appear that this explanation was ever actually considered by the agency. Rather, the agency appears to have assumed, without adequate explanation, that there would be immediate water savings to a degree that the Biological Opinion itself elsewhere recognized to be uncertain. "The Biological Opinion was therefore arbitrary and capricious in failing to examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made." *Center for Bio. Diversity v. U.S. Bureau of Land Mgmt.*, 698 F.3d 1101, 1124 (9th Cir. 2012) (citations and internal quotation marks omitted). And because, as the majority notes, the Government conceded at oral argument that the groundwater demand accounting was an integral component of the Biological Opinion's relevant challenged determinations under the ESA, *see* Opin. at 12, I agree with the majority's conclusion that the matter must be remanded to the pertinent agencies so that a new Biological Opinion can be prepared that relies on an appropriate re-evaluation of any expected water savings from the PPF easement.

In reaching the same ultimate conclusion, however, the majority unnecessarily relies on the contention that the "reasonably certain" standard requires a quantum and quality of proof that apparently exceeds what is normally

required under traditional standards of administrative review. Thus, it is not enough that the agency's findings have a "rational basis in record evidence," the majority concludes; rather, the agency must adduce "solid" and "clear and substantial information" that demonstrates a "degree of certitude" about the predicted savings. *See* Opin. at 13, 15. These requirements are partly drawn from a regulation adopted several years after the Biological Opinion in this case was issued, *see* 50 C.F.R. § 402.17(b) (2019), and to the extent that they merely reflect the statutory requirement that "each agency shall use the best scientific and commercial data available" in evaluating the likely effects of an agency action on relevant species, *see* 16 U.S.C. § 1536(a)(2), they are unobjectionable. But to the extent that the majority's standards purport to supplant traditional administrative law standards or to adopt an underlying substantive standard that differs from the statutory "likely" standard, I would refrain from any such unnecessary and doubtful holding in this case.

I concur, however, in Part II of the court's opinion, which rejects Plaintiffs' further contentions that are specific to the Government's challenged determinations as to the northern Mexican gartersnake.

For the foregoing reasons, I concur in part and concur in the judgment in part.