UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

WILDEARTH GUARDIANS,

Plaintiff,

v.

UNITED STATES FISH AND WILDLIFE SERVICE and DOUG BURGUM, in his official capacity as U.S. Secretary of the Interior,

Defendants.

Case No. 2:24-cv-02281-WLH-RAO

ORDER GRANTING PLAINTIFF'S MOTION FOR SUMMARY JUDGMENT [24] AND DENYING DEFENDANTS' CROSS MOTION FOR SUMMARY JUDGMENT [27]

Before the Court are Plaintiff WildEarth Guardians' Motion for Summary Judgement ("MSJ," Docket No. 24) and Defendants Doug Burgum and United States Fish and Wildlife Service's Cross Motion for Summary Judgment ("Cross MSJ," Docket No. 27). Plaintiff filed a written Request for Oral Argument, and the Court found the matter appropriate for oral argument. (Docket Nos. 31, 33–34; *see* Standing Order, Docket No. 13 at 16). The hearing for the MSJ and the Cross MSJ was held on May 9, 2025 (the "Hearing"). For the reasons explained below, the Court **GRANTS** Plaintiff's Motion for Summary Judgment and **DENIES** Defendants' Cross Motion for Summary Judgment.

I. BACKGROUND

A. Factual Background[1]

Plaintiff WildEarth Guardians ("Plaintiff") brings this instant action against United States Fish and Wildlife Service ("the Service") and Doug Burgum, in his official capacity as U.S. Secretary of the Interior (collectively, "Defendants"). (Compl., Docket No. 2). This action stems from Defendants' 2023 decision that two species of trees, *Yucca brevifolia* and *Yucca jaegeriana* (collectively, "Joshua trees") do not warrant listing as a threatened or endangered species under the Endangered Species Act ("ESA"). (*Id*. ¶ ¶ 2, 6).

In 2015, Plaintiff petitioned the Service to list *Yucca brevifolia* as a threatened species, causing the Service to conduct a status review and, some years later, publish its species status assessment ("2018 SSA") and 12-month finding ("2019 12-Month Finding"). (FWS_0012768; FWS_0011702); Endangered and Threatened Wildlife and Plants; 12-Month Findings on Petitions to List Eight Species as Endangered or Threatened Species, 84 Fed. Reg. 41694 (proposed Aug. 15, 2019) (to be codified at 50 C.F.R. pt. 17). The Service ultimately found that listing Joshua trees as threatened species was "not warranted." *See id*. Plaintiff filed suit to challenge the Service's decision, which resulted in the court setting aside the decision as arbitrary and capricious and remanding it to the Service for reconsideration. *WildEarth Guardians v. Haaland*, 561 F. Supp.3d 890 (C.D. Cal. 2021). In 2023, the Service again conducted a status review ("2023 12-Month Finding") and came to the same conclusion. Endangered and Threatened Wildlife and Plants; Petition Finding for Joshua Trees (Yucca brevifolia and Y. jaegeriana), 88 Fed. Reg. 14536 (proposed Mar. 9, 2023) (to be codified at 50 C.F.R. pt. 17).

[1] The parties agree there is no genuine issue of facts for the Court to resolve and they provide factual background to the case via the Administrative Record. (*See* Docket No. 21).

1. The Endangered Species Act

In passing the ESA, Congress declared that various species of fish, wildlife, and plants were endangered or threatened species requiring government protections. 16 U.S.C. §§ 1531(a–b). An endangered species is "any species which is in danger of extinction throughout all or a significant portion of its range[,]" and a threatened species is "any species which is likely to become an endangered species within the foreseeable future" *Id*. §§ 1532(6), (20). A species may be endangered or threatened due to any of the following factors:

> (A) the present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence.

Id. § 1533(a)(1).

Congress provides the intent of the ESA is to preserve ecosystems of these endangered and threatened species and provide a program of conservation them. *Id*. § 1531(b). Accordingly, upon receipt of a petition from an interested party, the Secretary of the Interior (the "Secretary") is charged with reviewing and determining a species' status, "solely on the basis of the best scientific and commercial data available." *Id*. §§ 1533(b)(1)(A), 1533(b)(3)(A). If a species is threatened or endangered, the Secretary will add the species to the list of threatened and endangered species in the Federal Register, which triggers substantive and procedural protections for the species. *Id.* §§ 1533(c), 1536(a), 1538. Within 12 months of the date the petition is received, the Secretary must find the petition action is warranted, not warranted, or warranted but precluded by other pending proposals. *Id*. § 1533(b)(3)(B). The Secretary delegated authority for the administration of these duties to the Service. *Ctr. for Biological Diversity v. Haaland*, 998 F.3d 1061, 1064 (9th Cir. 2021) (citing 50 C.F.R. § 402.01(b)).

2. Joshua Trees Background

Plaintiff is a non-profit 501(c)(3) conservation organization with a mission to "protect and restore the wildlife, wild places, wild rivers, and health of the American West." (Compl. ¶ 13). Joshua trees are unique plants found in the Mojave Desert, the Great Basin Desert and the Sonoran Desert. (FWS_0003931; FWS_0007733; FWS_0000335; FWS_0000038). Joshua trees contain two separate species, which differ from each other in genetics, appearance and location. (FWS_0000018). Joshua trees occupy approximately 9.5 million acres stretching from Arizona to Utah to Nevada and California. (FWS_000038).

Joshua trees have lived for thousands of years (FWS_0000345) and have the following characteristics: common lifespans of 150 years (FWS_0000334); the ability to produce both sexually via a symbiotic relationship with a yucca moth species and asexually (FWS_0000029−32); a lack of sexual maturity until they are 30 years old (FWS_0011776); and infrequent germination and slow growth (FWS_0000013, FWS_0000033). Dispersal for seedlings is limited, and, even if dispersed, to survive, seedlings require specific conditions for successful germination. (FWS_0000027−43; FWS_ 0007741−46; FWS_ 0009783−89). Moreover, juvenile trees require specific conditions for a survival, including periods of cool temperatures, yearly precipitation and low shrubs to provide them cover. (*Id.*). Plaintiff alleges that the best scientific data available shows that climate change, along with its effects of drought, wildfire, etc., threaten the Joshua trees' survival to point of near extinction by the end of the decade. (MSJ at 1).

In 2023, the Service issued the 2023 12-Month Finding determining that Joshua trees were not warranted to be listed as an endangered or threatened species in the foreseeable future. Endangered and Threatened Wildlife and Plants; Petition Finding for Joshua Trees (Yucca brevifolia and Y. jaegeriana), 88 Fed. Reg. 14536 (proposed Mar. 9, 2023) (to be codified at 50 C.F.R. pt. 17). For its review, the Service defined "foreseeable future" as midcentury, specifically 2040 through 2069.

(FWS_0000338−40). After midcentury, the Service was not able to make reliable projections regarding Joshua trees' responses to their threats and stressors. (*Id.*). The Service evaluated six species-specific bioclimatic models ("SDMs") and two bioclimatic models applying Intergovernmental Panel on Climate Change ("IPCC") Representative Concentration Pathways ("RCP"), the first tracking warmer climate conditions ("RCP 4.5"), and the second tracking higher global emissions and much warmer climate conditions ("RCP 8.5"). (FWS_0000066, FWS_0000168−77; FWS_0000183−84 (Appendix F)).

In the accompanying SSA that provides detailed scientific context ("2023 SSA"), the Service discusses current and future threats to the species, including habitat loss and degradation (FWS_0000067−73), risk of wildfires and its effect on increasing invasive grasses (FWS_0000073−86), climate change and its effects (FWS_0000086−97), seed predation (FWS_0000097−101) and the cumulative effect of all these threats (FWS_0000103, FWS_0000347). Despite these risks, the Service determined listing was not warranted because both species of Joshua tree have adequate resiliency, redundancy and representation throughout their ranges to maintain their populations and viabilities. (FWS_0000349−50). The Service reasoned Joshua trees faced meaningful threats, but the threats were largely localized in a small area of lower-elevation habitats and only affected individual trees. (FWS_0000344). Additionally, various factors offset the threats. For example, Joshua tree habitats are mostly located on federal or state-protected lands, and they can still reproduce asexually while under stress. (FWS_0000355−0000356). Accordingly, the Service concluded the trees are not endangered or threatened in the foreseeable future, so the listing is not warranted. (FWS_0000333).

B. Procedural Background

Plaintiff filed the instant Complaint on March 20, 2024, asserting four causes of action: (1) violation of the ESA via an arbitrary and capricious finding that Joshua trees are not threatened based on the five factor threat factors; (2) violation of the ESA

via an arbitrary and capricious finding that Joshua trees are not threatened throughout a significant portion of their range; (3) violation of the ESA via failure to use best available science and finding of conclusions contrary to the best available science; and (4) violation of the ESA via Defendants' listing decision arbitrarily defining the "foreseeable future." (*See* Compl.). On May 21, 2024, Defendants filed an Answer to the Complaint. (Docket No. 15).

Plaintiff and Defendants both anticipated the resolution of the Plaintiff's claims could be based on the Administrative Record, would not require discovery and would be resolved on cross-motions for summary judgment. (*See* Docket Nos. 18–19). Defendants filed notice of and lodged the Amended Administrative Record on September 3, 2024. (Docket No. 22). The Court exempted the parties from separate filings of statements of uncontroverted material facts, statements of genuine disputes, etc., as required by Local Rules and gave express permission to the parties to file their motions for summary judgment separately. (Docket No. 23).

On October 3, 2024, Plaintiffs filed this instant MSJ to obtain judgment on all four claims. (*See* MSJ). On November 15, 2024, Defendants filed a combined Opposition to Plaintiff's MSJ and the Cross MSJ. (*See* Cross MSJ). On December 19, 2024, Plaintiff filed a combined Reply in Support of the MSJ and Opposition to the Cross MSJ. ("Plaintiff's Reply," Docket No. 29). On January 24, 2025, Defendants filed a combined Opposition to the MSJ and Reply in support of the Cross MSJ. ("Service's Reply," Docket No. 30). The Court heard oral argument on May 9, 2025, and took the matter under submission.

II. DISCUSSION

A. Legal Standard

Judicial review of an agency's compliance with the ESA, and thus an agency's decision to not list a species as endangered under the ESA, is governed by the Administrative Procedure Act ("APA"). *Native Ecosystems Council v. Dombeck*, 304 F.3d 886, 901 (9th Cir. 2002). The APA provides that a court shall set aside an

agency finding when it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A).

This standard of review is deferential because such agencies make predictions and take actions within their own area of special expertise. *Ctr. for Biological Diversity v. Zinke*, 900 F.3d 1053, 1067 (9th Cir. 2018). Accordingly, it is improper for a court to "substitute [its] judgment for that of the agency." *Greater Yellowstone Coal., Inc. v. Servheen*, 665 F.3d 1015, 1023 (9th Cir. 2011).[2] Rather, in their review, courts should aim "to ensure that the agency considered the relevant factors and articulated a rational connection between the facts found and the choices made." *Id.* (quoting *Nw. Ecosystem Alliance v. U.S. Fish & Wildlife Serv.*, 475 F.3d 1136, 1140 (9th Cir. 2007). The Supreme Court has given the following examples of why an agency's decision would be 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."

Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).

Though the standard of review is deferential, an agency must provide a rational explanation for its decision or action based on the relevant facts and the "explanation must be evidenced from the listing decision itself." *Zinke*, 900 F.3d at 1069. Courts reviewing the explanation must "consider whether the decision was based on a consideration of the relevant factors and whether there has been a clear error of judgment." *Nw. Coal. for Alternatives to Pesticides v. U.S. E.P.A.*, 544 F.3d 1043,

[2] At the hearing, Defendants' counsel argued *Loper Bright Enterprises v. Raimondo*, 603 U.S. 369 (2024), did not have any effect on this case because the matter here turns on questions of fact, rather than questions of law. As Plaintiff did not argue for its application, the Court does not reach the issue.

1048 (9th Cir. 2008). Courts review an agency's conclusions based on the administrative record. *Zinke*, 900 F.3d at 1068 (9th Cir. 2018).

B. Analysis

Plaintiff seeks summary judgment on the following grounds: (1) the Service's listing decision runs counter to the best available science; (2) the Service's definition of "foreseeable future" is arbitrary contrary to the ESA; and (3) the Service's decision that Joshua trees are not threatened throughout a significant portion of their range was arbitrary. (*See generally* MSJ). The Service seeks summary judgment on the following grounds: (1) the Service properly considered habitat loss; (2) the Service properly considered existing regulatory mechanisms; (3) Plaintiff overstates the certainty of the best available science; (4) the Service's definition of "foreseeable future" is reasonable, and the Service explained its rationale; and (5) the Service's decision that Joshua trees are not threatened throughout a significant portion of their range is reasonable and is supported by the record. (*See generally* Cross MSJ).

All the issues are governed by the "best available science standard," as "Congress require[s] agenc[ies] to consider the scientific information presently available and intended to give 'the benefit of the doubt to the species.'" *Brower v. Evans*, 257 F.3d 1058, 1070 (9th Cir. 2001) (quoting *Conner v. Burford*, 848 F.2d 1441, 1454, (9th Cir. 1988). Notably, an agency may not "ignore available biological information." *Conner*, 848 F.2d at 1454. "An agency complies with the best available science standard so long as it does not ignore available studies, even if it disagrees with or discredits them." *San Luis & Delta-Mendota Water Auth. v. Locke*, 776 F.3d 971, 995 (9th Cir. 2014). Courts "must defer to the agency's interpretation of complex scientific data" so long as the agency provides a reasonable explanation for adopting its approach and discloses the limitations of that approach." *Nw. Ecosystem Alliance,* 475 F.3d at 1150.

For the following reasons, the Court **GRANTS** Plaintiff's Motion for Summary Judgment and **DENIES** the Service's Motion for Summary Judgment.

1. The Services Definition of Foreseeable Future is Arbitrary and Capricious

Under the ESA, a threatened species is a species that will become endangered in the foreseeable future. 16 U.S.C. § 1532(20). The ESA does not provide a definition for "foreseeable future." *See id.* To remedy this, the Service relies on a 2009 Solicitor's Opinion (M-Opinion 37021) (the "Solicitor's Opinion"), which provides guidance on Congress's intent of the term. (MSJ 37−38; Cross MSJ at 27). Congress intended "foreseeable future" to describe "the extent to which [the Service] can reasonably rely on predictions about the future in making determinations about the future conservation status of the species." (FWS_0008468 at 1). "[A] prediction is reliable if it is reasonable to depend upon it in making decisions." (*Id.*). The predictions take various forms, including the "extrapolation of population or threat trends, analysis of how threats will affect the status of the species, or assessment of future events that will have a significant new impact on the species." *(Id.*). Reliability does not require certainty, but it does require support from and a footing in facts and logic. (*Id. at* 8, 13; FWS_0000339).

In 2019, the Service used these guidelines to define "foreseeable future" as the extent to which the Service "can reasonably rely on information about the threats to the species *and* the species' responses to those threats." Endangered and Threatened Wildlife and Plants; Regulations for Listing Species and Designating Critical Habitat, 84 Fed. Reg. 45020 (Aug. 27, 2019) (to be codified at 50 C.F.R. pt. 424) (emphasis added); 50 C.F.R. § 424.11(d).[3] Accordingly, the determination is made on a "case-by-case basis, using the best available data and taking into account considerations

[3] Note that after the Service published its decision regarding Joshua trees, the Service updated its definition of "foreseeable future" to "[t]he foreseeable future extends as far into the future as the Service *can make reasonably reliable predictions* about the threats to the species and the species' responses to those threats." 50 C.F.R. § 424.11(d) (emphasis added). The italicized language reflects the change, replacing the "reasonably rely on information" language.

such as the species' life-history characteristics, threat-projection timeframes, and environmental variability." 50 C.F.R. § 424.11(d).

Plaintiff argues that "foreseeable future" applies to the timeframe "for which forecasts are possible[,]" and, as such, "foreseeable future" should extend to anytime in which the Service was able to make projections regarding the threats to Joshua trees and their potential responses to the threats. (MSJ at 39). The Solicitor's Opinion discusses the dictionary definition of foreseeable and references the exact verbiage Plaintiff uses, but it states, "taken together," and "more specifically," the definition relates to predictions that may be reasonably relied on. (FWS_0008468 at 8). Though end-of-century projections exist and are possible, the Court is not persuaded that their existence automatically makes them reasonably reliable or that another agency's use of the end-of-century timeframe forces the Service's hand in this decision. While the Court agrees with the Service that plausible does not necessarily mean reliable, however, as discussed in detail below, this distinction is not determinative because the Service failed to provide an explanation for its decision based on the best science available.

a. The Service's Use of the Science Available to Define Foreseeable Future is Arbitrary and Capricious

To comply with the ESA, the Service is required to apply the best available scientific data in determining foreseeable future. *See* 16 U.S.C. § 1533(b). Even where a wealth of uncertainty would not allow a reasonable person to make a reliable prediction, the Service must articulate a rational connection between the science it relied upon and its conclusion. *Greater Yellowstone*, 665 F.3d at 1024.

The Service reviewed two future scenarios measuring warmer climate conditions, RCP 4.5, and much warmer climate conditions, RCP 8.5. (Cross MSJ at 28). The RCPs are based on IPPC projections future emission scenarios, which are generally considered the best available science and an appropriate source of data for listing decisions. (MSJ at 40); *see Alaska Oil & Gas Ass'n v. Pritzker*, 840 F.3d 671,

679 (9th Cir. 2016); *see Alaska Oil & Gas Ass'n v. Jewell*, 815 F.3d 544, 558–59 (9th Cir. 2016).

Upon this review, the Service found climate change projections were reasonably reliable until the end of the century, but the species' responses to those projections were only reliable until the midcentury. (Cross MSJ at 28–29). The Service reasons that the species' response is unpredictable because of the following uncertainties: there is a lack of empirical data on physiological thresholds; it does not know what human policy changes will occur regarding global greenhouse gas emissions; there is uncertainty as to Joshua tree's ability to adapt and survive in harsh conditions; existing monitoring data are limited to only a small area of the range; and there is a lack of data available regarding yucca moth species, Joshua trees' pollinators. (Cross MSJ at 29). Additionally, regarding the threat of wildfire, the Service can only reliably project risk to midcentury because it is uncertain where end-of-century wildfires will occur or how frequently occupied habitat will burn. (Cross MSJ at 29–30).

Though IPCC projections are generally considered an appropriate basis for a listing decision, the definition of foreseeable future is species specific and requires a case-by-case determination. 50 C.F.R. § 424.11(d). As the Service correctly points out, the precedent supplied by Plaintiff is about arctic species. (MSJ at 40 (citing *Alaska Oil and Gas Ass'n v. Ross*, 722 Fed. Appx. 666, 668 (9th Cir. 2018); *Pritzker*, 840 F.3d at 680; *Jewell*, 815 F.3d at 558–59). Though the precedent sets a good reference point, it is not determinative here due to the difference in the species and factually intensive nature of this inquiry. As the Service only finds the species end-of-century responses unreliable, the Court need not address the certainty of end-of-century threats of climate change and wildfires.

Regarding the uncertainty of global greenhouse gas emissions, RCP 4.5 differed greatly from RCP 8.5, meaning human global emissions have a large effect on climate change. (FWS 0000339). The Service states human activity is the greatest factor

affecting global greenhouse gas emissions, and it cannot predict human behavior. (*Id.*). Though the Court does not expect the Service to predict the future with absolute certainty, the Service provides no explanation as to why it did not use current trends and standards regarding greenhouse gas emissions as a basis for its decision, when this data currently is available and the Service states in its SSA the regulations are unlikely to alter the trajectory of climate change impacts. (*See* FWS_0000169; *see* FWS_0000172). The Service used such data in support of its determination that the regulations will help prevent some threats to Joshua trees, so it may not ignore the data in this section of its analysis. Such selective reliance, without explanation, is arbitrary and capricious. *See Zinke*, 900 F.3d at 1069 ("By failing to consider the [study's contrary evidence], [the Service] acted in an arbitrary and capricious manner.").

Regarding the uncertainty due to the lack of data on Joshua trees' physiological thresholds and response to unfavorable conditions, the Service merely states there is uncertainty, without providing a meaningful explanation as to how the uncertainty, when viewed in light of the data that *is* available, supports the Service's determination that the listing is not warranted. (FWS_0000338−40). To meet the standard of using the best science available, the Service must use the facts, figures, and data within the *available* scientific findings, and explain why those facts and figures illustrate there is too much uncertainty for the findings to be reliable. *Greater Yellowstone*, 665 F.3d at 1028−30. For example, in *Greater Yellowstone*, the agency delisted the grizzly bear, though there was a projected decline in whitebark pine, one of its key food sources. *Id.* at 1028. The agency supported its decision by stating it were uncertain as to the impact the food source declines would have on the bears. *Id.* at 1028−29. The court reasoned that absence of evidence of population decline did not replace evidence of population persistence. *Id.* at 1030. Even though scientific uncertainty calls for deference to agency expertise in making predictions about those uncertainties, the court still required a rational explanation why the uncertainty about whitebark pine's

decline, in conjunction with considerable data as to the impact of other threats, supported the agency's decision to delist the grizzly bears. *Id.* at 1029−30.

Even though the Court is discussing the definition of "foreseeable future" in this case, *Greater Yellowstone* is still instructive as the Service applied the same reasoning in both matters. Merely stating repeatedly that the necessary facts are unknown to the Service is not utilizing the best available science, and thus is not acting within the statutory mandate. *See Ocean Advocates v. U.S. Army Corps of Eng'rs*, 402 F.3d 846, 859 (9th Cir. 2005) (Courts may not provide blind deference to "administrative decisions that [they] deem inconsistent with a statutory mandate or that frustrate the congressional policy underlying a statute.").

In addition to the general statements regarding uncertainty, the Service provides the following facts to support the uncertainty of Joshua trees' response at the end of the century: Joshua trees live for 150-300 years, adapt to hot and dry conditions over thousands of years and occupy their historical range despite recent climate changes. (FWS 0000339). At the Hearing, Defendants' counsel explained these facts establish evidence of population persistence, which was not present in *Greater Yellowstone* and thus, this case is distinguishable from *Greater Yellowstone.*

The Court does not find this distinction meaningful because in *Greater Yellowstone*, the court considered the uncertainties around whitebark pine *and* additional data that seemed contrary to the Service's determination. 665 F.3d at 1029−30. Similarly, here, the Court considers the various uncertainties put forward by the Service *and* the data regarding Joshua trees' survival over thousands of years. These facts regarding persistence should provide more history, data and certainty as to Joshua trees' potential responses. If the Service instead intends to use these facts to show Joshua trees' responses are uncertain, it must provide its explanation for reaching that conclusion. As the Service has not done so, the Court is compelled to conclude that the Service has acted arbitrarily and capriciously. *See Zinke*, 900 F.3d at 1073 (finding the Service acted in an arbitrary and capricious manner by "failing to

explain" how the data supports its conclusion for its listing decision); *see also Ctr. for Biological Diversity v. U.S. Fish & Wildlife Serv.*, 342 F. Supp. 3d 968, 976 (N.D. Cal. 2018) (finding a listing decision arbitrary and capricious where the Service cited uncertainty as its basis for a decision, despite the existence of available data, and thus did not "rationally explain" why its decision was justified).

With respect to the uncertainty regarding the yucca moth species, the Service provides valuable information in its SSA, noting uncertainty regarding if the yucca moth is appearing earlier in the year, but stating "there is site-specific evidence that low elevation habitat in the region may no longer be supporting yucca moths and sexual reproduction." (FWS_0000095). Still, directly after, it concludes "[o]verall, the potential effects of climate change on the yucca moth are unknown, including whether individuals have the potential to survive low to moderate intensity wildfires." While it is within the Service's discretion to place logical limits on the data it uses, there is no rational connection to the fact that the low-elevation region may not support yucca moths to the conclusion that the effects of climate change on yucca moths are not known. Though there might be a very reasonable explanation, it was not provided, and as such, the Service is not articulating a rational connection between the data and its findings, as is required by the ESA.

At the Hearing Defendants' counsel argued that in the 2023 SSA, it explained local scale studies on Joshua trees and their habitats were limited and only applied to small areas, so it is not proper to extrapolate the data to the entire range of the species. (FWS_0000092). Defendants' counsel contends that the Court can reasonably discern this line of reasoning applies to yucca moths as well, though it was not explicitly stated. (*See* FWS_0000095). The Court does not agree with this reasoning, as plants and animals may differ in key aspects. It does not follow that the Service's explanation regarding plants seamlessly applies to animals, without the Service stating it does and why.

b. The Service Has Not Met its Burden of Articulating its Change of Policy

When an agency makes a change in policy, the agency is under no obligation to illustrate that the reasons supporting the policy change are better than the reasons supporting the prior policy, but it is obliged to illustrate there are good reasons to support the "conscious change of choice." *F.C.C. v. Fox Television Studios Inc.*, 556 U.S. 502, 515 (2009). Further, "the requirement that an agency provide reasoned explanation for its action would ordinarily demand that it display awareness that it is changing position." *Id.* at 515. Plaintiff argues that in the Service's 2019 12-Month Finding, it recognized the foreseeable future as the end-of-century time frame, and in its 2023 12-Month Finding, it has changed its policy without acknowledgment and explanation. (MSJ 41−34). The Service states it did not change its policy, and regardless, it provided ample explanation for its decision and agency decisions should be upheld when the "agency's path may be reasonably discerned." (Cross MSJ at 41; Reply at 16−17); *Fox Television*, 556 U.S. at 513−514.

Here, the inquiry of the 2019 12-Month Finding required a definition for "foreseeable future." In the 2019 12-Month Finding, the Service conducted a fact-intensive review and determined Joshua trees were not likely to become endangered in the foreseeable future. Endangered and Threatened Wildlife and Plants; 12-Month Findings on Petitions to List Eight Species as Endangered or Threatened Species, 84 Fed. Reg. 41694, 41697 (proposed Aug. 15, 2019) (to be codified at 50 C.F.R. pt. 17). The Service concedes as much in its Cross MSJ, stating "[t]he Service also reassessed the appropriate foreseeable future timeframe for its Joshua tree determination." (Cross MSJ at 33). Further, the Court is not persuaded by the Service's discrediting of the policy because it was in an SSA. (Reply at 16−18). The 2019 12-Month Finding was relatively short, and the detailed analysis was in the 2018 SSA. (*See* FWS_0012768; FWS_0011702). Agencies often incorporate a separate document with additional reasoning and background to explain their decision. *See Haaland*, 998

F.3d at 1068 (incorporating an SSA into a listing decision due to the following language "[m]ore-detailed information about these species is presented in the species-specific assessment"). Here, the 2018 SSA was incorporated into the 2019 12-Month Finding, as the listing states the 2018 SSA contains "more detailed biological information, a thorough analysis of the listing factors, and an explanation of its determination." Endangered and Threatened Wildlife and Plants; 12-Month Findings on Petitions to List Eight Species as Endangered or Threatened Species, 84 Fed. Reg. 41694, 41697 (proposed Aug. 15, 2019) (to be codified at 50 C.F.R. pt. 17). This language mirrors that in *Haaland*, and in line with that decision, the Court finds the 2019 12-Month Finding incorporated the 2018 SSA.

Though the Service discussed its "foreseeable future" definition in the 2023 12-Month Finding, the Service did not acknowledge a change in policy in its review. (FWS_000038−40). The Service is required to show that it recognizes its change in policy, believes this policy to be a better policy and can provide reasons to support it. *Fox Television*, 556 U.S. at 502. Though in the Service's Reply, it explains why the 2018 SSA lacked a solid factual basis and why this policy is better, this explanation was not provided in the 2023 12-Month Finding or 2023 SSA. (Service's Reply at 16−17.) These post-hoc rationalizations in the brief are insufficient, as "[t]he explanation must be evidenced from the listing decision itself." *Zinke*, 900 F.3d at 1069. Accordingly, since the 12-Month Finding does not acknowledge the change in policy, the Service's definition of foreseeable future does not meet the standards required for the Court's deference.

2. The Service Did Not Use Best Available Science Regarding the Threat of Climate Change.

Plaintiff argues the best available science is sufficient to show Joshua trees are threatened by climate change to the point of becoming endangered or threatened and the Service's decision is contrary to the weight of the evidence. (MSJ 27−37). The

Service contends it appropriately assessed the scientific data and its limits. (Cross MSJ 10−17).

a. The Service's Use of the Science Available Regarding the Threat of Climate Change is Arbitrary and Capricious

The Service reviews climate change as a factor for determining if a species is endangered or threatened under the ESA. *Id.* §§ 1533(a)(1)(A), 1533(a)(1)(A). Plaintiff and the Service agree that the effects of climate change threaten Joshua tree populations and that the species distribution models provide the best available science on the topic. (Cross MSJ at 10). That said, the Service finds climate change impacts localized populations and individual trees, and the data shows "climate change is not currently reducing redundancy, representation, or resiliency at the species level." (Cross SMJ at 12). The Service frames its disagreement with Plaintiff as a difference in interpretation of the data and contends its interpretation deserves deference. (*Id.*). "[The Ninth Circuit] have stressed that [courts] must defer to the agency's interpretation of complex scientific data so long as the agency provides a reasonable explanation for adopting its approach and discloses the limitations of that approach." *Pritzker*, 840 F.3d at 679.

It is well-settled agencies have "broad discretion to choose which expert opinions to rely on when making a listing decision, [but they] cannot ignore available biological data." *Zinke*, 900 F.3d 1053, 1068 (9th Cir. 2018). Here, the Service did not discredit or ignore available studies, but it did selectively use them for its propositions. For example, a study cited in the 2023 SSA states there is a risk of "almost complete elimination of the species from the park by the end-of-century." (FWS_0011340). In the Hearing, Defendants' counsel argued the Service properly explained that it did not rely on this conclusion because the data is limited to a small, localized area and cannot be extrapolated across the entire range of Joshua tree habitats. (FWS_0000091-92). This statement, however, does not explain why the Service relied on some of the more favorable findings in the study but did not address

the less favorable finding quoted above. In particular, the Service notes the study "highlighted the potential for small areas of climatic refugia within the southern range of Joshua tree." (*Id.* (citing Barrows and Murphy-Mariscal 2012, entire; Sweet et al. 2019, entire)). Notably, the Service recognizes the limit to the study, but still uses it to show that climate refugia likely exists elsewhere and "were missed in earlier studies." (FWS_0000092; FWS_0000344 ("However, two of these models used finer-scale data and identified the potential for climate refugia in topographically diverse habitat that does not appear to have been captured in the coarse-scale climate models.")). As an agency may choose not to use a study if it notes why it disagrees with or discredits it, it follows that when an agency uses a study, if it does not use contrary facts, it needs to explain why it disagrees with or discredits them. *See San Luis & Delta-Mendota Water Auth.*, 776 F.3d at 995. Accordingly, such selective, unexplained reliance is arbitrary and does not provide enough explanation to the Court.

This select reliance is only one issue with the 12-Month Finding. More importantly, the Service reviewed the data in the context of the foreseeable future being limited to the midcentury. (FWS_0000338−40). As discussed above, the Court finds the limit arbitrary, so the lack of inclusion of scientific data referencing the end-of-century threats is also arbitrary. Altogether, the Court determines that the Service did not use the best data available to make its decision regarding climate change and as such, the decision is arbitrary and not in line with the statutory requirements.

b. The Service Properly Considered Regulatory Mechanisms and their Effect on Joshua Trees

The Service reviews regulatory mechanisms as a factor for determining if a species is endangered or threatened under the ESA. *Id.* § 1533(a)(1). The Service contends it properly considered existing regulatory mechanisms in its 2023 12-Month Finding, and from this consideration, properly determined these mechanisms, at least partially lessen the threats against Joshua trees. (Cross MSJ at 23-24). Plaintiff did

not address this its arguments, and as such, concedes the point. *See John-Charles v. California,* 646 F.3d 1243, 1247 n.4 (9th Cir. 2011) (stating a party waives an issue if the party does not raise it in its motion).

For sake of completeness, the Court will briefly address this issue. Areas of conservation are categorized in a protected area database, which differentiates between Status 1 areas that have a "mandated management plan is in place to maintain natural conditions, including disturbance events such as wildfire[;]" Status 2 areas that are protected by "management practices may suppress natural disturbance cycles such as wildfire or native pest outbreaks[;]" and Status 3 areas that only "allows for low intensity uses such as OHV recreation or isolated high intensity uses such as mining." (FWS_0000101). Approximately 3 million acres of Joshua trees' occupied habitat is in a Status 1 or Status 2 area, accounting for "23 percent of *Yucca brevifolia* and 41 percent *Yucca jaegeriana's distribution*." (*Id.*). These numbers increase to "59 percent of the range of *Yucca brevifolia* and 89 percent of the range of *Yucca jaegeriana*" if Status 3 areas are included. (*Id.*). The Service also reviewed the Clean Air Act (42 U.S.C. § 7401 et seq.) and the National Environmental Policy Act (NEPA; 42 U.S.C. § 4321 et seq.), and it stated these regulatory mechanisms offer some protection to Joshua trees. (FWS_0000341). The data presented rationally connects to the Service's explanation that the regulatory mechanisms ameliorate the severity of some of the threats to the species. Based on these findings, the Court agrees the Service properly reviewed this data and made its conclusion based on the best available science.

c. <u>The Service's Decision Regarding Cumulative Threats Was Arbitrary and Capricious</u>

The effect of multiple factors in the Service's review can be considered cumulatively to establish a species is threatened or endangered. 50 C.F.R. § 424.11(c). Plaintiff contends the cumulative impact of climate change, wildfires, urbanization and large-scale solar energy development, in conjunction with Joshua

trees' naturally low germination rates and slow growth states have a cumulative impact that makes an endangered or threatened listing nearly "ironclad." (MSJ 30−32). The Service states cumulative threats are lessened by mitigating factors and are not acting on a population-level or species-level. (Cross MSJ 22−23).

From the discussions above, the Court has determined that the Service has not provided a rational explanation as to why climate change alone does not threaten the species to become threatened or endangered. Even further, the Service clarifies that Plaintiff's arguments regarding cumulative effect carry little weight because Plaintiff is considering an end-of-century analysis. (Service's Reply at 14−15). This argument is unavailing because the Court has determined that the Service's limitation of the midcentury is arbitrary. Thus, altogether, the Service's arguments regarding cumulative threats are unpersuasive to the Court.

d. The Service Did Not State Uncertainty as its Only Rationale

The best available science standard prescribed by the ESA does not require the "research [to be] ironclad and absolute." *Pritzker*, 840 F.3d at 680. Scientific findings underlying ESA determinations are "often necessarily made from incomplete or imperfect information." *Brower*, 257 F. 3d at 1070–71. Here, Plaintiff states the Service's determination that there is too much uncertainty in the scientific data available is unreasonable and essentially requires the data to provide absolute certainty. (MSJ 32−37). The Service counters that Plaintiff is overstating the certainty of the science, and its varying interpretations illustrate the data is susceptible to more than one interpretation, which requires the Court to uphold the agency's finding. (Cross MSJ at 24−26). *See Zinke*, 900 F.3d at 1068 ("Where evidence is susceptible of more than one rational interpretation, we uphold the agency's finding if a reasonable mind might accept [it] as adequate to support a conclusion.").

The Court's previous *Greater Yellowstone* case illustration provides insight here, as well. Both in this matter and in *Greater Yellowstone*, "uncertainty" was a large part of the reasoning for the Service's decision; here, the Service uses

uncertainty to support its decision that climate change and the threats it creates do not endanger Joshua trees on a species-level. (FWS_0000339−40; FWS_0000353). This is problematic, as "[i]t is not enough for the Service to simply invoke 'scientific uncertainty' to justify its action." *Greater Yellowstone*, 665 F.3d at 1028; *see Zinke*, 900 F.3d at 1072–73 (holding that the agency's failure to explain why the uncertainty of climate change favors not listing a species makes the agency's decisions arbitrary).[4] (FWS_0000339−40; FWS_0000353).

Still, this case is distinguishable from *Greater Yellowstone* because the Service provided some data-based conclusions in its explanation for its decision. The Service's additional reasons includes the following: Joshua trees are still populating most of their historical ranges (FWS_0000339); regulatory mechanisms are providing some level of protection (FWS_0000345); resiliency is high due to large amounts of moderate and high quality habitat (FWS_0000353); there is moderate to high tree density (*id.*); there is recruitment consistently occurring throughout range (*id.*); clonal growth increases persistence when trees are under stress (*id.*); federal lands have less pressure for development (*id.*); and in the last decade, Joshua trees have high masting events (FWS_0000345). In conclusion, the Service provides a rational explanation based on existing data outside of general "uncertainty," so its determinations regarding the threat of climate change is not arbitrary for this reason. Still, as this was one of many challenges to the Service's decision, and the Court found other aspects of the Service's decision arbitrary and capricious, this conclusion is not determinative of Court's overall ruling.

[4] The Service claims *Zinke* is irrelevant here because, unlike in *Zinke*, the Service concludes climate change is a threat to the species. (Cross MSJ at 25-26). Though the facts are not identical, the Court is not persuaded *Zinke* is irrelevant. In both cases, the agencies determine, at some point, the effects of climate change or a species' response to the change in climate are too uncertain to be a basis for the agency's determination. *Zinke*, 900 F.3d 1072–73; (FWS_0000339-40; FWS_0000353). Thus, its holding applies in this case.

3. The Service's Determination Regarding a Significant Portion of Joshua Tree's Range is Arbitrary and Capricious

Though "significant portion of its range" is part of the definition of a threatened species, the ESA does not define this term. 16 U.S.C. § 1532(20). "[T]he Ninth Circuit has held that if a species is 'expected to survive' in an area that is much smaller than its historic range, the Service must 'develop some rational explanation for why the lost and threatened portions of a species' range are insignificant before deciding not to designate the species for protection." *Zinke*, 900 F.3d at 1064.

To provide an explanation for this, the Service developed a two-part inquiry "(1) [whether] the portion is significant; and (2) [whether] the species is in danger of extinction now or likely to become so in the foreseeable future in that portion." (FWS_0000354). Both inquiries require an affirmative answer, so the Service may start with either and end its inquiry if they reach a negative answer for the first question. *See* Final Policy on Interpretation of the Phrase "Significant Portion of Its Range" in the Endangered Species Act's Definitions of "Endangered Species" and "Threatened Species," 79 Fed. Reg. 37578, 37585−87 (July 1, 2014) (to be codified at 50 C.F.R. Ch. I). As the Service made no findings as to the significance inquiry, the Court will only look at the status (second) inquiry. *See Desert Survivors v. Department of the Interior,* 321 F. Supp. 3d 1011, 1070−74 (N.D. Cal. 2018) (holding it was proper for the court to review the significance inquiry because the agency answered the significance inquiry, even if it did so unintentionally). As a primary matter, considering the Service based this determination on its definition of foreseeable future, and above, the Court determined the foreseeable future definition was not established by an explanation rationally connected to the data, the analysis does not address the appropriate time range.

Here, the Service contends that because low-elevation areas are most vulnerable to potential threats, it only needed to review the status of Joshua trees in these areas. (Cross MSJ at 23−24; s*ee* FWS_0000342; *see* FWS_0000345). The Service provides

Joshua trees status is not threatened because (1) "current habitat potentially becoming climatically unsuitable does not equate to an immediate or complete loss of habitat, and that any habitat loss is projected to be localized[,] and (2) the Joshua trees' ability to asexually and sexually reproduce even in low-elevation areas affected by drought and wildfire will contribute to the species persistence. (Cross MSJ at 35; FWS_0000355−56). Because this area is most susceptible to effects of climate change, it follows that if the status in this less suitable area is not threatened, that is applicable to the range at large. *Fox Television,* 556 U.S. at 513–14 (stating Courts should "uphold a decision of less-than-ideal clarity if the agency's path may reasonably be discerned").

While the Court can reasonably discern the path for this decision, the Court must address the Service's statements that unsuitable habitat does not equate to immediate loss of habitat. (Cross MSJ at 35). The Service finds that "[a]pproximately 66 to 88.6 percent of the range of Yucca brevifolia is projected to be climatically unfavorable between 2040 and 2069," but still states "modeled climatically unfavorable habitat does not equate to an immediate loss of occupied habitat or a potential range contraction between 2040 and 2069." (FWS_0000355). This argument is unavailing because the Ninth Circuit has held "[t]he Service need not wait until a species' habitat is destroyed to determine that habitat loss may facilitate extinction." *Pritzker*, 840 F.3d at 683. Requiring complete loss of habitat runs counter to the intentions of the ESA, which has a policy of "institutionalized caution." *Sierra Club v. Marsh*, 816 F.2d 1376, 1383 (9th Cir. 1987), *abrogation on other grounds recognized by Cottonwood Envtl. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1075, 1088 (9th Cir. 2015).

In the Hearing, Defendants' counsel explained that even though there is predicted change in the habitat's climate, it does not necessarily mean that the habitat will be unsuitable because Joshua trees may adapt to the new conditions. It is well-established in the 2023 12-Month Finding and 2023 SSA that Joshua trees require

sufficient abundance to maintain their population over time, and that sufficient abundance is achieved by survival of juvenile Joshua trees. (FWS_0000337). "Optimal reproduction and recruitment of Joshua trees requires a convergence of events," including fertilization by pollinators, seed dispersal, isolated late-summer rainfall to trigger seed emergence from seed banks and exposure to cold temperatures to improve seedling and juvenile growth and survival. (FWS_0000335). Throughout the 2023 12-Month Finding, the Service explains that seedlings and juvenile Joshua trees are more susceptible to mortality from climate change threats and stressors. (FWS_0000337; FWS_0000341–42; FWS_0000344; FWS_0000350).

Considering these facts, it is essential that the Service considers climate change's effect on habitat suitability in relation to young Joshua trees, and not just the persistence of stronger, adult Joshua trees. Though the Service does note that Joshua trees can reproduce asexually under these stressors and that this clonal reproduction will increase the persistence of Joshua trees under stress (FWS_0000337), there are additional issues with asexual reproduction. For example, if seedlings and juveniles are to be replaced by clones, the clones "may not have the capacity to adapt to rapidly changing environmental conditions and the lack of reproductive fitness may make them more susceptible to extirpation." (FWS_0000028). Accordingly, the Service must provide an explanation that is rationally connected to the best science available as to either (1) the seedling and juvenile Joshua trees' survival in the predicted future habitat or (2) the persistence and survival of asexually reproduced clones if they are limited genetically and the only type of Joshua trees reproducing *and* surviving under these conditions.

Additionally, the Service states that "habitat loss will be localized in these modeled areas due to uncertainties in the species' response" during the 2040 to 2069 period. (FWS_0000355). The Court deems this inconsistent and arbitrary, because the Service says elsewhere in the report that the species' response only becomes unreliable at the end of the century. (FWS_0000339 (The best available scientific

data "supported evaluating future conditions out to 2040-2069 when we can reliably characterize the species' response and status.")). This inconsistency, without explanation, "is irrational, unclear, [and] not supported by the data it purports to interpret[,]" and accordingly, is arbitrary and capricious. *Nw. Coal.*, 544 F.3d at 1052 n.7.

Still, the Service "forecast[s] asexual reproduction to be maintained, particularly when trees are stressed by drought or in response to wildfire" and believes this will counteract the threat of climate change. (FWS_0000355−56). Though it is difficult for the Court to accept that asexual reproduction may counteract the "approximately 66 to 88.6 percent of the range" becoming "climatically unfavorable," this is an explanation for the Service's conclusion that is rationally connected to the underlying data and the Court will not substitute its judgment. Still, as the Service cited this as one of multiple reasons for its finding and the other reasons were found arbitrary and capricious, it is unclear to the Court if the Service would determine that this reason alone would support its conclusion.

4. Amicus Curiae

QuadState Local Governments Authority ("QuadState") is an interstate joint powers authority including six local government members and one city member in the following areas: California's Imperial and San Bernardino counties, and the City of Ridgecrest; Arizona's La Paz and Mohave counties; and Nevada's Lincoln and Nye counties. (Docket No. 28-1 at 1). QuadState filed a Motion for Leave to File Amicus Brief, which the Court granted, and accordingly, the Court ordered the proposed Amicus Curiae Brief accepted. (Docket Nos. 28, 41). QuadState appears as Amicus Curiae to support Defendants' determination that listing the Joshua trees as endangered or threatened is not warranted. (Docket No. 28-1 at 1). The Court has considered the propositions set forward in the Brief of Amicus Curiae to regarding the issues set forward in the instant MSJ and Cross MSJ.

The Court will clarify one matter, regarding persuasive caselaw. QuadState cites persuasive caselaw that warns against distorting "scientific judgment by indulging in worst-case scenarios" when there is too much uncertainty. *Maine Lobstermen's Ass'n v. Nat'l Marine Fisheries Serv.*, 70 F.4th 582, 586 (D.C. Cir. 2023). The *Maine Lobstermen* opinion states courts *may not* give species the benefit of the doubt when faced with uncertainty. The Court will not adopt this rule, as the decision is only persuasive, and a weight of *binding* decisions state that, if courts do not give the species the benefit of the doubt, they are ignoring Congress's intent in passing the ESA. *Conner*, 848 F.2d at 1454; *Sierra Club*, 816 F.2d at 1386; *League of Wilderness Defs./Blue Mountains Biodiversity Project v. Connaughton*, 752 F.3d 755, 763 (9th Cir. 2014). QuadState cites *Bennet v. Spear* as supporting the same holding, but the Court does not interpret that case in the same way. 520 U.S. 154, 176 (1997). Rather, *Bennet* merely reminds Courts to use the "best scientific and commercial data available[,]" to avoid making erroneous decisions based on speculation. Thus, the Court will abide by Ninth Circuit and Supreme Court precedent, requiring that courts ensure agencies use the best science available but allowing courts to honor Congress' intent by giving species the benefit of the doubt.

III. CONCLUSION

For the foregoing reasons, the Court **GRANTS** Plaintiff's Motion for Summary Judgment and **DENIES** the Service's Motion for Summary Judgment. The Court **SETS ASIDE** the Service's 12-Month Finding as arbitrary, capricious, and contrary to the ESA, and **REMANDS** to the Service for reconsideration pursuant to the above.

IT IS SO ORDERED.

Dated: May 12, 2025

HON. WESLEY L. HSU
UNITED STATES DISTRICT JUDGE