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Via email and certified mail; attachments via certified mail only.

RE: Sixty-Day Notice of Intent to Sue to Remedy Violations of the Endangered Species Act Related to the Revised Forest Plan for the Rio Grande National Forest and the U.S. Fish and Wildlife Service's Biological Opinion on the Plan

Dear Secretary Bernhardt, Chief Christiansen, Director Skipwith, and Supervisor Dallas:

I am writing pursuant to the citizen suit provision of the Endangered Species Act (“ESA”), 16 U.S.C. § 1540(g), to notify you that the U.S. Forest Service is in violation of ESA Section 7(a)(2), 16 U.S.C. § 1536(a)(2), in connection with the Forest Service’s May 2020 Land Management Plan for the Rio Grande National Forest in southcentral Colorado (hereinafter, “revised Forest Plan” or “revised Plan”) and the U.S. Fish and Wildlife Service’s (“FWS”) March 15, 2019 Biological Opinion concerning the revised Plan.

Through its adoption of the revised Forest Plan, the Forest Service abandoned key habitat protections that have been in place for more than a decade that significantly limited the logging allowed in important habitat for the threatened Canada lynx (“lynx”). The new standards open up hundreds of thousands of acres of lynx habitat in the Rio Grande National Forest to largely unregulated logging, increasing the threat to the small and struggling Colorado lynx population. The Forest Service and FWS’s justifications for approving these changes have no rational basis, ignore the best available science, fail to comply with ESA requirements in numerous respects, and are arbitrary and capricious. For these reasons, FWS’s Biological Opinion violates ESA section 7(a)(2), 16 U.S.C. § 1536(a)(2). The Forest Service’s reliance on this unlawful Biological Opinion, and its own failure to use the best available science and to provide adequate and relevant information to FWS in the Biological Assessment (“BA”), also violates ESA section 7(a)(2), 16 U.S.C. § 1536(a)(2).

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I. The Endangered Species Act

The ESA is “the most comprehensive legislation for the preservation of endangered species ever enacted by any nation.” Tenn. Valley Auth. v. Hill, 437 U.S. 153, 180 (1978). It was enacted “to provide a program for the conservation of . . . endangered species and threatened species” and “to provide a means by which the ecosystems upon which endangered species and threatened species depend may be conserved.” 16 U.S.C. § 1531(b).

Section 7(a)(2) of the ESA mandates that all federal agencies “insure that any action authorized, funded, or carried out by [the agency]...is not likely to jeopardize the continued existence of any endangered species or threatened species....” 16 U.S.C. § 1536(a)(2) ; see also 50 C.F.R. § 402.02 (defining jeopardy). To comply with this obligation, the ESA requires an action agency to consult with and obtain the opinion of the relevant wildlife agency, either FWS or NOAA Fisheries/National Marine Fisheries Service, before it takes any discretionary agency action that “may affect” a listed species. See 16 U.S.C. § 1536(a)(2); 50 C.F.R. §§ 402.03, 402.14(a). At the conclusion of a formal consultation, FWS provides the action agency with a biological opinion assessing whether the proposed action is likely to jeopardize the continued existence of any listed species, and, if so, identifies “reasonable and prudent alternatives” that avoid this violation. See 16 U.S.C. § 1536(b)(3)(A); 50 C.F.R. §§ 402.14(g), (h).

Even after an action agency has received a biological opinion, the agency has an independent duty to ensure that it complies with the substantive standards of section 7(a)(2). Resources Ltd., Inc. v. Robertson, 35 F.3d 1300, 1304 (9th Cir. 1993) (“consulting with the [FWS] alone does not satisfy an agency’s duty under the Endangered Species Act”); WildEarth Guardians v. U.S. Bureau of Recl., 2015 WL 13651243 at *5 (D. N.M. 2015) (citing 50 C.F.R. § 402.15(a) and noting that an action agency “has an independent duty to determine the lawfulness of its actions” following the issuance of a biological opinion). Accordingly, an action agency may not rely on a biological opinion that is arbitrary and capricious to meet its section 7(a)(2) obligations. See Pyramid Lake Paiute Tribe of Indians v. U.S. Dept. of Navy, 898 F.2d 1410, 1415 (9th Cir. 1990) (a federal agency’s “decision to rely on a FWS biological opinion must not have been arbitrary or capricious”). Specifically, an action agency may not rely on a biological opinion that is “legally flawed” or that “fails to discuss information that would undercut the opinion’s conclusions.” Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt., 698 F.3d 1101, 1127–28 (9th Cir. 2012) (citing Wild Fish Conservancy v. Salazar, 628 F.3d 513, 532 (9th Cir. 2010) and Defenders of Wildlife v. EPA, 420 F.3d 946, 976 (9th Cir. 2005)), rev’d on other grounds, Nat’l Ass’n of Home Builders v. Defenders of Wildlife, 551 U.S. 644 (2007)).

Courts review the Forest Service and FWS’s compliance with these standards under the Administrative Procedure Act (“APA”). As the Tenth Circuit has explained, an agency’s decisions may be set aside “when an agency fails to consider ‘the relevant data’ or fails to put forth ‘a rational connection between that data and its decision.’” WildEarth Guardians v. U.S. Fish & Wildlife Serv., 784 F.3d 677, 682–83 (10th Cir. 2015) (citations omitted). An agency’s decision may also be set aside “when the agency ‘entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.’” Id.

II. Background

A. The Rio Grande National Forest and the Colorado Population of Canada Lynx

The Rio Grande National Forest encompasses approximately 1.83 million acres in the San Juan Mountains in southcentral Colorado, including nearly 1 million acres of lynx habitat. See U.S. Forest Serv., “Biological Assessment for the Rio Grande National Forest Land Management Plan” (September 2018) (“BA”) at 4, 16 (estimating 1.04 million acres of lynx habitat); see also Randal Ghormley, “Lynx Habitat Model and Mapping Criteria” (2011) (“Ghormley 2011”) at 8 (modeling 993,051 acres of lynx habitat) [Attachment A].¹ This habitat is some of the most important lynx habitat for the State for Colorado’s small, isolated lynx population, most of which live on the Forest. See BA at 16, 20. This population is one of six lynx “geographic units” identified by FWS within the lower-48 states. See U.S. Fish & Wildlife Serv., “Species Status Assessment for the Canada lynx (*Lynx canadensis*) Contiguous U.S. Distinct Population Segment” (2017) (“Lynx SSA”) at 1 [Attachment B]. All lynx populations in the lower-48 were listed together as a “distinct population segment” (“DPS”) in 2000. 65 Fed. Reg. 16,052 (March 24, 2000).

Just prior to listing, the State of Colorado began a reintroduction program; the lynx had likely been absent from the State since the 1970s. 65 Fed. Reg. at 16,059. Between 1999–2006, the State reintroduced 218 lynx, 85% of which were released on the Rio Grande National Forest. BA at 16. Because population monitoring was last conducted in 2009, there is no current population data. See U.S. Fish & Wildlife Serv., “Biological Opinion Regarding the Rio Grande National Forest Land Management Plan” (March 2019) (“2019 BiOp”) at 7. However, at least one recent study suggests that the current population is quite small, despite the reintroduction effort. See John R. Squires et al., “A Specialized Forest Carnivore Navigates Landscape-Level Disturbance: Canada Lynx in Spruce-Beetle Impacted Forests,” *Forest Ecology & Mgmt* 475 (2020) (“Squires 2020”) at 3 (noting that the ten lynx captured for the study “included most individuals present in the study area,” which covered roughly 40% of the Forest) [Attachment C].

Regardless of the precise numbers, this population is in trouble. It is completely isolated from all other lynx populations in the lower-48 and FWS has predicted that it is likely to be extirpated by the end of the century and potentially even by 2050. Lynx SSA at 227. Lynx in Colorado and across the West depend almost exclusively on habitat in national forests and other federal lands. Id. at 14, Table 2 (percentage of federal ownership in each geographic unit of the DPS). Given this dependence, logging on national forest lands poses one of the most significant immediate threats to the Colorado population and its habitat. Logging creates openings in the forest canopy that lynx avoid and reduces habitat that supports populations of snowshoe hares, the lynx’s primary prey. Snowshoe hares require dense “understory horizontal cover,” which

¹ The Forest Service’s Biological Assessment cites the Ghormley 2011 modeling for its acreage numbers, but the numbers in the Biological Assessment and Ghormley 2011 differ because the BA appears to rely on a table that includes lands outside of the Rio Grande National Forest, as opposed to lands solely within Forest boundaries. See Ghormley 2011 at 17, Table 6b.

generally includes a mix of live younger trees, low branches on more mature trees, and deadfall, and is often damaged or removed during logging operations. In addition, construction of new roads for logging machinery damages and degrades habitat of lynx and their prey.

Climate change, large and severe wildfires, and other human activities that affect the lynx or its prey pose additional long-term threats to lynx populations in the lower-48. These threats work together; the Forest Service has recognized that climate change is likely to cause lynx populations and habitat in the lower-48 to shrink, which will, in turn, increase the populations' isolation from each other and the species' vulnerability to logging and other threats. See U.S. Forest Serv., "Draft Wildlife Specialist Report" (2017) ("Draft Wildlife Report") at 29 (cited in Final EIS Vol. I at 236). As FWS explained in the Lynx SSA, "[w]e expect lynx populations in each geographic unit to become smaller and more patchily-distributed due largely to projected climate-driven losses in habitat quality and quantity and related factors." Lynx SSA at 10.

Given these threats and the importance of the Rio Grande National Forest habitat for the Colorado population, maintaining this habitat for lynx and their prey is essential for this population to survive and recover. On the Rio Grande, the lynx rely primarily on high-elevation spruce-fir ecosystems. In these specialized habitats, the lynx's long legs and large paws, which act as natural snowshoes, allow it to efficiently hunt in deep, powdery snow. Lynx are therefore able to out-compete other predators like mountain lions, bobcats, and coyotes, whose paws sink into the deep snow and avoid these habitats. Lynx SSA at 11. As noted above, lynx primarily hunt snowshoe hare, which typically comprise more than 90% of their diet. Id. at 2. As a result, lynx populations generally fluctuate with the rise and fall of snowshoe hare populations. When snowshoe hare populations are down, lynx in Colorado depend primarily on red squirrels; if both snowshoe hares and red squirrels are in decline, individual lynx may starve to death. See 2019 BiOp at 10.

B. The Southern Rockies Lynx Amendment and the Spruce Beetle Outbreak

In listing the lower-48 lynx DPS in 2000, FWS concluded that inadequate federal land management plans were the primary threat to the species. 65 Fed. Reg. at 16,082. To address this problem, the Rio Grande National Forest, like all national forests in the southern Rockies, adopted the Southern Rockies Lynx Amendment ("SRLA") in 2008 to implement protections for lynx habitat. The SRLA divided lynx habitat on the Forest into Lynx Analysis Units ("LAUs") to help regulate logging. Each LAU approximates the size of the home range of a female lynx to represent the area and resources needed to support a lynx family. U.S. Forest Serv., "Record of Decision for the Southern Rockies Lynx Amendment" (2008) ("SRLA Record of Decision") at 7 [Attachment D]; 2019 BiOp at 8.

The SRLA's standards were intended, among other things, to maintain sufficient "suitable" lynx habitat within each LAU such that each LAU would support a resident lynx year-round. BiOp at 8. Habitat is considered "suitable" where there is sufficient winter forage and understory cover for the snowshoe hare, the lynx's primary prey. U.S. Fish & Wildlife Serv., "Biological Opinion for the Southern Rockies Lynx Amendment" (2008) ("SRLA BiOp") at 44 [Attachment E]. "Unsuitable" habitat is lynx habitat within an LAU that does not currently meet this standard—generally as a result of fire or vegetation management projects—but which could become "suitable" habitat in the future, if the vegetation is allowed to regenerate.

To maintain sufficient “suitable” habitat within each LAU, a SRLA standard called “VEG S1” prohibits logging in an LAU if more than 30% of lynx habitat in that LAU has fallen into “unsuitable” condition, while a standard called “VEG S2” limits “regeneration” projects—usually clearcuts or similar activities—to 15% of the habitat within each LAU in a 10-year period. Id. Under the SRLA, these protections applied to 97% of the lynx habitat in the SRLA area. Id.

In addition to these protections, the SRLA included a specific standard called “VEG S6” to protect what was considered the highest-quality lynx habitat on the Forest: the multi-story spruce-fir forests that provide habitat for snowshoe hare, as well as canopy cover and denning habitat for lynx. See id. at 45–46, 17–18 (discussing den sites). Under VEG S6, no more than 0.5% of this high-quality habitat could be impacted by new vegetation management projects across the SRLA area. Id. at 51, Table 3. The Forest Service projected that this standard, in combination with VEG S1 and S2 and other provisions in the SRLA, would “conserve the essential components of lynx habitat: a mosaic of early, mature and late successional forests, with high levels of horizontal cover and structure.” Id. at 46, 72.

After the SRLA was adopted, a spruce beetle outbreak significantly changed the conditions in lynx habitat on the Forest. By 2017, the beetles had killed up to 100% of the mature spruce in certain areas. BA at 17. The beetle outbreak essentially eliminated the existence of the multi-storied spruce forests that had been considered the lynx’s highest-quality habitat. It also transformed the Forest; it is now dominated by stands of older dead trees with less canopy cover and more space and light for the dense understory vegetation to grow. This was not the only significant habitat change on the Forest since the SRLA was adopted. The West Fork fire also burned 88,000 acres on the Forest (which was predominantly lynx habitat) in 2013, and lynx have been largely avoiding the burned area since. BA at 17. By 2018, primarily as a result of the beetle kill and fire, approximately 238,000 acres of “suitable” lynx habitat became “unsuitable.” BA at 17–18, Table 2; 2019 BiOp at 8–9, Table 1.²

After the beetle kill, the Forest Service recognized that VEG S6, one of the key SRLA standards, would no longer protect lynx habitat because the multi-story forests it targeted were nearly gone. BA at 23; see 2019 BiOp at 13–14 (FWS acknowledging that “[s]ince the beetle epidemic essentially eliminated multi-story conditions on the RGNF, the VEG S6 standard will have little utility over the life of [the revised] plan.”). In contrast, other SRLA standards, especially the VEG S1 and S2 standards that protect the dense understory cover needed by snowshoe hare, remain viable means of protecting and ensuring the restoration of lynx habitat.

In an effort to develop an understanding of how lynx were responding to these changes, a group of scientists led by Dr. John Squires, a prominent lynx researcher from the Forest Service’s Rocky Mountain Research Station, launched a study (hereinafter, the “Squires Study”) in 2013. The Squires Study evaluated lynx use of habitat in the southern portion of the Rio Grande National Forest and neighboring national forest land in the San Juan Mountains. See Squires 2020; John R. Squires et al., “Habitat Relationships of Canada Lynx in Spruce Bark

² The referenced (identical) tables in the BA and Biological Opinion list the total acreage converted from “suitable” to “unsuitable” as 238,538 acres, but the individual numbers provided in each table for each LAU add up to 325,151 acres.

Beetle-Impacted Forests (Analysis Summary – 19 March 2018)” (“Squires 2018”); John R. Squires et al., “Brief Summary of 19 March 2018 Report” (“Squires 2018 Summary”).³

The authors developed a model that identified the forest characteristics in the areas that lynx were using most of the time—known as “95% use” or “high-use” areas. Squires 2018 Summary at 3. In general, the authors concluded that lynx stayed in the same areas they had inhabited before the beetle outbreak, and some had successfully denned and produced kittens. Id. at 2–3. Lynx predominantly chose areas with dense understory horizontal cover, which, as noted above, provides habitat for snowshoe hares, the lynx’s primary prey, as well as places for lynx to den and to hide from predators. Id. at 2–3.

As for the lynx’s two primary prey species, the snowshoe hare population did not significantly decline as a result of the beetle outbreak, but the red squirrel population did. Squires 2018 Summary at 2 (citation omitted). Snowshoe hares continued to live in the areas with dense understory cover. But red squirrels rely on the cones from the mature trees that were decimated by the beetle outbreak. 2019 BiOp at 9. The decline of the red squirrel population may have significant effects on the lynx in the Forest due to the fluctuations of snowshoe hare populations. When snowshoe hare populations decline, FWS has observed that the lack of an alternative prey source such as red squirrels means that “lynx may not produce kittens, may expand or abandon their home range in search of prey in order to survive, or starve to death.” Id. at 10.

In addition to profoundly changing the Forest’s habitats for lynx and their prey, the beetle kill also created an increased incentive for commercial salvage logging, which is aimed at capturing the value of the dead trees. See, e.g., Squires 2018 at 2 (Forest Service has a “strong desire” to facilitate salvage logging across the Forest.); Final EIS Vol. I at 204 (Forest Service anticipates “widespread salvage projects” which are already “in various stages of planning across the Forest.”). However, salvage logging targets the same areas that the Squires Study identified as important lynx habitat. See Draft Wildlife Report at 32 (“[I]t is likely that some preferred timber salvage areas will overlap closely with the key ecosystem characteristics that lynx appear to be selecting for in the forests heavily influenced by spruce beetle.”).

Indeed, the Forest Service estimated that nearly 290,000 acres of beetle-impacted lynx habitat overlaps with the suitable timber base and, as a result, would be available for salvage logging unless restricted by the revised Plan. BA at 27, Table 4. While it is impossible to evaluate the accuracy of that number because the Forest Service provided no basis for it, there is no doubt that the overlap between the suitable timber base for salvage logging and lynx habitat is significant.

Moreover, salvage logging is likely to damage or destroy the very conditions that make this habitat valuable to lynx in a post-beetle forest, including, as noted above, by harming understory vegetation lynx and snowshoe hares need and by creating the large openings that lynx avoid. See BA at 26 (stating that the “potential damage to understory cover values” from salvage

³ The 2018 documents and the Squires 2020 report address the same data and study and have the same authors; the 2020 report was peer-reviewed and published, while the two 2018 documents were prepared to assist in the forest planning effort but had not yet been peer-reviewed or published at that time.

logging is a “primary concern in quality habitats for snowshoe hare and lynx” and noting there are no limits on the “size of created openings” for salvage logging activities); SRLA BiOp at 50 (describing damage to understory vegetation and snowshoe hare habitat when salvage logging is conducted after a beetle kill).

C. The Forest Plan Revision

As described above, the spruce beetle outbreak and West Fork fire transformed hundreds of thousands of acres into unsuitable habitat, created additional stress on what is already a small, isolated population, and undermined one of the critical protections in the SRLA—the limitations on logging in high-quality lynx habitat provided by VEG S6. But instead of addressing these changes in a way that will ensure that the existing lynx habitat is maintained and the newly “unsuitable” habitat has time to regenerate, the revised Forest Plan abandons the VEG S1 and S2 protections in large areas of the Forest and weakens protections for the highest-quality habitat remaining.

Notably, the Forest Service, like any agency, may change its position (here, between the SRLA and the revised Forest Plan), but only “if [it] provide[s] a reasoned explanation for the change.” Renewable Fuels Ass’n v. United States Env’tl. Prot. Agency, 948 F.3d 1206, 1255 (10th Cir. 2020) (citing Encino Motorcars, LLC v. Navarro, -- U.S. --, 136 S. Ct. 2117, 2125 (2016)). The agency “must ‘display awareness that it is changing position’ and ‘show that there are good reasons for the new policy.’” Id. (citing FCC v. Fox Television Stations, Inc., 556 U.S. 502, 515 (2009) (emphasis omitted)).

Here, nothing in the Biological Assessment, revised Forest Plan, or other planning documents acknowledges that the revised Forest Plan weakens protections for lynx habitat, let alone provides a “reasoned explanation” for these changes. Indeed, the Forest Service planning documents fail to even compare the protections provided by the revised Forest Plan and the SRLA in a meaningful way that would allow for a side-by-side, apples-to-apples comparison. The Forest Service also failed altogether to analyze the effects of the revised Forest Plan or provide FWS with accurate information or the best available science in completing the ESA consultation with FWS. Regardless, to the extent discernable from these documents and among the many changes from the SRLA to the revised Forest Plan, the revised Forest Plan includes at least two key departures from the earlier plan that dramatically weaken protections for lynx habitat and significantly change the likely effects on lynx survival and recovery without a corresponding analysis or justification.

1. The Revised Forest Plan Arbitrarily Abandoned Meaningful Protections for So-Called “Low-Use” Habitat

The first key departure from the SRLA stems from the Forest Service’s creation of a new metric based on the Squires Study—“high use” versus “low-use” habitat—and the agency’s decision to abandon key SRLA protections for all or most of the so-called “low-use” lynx habitat. Specifically, a new standard called “S-TEPC-3” removes VEG S1 and S2 protections from LAUs that only have “low-use” habitat—and possibly removes those protections from all low-use areas in every LAU, depending on which description of S-TEPC-3 in the plan documents is accurate. Compare 2019 BiOp at 5 and BA at 9 (describing S-TEPC-3 as applying

to the low-use areas in the specific LAUs that do not have any high-use areas) with BiOp at 14 and BA at 34–35, 37 (treating S-TEPC-3 as removing the VEG S1 and S2 protections from all low-use areas).

These changes are arbitrary and unlawful under the ESA for numerous reasons. As an initial matter, the Forest Service failed to analyze approximately 375,000 acres of lynx habitat on the Forest to determine whether it is “high-use” or “low-use”—but labeled this huge swath of the habitat as “low-use” anyway. The agency did so by categorizing all previously identified lynx habitat outside of the Squires Study area as “low-use,” without any accompanying analysis. This area covers the northern portion of the Forest and includes approximately 375,000 acres of lynx habitat in eleven LAUs.⁴ Thus, the revised Forest Plan abandons the critical protections provided by VEG S1 and S2 for hundreds of thousands of acres of lynx habitat across eleven LAUs with no analysis whatsoever.

This failure to analyze the northern portion of the Forest is particularly problematic because the best available science demonstrates that the northern portion of the Forest is critical for lynx for several reasons. For example, a 2012 study demonstrated a high probability of lynx being observed across the entire Forest, including in the northern portion. See Jake Ivan et al., “Predictive Map of Canada Lynx Habitat Use in Colorado” (2012) (predicting areas of high probability lynx usage throughout the Forest) [Attachment F]. This study, which constitutes the best available science on lynx use in the northern part of the Forest, should have been assessed in light of the Squires Study findings, along with any other relevant science, to evaluate lynx use in the northern part of the Forest before stripping this area of most protections on the basis that it is rarely used. See 50 C.F.R. § 402.14(d) (federal agency engaging in formal consultation “shall provide [FWS] with the best scientific and commercial data available....”).

The northern portion of the Forest also contains two of the four critical “linkage areas” identified by the Forest Service that lynx use to travel to and from the Grand Mesa, Uncompahgre, and Gunnison national forests. 2019 BiOp at 12 (identifying North Pass and Poncha Pass as two of the four linkage areas); U.S. Forest Serv., “Rio Grande National Forest Draft Assessment 5, Identifying and Assessing At-risk Species” at 15, Figure 2; Final EIS Vol. I at 229 (noting “considerable use” of North Pass); see SRLA BiOp at 36 (“Lynx need to be able to move between different geographic areas and mountain ranges.”). The Forest Service and FWS have recognized that these corridors are “essential for facilitating movement of Canada lynx across the landscape.” BA at 16; Final EIS Vol. I at 229; 2019 BiOp at 12 (noting that North Pass is “one of the most important habitat connectivity areas in Colorado”); Draft Wildlife Report at 27. Without such linkages, “lynx populations can become isolated and more vulnerable to extirpation in the long term.” SRLA BiOp at 36. Indeed, in 2008, FWS concluded that

⁴ The area (including lynx habitat and non-habitat) outside the Squires Study area comprises somewhere between 54–62% of the Forest. The acreage is unclear in part because the size of the Squires Study area is described differently in the 2018 and 2020 documents and in part because the 2018 document acknowledges that the Study area includes lands outside the Forest and the 2020 document does not. See Squires 2018 at 11 (stating that the study area was 756,390 acres in the Forest and in part of the neighboring forest); Squires 2020 at 3 (stating that the study area was 3,466 km² (approximately 856,500 acres) in the Forest).

maintaining a meta-population in the southern Rocky Mountains “depends on successful dispersal between habitat fragments, and potentially between geographic areas.” Id.

Nonetheless, the only mention in the Forest Service planning documents regarding the decision to label the northern portion of the Forest as “low-use” is a cursory statement in the revised Plan and Record of Decision in which the Forest Service suggested that the Squires Study authors had concluded that the northern portion of the Forest “support[s] little consistent lynx use.” U.S. Forest Serv., “Rio Grande National Forest Land Management Plan” (May 2020) (“Revised Forest Plan”) at 28; U.S. Forest Serv., “Record of Decision – Rio Grande National Forest Land Management Plan” (May 2020) at 43. The Forest Service provided no citations for this statement and nothing in the Squires Study supports this assertion.

Moreover, even if the northern portion of the Forest was properly identified as “low-use” (which it was not), the Forest Service failed to provide any explanation for weakening protections on the low-use habitat areas or assess the resulting effects on lynx and lynx habitat. Under the revised Forest Plan, approximately 650,000 acres of lynx habitat on the Forest—65% of the lynx habitat on the Forest—are now categorized as “low-use.” See 2019 BiOp at 15–16, Table 3 (high-use areas comprise 344,536 acres of the nearly 1 million acres of lynx habitat overall); id. at 11, Figure 2 (map). As noted above, because the planning documents are not clear, the revised Forest Plan may be abandoning the VEG S1 and S2 standards on all 650,000 acres (which would weaken protection on every LAU on the Forest); at a minimum, the Plan abandons those standards on the eleven northern LAUs. Either way, in at least the eleven northern LAUs, the Forest Service abandoned the protections needed to fulfill a key premise of the SRLA—that the LAU-wide standards of VEG S1 and S2 were necessary to ensure that each LAU, as a whole, could provide for breeding, feeding, and sheltering of lynx.

Indeed, at the time the Forest Service adopted the SRLA, the agencies recognized that habitat conditions are not static and can change for many reasons, including fire, beetle outbreaks, human activities, prey availability, and climate change. See, e.g., SRLA BiOp at 35 (describing importance of fire in maintaining a “mosaic” of successional forest stages and the corresponding effects on snowshoe hare populations); Draft Wildlife Report at 29 (noting impacts of climate change on habitat conditions). They also recognized that lynx’s usage patterns change over time due to these habitat changes, and because individuals regularly disperse long distances, which can lead to the occupation of formerly unoccupied habitats. See, e.g., SRLA BiOp at 15 (noting that lynx “make long distance exploratory movements outside their home ranges” and may colonize “suitable but unoccupied habitats, augment existing populations, or disperse to unsuitable or marginal habitats where they cannot survive”); id. (“Lynx are highly mobile and have a propensity to disperse long distances, especially when prey becomes scarce....”). Nonetheless, the Forest Service did not provide any basis for abandoning the VEG S1 and S2 protections (and accompanying LAU-wide standards) for hundreds of thousands of acres of lynx habitat or to analyze or acknowledge the impacts to lynx and lynx habitat as a result of this change.

2. The Revised Forest Plan Protects a Smaller Proportion of a Smaller Area of the Forest as Compared to the SRLA's Protections

In the second key departure from the SRLA, the revised Forest Plan allows a significant amount of salvage logging in the highest-value habitat remaining on the Forest. Under the SRLA, the VEG S6 standard allowed vegetation management projects in only 0.5% of the highest-quality lynx habitat at the time: the multi-storied spruce-fir forests that have since been essentially eliminated by the spruce beetle outbreak. Critically, this standard applied to the multi-storied forests in the roughly 1 million acres of lynx habitat across the Rio Grande (and other SRLA forests). In contrast, the revised Forest Plan's new standard, VEG S7, applies only where the identified so-called "high-use" areas overlap with the suitable timber base—an area of approximately 75,000 acres that represents much of the highest-quality habitat remaining on the Forest after the beetle kill. See 2019 BiOp at 15–16, Table 3.⁵ Indeed, the Forest Service acknowledged that these areas "represent a disproportionately high value subset of the overall suitable habitat in a lynx analysis unit." Revised Forest Plan at 27. Nonetheless, the VEG S7 standard allows 7% of this high-quality habitat to be salvage logged—a number that does not appear to have any scientific basis and is significantly larger than 0.5% allowance for the multi-storied habitat protected by the SRLA's VEG S6 standard. Allowing a higher proportion of a smaller area to be logged—especially an area the Forest Service deemed to be high-quality habitat—plainly will have different, and in certain areas more significant, impacts for individual lynx than under the SRLA. See, e.g., SRLA BiOp at 52 (noting "more significant" impacts on individual lynx where vegetation and fuel treatments are concentrated in smaller areas and identifying specific efforts to minimize those impacts).

Moreover, nothing in the revised Forest Plan or accompanying documents provides a rationale for choosing the 7% number at all; rather, it appears to be completely arbitrary. Not surprisingly, there is also no analysis of the effects on lynx or lynx habitat from allowing this amount of salvage logging in the identified stands of high-quality habitat.

Allowing this seemingly arbitrary amount of salvage logging in this high-quality habitat is particularly harmful here, where the small and struggling Colorado lynx population heavily depends on the Forest's habitat, that habitat has been radically altered by the spruce beetle outbreak, and the revised Forest Plan eliminated important protections for hundreds of thousands of acres of lynx habitat on the Forest through the elimination of VEG S1 and S2. That is, while SRLA involved multiple layers of protection for lynx habitat throughout the Forest (including through the application of VEG S1, S2, and VEG S6), the revised Forest Plan eliminates these safeguards by stripping the S1 and S2 protections from much of the lynx habitat on the Forest and applying the apparently arbitrary VEG S7 to a subset of the habitat in the Forest, as opposed to protecting all lynx habitat within the suitable timber base across the Forest. Thus, not only does VEG S7 have different impacts as compared to VEG S6, these impacts are even more significant in the context of the revised Forest Plan's other reductions to the SRLA's protections. These impacts are also more significant in light of the current precarious status of Colorado's lynx population and the dramatic alterations to the Forest's lynx habitat as a result of the beetle

⁵ "VEG S7" is also referred to "S-TEPC-2." This letter uses the VEG S7 nomenclature for consistency with the VEG S6 standard in the SRLA, which VEG S7 essentially replaces.

outbreak. Nonetheless, nothing in the Biological Assessment or other documents assesses the effects of VEG S7 either alone or in the context of other aspects of the revised Forest Plan.

Finally, a second allowance in the VEG S7 standard for hazard tree removal and salvage logging in so-called buffer areas near roads, trails, and other sites also dwarfs the total vegetation management acreage allowed under the SRLA. Compare 2019 BiOp at 16, Table 3 (potential amounts logged under 7% cap and buffers) with SRLA BiOp at 51, Table 3 (potential acres logged under VEG S6). As with other changes, the Forest Service failed to provide any rationale for these provisions or to analyze their effects.

D. The 2019 Biological Opinion

On March 15, 2019, FWS issued a Biological Opinion concluding that the revised Forest Plan is not likely to jeopardize the continued existence of the lynx DPS. 2019 BiOp at 17. FWS acknowledged that the revised Plan will cause adverse effects to lynx and result in take of individual lynx. Id. at 16, 17. But it failed to acknowledge that the revised Forest Plan weakens the protections provided by the SRLA. Instead, FWS concluded in part that the revised Forest Plan will not jeopardize the lower-48 DPS because it is adequately protected by existing land management plans. 2019 BiOp at 17. FWS also concluded that “if” the anticipated take of lynx “will not appreciably diminish the lynx population in Colorado,” then take will not jeopardize the DPS. 2019 BiOp at 17.

The latter conclusion is nonsensical because FWS did not address the level of take the agency anticipated as a result of the revised Forest Plan. In other words, FWS posed a question about the anticipated level of take as a key prerequisite to determine whether the revised Forest Plan will jeopardize the species, failed to assess or attempt to answer the question in any way, and still concluded that the revised Forest Plan would not jeopardize the species. Given that this question is a fundamental premise of the no-jeopardy conclusion, FWS’s failure to provide an analysis or estimate of anticipated take renders that conclusion arbitrary and capricious.

Further, for many of the reasons described above, FWS’s analysis of the “effects of the action” is arbitrary and unlawful. To analyze the “effects of the action,” FWS is required to add the direct and indirect effects of the action, along with effects of other activities that are interrelated or interdependent with the action, to the environmental baseline. 50 C.F.R. § 402.02 (Oct. 1, 2019) (defining “effects of the action,” “indirect effects,” and “environmental baseline”).⁶ The Biological Opinion fails to adequately analyze the environmental baseline or the indirect effects of the revised Forest Plan.

⁶ FWS and NMFS recently amended the ESA implementing regulations, including the definition of “effects of the action” and “environmental baseline,” effective October 28, 2019. 84 Fed. Reg. 50,333 (Sept. 25, 2019). Because the consultation process for the revised Forest Plan was completed on March 15, 2019 and Defenders otherwise raises statutory violations that post-date consultation, the amended regulations do not apply here. See 50 C.F.R. §§ 402.14(m)(1) & 402.15(a) (consultation terminates with the issuance of the biological opinion, at which point the agency determines how to proceed “in light of its section 7 obligations”); see also 84 Fed. Reg. 44976 (Aug. 27, 2019) (“The revisions to the regulations in this rule are prospective....”).

With respect to the environmental baseline, FWS arbitrarily concluded that the Colorado population is currently “stable” and failed to consider several relevant factors bearing on the status of this population. The Biological Opinion primarily relies on nearly 10-year-old information regarding the early survival rates of the reintroduced population, but acknowledges that active population monitoring has not been conducted since 2009. 2019 BiOp at 7. This data does not support FWS’s conclusion that the population is “stable,” nor does FWS grapple with information in the peer-reviewed version of the Squires Study, which suggests there may not be many lynx on the Forest, which, as noted above, contains much of the most important habitat for this population. See supra at 3. FWS also failed to acknowledge or address its own findings in the Species Status Assessment that the Colorado population is isolated and on a trajectory toward extirpation. Lynx SSA at 227. In addition, FWS catalogued some of the changes to the lynx’s habitat and prey base resulting from the beetle outbreak, such as the decline of the red squirrel population, but failed to assess whether or how these changes may affect the stability of the lynx population. 2019 BiOp at 9. As such, FWS failed to rationally assess the current status of the population or support its assumption that the population is stable. See Ctr. for Biological Diversity v. Salazar, 804 F. Supp. 2d 987, 1007 (D. Ariz. 2011) (holding that FWS’s conclusion that an endangered plant population was “stable” was arbitrary where population was isolated, in danger of extirpation, and in decline).

The Biological Opinion’s analysis of the “indirect effects” of the revised Forest Plan on lynx is similarly flawed. Among other things, the Biological Opinion inaccurately states that the “effects of implementing the proposed action are essentially the same as those documented in the SRLA BiOp.” 2019 BiOp at 13. These effects cannot be “essentially the same” because the lynx’s habitat has dramatically changed and the revised Forest Plan significantly reduces—and in some places eliminates—the protections in the SRLA. As discussed above, the spruce beetle outbreak fundamentally altered the habitat conditions for lynx and snowshoe hare and, as a result, one of the key protections in the SRLA no longer adequately protects lynx habitat. This standard (VEG S6) was replaced by VEG S7, which allows a higher proportion of a smaller subset of habitat to be salvage logged and does not protect low-use habitat at all. In addition, the Forest Service removed two of the key SRLA protections (VEG S1 and VEG S2) from at least 375,000 acres of lynx habitat, and potentially much more. Accordingly, the conclusion that the effects of the SRLA and the revised Forest Plan are “essentially the same” is unsupported and is not rationally connected with the facts in the record.

Not only did FWS fail to acknowledge that the revised Plan weakens the protections for the lynx on the Forest and therefore has different and more significant impacts, FWS failed to provide a rationale for these changes, as the law requires. See Renewable Fuels Ass’n, 948 F.3d at 1255; see Ctr. for Biological Diversity v. Jewell, 2019 WL 4695570 at *7–*8 (D. Colo. 2019) (FWS arbitrarily failed to explain its methodology and how it reached a different conclusion on the number of healthy trout populations despite evidence being substantially identical to the agency’s earlier determination). As with the Forest Service, this failure is arbitrary and capricious.

Moreover, regardless of whether the agency provided a reasoned explanation for weakening the protections in the SRLA, FWS failed to assess the effects of the changes at all, and, as a result, failed to support its no-jeopardy conclusion. As detailed above, FWS failed to

conduct the required analysis to support a no-jeopardy conclusion for at least the following reasons:

(1) FWS did not analyze lynx usage in the northern portion of the Forest or offer any other support for assuming all of the habitat outside of the Squires Study Area is low-use, even though lynx usage is the Forest Service's chosen metric for determining that certain areas no longer need key SRLA protections;

(2) FWS ignored the best available science regarding lynx usage on the northern portion of the Forest, including science that undermines the conclusion that the northern portion of the Forest is low-use;

(3) FWS did not assess the basis for reducing protections for so-called "low-use" areas;

(4) FWS did not assess the effects of stripping the protections of VEG S1 and S2 from the LAUs that do not have identified "high-use" areas, including the northern portion of the Forest, nor did FWS assess the effects of stripping these protections from all low-use areas, to the extent that is the intention of the revised Forest Plan;

(5) FWS provided no scientific or other rationale for allowing 7% of the areas targeted by the VEG S7 standard (high-use areas that overlap with the suitable timber base) to be salvage logged; and

(6) FWS did not analyze the effects of allowing logging in up to 7% of the suitable timber base in the high-use areas under VEG S7 standards.

The only information offered by the Biological Opinion that even bears on any of these questions is a series of tables with acreage numbers of various kinds of lynx habitat in LAUs and potentially affected acres. See, e.g., 2019 BiOp at 15–16, Table 3; 2019 BiOp 8–9, Table 1. But these numbers do not appear to be internally consistent. Even if they were consistent, they are impossible to verify because, though they were taken from the Biological Assessment, the Forest Service provided little to no information about where they come from. See BA at 27–28 (providing no source for data); id. at 17–18 (stating only that baseline habitat conditions "were updated using the most recent corporate GIS data"). Regardless, FWS did not assess what these numbers mean for lynx survival and recovery.

Instead of conducting a valid effects analysis, FWS attempted to justify its lack of analysis by stating the agency "cannot adequately assess the full effects to lynx at this broad programmatic scale since we do not know the project specific locations or other information to allow for a more detailed analysis." 2019 BiOp at 16. Nonetheless, despite this assertion, FWS also concluded that "[w]e believe the new standard [VEG S7] will further limit effects within the 95% use area compared to the SRLA standards alone" and that it "is likely to minimize effects to lynx occupying home ranges on the forest." Id. Similarly, the Biological Opinion acknowledged that "[v]egetation management in the low-use areas may adversely affect lynx," but dismissed those effects in a single sentence, stating that "we do not believe effects within the low-use are[as] are as severe as the potential negative effects within the high-use areas." 2019 BiOp at 16. These are not the right standards. Whether particular effects are "minimized," "further limit[ed]," or not "as severe" as other effects does not answer the question of whether the action

is likely to cause jeopardy. FWS failed to provide any basis for these statements, in any event. Indeed, FWS ignored the fact that the revised Forest Plan in fact significantly reduces protections for high-quality lynx habitat as compared to the SRLA, as noted above.

Compounding this error, FWS completely ignored any effects on the lynx's prospects for recovery, as required by the ESA and its implementing regulations. See Nat'l Wildlife Fed'n v. Nat'l Marine Fisheries Serv., 524 F.3d 917, 931 (9th Cir. 2008) ("the jeopardy regulation requires [the Service] to consider both recovery and survival impacts"). The Biological Opinion does not directly address recovery except to assert that "recovery criteria are not necessary" for Canada lynx because FWS "will begin preparation of a proposed rule to delist the species." 2019 BiOp at 7. While FWS has not yet issued any proposed rule, the status of that process is irrelevant so long as the lynx remains listed under the ESA. Because the lynx remains listed, FWS's jeopardy analysis must include an evaluation of revised Forest Plan's effects on the prospects for lynx recovery.

In short, the Biological Opinion violates the ESA and is arbitrary and capricious for numerous reasons. Among other things, FWS failed to consider important aspects of the problem, failed to consider the best available science, and failed to provide a "rational connection" between the facts found and the no-jeopardy conclusion. See WildEarth Guardians, 784 F.3d at 682–83 (stating standard).

IV. Legal Violations

The 2019 Biological Opinion violates the ESA and is arbitrary and capricious for numerous reasons, including but not limited to the ones detailed above. By relying on the Biological Opinion, the Forest Service has failed to meet ESA section 7(a)(2)'s standard to "insure" that the revised Forest Plan is not likely to jeopardize the Canada lynx. See Defenders, 420 F.3d at 976 (relying on flawed biological opinion renders an action "not in accordance with law" and arbitrary and capricious).

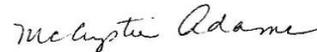
In addition, the Forest Service failed to use the best available science in the Biological Assessment and failed to provide FWS with key relevant information, but nevertheless relied on an incomplete Biological Opinion to approve the Record of Decision. Colo. Env'tl. Coalition v. Office of Legacy Mgmt., 302 F. Supp. 3d 1251, 1273–74 (D. Colo. 2018) (finding that agency's failure to convey relevant information to FWS, and reliance on the resulting biological opinion knowing it lacked material information, is arbitrary). For at least these reasons, the Forest Service has violated its substantive section 7(a)(2) duty under the ESA with respect to its adoption and implementation of the revised Forest Plan for the Rio Grande National Forest.

V. Conclusion

As set forth above, the Forest Service and FWS are in violation of ESA section 7(a)(2). The Forest Service violated the ESA by relying on FWS's unlawful Biological Opinion and adopting the revised Forest Plan for the Rio Grande National Forest. In addition, the agency violated the ESA by failing to use the best available science and by failing to provide FWS with relevant information during the section 7(a)(2) consultation on the revised Plan.

If the Forest Service and FWS do not take action within sixty days to remedy these violations, including the withdrawal of the Record of Decision and reinitiation and completion of consultation on the revised Forest Plan, Defenders of Wildlife intends to pursue legal action. If you believe any of the information presented above is inaccurate or incomplete, or would like to discuss these issues further, please contact the undersigned via email or at 720-943-0459 at your earliest convenience. Thank you for your attention to this matter.

Sincerely,



McCrystie Adams
Timothy Estep

CC (*via e-mail only*): Noreen Walsh, Regional Director, Region 6, U.S. Fish & Wildlife Service

Enclosures: Attachment A – Randal Ghormley, “Lynx Habitat Model and Mapping Criteria” (2011).

Attachment B – U.S. Fish & Wildlife Serv., “Species Status Assessment for the Canada lynx (*Lynx canadensis*) Contiguous U.S. Distinct Population Segment” (2017).

Attachment C – John R. Squires et al., “A Specialized Forest Carnivore Navigates Landscape-Level Disturbance: Canada Lynx in Spruce-Beetle Impacted Forests,” *Forest Ecology & Mgmt* 475 (2020).

Attachment D – U.S. Fish & Wildlife Serv., “Record of Decision for the Southern Rockies Lynx Amendment” (2008).

Attachment E – U.S. Fish & Wildlife Serv., “Biological Opinion for the Southern Rockies Lynx Amendment” (2008).

Attachment F – Jake Ivan et al., “Predictive Map of Canada Lynx Habitat Use in Colorado” (2012).