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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

CENTER FOR BIOLOGICAL DIVERSITY, ENVIRONMENTAL PROTECTION INFORMATION CENTER, KLAMATH-SISKIYOU WILDLANDS CENTER, and SIERRA FOREST LEGACY,

Plaintiffs,

vs.

U.S. FISH & WILDLIFE SERVICE, *et al*.,

Defendants,

and

AM. FOREST RESOURCE COUNCIL, *et al*.,

Defendant-Intervenors.

Case No.: 3:16-cv-06040-WHA

**PLAINTIFFS' COMBINED OPPOSITION TO CROSS-MOTIONS FOR SUMMARY JUDGMENT and REPLY IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT**

Date: May 3, 2018
Time: 8 a.m.
Judge: Hon. William Alsup
Place: Courtroom 8

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## INTRODUCTION

After conducting a decades'-long scientific review and proposing to list the Pacific fisher as threatened under the Endangered Species Act ("ESA"), at the last hour the Fish and Wildlife Service ("Service") abruptly reversed course and withdrew its proposal. To defend the Service's "Listing Withdrawal," the Service and industry intervenors now seek to mischaracterize this case as one in which the Service received persuasive new scientific data showing that the species is no longer at risk. The record, however, demonstrates otherwise.

The record shows—and the Service's own staff acknowledged—that the best available science did not meaningfully change after the Service published its proposed listing rule. There is still no question that the Pacific fisher was nearly extirpated by trapping and rampant logging around the turn of the 20th century, and that only two small native populations survive today. There is still no question that these two native populations face an inherent risk of extinction due to their small population size. And there is still no question that they face increasing threats from multiple factors, including exposure to toxicants and high-severity wildfire driven by climate change.

Ultimately, it was not new scientific information that caused the Service to reverse course and abandon its proposed listing rule only a few months before the court-ordered deadline for it to be finalized. Rather, the record shows that the Service withdrew the proposal because its Regional Director misconstrued three population studies as evidence that the two native populations are "basically stable." But in fact, the studies upon which the Regional Director relied do not show the populations are stable. At best, the demographic studies are—and have always been—inconclusive with regard to the Pacific fisher's current population trend. As such, they cannot provide a rational basis for the Service's Listing Withdrawal. Nor does the Service's desire for hypothetical better data establishing conclusively the extent to which well-documented threats are currently impacting fishers provide a legal basis for dismissing the "*best scientific and commercial data available*" demonstrating that Pacific fishers are at serious risk of extinction within the foreseeable future throughout all or a significant portion of their range. 16 U.S.C. § 1533(b)(1)(A). Plaintiffs ask this Court to set aside the Service's illegal Listing Withdrawal and order the Service to publish a new final determination within 90 days that comports with the ESA.

## ARGUMENT

### I. The Listing Withdrawal Was Not Based on New Information, but on the Service's Arbitrary Conclusion That Pacific Fisher Populations Are Stable.

Defendants claim incorrectly that the Service's Listing Withdrawal was prompted by a significant change in the best available scientific information that occurred after the Service published its proposed listing rule. *See* Fed. Defendants' Cross-Mot. for Summ. J. (ECF 57) ("Service Br.") at 1; Def.-Intervenors' Notice of Mot., Cross Mot. for Summ. J. (ECF 58) ("Intervenor Br.") at 2, 7–11. In fact, the record is clear that the best available scientific information available did not meaningfully change after the Service proposed listing the Pacific fisher in 2014. Instead, the Service's own Regional Listing Coordinator confirmed that "[w]e re-evaluated the existing information [and] came to a different conclusion about it." AR 129266. *See also* AR 133155 ("[W]e previously drew conclusions based on information. We're now drawing different conclusions on that same information."); AR 132600 (draft memo explaining that the Service "re-evaluated the best available information used for the proposed listing rule and came to a different conclusion"). Indeed, the Service's Listing Coordinator cautioned that "saying the new information supports our conclusion is misleading." AR 129266.

Rather than new information, Service staff explained that the reversal "hinged" on the Regional Director's new interpretation of the available population trend data. AR 126177. Whereas the Service had previously viewed the available population trend data as unclear, *see, e.g.,* AR 000693, the Regional Director decided to interpret the trend data as showing fisher populations are no longer declining and—to quote the Listing Withdrawal—"basically stable." AR 000718. In the words of the Service's Chief of Listing and Recovery, the Regional Director's "rationale for withdrawal" was "basically based on an acknowledgment that there are threats out there, but they are not being manifested on the ground (e.g., not seeing declining populations)." AR 134274. The Regional Director's determination in this regard is reflected throughout the Listing Withdrawal, which repeatedly cites the lack of population declines, or lack of "operative" or "manifested" threats, as the reason for dismissing well-documented threats to the fisher's continued existence. *See, e.g.,* AR 000735 (summarizing the Listing Withdrawal's reasoning that the Pacific fisher "does not meet

the definition of an endangered or threatened species under the Act" as based on (1) the lack of "significant impacts at either the population or rangewide scales"; and the fact that (2) "the fisher is not exhibiting population declines in any portion of its range"); AR 000730 (Listing Withdrawal dismissing cumulative threats to small populations on the basis that the fisher populations are not "experiencing population declines or further reductions in distribution, which would be indicative of [cumulative] impacts"); AR 000727 (Listing Withdrawal dismissing threat of toxicants on the basis that the Pacific fisher "is not experiencing significant impacts at either the population or rangewide scales, currently or in the foreseeable future"); AR 000721 (Listing Withdrawal dismissing threat from high-severity wildfire on basis that there are "no surveys or other information [showing] this stressor to be functioning as an operative threat on the fisher's habitat to the degree we considered to be the case at the time of the proposed listing").

In short, the Service's Listing Withdrawal was not based on any new science discounting the threats that had initially led the Service to propose to list the Pacific fisher. Rather, the crux of the agency's decision was the Regional Director's assertion that the "threats out there" are not currently causing population declines. AR 134274.

## II. The Available Population Trend Data Is at Best Inconclusive and Therefore Does Not Provide a Rational Basis for the Service's Conclusion That Pacific Fisher Populations Are "Basically Stable" and Well-Documented Threats Are Not "Operative."

As explained above, the key driver of the decision to withdraw the proposal to protect the Pacific fisher under the Endangered Species Act was the Regional Director's view that the native Pacific fisher populations are "basically stable," AR 000718, and that therefore "no portion" of the Pacific fisher population is at risk, AR 000735. Because the population studies in front of the Service did not show that the Pacific fisher populations are stable, however, this conclusion was arbitrary and capricious, and the Listing Withdrawal should be set aside.

As detailed in Plaintiffs' opening brief, the Listing Withdrawal cites four demographic studies for its conclusion that the native Pacific fisher populations are "stable." Pls.' Opening Br. at 19-22. Discounting any reliance on the "inconclusive" 2013 study by Zielinski of the North Coast population, the Service now claims it relied on only three key population studies to support the Listing Withdrawal: the Sweitzer study of the Southern Sierra native population, and the Hoopa and

Eastern Klamath studies of the North Coast native population. Service Br. at 12–13.[1] The Service fails to show, however, how these limited and inconclusive studies rationally support the Listing Withdrawal.

The Sweitzer study of the Southern Sierra population does not support the Service's conclusion that the Southern Sierra population is no longer at risk. The study found an estimated population growth rate of .97, and concluded that "[w]e believe that the combination of a population growth rate slightly below 1.0, small population size and low density, multiple challenges to survival and reproduction, and damage to habitat from wildfires warrants concern for the viability of the fisher population in our study area." AR 024639. Defendants argue that because the confidence interval of the study straddled 1 (with 1 indicating a stable population), the Service could interpret the confidence interval as meaning that "the population studies in this case are clear" and "there is no evidence that the population is in decline." Service Br. at 18; *see also* Intervenor Br. at 18–19 ("confidence intervals bounding 1.0 for the growth rate" indicates "that the growth rate is not statistically different from 1.0"); Listing Withdrawal at AR 000728 ("because the confidence intervals include 1, this indicates a statistically stable trend"). Defendants misunderstand the basics of confidence intervals.

In this case, the confidence interval of the population studies represents a range of numbers within which the true population growth rate likely falls. But within the confidence interval, any of the values could represent the true population trend. "[F]or example, if the upper and lower limits of a confidence interval are .90 and 2.50, there is just as great a chance that the true result is 2.50 as .90." Wayne LaMorte, *Confidence Intervals and p-Values,* Boston University School of Public Health (last updated Jun. 16, 2016), http://sphweb.bumc.bu.edu/otlt/MPH-Modules/EP/EP713_RandomError/EP713_RandomError6.html. Another way to understand

[1] Intervenors claim that the "Service considered numerous other studies and reported data." Intervenor Br. at 21. Among the studies Intervenors cite to is a population modeling study that gauged the risk of extinction of the Southern Sierra population and "found that the population has a very high likelihood of extinction given reasonable assumptions with respect to demographic parameters." AR 022647. Intervenors do not explain how any of these other studies support the Listing Withdrawal.

confidence intervals is as a test of whether a "null hypothesis" about a population trend can be rejected. If the null hypothesis—for instance, that the population is stable—is contained within the confidence interval, then the null hypothesis cannot be rejected. *See Nat. Res. Def. Council, Inc. v. Rauch,* 244 F. Supp. 3d 66, 89–90 (D.D.C. 2017). This means that when a confidence interval for population growth spans 1, it is equally likely that the population is increasing, decreasing, or stable—and none of these possibilities can be rejected. This correct understanding of confidence intervals is contained in the Service's Final Species Report. AR 022641 (explaining it is difficult to determine if a population is increasing or decreasing when a population growth rate confidence interval spans 1); *see also* AR 067328–29 (Service scientist explaining that a confidence interval spanning 1 is "an indication of uncertainty about the population trend"); Service Br. at 13 (admitting that "trend variation around 1.0 does not necessarily indicate either a steady decline or increase").

A confidence interval spanning 1 therefore does not mean that the population is "statistically stable." AR 000728. And it certainly doesn't mean that "there is no evidence that the population is in decline." Service Br. at 18. Rather, it means that the population may be increasing, or it may be decreasing, or it may stable, and the Service does not have the ability to reject any of these possibilities. Basic rules of statistics dictate that the Service may not view uncertainty about whether a population is increasing, decreasing, or stable as a panoply of options from which it may pick its favored conclusion. This is not a "policy disagreement," Service Br. at 15; it is just not how confidence intervals work. The Sweitzer study does not demonstrate that the Southern Sierra population is stable, and the Service's reliance on it to support the Listing Withdrawal was arbitrary and capricious.

The D.C. District Court rejected this exact misuse of confidence intervals in *Natural Resources Defense Council, Inc*. There, the National Marine Fisheries Service decided not to list the blueback herring as threatened under the Endangered Species Act because it concluded that most of the herring's populations were stable. The studies at issue there were of population abundance, where "zero" indicated no change in abundance. Just like here, the Fisheries Service based its conclusion that the populations were stable on the fact that the studies' confidence intervals contained zero. *Nat. Res. Def. Council, Inc.,* 244 F. Supp. 3d at 89. The court rejected this

conclusion as an "error of logic." *Id.* at 93. The court explained that the fact that the confidence interval included zero meant that, statistically, the Fisheries Service could not reject the null hypothesis that the population was stable. But, the court explained, the fact that the Service could not reject the possibility of a stable population did not rationally support the Service's conclusion that the population "was, in fact, stable." *Id.* at 94; *see also id.* at 91 ("reasoned decisionmaking does not permit an agency to conclude, based on a failure to reject the null hypothesis and without further analysis, that the null hypothesis is true"). The court held that the Fisheries Service had failed to offer a rational connection between the facts found and the conclusions drawn, and set aside the agency's conclusion that the blueback herring should not be listed as threatened under the ESA. *Id.* at 94. The same conclusion should be reached here: just because the confidence interval of the Sweitzer study included the possibility that the Southern Sierra population was stable does not give the Service a rational basis to conclude that the population "was, in fact, stable." *Id.* at 94; *see also Pac. Coast Fed'n of Fishermen's Associations v. Gutierrez,* 606 F. Supp. 2d 1122, 1164, 1168 (E.D. Cal. 2008) (holding that the Fisheries Service's conclusion that the winter-run Chinook salmon population was recovering was arbitrary and capricious when the Service had acknowledged, based on a study with a population growth rate of .97 and a confidence interval of .87–1.09, that the population may be declining).

For the North Coast population, the two available studies were also inconclusive. As an initial matter, the Service's Final Species Report acknowledged that both studies sampled very small areas (only .62% of fisher habitat), and determined that "given the small portion of the North Coast population sampled by the two study areas . . . *it is difficult to determine whether the North Coast population as a whole is increasing, decreasing, or stable*." AR 022641 (emphasis added). Defendants do not attempt to square what the Final Species Report rightly determined (it is not clear whether the population is increasing or decreasing) with what the Listing Withdrawal wrongly concluded (the population is "essentially stable"), AR 000729. Rather, they repeat their erroneous assertion, rejected in *Natural Resources Defense Council, Inc.*, that because the confidence intervals in the studies spanned 1, the Service was entitled transform statistical uncertainty about population

growth into certainty that the population is stable. Service Br. at 12–13; Intervenor Br. at 20–21. Again, this was not a rational conclusion. *Nat. Res. Def. Council, Inc.*, 244 F. Supp. at 88–96.

Defendants' argument that these studies are "the best scientific and commercial data available" is misplaced. Service Br. at 13, 15; Intervenor Br. at 18. Plaintiffs take no issue with the quality of the studies themselves, or argue that they should be ignored. The issue is with the Service's misinterpretation of these limited and inconclusive studies as showing "essentially stable" populations, and the shoehorning of this erroneous conclusion to erase seventeen years of administrative analysis supporting the listing of this critically depleted and fragile species. *Nat. Res. Def. Council, Inc.*, 244 F. Supp. 3d at 94 (noting that National Marine Fisheries' Service misinterpretation of confidence intervals "was hardly a complex judgment about sampling methodology and data analysis; it was a simple error of logic" (internal quotation marks omitted)). Whether or not they are the "best" studies available, ambiguous studies of population trends cannot provide "evidence of a conclusion that the studies do not support." *Pollinator Stewardship Council v. Envtl. Prot. Agency*, 806 F.3d 520, 531 (9th Cir. 2015) (holding that "[n]either logic nor precedent" could sustain the position that a study that was inconclusive as to the risk of a pesticide on bees affirmatively proved that there was no risk to bees).

Defendants point to no case where a court allowed the Service to rely on inconclusive population studies to support a determination that a species did not merit listing. And their attempts to distinguish cases where courts rejected this approach fail.

This case is similar to *Tucson Herpetological Society*, where the Ninth Circuit rejected reliance on a single population study, which did not clearly show a declining population of horned lizards in two discrete sections of the lizard's range, for the "sweeping conclusion that viable lizard populations persist throughout most of the species' current range." *See* Pls.' Opening Br. at 22, quoting *Tucson Herpetological Soc'y v. Salazar*, 566 F.3d 870, 879 (9th Cir. 2009). The Service argues that the present case is different, because although it agrees the Service was wrong to rely on only one ambiguous study in *Tucson Herpetological Society*, here the Service has relied on three. Service Br. at 18. But the Ninth Circuit did not hold that the Service's irrational reliance on an ambiguous study could be cured by irrational reliance on a second ambiguous study, or a third. The

Service misses the takeaway lesson from the case: the Service may not rely on limited, ambiguous studies to make sweeping conclusions about a species' persistence. *Tucson Herpetological Soc'y*, 566 F.3d 870; *see also Nat. Res. Def. Council, Inc.*, 244 F. Supp. 3d at 88-91 (rejecting the Fisheries Service's misinterpretation of four population abundance studies). Intervenors argue that this case is different because they claim, with no citation to the record, that the Service evaluated evidence that Pacific fisher populations have been stable over a long period of time. Intervenor Br. at 22. The record does not support this assertion. Indeed, the longest population study of fishers on the Hoopa Reservation between 1998–2013, cited by the Service, in fact noted that fisher density declined dramatically—by 73%—between 1998–2004 and did not recover from the decline between 2004–2013. AR 012929, AR 012951.

Defendants' attempt to distinguish *Defenders of Wildlife v. Babbitt* is similarly unavailing. There, the court rejected the Service's conclusion that although the lynx had declined at the turn of the century, the lynx was not in need of listing because the population trend had reversed in some areas. The court found this was counter to the studies in the record, which had found the lynx had dramatically declined with no associated increases and was in "serious trouble." *Defenders of Wildlife v. Babbitt*, 958 F. Supp. 670, 682 (D.D.C. 1997). Just like with the lynx, Pacific fisher populations declined dramatically at the turn of the century, have not rebounded, and the population studies the Service relied on confirmed it remains vulnerable to extinction due to the small population size of its remaining native populations and multiple challenges to survival. *See, e.g.,* AR 024639 (Southern Sierra population study expressing "concern for the viability of the fisher population in our study area"); AR 012961 (Hoopa study of North Coast population noting that stressors "continue to threaten the long-term persistence of fisher populations in the Pacific states"). The Service argues that this case is different, because here the population studies are "clear," and "there is no evidence that the population is in decline." Service Br. at 18. But as explained above, none of the studies the Service relied on are "clear," and none rule out the possibility of population decline. *See Nat. Res. Def. Council, Inc.*, 244 F. Supp. 3d at 88-91 (explaining basics of interpreting confidence intervals). Intervenors argue that this case is different because in *Defenders of Wildlife*, the Service made unsupported statements containing factual errors. Intervenor Br. at 22. But this is

exactly the case here, where the Service has relied on unclear studies of population growth for the unsupported, blanket conclusion that the Pacific fisher's populations are stable.

Nor is *U.S. Fish & Wildlife Service* helpful to Defendants. Intervenor Br. at 22–23, citing *Ctr. for Biological Diversity v. U.S. Fish & Wildlife Service*, 246 F. Supp. 3d 1272, 1279–82 (N.D. Cal. 2017). There the Service concluded that coastal marten populations in California were not declining because it lacked current data confirming continued declines. The court, quoting *Tucson Herpetological Society,* rejected this conclusion as unreasonable, explaining that "[i]f the science on population size and trends is underdeveloped and unclear, the Secretary cannot reasonably infer that the absence of evidence of population decline equates to evidence of persistence." *U.S. Fish & Wildlife Service,* 246 F. Supp. 3d at 1280. This is precisely the case here, where there is no clear population trend data and the Service cannot therefore reasonably conclude the populations are stable. The court upheld the Service's conclusion that the marten population in Oregon was relatively large and stable, in contrast, because the Service pointed to a recent study showing that the Oregon population was relatively large and stable. No such similar study exists here.

In a final attempt to distance the Listing Withdrawal from the ambiguous studies it erroneously relied on, the Service claims that its decision should be upheld because it "did not rely exclusively on persistence." Service Br. at 14. But as explained above, the record is clear that the reversal "hinged" on these population studies. AR 126177. The Service's mistaken conclusion that these studies showed stable populations—and therefore threats had not yet "manifested"—was repeatedly touted as the key rationale for the Service's decision. *See* AR 000715; AR 000721; AR 000730; AR 000734; AR 000756; AR 000774; AR 000795; AR 000804 (Service repeatedly citing lack of "operative" or "manifested" threats—i.e., lack of evidence of population decline—as reason for withdrawal). The erroneous finding that the population studies showed stable populations was the heart of the Service's ultimate decision to disregard the threats to the Pacific fisher, and to withdraw the proposed listing. Thus, even if the Service gave other reasons for the Listing Withdrawal, because it cannot be "readily [said] that the erroneous finding clearly had no bearing on the Secretary's ultimate decision to withdraw the proposed listing," the court must vacate and remand the Listing Withdrawal. *See Tucson Herpetological Soc'y*, 566 F.3d at 880 (remanding

listing withdrawal even when the Service gave multiple rationales unrelated to the Service's erroneous reliance on limited population data).

## III. The Service's Desire for More Definitive Data Regarding the Impact That Existing Threats are Having on the Pacific Fisher Does Not Provide a Legal Basis for Dismissing the Best Available Data.

As explained above, the Service's conclusion that Pacific fisher populations are stable was not supported by the limited and inconclusive studies it relied on. The Service's decision to withdraw the proposed rule based on lack of evidence of "operative" or "manifested" threats was arbitrary and capricious, moreover, because it did not provide a rational basis for the Service to ignore the inherent threats to small populations, as well as the ESA's mandate that the Service evaluate not only "operative" threats, but also those threats looming in the "foreseeable future." 16 U.S.C. § 1532(6), (20).

### A. The Service Lacked a Rational Basis to Dismiss the Risk from the Cumulative and Synergistic Effects of Stressors Acting on Small Populations.

In the proposed rule, the Service determined that "the greatest long-term risk to fishers" is the "isolation of small populations and the higher risk of extinction due to stochastic events." AR 000691. The Service determined that the Pacific fisher was likely to become endangered in the foreseeable future "based on multiple threats impacting the remaining two extant native original populations and the cumulative and synergistic effects of the threats on small populations." AR 000693. After publication of the proposed rule, there have been no new studies showing that the size of these populations has increased, that the small size of these populations no longer poses an inherent risk, or that the "multiple threats" have abated. The Service's reversal boiled down to its erroneous conclusion that it could dismiss these threats on the basis that the populations were not yet "experiencing population declines." AR 000730; *see also* AR 000729 ("there is no indication that any of the monitored populations are exhibiting a population growth trend that is other than essentially stable").

In the same way the absence of evidence that someone clinging to a cliff has already fallen does not provide a rational basis to conclude that she is safe, the absence of definitive evidence of declining populations does not provide a rational basis to conclude that the species is not at risk. This

case is therefore on all fours with *Defenders of Wildlife v. Jewell*, where the court explained that it was arbitrary and capricious for the Service to "catalogue[] a number of seemingly perilous circumstances," including small population size, and then to conclude that none of the circumstances actually posed a threat, simply because there was no data confirming the threat. *Defenders of Wildlife v. Jewell*, 176 F. Supp. 3d 975, 1005–06 (D. Mont. 2016).

Defendants do not dispute the core holding of *Defenders of Wildlife v. Jewell* that the Service may not rely on the lack of data confirming a threat as a reason to dismiss the inherent risk of extinction in small populations. Intervenor Br. at 23–24; Service Br. at 19–20. This is precisely the same error that the Service has made here. Just like with the wolverine, the Service noted that Pacific fisher populations and range have been greatly reduced, which the Service acknowledged could "potentially increase[] the vulnerability of the fisher to cumulative low- or medium impacts." AR 000730. Yet in the same breath, the Service dismissed this threat because it lacked information suggesting "that current fisher populations in the west coast States are experiencing population declines or further reductions in distribution." *Id*. Just like in *Defenders of Wildlife v. Jewell*, the Service acted arbitrarily and capriciously in dismissing the inherent threat to small populations based on the lack of evidence of further declines.

Instead of arguing that the Service was correct to dismiss the threats to the Pacific fisher based on the lack of evidence of declines, Defendants try to distract from this error. Defendants attempt to brush aside the Service's prior conclusion that small population size itself poses a threat as "based largely on general theoretical principles of ecology." Service Br. at 11, 20; Intervenor Br. at 14. But the Service admits that there is no actual population modeling for the Pacific fisher that is better than theoretical models. AR 000728 ("we lack *specific* information about genetic processes in small, isolated forest carnivore populations" (emphasis added)). Thus, as the Service's cited source explains, in the absence of more specific studies, the studies the Service relied on in the proposed listing suggesting small population size is a threat provide the best available science: "[w]ithout better knowledge of the genetic attributes and processes affecting forest carnivores, questions regarding persistence of small, isolated populations *can only be answered with untested theoretical*

*models*." (Ruggiero *et al*. 1994, AR 179547 (emphasis added), cited in Listing Withdrawal at AR 000728).

The Service may not "ignore[] the *best* available science by demanding *better* science." *Defenders of Wildlife v. Jewell*, 176 F. Supp. 3d at 1001. The court rejected a similar argument in *Defenders of Wildlife v. Jewell*. There, the Service was presented with data showing that the wolverine makes its dens in deep snow, and therefore climate change poses an increasing threat to the wolverine by leading to decreased snowpack depth. In withdrawing the proposed rule to list the wolverine, the Service decided it could not determine how climate change would impact denning because the scale of the model was too coarse, and because it did not know for certain why the wolverine dens in deep snow. The court found that the Service acted arbitrarily and capriciously in disregarding what it had previously found to be the best available science. The court noted that there was no study that analyzed the issue at a finer scale, and concluded that "[q]uite simply, the Service cannot demand a greater level of scientific certainty than has been achieved in the field to date—the 'best scientific data available' standard does not require that the Service act only when it can justify its decision with absolute confidence, and the ESA accepts agency decisions in the face of uncertainty." *Id.* at 1003 (internal alterations and quotation marks omitted); *see also Miccosukee Tribe of Indians of Fla. v. United States*, 566 F.3d 1257, 1267 (11th Cir. 2009) (the Service "cannot hide behind uncertain scientific data to shirk their duties under the [Endangered Species] Act"). In this case, theoretical models explaining "the greatest long-term risk to fishers [is] the isolation of small populations and the higher risk of extinction due to stochastic events," AR 000691, is the best available science, and the Service acted arbitrarily and capriciously in disregarding it because no more "*specific* information about genetic processes in small, isolated forest carnivore populations" exist. AR 000728 (emphasis added).

Defendants also suggest that the presence of the reintroduced populations has now ameliorated the threat posed by small and isolated populations, but they are mistaken. Service Br. at 11, 20; Intervenor Br. at 18-19. While the proposed rule noted that the reintroduced populations provide some level of redundancy, representation, and resiliency for the native populations, so that the Pacific fisher was not in immediate danger of extinction (i.e., "endangered") nevertheless, the

Service concluded that the Pacific fisher was threatened "based on multiple threats impacting the remaining *two extant native original populations*." AR 000693 (emphasis added).

Since the proposed rule, no new information emerged to suggest that the presence of the reintroduced populations now compensates for the risk to the native populations. The reintroduced populations are no larger or more robust than when the Service issued the proposed rule. The Final Species Report, like the proposed rule, found that the reintroduced population in the Southern Oregon Cascades has persisted but not expanded much. *Compare* proposed rule at AR 000693 ("[the Southern Oregon Cascades] population has persisted since its establishment more than 30 years ago, but it does not appear to have expanded much beyond the area in which it was reintroduced"), *with* Final Species Report at AR 022650 ("it appears that this population has not expanded its range much"). Similarly, both the proposed rule and Listing Withdrawal considered that the North Coast and Southern Oregon populations may be connecting. AR 022637. For the other more recently introduced populations, the Service repeated its determination from the proposed rule that "it is too early to conclude the degree to which they will persist and contribute to future fisher conservation." Proposed rule at AR 000693; Final Species Report at AR 022651 ("it is too early to determine if the populations will persist"); Listing Withdrawal at AR 000719 ("our finding that the [Pacific fisher] is not endangered or threatened does not depend on . . . the new reintroduction in the South Washington Cascades").

Overall, the Final Species Report still recognized that both the native and reintroduced populations are "relatively small and isolated" which increases "the vulnerability of these populations to stochastic changes in survival and reproductive rates." AR 022758. The Final Species Report thus continued to recognize that if fisher mortality were to increase due to a random event, there would be the possibility of "sudden, sharp declines in the populations." *Id*. And in the Listing Withdrawal, the Service continued to acknowledge that if either of the native populations "were to be permanently lost, the fisher's population redundancy in the west coast States [sic] would be lowered, thereby decreasing the fishers' chances of survival in the face of potential environmental, demographic, and genetic stochastic factors and catastrophic events (extreme drought, wildfire, etc.)." AR 000729. The Service again dismissed these concerns on the basis that there was no

"information available" to suggest that stressors were already "acting upon any of the populations." *Id.* But as explained above, the absence of data confirming a threat is not a rational basis to dismiss the threats the Service previously found inherent to small populations. *Defenders of Wildlife v. Jewell*, 176 F. Supp. 3d at 1005–06 (D. Mont. 2016). The Service acted arbitrarily and capriciously in dismissing the cumulative and synergistic risks to the small native populations.

### B. The Service Lacked a Rational Basis for Dismissing the Risk from Threats Looming in the Foreseeable Future.

By focusing myopically on the lack of "operative" threats, the Service also unlawfully ignored the ESA's mandate to consider the "foreseeable future" and to thus "take preventive measures before a species is 'conclusively' headed for extinction." *Defs. of Wildlife v. Babbitt*, 958 F. Supp. 670, 680 (D.D.C. 1997). The Service is incorrect to the extent that it implies stressors must be currently "operating on the species" in order for the Service to list it under the ESA. Service Br. at 16–17. The Service need not "wait until it [has] quantitative data reflecting a species' decline, its population tipping point, and the exact year in which that tipping point would occur before it could adopt conservation policies to prevent that species' decline." *Alaska Oil & Gas Ass'n v. Pritzker*, 840 F.3d 671, 683 (9th Cir. 2016). Rather, the Service has a duty to "take action at the earliest possible, defensible point in time to protect against the loss of biodiversity within our reach as a nation." *Defenders of Wildlife v. Jewell*, 176 F. Supp. 3d at 1011. Despite the Service's claim to the contrary, Service Br. at 21, the overwhelming scientific evidence in front of the Service suggests that exposure to toxicants and high-severity wildfire will impact the Pacific fisher in the foreseeable future. The Service acted arbitrarily and capriciously by disregarding this evidence on the basis that there is no evidence these stressors are currently "functioning as an operative threat," AR 000721, or already causing "documented . . . decline," AR 000727.

#### 1. There Was No Rational Basis to Dismiss the Threat of Exposure to Toxicants.

In the proposed rule, the Service concluded that toxicants, and anticoagulant rodenticides in particular, were "a newly identified threat because of reported mortalities of fishers from toxicants and a variety of sublethal effects." AR 000690. The Service's Final Species Report did not conclude that toxicants no longer pose the threat identified in the proposed rule. Instead, the Final Species

Report repeated the conclusion of the Draft Species Report that exposure to toxicants "may result in significant population-level impacts in the near future" for the Southern Sierra Population. *Compare* AR 022755 (Final Species Report), *with* AR 022520 (Draft Species Report). The Service's dismissal of this threat again ultimately hinged on the (erroneous) conclusion that the Pacific fisher "is not experiencing significant impacts at either the population or rangewide scales, currently or in the foreseeable future." AR 000727.

The Service's other excuses for dismissing the threat of toxicants, Service Br. at 10, are again an attempt to "ignore[] the best available science by demanding better science." *Defenders of Wildlife v. Jewell*, 176 F. Supp. 3d at 1001.[2] The Service now claims that toxicants do not pose a threat because there is "no evidence that rodenticide usage will increase within the range of the [Pacific fisher] in the future." Service Br. at 10. But the Service's desire to wait for further evidence that rodenticide use will increase is arbitrary and capricious in the face of the most recent study on Pacific fisher mortality, which concluded there *has already been* "an increase of this emerging threat." AR 010949; *see also* Final Species Report at AR 022740 (citing study as "new information"). The study found the average incidence of toxicosis for 2007–2011 was only 5.6%, but between 2012–2014, 18.7% of fisher deaths were caused by exposure to toxicants. *Id.* This represented a 233% increase in mortality due to toxicosis. AR 133753 (email from study author to Service explaining importance of the finding). In the same time period, the study found that Pacific

[2] Intervenors do not argue that the Service properly considered the effects of toxicants. *See* Intervenor Br. at 12–18 (arguing that the Service adequately considered other threats, without mentioning toxicants). Under "Factual Background," Intervenors mention wisps of public comments on the Service's Draft Species Report's analysis of toxicants. Intervenor Br. at 10-11. Although one public commenter—a timber company with a financial interest in the withdrawal of the proposed listing—provided anecdotal evidence of declines in illegal marijuana grows on its own land (*see* Roseburg Resources Company comment at AR 164955), none of the comments Intervenors point to offered any new studies showing that the use of toxicants or toxicant exposure was decreasing across the Pacific fisher's range. And several of the commenters Intervenors selectively quote from expressed support for the Service's conclusion that toxicants posed a threat, particularly to the native California populations. *See* Sauder peer review at AR 179198-99 ("[O]verall, I find the estimates of scope and severity for the various threats assessed to be reasonable."); Sager peer review at AR 179252-3 (concluding that "[o]verall, I agree that the Service has compiled substantial data to support listing at least some segment of west coast fishers as threatened under the Endangered Species Act" and noting that exposure to toxicants "is clearly an emerging threat to fishers in at least some parts of the range (particularly California)").

fishers were also increasingly exposed to anticoagulant rodenticides due to their profligate use at illegal marijuana cultivation sites, with exposure increasing from 79% between 2007–2011 to 85% in 2012–2014. AR 010949. The study explained that "[t]his increase in cases and exposure could signify either an increase in the number of cultivation sites or area impacted or that cultivators are increasing the level of toxicants being dispersed within occupied fisher home ranges. In either case, this anthropogenic threat is of increasing concern." AR 010949.

The mortality study was not the only one to conclude the problem is growing. A 2015 study by the California Department of Fish and Wildlife found that illegal marijuana grows increased between 2009 and 2012. AR 002230–33. And the Hoopa Study of the North Coast also concluded the problem of exposure to toxicants may be "growing in severity." AR 012957–59. Ignoring that the problem has been increasing in the recent past, while concluding that the Pacific fisher is not threatened by exposure to toxicants because the Service lacks the ability to predict precisely how the problem may progress in the future, was arbitrary and capricious. *Defenders of Wildlife v. Jewell*, 176 F. Supp. 3d at 1001; *see also Greater Yellowstone Coal., Inc. v. Servheen,* 665 F.3d 1015, 1028–30 (9th Cir. 2011) (holding that the Service's conclusion that whitebark pine declines would not threaten the grizzly because "the specific response of grizzly bears to declines in whitebark cone production is . . . uncertain" was arbitrary and capricious when "considerable data—demonstrating a relationship between pine seed shortages, increased bear mortality, and decreased female reproductive success"—all pointed to potential impacts to the grizzly bear).

The Service also attempts to dismiss the threat of toxicants on the basis that it lacked required evidence "indicating that exposure to toxicants at sub-lethal levels . . . was occurring wide-range or at the population level." Service Br. at 10. But the best available science before the Service indicates that sublethal exposure is widespread and already causing harm to the Pacific fisher. The Final Species Report repeated the conclusion of the Draft Species Report that "toxicant exposure in the two populations of California fishers appears to be widespread." Final Species Report at AR 022759. The Final Species Report, like the Draft Species Report, also explained how sublethal exposure can harm the Pacific fisher by "impair[ing] an animal's ability to recovery from physical injury." *Compare* Final Species Report at AR 022754, *with* Draft Species Report at AR 022519; *see also* AR

040510–11 (email from leading fisher biologist providing a video, www.youtube.com/watch?v=otognB4LdTY, demonstrating how a fisher compromised by sublethal exposure "may be vulnerable to other mortality factors, i.e., predation"). For example, "[anticoagulant rodenticide]-exposed fishers may be at risk of prolonged bleeding if wounded when pursuing or killing prey, escaping or fighting predators, or by conspecifics (for example, during mating)." *Id.* Exposure can also result in changes to animal's behavior, "which makes them more susceptible to environmental stressors, such as adverse weather conditions, food shortages, and predation." *Id.* Sublethal exposure to anticoagulant rodenticides may also "reduce the reproductive potential of fishers," as exposure "has been documented to cause fetal abnormalities, miscarriages, and neonatal mortality in mammals." AR 022755. And although the exact degree to which sublethal exposure increases mortality from other causes is not known, "individual fishers within [the North Coast, Southern Sierra, and Olympic National Park populations] have been found dead from other causes and also were found to be exposed to [anticoagulant rodenticides] at sublethal levels," AR 000727. Thus, the best available science still confirms that the Pacific fisher, and particularly the population in the Southern Sierra, is at risk from the direct and sublethal effects of exposure to toxicants. The Service acted arbitrarily and capriciously in dismissing the threat of toxicants in the Listing Withdrawal on the basis that it lacked information about the exact extent of sublethal exposure. *Defenders of Wildlife v. Jewell*, 176 F. Supp. 3d at 1001; *Greater Yellowstone Coal., Inc.,* 665 F.3d at 1028-30.

**2. There Was No Rational Basis For Dismissing the Threat from Wildfire.**

In the Service's proposed rule to list the Pacific fisher, the Service considered wildfire to be a present and future threat "because the frequency and size of wildfires is increasing; we expect this trend to continue into the future; and based on fishers outside of the West Coast range and other related species, we predict that large fires (particularly those of higher severity and larger scale) will cause shifts in home ranges and movement patterns, lower the fitness of fishers remaining in the burned area, and create barriers to dispersal." AR 000686. The Service considered wildfire to be "particularly problematic" for the Southern Sierra population, "because of the narrow band of habitat that comprises [the Southern Sierra population] and the small population size." *Id.* The Service

linked increasing high-severity fires and habitat conversion in the Southern Sierra to climate change, noting that climate models predicted that climate change would cause more-frequent fires and conversion of fisher habitat to grassland and shrubland. Draft Species Report at AR 022432–33. No new information has cast doubt on the Service's original key findings. The Service's Final Species Report confirmed the basic facts that climate change will cause increasing high-severity fires and habitat conversion in the drier portions of California, including the Southern Sierras. AR 022721, AR 022667, AR 022690, AR 022687, AR 022669 ("[b]ecause both the size and severity of fire may be increasing within fisher habitat in the Sierra Nevada, this risk is likely to increase in the future."). The best available science since the proposed rule has therefore confirmed the concern that high-severity wildfires and loss of habitat could threaten the Pacific fisher, and the native Southern Sierra population in particular. AR 022667, AR 022691. Again, the Service's reversal came down to its erroneous conclusion that the Service lacked "surveys or other information" showing that wildfire was already "an operative threat." AR 000721.

Defendants' additional attempts to dismiss the threat of high-severity wildfire are either contradicted by the record or fail to grapple with the Service's initial rationale behind the proposed rule. *See F.C.C. v. Fox Television Stations, Inc.*, 556 U.S. 502, 515-16 (2009) (explaining that when an agency changes policy, "a reasoned explanation is needed for disregarding facts and circumstances that underlay or were engendered by the prior policy"); *Organized Vill. of Kake v. U.S. Dep't of Agriculture*, 795 F.3d 956, 968 (9th Cir. 2015) ("[A]n agency may not simply discard prior factual findings without a reasoned explanation.").

Defendants claim that wildfire is no longer a threat because "future wildfires will continue at a similar rate and severity across the landscape [sic] has been occurring in the recent past." Service Br. at 10; Intervenor Br. at 18. But the Service's Final Species Report contradicts this assertion, explaining that "[r]ecent climate change has already caused an increase in wildfire activity in some areas, and this trend is likely to increase as climate change progresses." AR 022687 (citations omitted). The Final Species Report also explains that "it is highly likely that the Sierra Nevada"—the area containing the most vulnerable native Pacific fisher population—"will experience climate-related increases in disturbance from fire[.]" AR 022690.

Defendants further argue that the Service was correct to dismiss the threat of wildfire to the Pacific fisher because "wildfires are not expected to be high severity in all cases such that they destroy habitat for entire populations." Service Br. at 10; Intervenor Br. at 18. They also now point to habitat benefits from forest ingrowth and low- or mixed-severity fire. *Id.* But the concern that drove the proposed listing was never that a wildfire itself would wipe out an entire population's habitat. Rather, the Service's concern was that fires could "cause shifts in home ranges and movement patterns, lower the fitness of fishers remaining in the burned area, and create barriers to dispersal." AR 000686. The Service predicted that these impacts, acting on small populations, could lead to rapid extinction. *See, e.g.,* AR 000028 ("Random . . . environmental changes can lead to declines that, in small populations, result in rapid extinction. . . . [S]tand-replacing fire or severe storms, magnify risk of extinction further." (citations omitted)). In the Listing Withdrawal, the Service entirely ignored its prior reasoning as to why high-severity fire poses a threat, and similarly failed to explain how any benefits from forest ingrowth and low- or mixedseverity fire would ameliorate the risks from high-severity wildfire identified by the proposed rule. The Service may not simply "casually ignore[]" its prior concerns and findings when altering course. *State v. Bureau of Land Mgmt.*, No. 17-CV-07186-WHO, 2018 WL 1014644, at *6 (N.D. Cal. Feb. 22, 2018). The Service's new erroneous conclusion that wildfire does not pose a threat to any portion of the Pacific fisher's range was arbitrary and capricious. *See Fox Television Stations*, 556 U.S. at 515-16; *see also The Fund for Animals v. Norton*, 294 F. Supp. 2d 92, 105–06 (D.D.C. 2003) (concluding that a "180 degree reversal from a decision on the same issue" was arbitrary and capricious when the agency failed to give a reasoned explanation for dismissing the concerns that drove the original rulemaking).

In sum, the lack of definitive evidence of declining populations was not a rational basis to dismiss the well documented threats that drove the proposed rule. The best available science demonstrates that small population size, exposure to toxicants, and increasing high-severity wildfire all threaten the Pacific fisher. The Service's dismissal of these threats based on its desire for more conclusive data was arbitrary and capricious. The Court should set aside the Listing Withdrawal and require the Service to issue a new rule, based on the evidence before the agency.

## IV. The Court Should Not Resolve Count II in Favor of Defendants.

Plaintiffs brought a separate cause of action challenging the Service's failure to apply its Significant Portion of the Range policy, which provides that: "[i]f the species is neither endangered nor threatened throughout all of its range, we will determine whether the species is endangered or threatened throughout a significant portion of its range." 79 Fed. Reg. 37,578, 37,585 (July 1, 2014), AR 036794. *See* Complaint, ¶¶ 59–64. In the Listing Withdrawal, the Service concluded "it was not necessary to assess whether any portion of the range may be significant under the [Service's Significant Portion of the Range] policy" because it "determined that *no portion* of the [Pacific fisher's] range *may be* in danger of extinction in those portions or is likely to become so within the foreseeable future." AR 000735 (emphasis added); *see also* AR 126147 (email explaining that the Regional Director "has concluded that the recommendation [to designate the North Coast and Southern Sierra as significant portions of the range] at this time is not warranted given the lack of demonstrated population declines from the significant stressors individually and cumulatively").

Plaintiffs have extensively briefed why the Service's conclusion that "no portion of the [Pacific fisher's] range may be in danger of extinction in those portions or is likely to become so within the foreseeable future" was in error. AR 000735. The Court should not, therefore, "find in favor of Federal Defendants on claim 2." Service Br. at 22–23. Rather, the Court should grant Plaintiffs' motion for summary judgment requesting this Court remand the Listing Withdrawal with direction that the Service reevaluate its conclusion that the Pacific fisher is not threatened in any portion of the species' range, which would effectively resolve both counts I and II of Plaintiffs' Complaint in Plaintiffs' favor.

## V. The Court Should Remand with Direction that the Service Prepare a New Rule Within 90 Days.

Contrary to the Service's protest, Service Br. at 23, remand with direction that the Service prepare a new rule within 90 days is appropriate here. Courts may generally set reasonable deadlines for agency action. *Envtl. Def. Ctr. v. Babbitt*, 73 F. 3d 867, 872 (9th Cir. 1995). In particular, "timeliness in the listing process is essential." Congress specifically amended the Endangered Species Act in 1982 "for the very purpose of curtailing the [listing] process." *Biodiversity Legal*

*Found. v. Badgley,* 309 F.3d 1166, 1175 (9th Cir. 2002) (*citing Ctr. for Biological Diversity v. Norton*, 254 F.3d. 833, 839 (9th Cir. 2001).

The Service has demonstrated that in the absence of a court-ordered deadline, it will indefinitely delay taking action to protect the Pacific fisher. *See* Pls.' Opening Br. at 9–11 (detailing Service's repeated delays and the repeated need for court-ordered deadlines). Ninety days is a reasonable amount of time. The Service has already had more than seventeen years to consider the existing science. And it has demonstrated it can reevaluate its listing conclusions within a matter of months. *Compare* AR 126177 (Regional Director's decision to withdraw proposed rule), *with* AR 000711 (Listing Withdrawal published four months later). Given this history, and given that Congress explicitly set a short deadline for the Service to list species as threatened or endangered, "in order to encourage and expedite the listing process," 90 days is a reasonable period of time. *W. Watersheds Proj. v. Foss*, No. CV 04 168 MHW, 2006 WL 2868846, at *4 (D. Idaho Oct. 5, 2006) (setting a 90-day deadline for the Service to issue a final listing decision).

Despite the Service's claim to the contrary, the "prevailing case law in this circuit" does not "recognize" that 90 days is insufficient to prepare a new rule. Service Br. at 24. *Tucson Herpetological Society* did not address the reasonableness of a proposed deadline. 566 F.3d at 874. In *Center for Biological Diversity v. Norton*, the Service presented the court with specific evidence of a budget moratorium and backlog of listing petitions that delayed it from issuing a final rule listing the spotted owl as endangered or threatened within the time period proposed by plaintiffs. *Ctr. for Biological Diversity v. Norton*, 208 F. Supp. 2d 1044, 1052 (N.D. Cal. 2002). Here, the Service has claimed that 90 days would "simply not be enough time" but fails to point to any reason why that is the case. Service Br. at 24. The record provides ample evidence that 90 days is a reasonable amount of time under the circumstances.

## CONCLUSION

The best available science, essentially unchanged since the proposed rule, makes it clear that the fragile remaining Pacific fisher populations warrant protection under the Endangered Species Act. Deciding at the eleventh hour to jettison this data while pointing to scant and inconclusive studies of population growth and the desire for hypothetical "better" data was a textbook example of

arbitrary and capricious decisionmaking. The Listing Withdrawal should be set aside, the proposed rule reinstated, and the Service instructed to prepare a new rule based only on the best scientific information available.

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