

United States District Court
For the Northern District of California

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IN THE UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

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

No. C 16-06040 WHA

Plaintiffs,

v.

**ORDER RE CROSS-MOTIONS
FOR SUMMARY JUDGMENT**

U.S. FISH & WILDLIFE SERVICE; RYAN
K. ZINKE, in his capacity as Secretary of the
Interior; and GREG SHEEHAN, in his
capacity as Principal Deputy Director of the
U.S. Fish & Wildlife Service,

Defendants.

INTRODUCTION

In this action for declaratory and injunctive relief under the Endangered Species Act, plaintiffs seek protection for the Pacific fisher. All parties have moved for summary judgment. For the reasons stated below, plaintiffs’ motion is **GRANTED IN PART** and defendants’ motions are **DENIED**.

STATEMENT

The fisher is a medium-sized brown mammal in the weasel family found only in North America. It has a long body with short legs and a long bushy tail. Fishers naturally populate in low densities over large, non-overlapping ranges.

1 Beginning in the 1900's, the Pacific fisher population — a “distinct population segment”
2 found in Washington, Oregon, and California — experienced significant decline due to
3 extensive logging and trapping. As such, the Pacific fisher has largely disappeared from its
4 historic range. Altogether, the Pacific fisher now exists in five populations — two small,
5 isolated native populations, the Northern California-Southwestern Oregon and Southern Sierra
6 Nevada populations, and three reintroduced populations, the Northern Sierra Nevada, Southern
7 Oregon Cascade, and Olympic Peninsula populations. Estimates for the Northern California-
8 Southwestern Oregon population size range from 258 to 4,018. Estimates for the Southern
9 Sierra Nevada population size range from 100 to 500 (AR 000684, 022630, 022641, 022647).

10 The Endangered Species Act aims to identify and to protect endangered and threatened
11 species and to “reverse the trend toward species extinction, whatever the cost.” *Tenn. Valley*
12 *Auth. v. Hill*, 437 U.S. 153, 184 (1978). To that end, the Secretary of the Interior is charged
13 with maintaining a list of “endangered” and “threatened” species. 16 U.S.C. § 1533. The
14 Secretary has delegated his authority to implement the Act, including the authority to make
15 listing decisions, to the United States Fish and Wildlife Service. *See* 50 C.F.R. § 402.01(b)
16 (2017).

17 An “endangered” species is “any species which is in danger of extinction throughout all
18 or a significant portion of its range.” 16 U.S.C. § 1532(6). A “threatened” species is any
19 species “which is likely to become an endangered species within the foreseeable future
20 throughout all or a significant portion of its range.” *Id.* § 1532(20). The term “species”
21 includes subspecies and “any distinct population segment of any species of vertebrate fish or
22 wildlife which interbreeds when mature.” *Id.* § 1532(16).

23 The Act permits interested persons to petition to add or remove species to the
24 endangered species lists. *Id.* § 1533(b)(3). The Service, as the Secretary’s delegee, must then
25 determine within 90 days of receiving a petition, “[t]o the maximum extent practicable,”
26 whether the petition is supported by “substantial scientific or commercial information.” *Id.* §
27 1533(b)(3)(A). If the Service finds that it is, it must “commence a review of the status of the
28 species concerned.” *Ibid.* The Service must make a finding on the status of the species within

1 twelve months and publish its finding (the twelve-month finding). *Id.* § 1533(b)(3)(B).

2 The twelve-month finding must make one of the following findings: the listing is (1)
3 not warranted; (2) warranted; or (3) warranted but precluded due to higher priorities. *Id.* §
4 1533(b)(3)(B). In making such a finding, the Service must assess five statutory factors “solely
5 on the basis of the best scientific and commercial data available”: (1) the present or threatened
6 destruction, modification, or curtailment of the species’ range; (2) overutilization for
7 commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) the
8 inadequacy of existing regulatory mechanisms; and (5) other natural or man-made factors
9 affecting the species’ continued existence. *Id.* §§ 1533(a)(1), (b)(1)(A).

10 Since 1990, petitions to protect the Pacific fisher have been filed three times. In 1991,
11 the Service concluded that listing the Pacific fisher as “endangered” was “not warranted.” In
12 1996, the Service again rejected a petition to list two fisher populations (including the Pacific
13 fisher population) as “threatened” due to lack of substantial information. In 2000, the Center
14 for Biological Diversity and other groups petitioned to list the Pacific fisher as endangered (AR
15 000680).

16 In 2004, following the 2000 petition, the Service published a twelve-month finding that
17 the Pacific fisher listing was “warranted but precluded.” In 2010, plaintiffs sued the Service for
18 lack of expeditious progress on the Pacific fisher’s listing. In 2011, the parties dismissed the
19 action via stipulation as part of a larger multi-district litigation settlement agreement requiring
20 the Service to issue a proposed rule or “not warranted” finding by September 30, 2014 (*ibid.*).

21 On October 7, 2014, the Service publicly proposed to list the Pacific fisher as
22 threatened. In its public statement, the Service concluded that the main threats or stressors to
23 the Pacific fisher were “habitat loss from wildfire and vegetation management; toxicants
24 (including anticoagulant rodenticides); and the cumulative and synergistic effects of these and
25 other stressors acting on small populations.” The Service further recognized “the isolation of
26 small populations and the higher risk of extinction due to stochastic events” as the “greatest
27 long-term risk.” The proposed rule acknowledged that the mere identification of stressors that
28 could impact a species negatively was insufficient to compel a listing. Rather, there must be

1 “evidence that these stressors are operative threats that act on the species.” The Service then
2 called for public comment on the proposed rule and on its draft species report (AR 000677,
3 000684, 000691, 022360).

4 On April 18, 2016, after the receipt of public comments, the Service reversed course and
5 withdrew the Pacific fisher’s proposed listing. The Service published its final species report,
6 which is a compilation of all of the best available science, in tandem with its final rule.

7 In the reversal, the Service stated that reconsideration of the information available prior
8 to the proposed listing, as well as all new information received thereafter, led it “to conclude
9 that the native populations will persist into the future . . . and that as a whole the [Pacific] fisher
10 does not meet the definition of an endangered or threatened species under the Act” (AR
11 000719).

12 The Service qualitatively reassessed the various stressors. For example, in discounting
13 wildfires as a threat, the reversal noted that new information suggested that wildfires have
14 beneficial consequences, such as creating new habitats for fishers and increasing prey
15 abundance. For small population size, the reversal noted that the separation of the two native
16 populations is longstanding and that despite their few numbers and isolation, the populations
17 have persisted over a long period of time. The reversal further observed that interchange
18 between the native Northern California-Southwestern Oregon population and two other
19 reintroduced populations “may be” beginning to occur. As for toxicant exposure, the reversal
20 emphasized what the Service characterized as a small number of confirmed deaths due to
21 toxicosis (AR 000720–21, 000726–29).

22 Additionally, the Service quantitatively reassessed the stressors. The reversal stated that
23 a “key point” in the Service’s determination was that the best available information, in its view,
24 did not show that the stressors were “functioning as operative threats on the fisher’s habitat,
25 populations, or the proposed [distinct population segment] as a whole to the degree [the
26 Service] considered to be the case at the time of the proposed listing.” A 2015 conference call
27 memorandum noted that the decision to withdraw the proposed listing “hinged on the fact that
28 [the Service had] not yet seen threats acting to the point where there are declining population

1 trends since the time of the ‘warranted but precluded’ finding. Threats are evident but [the
2 Service hadn’t] seen the effects on population yet” (AR 000715, 126177).

3 Plaintiffs — members of the coalition that submitted the original petition to list the
4 Pacific fisher — now challenge the reversal. Plaintiffs argue that the reversal was arbitrary and
5 capricious as to these threats: (1) toxicants; (2) small population size; and (3) wildfires.
6 Plaintiffs seek to set aside the Service’s reversal, to reinstate the Service’s proposed listing rule,
7 and an order requiring the Service to publish within ninety days a new rule based solely on “the
8 best scientific and commercial data available” (Dkt. No. 55 at 1).

9 Defendants respond that this is a matter of difference in interpretation of the scientific
10 evidence, and thus the Service’s interpretation and its ultimate reversal are entitled to deference.
11 According to defendants, the reversal was anchored in new information elicited during the
12 comment period, which prompted the Service to reevaluate the identified stressors, individually
13 and cumulatively, that could impact the Pacific fisher population (Dkt. No. 57 at 8). In
14 reversing, defendants contend the Service both (1) “qualitatively analyz[ed] the scope and
15 severity of each identified stressor”; and (2) “analyzed whether or not identified stressors were
16 operating as threats at the population or range-wide level,” relying on “population trend data as
17 circumstantial evidence of stressors having a manifested impact” (*id.* at 12).¹

18 This order follows a first round of full briefing and oral argument (Dkt. No. 71)
19 followed by a second round of supplemental briefing and further oral argument (Dkt. No. 79).
20 The Court thanks counsel for both sides for their excellent advocacy.

21 **ANALYSIS**

22 The Administrative Procedure Act governs the standard and scope of judicial review for
23 administrative decisions. Under the APA, the standard of review is whether the agency’s
24 decision was “arbitrary, capricious, an abuse of discretion or otherwise not in accordance with
25 the law.” *Pac. Coast Fed. of Fishermen’s Ass’n v. Nat’l Marine Fisheries Serv.*, 265 F.3d 1028,

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27 _____
28 ¹ The American Forest Resource Council, California Forestry Association, National Alliance of Forest Owners, Oregon Forest Industries Council, and Washington Forest Protection Association’s unopposed motion to intervene as a defendant was granted on January 24, 2017 (Dkt. No. 41). Because both defendants’ briefings largely overlap, the federal-defendant and intervenor-defendant’s motions are considered together for purposes of this order.

1 1034 (9th Cir. 2001). In determining whether an agency’s decision was arbitrary and
2 capricious, a court must determine whether the agency articulated a “rational connection
3 between the facts found and the choice made.” An action will be deemed arbitrary and
4 capricious where the agency offers an explanation for an action “that runs counter to the
5 evidence before the agency, or is so implausible that it could not be ascribed to a difference in
6 view or the product of agency expertise.” *Motors Vehicles Mfrs. Ass’n. v. State Farm Mutual*
7 *Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

8 The APA requires “a substantial inquiry, a thorough, probing, in-depth review.” *Native*
9 *Ecosystems Council v. U.S. Forest Serv.*, 418 F.3d 953, 960 (9th Cir. 2005). “While our
10 deference to the agency is significant, we may not defer to an agency decision that ‘is without
11 substantial basis in fact.’ ” *Sierra Club v. U.S. EPA*, 346 F.3d 955, 961 (9th Cir.2003) (quoting
12 *FPC v. Fla. Power & Light Co.*, 404 U.S. 453, 463 (1972)). “When an agency changes a policy
13 based on factual findings that contradict those on which the prior policy was based, an agency
14 must provide a ‘reasoned explanation . . . for disregarding facts and circumstances that underlay
15 or were engendered by the prior policy.’ ” *Ctr. for Biological Diversity v. Zinke*, 900 F.3d
16 1053, 1067–68 (9th Cir. 2018) (quoting *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502,
17 515–16 (2009)) (involving the Service’s reversal of a finding that listing was “warranted but
18 precluded”).

19 This order now applies these standards against the administrative record.

20 **1. ANTICOAGULANT RODENTICIDES AND OTHER TOXICANTS.**

21 In the 2014 proposed listing, the Service viewed anticoagulant rodenticides and other
22 toxicants as “a newly identified threat because of the reported mortalities of fishers from
23 toxicants and a variety of sublethal effects” (AR 000690) — “mortalities” meaning direct
24 poisoning and “sublethal effects” meaning lethargy and other debilitations that render fishers
25 vulnerable to other direct causes of death (like predation). The main sources of anticoagulant
26 rodenticide exposure in California are illegal marijuana grows, where anticoagulant
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1 rodenticides are used to discourage herbivory and poison rats that might chew on young
2 marijuana plants (AR 022747).

3 The proposed listing stated that the Service based its severity estimates regarding
4 toxicant exposure “on mortality rates alone, but [it] acknowledge[d] that th[ose] values likely
5 *underrepresent* the population-level effects when considering research conclusions regarding
6 sublethal levels of rodenticides and other toxicants in a wide variety of animal species” (AR
7 000690) (emphasis added).

8 After the proposed listing, a new, subsequent study showed that the impact of toxicant
9 exposure had worsened. Plaintiffs thus argue that the Service’s 2016 reversal on toxicant
10 exposure was arbitrary and capricious. This order agrees, as now explained.

11 **A. Studies on Toxicant Exposure.**

12 After the proposed listing, a 2015 study by Gabriel and others showed a significant
13 increase in Pacific fisher mortality due to rodenticide poisoning, meaning the threat was
14 actually worse than previously thought. The authors explicitly warned of “an *increase* of this
15 emerging threat” for Pacific fishers (AR 010949) (emphasis added).

16 The Gabriel study ranked as the most comprehensive study of fisher mortality in
17 California as of the time of the reversal. The authors collected data from a total of 167 dead
18 Pacific fishers found in both native California populations (AR 010938, 010940). The study
19 observed a notable increase in toxicosis, meaning direct death by poisoning of Pacific fishers.
20 Earlier, from 2007–2011, the average annual death rate from toxicosis had been 5.6 percent.
21 Later, however, from 2012–2014, the death rate from toxicosis increased to 18.7 percent per
22 year. This indicated a tripling of Pacific fisher deaths due to poisoning. Moreover, for the same
23 time periods, toxicant exposure also increased — from 79 percent to 85 percent (AR 010949),
24 meaning of the 167 dead Pacific fishers, 85 percent had anticoagulant rodenticides or other
25 toxicants in their bodies. The authors thus concluded that the threat of toxicant exposure was
26 “of increasing concern” (*ibid.*). Significantly, the Service failed to address the study’s key
27 findings and conclusions in its reversal. As such, this order finds that the Service’s assessment
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1 of the toxicant exposure stressor “r[an] counter to the evidence before [it]” and was accordingly
2 arbitrary and capricious. *Motor Vehicles Mfrs.*, 463 U.S. at 43.

3 *First*, while the reversal acknowledged the 2015 Gabriel study in passing, it failed to
4 come to grips with the Gabriel study’s express finding that “mortality from and exposure to
5 toxicants appears to be on the rise” (AR 010951). The reversal further failed to grapple with the
6 Gabriel study’s finding that toxicant exposure had increased from 79 percent to 85 percent and
7 that toxicosis had more than tripled within a decade, despite acknowledging this fact in
8 response to Comment No. 263 (AR 000799). Instead, the reversal simply concluded — *ipse*
9 *dixit* style — that “the best available information at this time d[id] not support concluding that
10 the impacts described . . . r[ose] to the level of a threat, based on the insufficient evidence that
11 [anticoagulant rodenticides] or other toxicants [were] resulting in significant impacts at either
12 the population or rangewide scales” and that the Service was “not aware of any information that
13 indicate[d] use of [anticoagulant rodenticides] will increase within the range of the proposed
14 [distinct population segment] in the future” (AR 000727, 000799).

15 *Second*, to the limited extent the reversal addressed the Gabriel study, the reversal
16 cherry picked the Gabriel study. It zeroed in on the study’s finding of 15 confirmed deaths
17 directly caused by toxicant exposure. The reversal characterized 15 as a negligible number of
18 deaths. This number, however, is not necessarily representative of the total number of cases of
19 toxicosis, as the reversal itself explained that “for any contaminant, collection of dead or
20 moribund individuals is likely to represent only a *subset* of the actual exposure or mortality
21 attributable to that contaminant” (AR 000799) (emphasis added). Moreover, the 15 confirmed
22 cases of direct poisoning must be viewed against the Pacific fisher’s small population size —
23 which the reversal failed to do (AR 000718).²

24 *Third*, the Service further erred in addressing the effects of sublethal exposure to
25 toxicants on the Pacific fisher population. The proposed listing found sublethal exposure likely
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27 ² The Gabriel study found 13 confirmed deaths but two additional mortalities were reported to the Service in a 2016
28 email by Dr. Greta Wengert (AR 038208), so the reversal correctly used 15 as the number of confirmed toxicosis cases.

1 widespread with detrimental effects (AR 000690). For example, the proposed listing found that
2 the effects of sublethal exposure likely included sickness and a decreased ability to heal from
3 injuries, which may increase the probability of mortality from other stressors, and that a
4 sublethal dose of anticoagulant rodenticide could cause significant clotting abnormalities and
5 hemorrhaging (*ibid.*). No new information since the proposed listing rebutted these original
6 findings.

7 In addressing these effects, the reversal simply retreated into “uncertainty,” stating that
8 it was “uncertain” at what level of toxicant exposure fishers may be experiencing adverse
9 impacts. Specifically, the reversal noted that “the individual fishers within three populations . .
10 . ha[d] been found dead from other causes and also were found to be exposed to [anticoagulant
11 rodenticides] at sublethal levels with an unknown degree of impact to those individuals” and
12 that the Service lacked information on the population-level effects (AR 000727). Defendants
13 now further argue in their briefing that the 2015 Gabriel study found predation as the highest
14 contributing source of mortality for Pacific fishers, with anticoagulant rodenticide exposure
15 trailing behind as a source of Pacific fisher mortality. This shows, according to defendants, that
16 the Service reasonably concluded that toxicant exposure did not have a population-wide impact.

17 With respect to predation, however, the 2015 Gabriel study pointed out that

18 it would be difficult, if not impossible, to determine whether some
19 of the predation mortalities were ultimately going to result in
20 toxicosis. Many of the predation cases exhibited ante-mortem
21 hemorrhaging that could have been due directly to predation or
22 alternatively, [anticoagulant rodenticide] exposure. Anticoagulant
23 rodenticides have previously been shown to cause lethargy and
24 weakness in exposed animals . . . but teasing these two causes of
25 death apart was not possible

26 (AR 010951). The Service itself even acknowledged this in the reversal, stating in response to
27 Comment No. 276 that it “agree[d] that exposure to [anticoagulant rodenticides] may predispose
28 fishers to predation due to the known physically debilitating effects” of anticoagulant
rodenticides on fishers (AR 000802).

Moreover, with respect to uncertainty, the reversal cited a 2004 study by Erickson and
Urban, which evaluated, *inter alia*, the toxicity of widely-used anticoagulant rodenticide

1 brodifacoum on minks (the Pacific fisher’s cousin), to conclude that “no consistent trends
2 associate residue concentrations with levels at which adverse effects occur” (AR 000727). In
3 the final species report (a companion to the reversal document), however, the Service used the
4 very same study to conclude that “a fisher foraging in an area illegally baited with over-the-
5 counter brodifacoum products could easily consume enough exposed rodents over several days
6 to succumb to the poison, if fishers have approximately the same susceptibility to brodifacoum
7 that mink do” (AR 022750–54). The reversal failed to address this alarming conclusion.

8 At bottom, that these Pacific fisher deaths could not be pinned on toxicant exposure
9 directly or that it may be uncertain as to what level of toxicant exposure fishers may be
10 experiencing adverse impacts do not provide the Service a rational connection to its conclusion
11 that toxicant exposure does not rise to the level of a threat.

12 Our court of appeals has addressed how scientific “uncertainty” should be evaluated in
13 listing decisions. In *Greater Yellowstone Coalition, Inc. v. Servheen*, 665 F.3d 1015 (9th Cir.
14 2011), our court of appeals held that the Service failed to rationally support its conclusion that a
15 projected decline in whitebark pine, a key food source for bears, posed no threat to the
16 Yellowstone grizzly. There, the Service argued it did not know what impact whitebark pine
17 declines would have on the Yellowstone grizzly and pointed to the lack of data showing a
18 population decline due to whitebark pine loss as positive support for its delisting. *Id.* at
19 1028–30. Our court of appeals rejected this reasoning, explaining that the delisting “present[ed]
20 no data indicating that whitebark pine declines w[ould] not threaten the Yellowstone grizzly
21 population, and considerable data — demonstrating a relationship between pine seed shortages,
22 increased mortality, and decreased female reproductive success — pointing the opposite
23 direction.” *Id.* at 1030 (citing *Tuscon Herpetological Soc’y v. Salazar*, 566 F.3d 870, 879 (9th
24 Cir. 2009)). Thus simply stating that the impact was “uncertain” was insufficient. Rather, the
25 Service should have explained *why* the uncertainty favored delisting instead of some other
26 course of action, such as conducting further studies to help clarify the impact. *Id.* at 1028.

1 Although *Greater Yellowstone* involved a delisting, our court of appeals has extended
2 the same line of reasoning to where the Service reversed from finding a listing as “warranted
3 but precluded” to a final rule finding the listing as “not warranted.” *See Ctr. for Biological*
4 *Diversity*, 900 F.3d at 1060–62. *Greater Yellowstone* thus applies here, where the proposed
5 listing (and even the reversal) recounted the myriad of adverse effects of direct and indirect
6 exposure to anticoagulant rodenticides. The evidence also showed that exposure to
7 anticoagulant rodenticides was increasing. The reversal presented no direct data indicating that
8 toxicant exposure posed no threat to the Pacific fisher.

9 “[I]t is not enough for [the Service] to simply invoke ‘scientific uncertainty’ to justify its
10 action.” *Ctr. for Biological Diversity*, 900 F.3d at 1072 (quoting *Greater Yellowstone Coal.*,
11 665 F.3d at 1028). Thus simply asserting the uncertainty as to the precise effects on the Pacific
12 fisher population does not serve as a rational connection to the Service’s conclusion that the
13 Pacific fisher’s increasing exposure to toxicants no longer rises to the level of a threat. Nor
14 does it rationally explain why not listing the Pacific fisher was justified “as opposed to taking
15 another course of action,” as “[p]ursuing another course of action may have been particularly
16 prudent given the ESA’s policy of ‘institutionalized caution.’ ” *Ctr. for Biological Diversity*,
17 900 F.3d at 1073 (quoting *Ariz. Cattle Growers’ Ass’n v. Salazar*, 606 F.3d 1160, 1167 (9th Cir.
18 2010)). The Service therefore acted in an arbitrary and capricious manner in qualitatively
19 assessing the threat of toxicant exposure.

20 **B. Population Trend Studies.**

21 Defendants further argue that the Service treated the purportedly low confirmed
22 mortality in tandem with the Service’s assessment that the native Pacific fisher populations
23 were stable. This combined evaluation, according to defendants, supported the Service’s
24 conclusion that toxicant exposure does not rise to the level of a threat. In other words, the
25 Service used alleged population stability as circumstantial evidence supporting its position that
26 toxicant exposure, as well as other identified stressors, were not “operative threats.” Plaintiffs,
27 however, contend that the Service’s erroneous conclusion that the Pacific fisher populations are
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1 persistent, *i.e.* stable, was based on limited and inconclusive trend data. This order agrees with
2 this criticism.

3 In its reversal, the Service relied on three population trend studies in concluding that the
4 Pacific fisher population trend was either stable or not in decline. These studies refer to
5 “lambda,” which is a measure of the rate of a population’s growth or shrinkage — with a
6 lambda of one indicating no growth and no shrinkage, a lambda below one indicating shrinkage,
7 and vice versa.

8 As to the native Southern Sierra Nevada population, a 2015 study by Sweitzer and
9 others reported a lambda range of 0.79 to 1.16 using a 95 percent confidence interval and an
10 estimated lambda of 0.966 (AR 000728). As to the native Northern California-Southwestern
11 Oregon population, two long-term studies — 2014 studies by Higley and others (“the Hoopa
12 study”) and Powell and others (“the Eastern Klamath study”) — reported an estimated lambda
13 of 0.992 (95 percent confidence interval of 0.883–1.100) and 1.06 (95 percent confidence
14 interval of 0.97–1.15), respectively (*ibid.*).³

15 Because all three studies “showed a population trend confidence interval which
16 straddled 1.0,” the Service concluded that the studies indicated a “statistically stable trend”
17 (Dkt. No. 57 at 12; AR 000728). This was the very same logical error the Service committed in
18 *Natural Resources Defense Council, Inc. v. Rauch*, 244 F. Supp. 3d 66 (D.D.C. 2017) (Judge
19 Randolph D. Moss), which rejected a similar interpretation of confidence intervals. There, the
20 Service declined to list the blueback herring as threatened under the Act because it concluded
21 that the herring’s populations were stable based on population abundance studies showing a 95
22 percent confidence interval, which included the null hypothesis of “zero” (the indication of no
23 change in abundance). This only meant, however, that the null hypothesis of population
24 stability could not be rejected. *Id.* at 90–91. To offer it as proof of population stability, as the
25 Service did, was an “error of logic.” *Id.* at 94. The district court accordingly held that the

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28 ³ The Service found the fourth study by Zielinski, *et al.* to be inconclusive and thus purports to not have relied on
it (Dkt. No. 57 at 13; AR 000718).

1 Service “failed to offer a ‘rational connection’ between the agency’s inability to reject the null
2 hypothesis that the trend had not changed, and its conclusion that the . . . population was, in
3 fact, stable.” *Ibid.*

4 So too here.

5 Simply because the confidence intervals included 1.0, indicating that population stability
6 was possible, hardly proved it actually was 1.0 or greater. The confidence intervals also
7 included values below one. The confidence interval means nothing more than it is 95 percent
8 likely that the actual lambda is somewhere in the interval, somewhere between the low end of
9 the interval and its high end.

10 This error in logic was exacerbated by the Service’s own observations made elsewhere
11 in the record. The Service’s own scientists understood (correctly) that a confidence interval
12 spanning 1.0 in connection with the Northern California-Southwestern Oregon population
13 studies was “an indication of uncertainty about the population trend” (AR 067328–29).
14 Moreover, the reversal recognized that “the areas monitored for population trend are limited”
15 (AR 000728). Regarding two of these studies — the Hoopa and Eastern Klamath studies — the
16 final species report explicitly noted that “[g]iven the small portion of the [Northern
17 California-Southwestern Oregon] population sampled by the two study areas . . . it is difficult to
18 determine whether [that] population as a whole is increasing, decreasing, or stable” (AR
19 022641).

20 As for the Sweitzer study, defendants now argue that the authors concluded that the data
21 “suggest[ed] stability or growth in some years” and “did not indicate a persistent decline in four
22 years from 2008–2009 to 2011–2012” (Dkt. No. 62 at 11; AR 024651). The reversal further
23 noted that “[a]lthough the authors express[ed] concern for the population and the need for
24 continued monitoring, their research suggests a basically stable trend when considered together
25 with information on population size and density” (AR 000718 (citing AR 024635)).⁴ Both
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27 ⁴ This order notes that the Service seemed to have erroneously cited in the reversal Sweitzer *et al.* 2015b, p. 10,
28 rather than Sweitzer *et al.* 2015, p. 10, which actually contains the proposition cited for.

1 comments mischaracterized the authors' conclusions. The reversal failed to come to grips with
2 the larger point of the Sweitzer study — namely, population growth for Pacific fishers in the
3 Southern Sierra Nevada segment was much more sensitive to adult *female* survival rates than
4 any other demographic rate and that *female* survival rates were 20 percent lower than 0.90 (AR
5 024635). The authors ultimately concluded that this *female* survival rate below 0.90 “impl[ied]
6 a greater challenge for maintaining self-sustaining fisher populations in the southern Sierra
7 Nevada region” (AR 024626).

8 In *Tuscon Herpetological Society v. Salazar*, 566 F.3d 870 (9th Cir. 2009), our court of
9 appeals set aside the Service's reversal of a proposed listing of the flat-tailed horned lizard as
10 arbitrary and capricious where the Service used “limited and inconclusive” population studies to
11 conclude that the lizard persisted in a substantial portion of its range. “If the science on
12 population size and trends is underdeveloped and unclear, the Secretary cannot reasonably infer
13 that the absence of evidence of population decline equates to evidence of persistence.” *Id.* at
14 879. There, the Service had cited in the reversal a study based on the emerging “capture-mark-
15 recapture” methodology that looked at two discrete sections of the lizard's range as evidence of
16 no large population decline. Our court of appeals held that “[t]his single attenuated finding”
17 could not rationally support the Service's “sweeping conclusion that viable lizard populations
18 persist.” *Ibid.* This was especially true given that, “[c]ontrary to the lesson the Secretary
19 dr[ew] from the study . . . the author's primary conclusion [was] that the study's population
20 estimates [could] serve as a ‘baseline for future monitoring.’ ” *Ibid.*

21 Similarly here, the Service could not have reasonably used the mere fact that the
22 confidence intervals straddled 1.0 as proof of population stability. Moreover, the reversal
23 ignored the conclusion in the Sweitzer study itself that a female survival rate below 0.90
24 “impl[ied] a greater challenge for maintaining self-sustaining fisher populations in the southern
25 Sierra Nevada region” and that “[c]onsidering that there are likely fewer than 500 individual
26 fishers within California's southern Sierra Nevada region and that these animals are exposed to
27 multiple known stressors, the population cannot be considered secure” (AR 024626, 024652).

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1 Accordingly, the Service arbitrarily and capriciously relied on these population trend studies to
2 conclude Pacific fisher population stability.

3 Defendants reply that although “the population studies on which the Service relied may
4 be imperfect, *Tucson* does not create a blanket prohibition on considering imperfect data” (Dkt.
5 No. 62 at 12). Defendants argue that these population studies were “the best available data
6 about fisher population trends” and thus were “not ‘limited and inconclusive’ ” (Dkt. No. 57 at
7 13). Defendants further contend that “[e]ven if the available scientific and commercial data are
8 ‘quite inconclusive, [the Service] may — indeed must — still rely on it at that stage’ ” (Dkt. No.
9 57 at 13). *Tucson*, however, instructs that the Service may not affirmatively rely on limited and
10 inconclusive studies (which the Service itself recognizes as “imperfect”) as evidence of
11 persistence, and in turn use this “evidence” of persistence as proof that the stressors pose no
12 threat to the Pacific fisher population. *See Tucson Herpetological Soc’y*, 566 F.3d at 879. “The
13 limitations of the underlying data in this case mean that no such conclusion can be reached.”
14 *Pollinator Stewardship Council v. U.S. E.P.A.*, 806 F.3d 520, 531 (9th Cir. 2015).

15 Defendants further emphasize that “[t]he absence of conclusive evidence of persistence,
16 standing alone, without persuasive evidence of widespread decline, may not be enough to
17 establish that the Secretary *must* list the [species] as threatened or endangered.” *Tucson*
18 *Herpetological Soc’y*, 566 F.3d at 879. This order, however, does not mandate that the Service
19 *must* list the Pacific fisher as threatened — rather, it merely holds that, with respect to the three
20 population studies, the Service failed to make a rational connection between the population
21 trend data and its conclusion that the Pacific fisher population is stable (which, in turn, was used
22 to support its conclusion on toxicant exposure).

23 Defendants also point to *Center for Biological Diversity v. U.S. Fish & Wildlife Service*,
24 246 F. Supp. 3d 1272, 1282 (N.D. Cal. 2017) (Judge Jon S. Tigar), which upheld the Service’s
25 determination that there was no evidence that the coastal marten populations in Oregon were
26 declining, even in the absence of rigorous studies showing persistence. The district court,
27 however, upheld such a determination in light of the fact that there was no evidence to begin
28

1 with that the Oregon coastal marten population was ever in decline, unlike here. *Ibid.*
2 Moreover, the imperfect data (which constituted the best scientific data available) indicated that
3 the Oregon population was large and that the surveys “quickly detected the presence of coastal
4 martens.” *Id.* at 1281–82. In contrast, the district court rejected the Service’s argument that the
5 coastal marten populations in California were not declining where previous surveys
6 demonstrated significant population decline and the Service lacked current data confirming
7 continued decline. *Id.* at 1280–81.

8 Here, the absence of conclusive evidence of Pacific fisher persistence does not stand
9 alone. The Service does not dispute that the Pacific fisher population has declined dramatically
10 and that it remains notably small. As the Service itself noted, “[f]isher populations today in the
11 west coast States are smaller and their range has been reduced compared to historical
12 conditions” (AR 000730). And, the fisher has experienced well-documented population decline
13 “after the early 1900s by the combination of commercial trapping and loss of forest habitat from
14 logging and development” (AR 024639).

15 * * *

16 Because this order finds remand appropriate based on the Service’s treatment of the
17 toxicant exposure threat and the Service’s flawed logic regarding population stability, it does
18 not and need not reach plaintiffs’ other criticisms regarding the Service’s treatment of other
19 stressors. This order, however, acknowledges that plaintiffs have raised plausible criticisms on
20 both those points. The Court suggests that on remand, the Service consider and address those
21 further points made by plaintiffs as well.

22 2. COUNT II WAIVER.

23 Plaintiffs alleged in their complaint that the Service’s conclusion that the Pacific fisher
24 was not threatened throughout any significant portion of its range is contrary to the best
25 scientific information available (Dkt. No. 1 ¶ 64). Defendants argue that plaintiffs waived this
26 second claim for relief by failing to advance an argument in support of it in their opening brief
27
28

1 for summary judgment (Dkt. No. 57 at 22). Because this order finds for plaintiffs as to their
 2 first claim for relief, defendants' motion for summary judgment on waiver is **DENIED AS MOOT**.

3 **3. REMEDY.**

4 Plaintiffs request that the Service be ordered to prepare a new rule within ninety days
 5 that is based "solely" on the "best scientific and commercial data available" (Dkt. No. 55 at 25).

6 Defendants argue that if the Service's withdrawal of the proposed rule is found arbitrary
 7 and capricious, then plaintiffs' request for a new rule within ninety days should be rejected
 8 (Dkt. No. 57 at 23–24). Defendants note that plaintiffs' requested remedy deviates from their
 9 requested relief in the complaint, as plaintiffs originally requested an order requiring the Service
 10 to publish a final rule within six months (*see* Dkt. No. 1 ¶ 17). Defendants request that if the
 11 Court is inclined to set a date for completing a revised rule, then it be granted leave to brief the
 12 timeline in order to evaluate staffing and budget constraints (Dkt. No. 57 at 24).

13 Plaintiffs' request for an order directing the Service to prepare a new rule within ninety
 14 days of remand is **DENIED**. The Service shall prepare a new rule by **MARCH 22, 2019**.
 15 Defendants' request for leave to brief the timeline for remand is **DENIED AS MOOT**.

16 **CONCLUSION**

17 For the foregoing reasons, plaintiffs' motion for summary judgment is **GRANTED IN**
 18 **PART**. Defendants' motions for summary judgment are **DENIED**. The Listing Withdrawal is
 19 hereby **VACATED** and this action is **REMANDED** to prepare a revised rule that comports with this
 20 order.

21 **IT IS SO ORDERED.**

22
 23 Dated: September 21, 2018.

24 
 WILLIAM ALSUP
 UNITED STATES DISTRICT JUDGE