

Information Memorandum for the Secretary/Director

Date: Month DD, 2020

From: Gary Frazer, Assistant Director, Ecological Services

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Subject: Endangered Species Status for the Southern Sierra Nevada Distinct Population Segment of Fisher

I. Introduction

After assessing the best available information, we recommend that the Southern Sierra Nevada (SSN) DPS of fisher is an endangered species (i.e., currently in danger of extinction throughout all of its range). We find the cumulative impact of all identified threats on the SSN DPS, especially habitat loss and fragmentation due to high-severity wildfire and vegetation management (noting that tree mortality from drought, disease, and insect infestation is exacerbated by changing climate conditions), and exposure to toxicants, are acting upon this DPS to such a degree that it is in danger of extinction. Additionally, the existing regulatory mechanisms are not sufficient to address these threats to the level that the species does not meet the definition of an endangered species.

We also recommend that the Northern California-Southern Oregon (NCSO) DPS of fisher is not listed as an endangered or threatened species (i.e., not in danger of extinction throughout all or a significant portion of its range, both currently and into the foreseeable future). We find the potential for effects associated with small populations are not a substantial threat to the DPS, and the species continues to have a widespread distribution despite the manifestation of threats on the landscape, suggesting that, overall, the subpopulations is likely self-sustaining. For example, population growth continue to occur despite increased levels of toxicant exposure and records of associated fisher mortalities. Additionally, conservation efforts are providing for the retention of fisher habitat and structural elements in some areas, including from recent agreements that benefit the species.

This decision is in response to a settlement date, due to the Federal Register on April 25, 2020.

II. Background

We proposed the “West Coast DPS” as a threatened species on October 7, 2014 (hereafter referred to as 2014 Proposed Rule). At that time, the DPS range and configuration included suitable habitat across the states of Washington, Oregon, and California. We held multiple comment periods, one public hearing, and seven public information meetings across the DPS’s range. We withdrew that proposal on April 18, 2016, concluding that the threats acting upon the DPS were not of sufficient imminence, intensity, or magnitude to indicate that they were singly or cumulatively resulting in significant impacts at either the population or rangewide scales. On October 19, 2016, the Center for Biological Diversity (CBD) *et al.* filed a complaint for declaratory and injunctive relief, alleging that our determination on the West Coast DPS of fisher violated the Act. Following many months of litigation, the court issued an order that vacated the listing withdrawal and remanded the Service’s final determination for reconsideration. The

Court directed the Service to prepare a new determination (a proposed revised rule or a final determination by October 26, 2019).

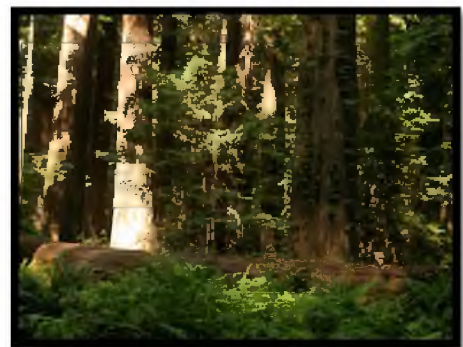
We published a revised proposed rule for the “West Coast DPS” on November 7, 2020, which included a 30-day comment period and was followed on December 19, 2019, with an additional 15-day comment period. At this that time, the DPS analysis describing the range and configuration was revised to longer include fishers north of the Columbia River (i.e., the State of Washington). Per the Court’s order, we are submitting a final listing determination to the Federal Register by April 25, 2020. This analysis includes our reevaluation of the best available scientific and commercial information, including all new information received since 2016 and all comments received. This current evaluation includes a revision of the DPS configuration to be represented as two DPSs: the Northern California-Southern Oregon (NCSO) DPS and the Southern Sierra Nevada (SSN) DPS, the latter of which we recommend finalizing as an endangered species.

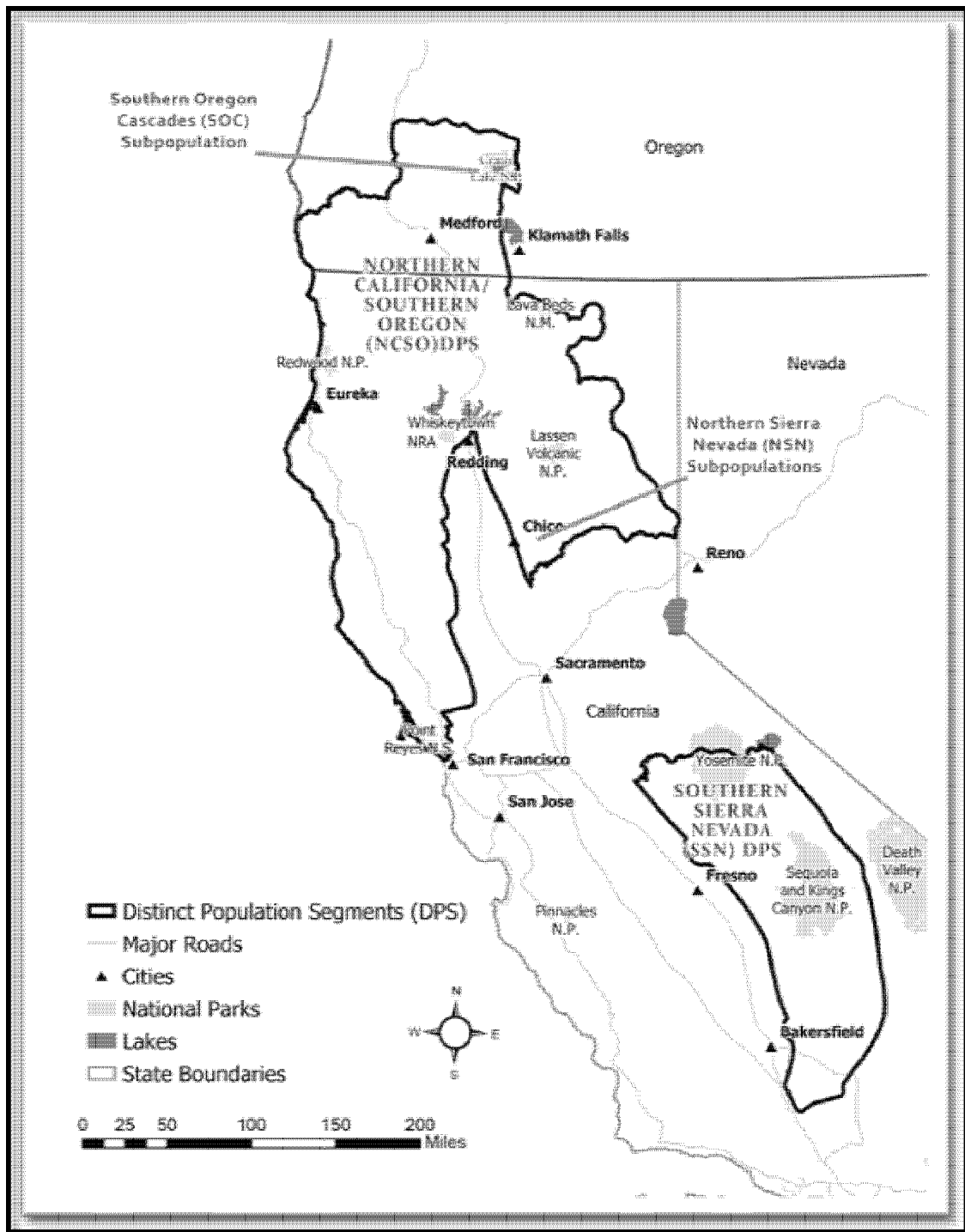
Photos and Range Maps

Fishers are medium-sized, light brown to dark blackish-brown mammals found only in North America. They are classified in the order Carnivora, family Mustelidae, which is a family that also includes weasels, mink, martens, and otters.

Fishers are consistently associated with low- to mid-elevation coniferous and mixed conifer and hardwood forests with characteristics of mid- and late-successional forests (e.g., diverse successional stages, moderate to dense forest canopies, large-diameter trees, coarse downed wood, and singular features of large snags, tree cavities, or deformed trees). Fishers are obligate users of tree or snag cavities for denning, and they select denning and resting sites with a high proportion of characteristics associated with late-successional forests, such as snags, down wood, and vertical and horizontal diversity. These characteristics are maintained and recruited in the forest through ecological processes such as fire, insect-related tree mortality, disease, and decay.

This DPS is found in high elevation forests from the Tuolumne River in Yosemite National Park south to the Kern River Canyon, including Mariposa, Madera, Fresno, Tulare, and Kern Counties, California.





Distinct population segments (DPSs) and subpopulations of fisher in California and Oregon.

Key Drivers of Species Status

NCSO DPS—The population size component of resiliency for the overall DPS may be lower than historical levels to some degree, based simply on historical losses. However, fishers in the DPS have rebounded from the lows of the early- and mid-1900s, and continue to remain widely distributed and common across the DPS. Existing density estimates across this DPS may be variable over time and space, but they do not indicate any population declines. Although we identify threats acting upon this DPS that likely cause losses of individuals, evaluation of all the available information relevant to the demographic condition of the DPS supports our conclusion that this population is resilient. This DPS exhibits redundancy by being well distributed and common across a broad geographic range, and being comprised of multiple smaller subpopulations and aggregates of individuals in geographic areas such that should a catastrophic event affect a portion of its range, substantial numbers of fishers would still occur elsewhere in the DPS's range. Finally, fishers in this DPS exhibit a high degree of representation as exhibited by ecological variability across the DPS; they are found across multiple physiographic provinces that represent a wide variety of forest types and ecological conditions.

SSN DPS—The population size component of resiliency may be lower than historical levels to some degree because the total population size is small and fragmented and has been reduced in distribution relative to historical levels. The SSN DPS faces a variety of threats that will result in losses of individual fishers or impediments to population growth, including loss and fragmentation of habitat (i.e., from high-severity wildfire and wildfire suppression actions, climate change, tree mortality from drought, disease, and insect infestation, vegetation management, and development) and potential direct impacts to individuals (e.g., increased mortality, decreased reproductive rates, increased stress/hormone levels, alterations in behavioral patterns) from wildfire, increased temperatures, increased tree mortality, disease and predation, exposure to toxicants, vehicle collisions, and potential effects associated with small population size. These threats cumulatively play a large role in both the current and future resiliency of the DPS. Redundancy is limited across the range of the SSN DPS as a result of the DPS being a single fragmented population distributed over a relatively confined geographic area for a carnivorous mammal. The limited redundancy of the SSN DPS decreases the DPS's chance of survival in the face of potential environmental, demographic, and genetic stochastic factors and catastrophic events. The SSN DPS exists in a limited range of environmental conditions and has narrow representation in the environments that it occupies.

Climate Change

Fisher habitat is likely to be affected by changing climate conditions, but the severity will vary, potentially greatly among different regions, with effects to fishers ranging from negative, neutral, or potentially beneficial. We considered global climate models in Oregon (emission pathways RCPs 4.5 and 8.5), as well as multiple general circulation models and downscaling with regional climate models, which suggested that extreme heat and precipitation events are expected to increase in frequency, duration, and intensity. Additionally, higher temperatures during spring and summer, coupled with early snow melt, will reduce the moisture of both live fuels and dead surface fuels by increasing evaporative demands during the dry season and lengthening the fire season. Overall, studies specific to predicting the effects of climate change on suitable fisher

habitat have produced a wide range of results, including the potential for both negative effects to habitat (e.g., increased wildfire activity which in turn can increase tree mortality from disease and insects) and beneficial effects to habitat (e.g., shifts from conifer forest to hardwood-dominated mixed forest in some area-specific regions could improve habitat conditions).

Data Sources

For the NCSO subpopulation/DPS, the most recent population estimate was developed in 2017 to cover southern Oregon and coastal California, although it excludes subpopulation information related to two reintroduction sites that reside within the overarching boundary of the NCSO DPS's range. Using this 2017 estimate of fisher density, the NCSO DPS is estimated to be 3,196 individuals (2,507–4,184; 95 percent Confidence Interval (C.I.)). Older estimates for the NCSO DPS (also minus reintroduction sites) using various methodologies range from a low of 258–2,850 individuals, and to a high of 4,018 individuals based on extrapolation. Trend information for fishers within this DPS is based on two long-term study areas within a small proportion of the DPS's range on the Hoopa Valley Indian Reservation (145 mi² study area) in northern California, and the Eastern Klamath Study Area (ESKA; 200 mi² study area) that straddles the California/Oregon border and represents a more dry portion of the NCSO DPS range. Researchers from the Hoopa study suggested in 2014 that “the population as a whole is essentially stable,” but they raised concerns about recent declines in males that they believes was associated with toxicant poisoning. Researchers from the ESKA study suggested 2014 wildfire impacts to the population were likely evident, although data since 2016 has not been fully evaluated. For both studies, researchers use the term “stable” to imply that there are no significant statistical shifts occurring in the data from year to year, suggesting that annual abundance estimates are fluctuating around a steady value consistent with normal population variation.

For the SSN subpopulation/DPS, the most recent overall (male and female) population size estimate reported in 2000 ranges from a low of 100 to a high of 500 individuals based on available fisher habitat; however, significant changes to available habitat have occurred as a result of extensive tree mortality from 2015 to present. Thus, these impacts are not accounted for in the 2000 population estimate. Trend information is available based on an 8-year monitoring study (2002–2009) and a separate analysis over a 14-year period (2002–2015); overall, these analyses showed no declining trends, but also showed no details on survival and recruitment and no results post tree mortality impacts from 2015 to present. Additionally, another study from 2007–2014 indicates a slightly negative population growth rate for the period of research, and an extension of the study to 2017 and re-analysis of data indicate a relatively stable population, but again, this does not take into consideration the effects that tree mortality may have on fishers and their habitat. Finally, extensive areas of suitable habitat within this DPS remain unoccupied by fishers, suggesting that habitat may not be the only limiting factor for this DPS.

Data sources for threats and the species response to those threats are relatively extensive throughout Oregon and California.

Critical Habitat

We previously determined that designation of critical habitat was prudent but not determinable because specific information needed to analyze the impacts of designation was lacking. We are still in the process of assessing this information, and we plan to publish a proposed rule to designate critical habitat for the SSN DPS of fisher in the near future.

Conservation Efforts

Conservation efforts for the NCSO DPS are fairly extensive, to include:

- Northwest Forest Plan (NWFP)—The NWFP has guided the management of USFS and BLM lands in the range of the northern spotted owl since 1994; this range includes most of the NCSO subpopulation. The NWFP provides conservation benefits to fishers through a network of late-successional and old-growth forests that can provide fisher habitat. However, BLM in western OR recently revised their RMPs and they no longer manage their lands under the NWFP. They still manage a similar area of reserve land allocations as they did under the NWFP, but their revised RMP calls for increased timber harvest in their harvest land base.
- HCPs—The DPS is a covered species in one HCP in CA, although the species is currently known to occur on lands under two additional HCPs in CA. All of these HCPs occur in the northwestern portion of the State and are focused on northern spotted owls. Most of the fisher habitat on private lands in CA is not currently encompassed under any HCP. Several HCPs that do not include fishers as a covered species provide ancillary benefits because they focus on providing habitat features for species such as northern spotted owls and anadromous salmonids, which also are used by fishers. The fisher is not a covered species under any HCPs in OR.
- Sierra Pacific Industries Ownership CCAA—This CCAA covers all of their ownership within the NCSO and SSN subpopulation areas. It manages resting and denning habitat, and retains key denning and resting structures on the landscape during timber harvest.
- Oregon CCAA—A template CCAA was completed for fishers in western OR and the 1st permit was recently issued with the Green Diamond Resource Company; we are in the process of considering five additional permit applications, totaling over one million acres of enrollment. Given the recently issued permit is new and those benefits that may reduce some threats have not yet been realized, we are unable at this time to rely on its conservation benefit toward the current condition of the species and its habitat.
- MOUs—Multiple MOUs that benefit fisher and its habitat are being implemented, including:
 - Western Oregon MOU—An MOU between State and Federal agencies in western OR was signed in 2015 to collaborate and facilitate fisher conservation.
 - Intergovernmental MOU for fisher conservation in Oregon (signed by Federal and State agencies in Oregon in 2016) to facilitate fisher conservation activities.
 - Fuels Reduction MOU (signed February 7, 2020) between the USFS, the State of California, Sierra Pacific Industries, and the National Fish and Wildlife Foundation to facilitate coordinated actions that may contribute to fuels reduction efforts across the various land ownerships.

Conservation efforts for the SSN DPS are predominantly driven by the “Southern Sierra Nevada Fisher Conservation Strategy,” which is intended to meet the needs of multiple agencies with an interest in fisher conservation and land management in the Sierra Nevada, including the USFS, NPS, USFWS, California Department of Fish and Wildlife, Sierra Nevada Conservancy (SNC), and other local, state, tribal, and private entities. The Strategy provides science-based guidance for conserving and recovering fisher in the southern Sierra Nevada by reducing threats and increasing the quality and resiliency of fisher habitat. The Strategy is to be implemented within an adaptive management framework to allow adjustments as new information accrues from monitoring and landscape changes such as wildfire and tree mortality.

The information below this line is for informational and outreach purposes only and has not been used as the basis for any potential Agency decision.

III. Positions of Interested Parties

All Federal, State, local government, tribal, and industry partners within the range of the NCSO and SSN DPSs have been made aware of our actions through the multiple comment periods that have occurred on the 2014 Proposed Rule and the 2019 Revised Proposed Rule, and associated comment periods. All Federal, state, and tribal partners were also invited to review scientific information in the 2014 draft SSA report (which was subsequently updated in 2016, but not updated further due to timing and workload constraints associated with the court-order). All of these partners will once again be contacted as a result of this final agency action. Positions of key partners based on the most recent 2019 Revised Proposed Rule include:

USDA—Forest Service, Regions 5 and 6: Both regions have noted over the years since 2014 how listing one or different DPSs would heavily affect their management and workload. USFS Region 6 (Oregon) has not stated an opinion on the DPS analysis/configuration to date, and they have also stated that existing conservation strategies and internal regulatory mechanisms provide a solid foundation on National Forest administered lands for the existence and recovery of fishers. We suspect they would support our decision to not list the NCSO DPS. USFS Region 5 (California) recently commented their belief that the 2019 Revised Proposed Rule does not make a compelling case to list the [2-state] West Coast DPS of fisher as threatened, given two unconnected subpopulations and data showing relatively stable subpopulations. Further, they believe both populations should be treated as separate DPSs, and that threats facing the NCSO subpopulation do not support a threatened status conclusion. Regardless of our listing decisions, we are confident that our collaborative working relationship would continue irrespective of the decisions.

DOI--BLM/Oregon: In the comment letters that the BLM submitted on both the 2014 Proposed Rule and 2019 Revised Proposed Rule, they did not state whether or not they agreed with our finding that listing was warranted, nor did they make any comments on how a listing decision either way might affect their management. Based on our history with this agency, we believe they would prefer the fisher not be listed, so as to alleviate consultation workload. In addition, BLM is facing strong political pressure to harvest more timber on their OR and CA Railroads

Act lands, which may be complicated by additional listings. Regardless, we are confident that our collaborative working relationship would continue irrespective of the decision.

DOI--National Park Service, Pacific West Region: The Pacific West Region of the National Park Service has supported our proposed rule to list the species, including both the NCSO and SSN subpopulations, and excluding the originally-proposed area in the State of Washington. However, in their comments on the 2014 proposed rule after it was reinstated following the withdrawal, they asked us to consider indicators suggesting that the SSN subpopulation “may not be imperiled.” Those indicators included: a lack of evidence that the SSN subpopulation has declined from historical levels (or in abundance in contemporary times), and a lack of evidence that the potential stressors in the listing proposal have negatively impacted population dynamics in the SSN subpopulation. We expect that their collaboration with us and other partners on fisher conservation would continue regardless of the listing decision.

Oregon Department of Fish and Wildlife (ODFW): ODFW did not comment on the 2019 Revised Proposed Rule. However, they commented on our re-opening of the 2014 Proposed Rule during February 2019, preferring a decision to not list the fisher and reiterating that threats in the OR-portion of the fisher’s range have not increased since 2014. We expect our collaboration on fisher conservation with the State of Oregon will continue into the future.

Oregon Department of Forestry (ODF): ODF did not respond to our 2019 request for comments on the proposed rule, but they have previously not supported listing the fisher, stating that doing so would do little to address the threats to their conservation. Furthermore, they stated that if listing does occur, they would encourage us to consider two separate DPSs for the NCSO and SSN subpopulations. We expect our collaboration on fisher conservation with ODF will continue into the future.

California Department of Fish and Wildlife (CDFW): CDFW did not comment on the 2019 Revised Proposed Rule. However, we have worked with the State throughout the process and will continue to do so into the future. Since the time of the 2014 Proposed Rule, CDFW has State-listed as threatened the SSN subpopulation (Southern Sierra ESU (defined as CA south of the Merced River). We assume they would be in favor of federally listing the fisher in the SSN subpopulation; we are uncertain of their position regarding the NCSO subpopulation/DPS, although suspect their concurrence given no state listing of the fisher in the remainder of its range in California.

Tribes in Oregon and California (OR: Confederated Tribes of Coos, Lower Umpqua and Siuslaw; Coquille Indian Tribe; Cow Creek Band of Umpqua Tribe of Indians; Confederated Tribes of Grand Ronde; Klamath Tribes; Confederated Tribes of Siletz Indians; and Confederated Tribes of Warm Springs; CA: Cahto, Hoopa, Yurok, Karuk, Quartz Valley Indian Reservation, the Resighini Rancheria, the Wintu, and Tule River): Only one tribe (Cahto Tribe, Laytonville Rancheria) expressed an official opinion in their comments on the 2019 Revised Proposed Rule to list the West Coast DPS of fisher as a threatened species. We expect our collaboration on fisher conservation with interested tribes (especially the Hoopa Tribe, where they have been implementing conservation

activities related to numerous Tribal Wildlife Grants from the Service) will continue into the future.

Sierra Pacific Industries (SPI) and Green Diamond Resource Company (GDRC): SPI and GDRC do not believe the fisher should be listed, asserting that fisher populations are large and expanding, not experiencing significant impacts from threats across its range, including per new information available since our 2016 withdrawal of the 2014 Proposed Rule. They both specifically state that the NCSO subpopulation and the DPS as a whole (NCSO and SSN subpopulations) does not warrant listing, in large part due to beneficial conservation measures being implemented to support the species and its habitat. Thus, both companies recommend we withdraw the 2019 Revised Proposed Rule. We anticipate a continued working partnership with these companies on conservation of fisher and its habitat given operative conservation agreements/plans on their lands.

Private Forestry Groups/Organizations (Oregon Forest Industries Council, California Forestry Association, American Forest Resource Council): These organizations most recent comments on the 2019 Revised Proposed Rule recommend we withdraw the proposed rule, citing essentially the same reasons as those listed above by SPI and GDRC, especially highlighting the significant conservation occurring as a result of many conservation agreements/plans across southern Oregon and northern California.

Non-profit Environmental Organizations (Defenders of Wildlife, Center for Biological Diversity, Environmental Protection Information Center, Klamath-Siskiyou Wildlands Center, Oregon Wild, Sierra Forest Legacy, the Western Watersheds Project): These organizations support listing fishers in the West Coast states, most believing the DPS should be represented as the historical 3-state range, and some believing that fishers in the entire historical range warrant listed as an endangered species due to a significant portion of the range (SSN subpopulation) meeting the definition of an endangered species, and all believing the species is (at minimum) warranted for listing as threatened consistent with the 2019 Revised Proposed Rule. Comments prior to the 2019 Revised Proposed Rule generally were in opposition to smaller DPS alternatives because they believe those more limited areas would not provide for fisher recovery.

IV. Potential Issues/Conflicts

Legal challenges by non-profit environmental organization(s) are likely as a result of our revised DPS analysis, and not listing the NCSO subpopulation area/DPS.

V. Communications and Outreach

Outreach Lead: Region 8, Pacific Southwest Regional Office: [Pamela Bierce],
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Affected States: California, Oregon

Media POC: Region 8, Pacific Southwest Regional Office: [Pamela Bierce],
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Congressional: same as above

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- (3) Curt Melcher, Director, Oregon Department of Fish and Wildlife, (503) 947-6044
- (4) Peter Daugherty, State Forester, Oregon Department of Forestry, (503) 945-7211