August 6, 2021

Objection Reviewing Officer
c/o Forest Supervisor Kara Chadwick
San Juan National Forest
15 Burnett Court
Durango, CO 81301
Via web portal: https://cara.ecosystem-management.org/Public//CommentInput?Project=57671
Via email: kara.chadwick@usda.gov

Re: OBJECTION Pursuant to 36 C.F.R. § 218.8 to Salter Vegetation Management Project Environmental Assessment, Project #57671, Dolores Ranger District, San Juan National Forest.

Dear Reviewing Officer:

The Center for Biological Diversity ("the Center") and WildEarth Guardians ("Guardians"), collectively "Objectors," hereby submit these objections to the San Juan National Forest's draft Decision Notice (DN), Finding of No Significant Impact (FONSI) and final environmental assessment (Final EA) for the Salter Vegetation Management Project.

Project Objected To

Pursuant to 36 C.F.R. § 218.8(d)(4), the Center objects to the following project:

> *Project*: Salter Vegetation Management Project, Dolores Ranger District, Montezuma and Dolores Counties, Colorado
>
> *Responsible Official and Forest/Ranger District*: Derek Padilla, District Ranger, Dolores Ranger District, San Juan National Forest

Timeliness

These objections are timely filed. Notice of the draft DN and FONSI was published in the Cortez Journal (the newspaper of record) on June 23, 2021.[1]

[1] *See* Public Notice, Cortez Journal (Aug. 23, 2021), available at https://www.fs.usda.gov/nfs/11558/www/nepa/113183_FSPLT3_5653922.pdf (last viewed Aug. 6, 2021). The 45th day after the date of the June 23, 2021 notice, counting June 24 as day one, falls on August 7, a Saturday, and so the objection period expires at 11:59 PM Mountain time on the next business day, Monday, August 9. *See* 36 C.F.R. § 218.6(a) ("when the time period expires on a Saturday, Sunday, or Federal holiday, the time is extended to the end of the

Lead Objector

As required by 36 C.F.R. § 218.8(d)(3), the Objectors designate the "Lead Objector" as follows:

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Interests and Participation of the Objectors

The Center for Biological Diversity is a 501(c)(3) nonprofit organization based in Tucson, Arizona, with offices across the country including in Crested Butte and Denver, Colorado, and has 1.7 million members and online activists. The Center is dedicated to protecting and restoring imperiled species and natural ecosystems. The Center uses science, policy, and law to advocate for the conservation and recovery of species on the brink of extinction and the habitats they need to survive. The Center has and continues to actively advocate for increased protections for species and their habitats across Colorado. Center members and supporters use and enjoy the San Juan National Forest, and the lands of the Salter Project area for recreation, photography, nature study, and spiritual renewal.

The Center for Biological Diversity believes that the welfare of human beings is deeply linked to nature — to the existence in our world of a vast diversity of wild animals and plants. Because diversity has intrinsic value, and because its loss impoverishes society, we work to secure a future for all species, great and small, hovering on the brink of extinction. We do so through science, law and creative media, with a focus on protecting the lands, forests, waters and climate that species need to survive. The Center has and continues to actively advocate for increased protections for species and their habitats in southwest Colorado and across the American Southwest.

WildEarth Guardians is a nonprofit conservation organization headquartered in Santa Fe, NM with offices in several western states. With more than 182,000 members and supporters Guardians work to protect and restore wildlife, wild places, wild rivers, and the health of the American West. For many years, Guardians has advocated for an environmentally and economically sustainable transportation system on Forest Service lands, with properly managed motorized recreation. Guardians also promote and support actions that restore ecological integrity to degraded ecosystems in order to ensure at-risk species can thrive.

Summary.

We remain concerned that the Salter Project Final EA fails to meet the National Environmental Policy Act's (NEPA's) standards for disclosure and public involvement in several respects.

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next Federal working day."); *id.* § 218.6(b) ("Starting date**.** The day ***after*** publication of the legal notice … is the first day of the objection-filing period") (emphasis added).

While we appreciate the inclusion of an alternative that protects some large, old trees, we remain concerned that the proposed action will destroy thousands of pre-settlement trees, some more than a century old. We believe there is no ecological or social basis for doing so. T

he Final EA also fails to contain critical information necessary to understand the project's impacts, including information about the baseline conditions of the project and about the location and impacts of 100+ miles of temporary roads.

The Final EA fails to disclose the project's economic impacts despite the fact that economic development is a project purpose. The Final EA fails to take a hard look at the project's climate impacts, ignoring the Biden administration's emphasis on quantifying and reducing climate pollution.

The Final EA fails to provide a robust review of the varying impacts of the two action alternatives, undermining the heart of the NEPA process, and fails to respond to critical comments and studies provided by experts contradicting the Forest Service's assumptions.

Unless the Forest Service addresses these issues and others, there is a potential for the proposal to have significant impacts, requiring the Forest Service to prepare an environmental impact statement (EIS).

We are also disappointed that the Forest Service failed to respond to nearly every concern we raised about the project. The EA fails to contain a section responding to public comments. The agency had an opportunity to engage with the public, to explain why it favored certain science over others, why it concluded it could ignore the President's directives on climate change, why it declined to use the best available science in crafting mitigation measures or design features for goshawk. The agency failed to take advantage of the opportunity and appears to have simply ignored all of these legitimate concerns. If the Forest Service is to fulfill its role as a good steward of public lands, build support for forest protection, and comply with its NEPA obligations to effectively involve the public, it must do better.

I. BACKGROUND: THE SALTER PROJECT

The Final EA states that the Forest Service identified the following needs for the project:

- improve resilience and resistance to epidemic insect and disease outbreaks,

- increase the structural diversity of the ponderosa pine forest represented across the project area, and

- provide economic support to local communities by providing timber products to local industries in a sustainable manner.[2]

[2] San Juan National Forest, Salter Vegetation Management Project, Draft Environmental Assessment (June 2021) at 1 (hereafter, "Final EA").

The Final EA further states that the project is needed to move the forest stands in the area toward desired conditions dictated by the Forest Plan:

> The need for this project is derived from the differences between the existing forest vegetation conditions and the desired forest vegetation conditions, as defined by the San Juan National Forest Land and Resource Management Plan.[3]

The Final EA also alleges that the project is needed to address an ongoing beetle infestation:

> Bark beetles have infested adjacent landscapes causing significant mortality. The early stages of a bark beetle infestation are now being observed in the Salter project area.[4]

The proposal involves "tree-cutting, tree planting, and activity fuel burning" across "approximately 22,346 acres."[5] Those activities include "single tree selection," including the logging of trees up to 26.9" diameter at breast height (dbh), or over 7 feet in circumference, across 19,675 acres.[6] The treatment would leave "50-to-70 basal area per acre of residual basal area depending upon stand condition. There are 19,675 acres of this treatment type."[7]

The project will also involve 3,115 acres of commercial thinning, where again trees up to 26.9" dbh could be chainsawed, and again the target would be "a variable residual square feet of tree stem basal area of 50 -70 basal area per acre depending upon stand condition."[8]

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[3] Final EA at 8. *See also id*. at 11 ("The structure and size class distributions in the stands identified for this analysis are not within desired conditions described in [San Juan Forest Plan Sec.] 2.2.23 based on field reconnaissance and inventory data.")

[4] Final EA at 11.

[5] Final EA at 12.

[6] Final EA at 12, note 1. Note that while the Draft EA several times states that no trees larger than 26" dbh will be logged, *id*. at 12 (Table 1), 13, the document also asserts that "[t]he maximum diameter to harvest would be 26.9"," or about three inches greater in circumference. *Id*. at 14. *See also id*. at 12 n.1 ("No tree larger than 26.9 inch diameter at breast height would be cut in alternatives 2 and3 [sic]."). The Forest Service ignored our request in comments on the Draft EA that the agency clarify which number was correct. *See* letter of E. Zukoski, Center for Biological Diversity *et al*. to D. Padilla, San Juan NF (Mar. 2, 2021) at 3 n.5 ("Center Draft EA Comment"), attached as Ex. 1.

[7] Final EA at 12.

[8] Final EA at 13. We note that summing the acres in Table 2 (Final EA at 12-13) for commercial thinning and single tree selection treatments results in a project area of 22,790 acres, a figure larger than the "approximately 22,346" acres the Final EA (at 1, 12) asserts would be treated. Although in our comments on the Draft EA we urged the Forest Service to address this discrepancy, the Forest Service failed to do so without explanation. *See* Center Draft EA Comment (Ex. 1) at 3.

II. THE FINAL EA FAILS TO TAKE THE HARD LOOK AT ENVIRONMENTAL IMPACTS THAT NEPA REQUIRES.

NEPA is "'our basic national charter for protection of the environment.'"[9] In enacting NEPA, Congress recognized the "profound impact" of human activities, including "resource exploitation," on the environment and declared a national policy "to create and maintain conditions under which man and nature can exist in productive harmony."[10]

The statute has two fundamental two goals: "(1) to ensure that the agency will have detailed information on significant environmental impacts when it makes decisions; and (2) to guarantee that this information will be available to a larger audience."[11] "NEPA promotes its sweeping commitment to 'prevent or eliminate damage to the environment and biosphere' by focusing Government and public attention on the environmental effects of proposed agency action."[12] Stated more directly, NEPA's "'action-forcing' procedures ... require the [Forest Service] to take a 'hard look' at environmental consequences"[13] *before* the agency approves an action. "By so focusing agency attention, NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct."[14] To ensure that the agency has taken the required "hard look," courts hold that the agency must utilize "public comment and the best available scientific information."[15]

NEPA's review obligations are more stringent and detailed at the project level, or "implementation stage," given the nature of "individual site specific projects."[16] "[G]eneral

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[9] *Center for Biological Diversity v. United States Forest Serv*., 349 F.3d 1157, 1166 (9th Cir. 2003) (quoting 40 C.F.R. § 1500.1).

[10] 42 U.S.C. § 4331(a).

[11] *Envtl. Prot. Info. Ctr. v. Blackwell*, 389 F. Supp. 2d 1174, 1184 (N.D. Cal. 2004) (quoting *Neighbors of Cuddy Mt. v. Alexander*, 303 F.3d 1059, 1063 (9th Cir. 2002)); *see also Earth Island v. United States Forest Serv.*, 351 F.3d 1291, 1300 (9th Cir. 2003) ("NEPA requires that a federal agency 'consider every significant aspect of the environmental impact of a proposed action ... [and] inform the public that it has indeed considered environmental concerns in its decision-making process.'").

[12] *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 371 (1989) (quoting 42 U.S.C. § 4321).

[13] *Metcalf v. Daley*, 214 F.3d 1135, 1141 (9th Cir. 2000) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989)).

[14] *Marsh*, 490 U.S. at 371 (citation omitted).

[15] *Biodiversity Cons. Alliance v. Jiron*, 762 F.3d 1036, 1086 (10th Cir. 2014) (internal citation omitted).

[16] *Ecology Ctr., Inc. v. United States Forest Serv*., 192 F.3d 922, 923 n.2 (9th Cir. 1999); *see also Friends of Yosemite Valley v. Norton*, 348 F.3d 789, 800-01 (9th Cir. 2003); *New Mexico ex rel. Richardson v. Bureau of Land Management*, 565 F.3d 683, 718-19 (10th Cir. 2009) (requiring site-specific NEPA analysis when no future NEPA process would occur); *Colo. Envtl. Coal. v. Ofc. of Legacy Mgmt*., 819 F. Supp. 2d 1193, 1209-10 (D. Colo. 2011) (requiring site-specific

statements about possible effects and some risk do not constitute a hard look, absent a justification regarding why more definitive information could not be provided."[17]

NEPA requires site-specificity to fulfill two basic purposes: 1) to ensure agencies are making informed decisions prior to acting; and 2) to ensure the public is given a meaningful opportunity to participate in those decision-making processes.[18] Federal courts apply these touchstone criteria when evaluating whether an EIS is adequately site-specific.[19]

Analyzing and disclosing site-specific impacts is critical because where (and when and how) activities occur on a landscape strongly determines that nature of the impact. As the Tenth Circuit Court of Appeals has explained, the actual "location of development greatly influences the likelihood and extent of habitat preservation. Disturbances on the same total surface area may produce wildly different impacts on plants and wildlife depending on the amount of contiguous habitat between them."[20] The Court used the example of "building a dirt road along the edge of an ecosystem" and "building a four-lane highway straight down the middle" to explain how those activities may have similar types of impacts, but the extent of those impacts – in particular on habitat disturbance – is different.[21] Indeed, "location, not merely total surface disturbance, affects habitat fragmentation,"[22] and therefore location data is critical to the site-specific analysis NEPA requires. Merely disclosing the existence of particular geographic or biological features is inadequate; agencies must discuss their importance and substantiate their findings as to the impacts.[23]

NEPA further mandates that the agency provide the public "'the underlying environmental data' from which the Forest Service develop[ed] its opinions and arrive[d] at its decisions."[24] "The agency must explain the conclusions it has drawn from its chosen methodology, and the reasons

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NEPA analysis even when future NEPA would occur because "environmental impacts were reasonably foreseeable").

[17] *Or. Natural Res. Council Fund v. Brong*, 492 F.3d 1120, 1134 (9th Cir. 2007) (citation omitted); *see also Or. Natural Res. Council Fund v. Goodman*, 505 F.3d 884, 892 (9th Cir. 2007) (holding the Forest Service's failure to discuss the importance of maintaining a biological corridor violated NEPA, explaining that "[m]erely disclosing the existence of a biological corridor is inadequate" and that the agency must "meaningfully substantiate [its] finding").

[18] *Stein v. Barton*, 740 F. Supp. 743, 749 (D. Alaska 1990).

[19] *See WildEarth Guardians*, 790 F.3d at 921-25 (holding EIS inadequate for failure to disclose location of moose range); *Or. Nat. Desert Ass'n v. Rose*, 2019 WL 1855419 (9th Cir. 2019) (holding environmental analysis violated NEPA by failing to establish "the physical condition of [roads and trails] and authorizing activity without assessing the actual baseline conditions").

[20] *New Mexico ex rel. Richardson*, 565 F.3d at 706.

[21] *Id*. at 707.

[22] *Id*.

[23] *Or. Natural Res. Council Fund v. Goodman*, 505 F.3d 884, 892 (9th Cir. 2007).

[24] *WildEarth Guardians v. Mont. Snowmobile Ass'n*, 790 F.3d 920, 925 (9th Cir. 2015).

it considered the underlying evidence to be reliable."[25] In the end, "vague and conclusory statements, without any supporting data, do not constitute a 'hard look' at the environmental consequences of the action as required by NEPA."[26]

CEQ's regulations establish specific ways agencies must analyze proposed actions, including project-level decisions, including a detailed discussion of direct, indirect, and cumulative impacts and their significance; and an analysis of reasonable alternatives to the proposed action.[27] Such analysis is required for both environmental assessments and EISs.

The Salter Project is a project-level decision. As a result, any NEPA analysis must include the detailed information and analysis that NEPA and the CEQ regulations require.

While the Final EA contains some description of the location and nature of proposed vegetation treatments, it fails to comply with NEPA, as described below.

[25] *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1075 (9th Cir. 2011) (citation omitted).

[26] *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 973 (9th Cir. 2006); *see also Ocean Advocates v. Army Corps of Engineers*, 402 F.3d 846, 869 (9th Cir. 2004) (finding that a vague and uncertain analysis is insufficient to meet NEPA's mandate).

[27] We request that the Forest Service confirm to the public, *in writing*, that it intends to rely on the NEPA regulations promulgated in 1978 and in force as of the date scoping on the Salter Project began. Although CEQ issued a final rulemaking in July 2020 fundamentally rewriting those regulations, the new rules apply only "to any NEPA process begun *after* September 14, 2020," or where the agency has chosen to "apply the regulations in this subchapter to ongoing activities." 40 C.F.R. § 1506.13 (2020) (emphasis added). Scoping on this project began before September 14, 2020, and neither the Draft nor Final EA indicates that the agency is opting to use the 2020 CEQ NEPA regulations. The draft Decision Notice and FONSI references the ten significance factors in "40 CFR 1508.27(b)," a citation that only exists in the 1978 regulations, and not the 2020 regulations, indicating that the agency intends to rely on the 1978 rules. *See* Sand Juan National Forest, Draft Decision Notice and Finding of No Significant Impact for the Salter Vegetation Management Project (June 2021) at 17; *see also* 2020 CEQ NEPA Regulations, 85 Fed. Reg. 43304, 43376 (July 16, 2020) (containing no regulation numbered 40 C.F.R. § 1508.27) . In any event, the 2020 regulations have been challenged as illegal in no fewer than four pending lawsuits. *See, e.g.*, *Environmental Justice Health Alliance v. CEQ*, Case 1:20-cv-06143 (S.D.N.Y. Aug. 6, 2020); *Wild Virginia v. CEQ*, Case 3:20-cv-00045-NKM (W.D. Va. July 29, 2020); *Alaska Community Action on Toxics v. CEQ*, Case 3:20-cv-05199-RS (N.D. Ca. July 29, 2020); *State of California v. Council on Environmental Quality,* Case No. 3:20-cv-06057 (N.D. Cal. Aug. 28, 2020).

B. The Final EA Fails to Disclose Many of the Salter Project's Site-Specific Direct and Indirect Effects.

Although NEPA requires that analysis disclose specific information about the when, where, and how of any agency action, so that the impacts and alternatives can be described and weighed, the Final EA fails to contain much of this data, violating NEPA.[28]

The where and the how of new temporary road construction are not disclosed, or are disclosed incompletely.

For example, the Final EA inconsistently identifies the total mileage of temporary roads. At one point, the Final EA states noncommittally that "temporary roads *may be* required to reduce the need for excessive tractor skidding and allow wood products to be moved to the permanent road system."[29] Despite the fact the temporary roads "may be" required, the Final EA then asserts that "[a]pproximately 50-to-75 miles of temporary road construction are analyzed under this proposal."[30] Elsewhere, the EA states with more assurance that "[i]mplementing the modified proposed action *will require* development of approximately 106 miles of temporary roads," or as much as double the mileage the EA elsewhere says the document analyzes.[31] But even that number is apparently a guestimate because temporary roads will only be laid out later:

> Though these roads have been theoretically identified, the final alignment may deviate from the plan. Such deviation would be limited to that agreed by the Forest Service (Engineering Representative/Sale Administrator) and the contractor. The implementation of the modified proposed action should not result in an increase of temporary road mileage greater than 10 percent of the estimated 106 miles of primary temporary roads. Therefore, 11 miles or less of addition[al] temp roads can be expected.[32]

Thus, the Forest Service predicts that as many as 117 miles of temporary road may be built for the project, and the agency will not identify the precise location of the routes' final alignment until the Forest Service and the contractor agree, long after the NEPA process (and public involvement) has terminated.

Road construction – even for temporary roads – removes all vegetation within the area graded, eliminates and fragments habitat, alters hydrology, and can act as a vector for human-caused

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[28] The Center and Guardians raised each of the issues discussed in this section with the Forest Service in comments on the Draft EA. *See* Center Draft EA Comment (Ex. 1) at 3-27. The Forest Service failed to respond to our letter in any way.

[29] Final EA at 19 (emphasis added).

[30] Final EA at 19.

[31] Final EA at 63 (emphasis added). *See also id*. ("The primary temporary road alignments consist of 69.8 miles of existing non-system roads, and 36.4 miles of new ground disturbance", which totals 106.2 miles).

[32] Final EA at 63.

fires and the spread of noxious weeds. Road use can cause roadkill, disturb wildlife during critical periods (winter, nesting/calving, etc.), and increase opportunities for poaching. Thus, the nature and location of the road network to be used and constructed is critical to understanding this project's impacts. However, the Final EA fails to define the location of temporary road use and road construction, and omits other data important to understanding road impacts.

The Forest Service has long acknowledged that temporary roads can have significant impacts. In its 2000 analysis of the Roadless Area Conservation Rule – which generally barred the construction of both permanent and temporary roads – the agency stated:

> Although only used for relatively short periods, temporary roads present most of the same risks posed by permanent roads, although some may be of shorter duration. Many of these roads are designed to lower standards than permanent roads, are typically not maintained to the same standards, and are associated with additional ground disturbance during their removal…. While temporary roads may be used for periods ranging up to ten years, and are then decommissioned, their short- and long-term effects can be extensive to terrestrial species and habitats.[33]

The Final EIS on the Roadless Rule also noted that "[t]he use of temporary roads may have the same long lasting and significant ecological effects as permanent roads, such as the introduction of nonnative vegetation and degradation of stream channels."[34] Temporary "[s]kid roads and trails, log landings, and similar disturbances within the [timber] sale area are the main cause of soil erosion and can contribute up to 90% of the sediment generated by timber sale activity (Patric 1976; Swift 1988)."[35] The Roadless Rule Final EIS acknowledged that temporary road construction can cause increased risk of surface erosion and landslides, but that this varies widely and depends on local site characteristics.[36] But the Final EA does not disclose local site characteristics are not disclosed, because that document fails to disclose the location of proposed temporary roads.

Maps in the Final EA apparently identify where *some* temporary road construction is likely to occur, but the maps do not appear to disclose where the routes will be constructed within cutting units.[37] This may be due to an error in the map display (in which the temporary roads are hidden

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[33] USDA Forest Service, Final Environmental Impact Statement, Roadless Area Conservation Rule (Nov. 2000) at 3-150 excerpts attached as Ex. 2. *See also id.* at 3-30 ("temporary roads are not designed or constructed to the same standards as classified roads and are not intended to be part of the National Forest System Transportation System. The results can be a higher risk of environmental impacts over the short run."); *id.* at 3-164 (concluding that "[t]emporary roads present most of the same risks posed by permanent roads" to rare plants, "although some [impacts] may be of shorter duration.").

[34] Roadless Area Conservation Rule Final EIS (Nov. 2000) (Ex. 2) at 2-18.

[35] Roadless Area Conservation Rule Final EIS (Nov. 2000) (Ex. 2) at 3-45.

[36] Roadless Area Conservation Rule Final EIS (Nov. 2000) (Ex. 2) at 3-45.

[37] Final EA, Appendix A, at 92-99.

under the layer for logging units), or it may be because the Forest Service intends to rely on skid trails within units. Whatever the reason, it is difficult to discern where the Forest Service intends to construct temporary roads. The Transportation System report in the project file does little to help the reader understand temporary road impacts.[38] While that report provides a unique number for each temporary route and estimates its potential length, it does not provide much useful information about *where* the roads will be constructed or the resources the roads may impact.

Because the Final EA, like the draft, fails to disclose the location of temporary roads, or the values and conditions they might impact, it cannot provide the decisionmaker or the public with whether or where these mitigation measures may be required. This violates NEPA's hard look mandate.

Further, the width of new roads – which defines the level of direct habitat destruction from bulldozing – is not defined, and the Final EA provides little guidance as to when, if ever, widths might be restricted, again making it impossible for the public or the agency to know the extent of project impacts.[39] The Final EA states: "Temporary roads will be held to the minimum feasible number, width and total length and will be located sufficiently far from streams and other water bodies to minimize discharge into those waters except at necessary water crossings."[40] This provides little helpful information about the location, number, width, or impacts of the routes.

The Final EA similarly provides little information about skid trails. The Final EA states that "[s]kid trails would be held to the minimum number, width, and length."[41] This provides neither the public nor the decisionmaker with any idea as to the number, length, or scope of potential impacts from such trails, which will crush vegetation, cause a loss of habitat, and compact soil, among other impacts. Further, the amount of surface area that skid trails, roads and similar disturbance is so large that impacts from these features appears certain to be significant. The Final EA states that "[d]esign features for Hydrology and Soils also restrict roads, landings, skid trails, concentrated-use sites, and similar soil disturbances to designated sites to no more than 15 percent of any timber sale unit."[42] Because there are 22,790 acres of logging units, skid trails, roads, etc. could degrade soils on up to 3,400 acres – an area of more than five square miles.

The Final EA fails to take the required hard look at the impacts of temporary roads because it fails to disclose not only their location but also the values that could be impacted by road construction and use. For example, the Final EA fails to define the "where" of sensitive soil resources.

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[38] San Juan NF, Transportation System report (no date) (Salter project file).

[39] *See* Final EA at 26 ("[t]he location and clearing widths of all temporary roads or facilities will be agreed to in writing (between the Forest Service and the contractor) before construction is started.").

[40] Final EA at 22.

[41] Final EA at 26.

[42] Final EA at 49.

With respect to wildlife, the Final EA and the associated project files provide no maps showing the location of habitat for any species (apart from elk and goshawk), or the relative value of such habitat, or where such habitat may be impacted by logging, road construction, road use, or fire. This makes it difficult for the public or the agency to understand impacts, or to evaluate whether an alternative to avoid certain areas could be crafted.

In short, specific road construction plans may be designed only after project approval, meaning that only then will the Forest Service have the site-specific information necessary to understand the project's impacts and mitigate them. This gets NEPA compliance backwards. NEPA mandates that agencies look before they leap. The Forest Service here is leaping before looking.

Areas to be avoided/mitigated. The Final EA notes that it will design treatments to avoid certain areas (*e.g.*, water influence zones), thus potentially concentrating logging activities in remaining areas. But the Final EA fails to disclose *where* most of these values may exist that vegetation treatments are designed to protect or avoid, thus making it difficult to understand the impact of these provisions on project design and on the environment.

The Final EA states that certain design elements will minimize or avoid potential adverse effects to resources including water influence zones (WIZ), riparian areas, and other wetlands:

- Organic soils associated with riparian areas, intermittent streams, and the water influence zone (WIZ) would be protected through a no harvest/no mechanized equipment buffer.[43]

- Intermittent streams with riparian vegetation would have a buffer strip width of 100 feet on each side of the channel unless a field visit by hydrologist determines a different site-specific buffer.[44]

- Mechanical treatments would avoid wetlands, wet meadows and riparian areas. No skidding, decking or loading would be allowed in these areas in order to protect water quality, existing soils, and vegetative cover.[45]

But the Final EA and associated documents made available to the public appear to not identify these areas on maps. Nor does the Forest Service describe or quantify the extent of these areas.

The "how" of some of the design elements is also undefined. The Final EA states, for example, that "[p]roper drainage will be constructed or reconstructed on existing system road and newly constructed temporary roads."[46] What "proper drainage" is or how it will influence the location or extent of road construction is not explained. The failure to provide this information violates NEPA.

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[43] Final EA at 70.

[44] Final EA at 71.

[45] Final EA at 71.

[46] Final EA at 22; *see also id.* at 70 ("Log landings … will be designed to have proper drainage").

Suggested Remedy. The San Juan National Forest should prepare a supplemental NEPA document, preferably a Draft EIS, that discloses the site-specific impacts of the proposed action and alternatives.

C. The Final EA Fails to Disclose Important Baseline Conditions in the Project Area.

The Final EA's failure to disclose the where and the how of the project also results in a failure to comply with another NEPA requirement: the mandate that agencies "succinctly describe the environment of the area(s) to be affected or created by the alternative under consideration."[47] NEPA requires the action agency to set an appropriate baseline detailing the nature and extent of the resources in the area: "The concept of a baseline against which to compare predictions of the effects of the proposed action and reasonable alternatives is critical to the NEPA process."[48] "Without establishing ... baseline conditions ... there is simply no way to determine what effect [an action] will have on the environment and, consequently, no way to comply with NEPA."[49]

Without baseline data, neither the public nor the agency can understand the effects of the proposed action or craft and analyze alternatives and mitigation measures to protect these values. As such, the Forest Service has a duty to identify the environmental baseline and affected environment, as well as the scope of impacts and where those impacts are most likely to be felt.

The Final EA also contains little site-specific information on a variety of resources, including wildlife and wetlands.

Baseline information will better enable the public to understand whether there is a need for the project. The Final EA states that: "In the past ten years, approximately 34 percent of the project area has experienced fire, either wildfire or prescribed."[50] This statement raises numerous questions which the Final EA to answer: Where are these tens of thousands of acres? Are these areas contained in any cutting units? What basal area remains? Did the fires result in residual basal area that approximated what the Salter Project proposes to achieve? Has previous fire covering more than one-third of the project reduced the need for "resilience" treatments because those fires have made the landscape more resilient to beetle infestations or future fire? If not, why not? If these fires have effectively fire-proofed large portions of the project area, or at least greatly reduced the risk of future high intensity fire, is there still a need for the project?

The Forest Service's failure to address these issues, which go to the project's purpose and need as well as its impacts, violates NEPA.

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[47] 40 C.F.R. § 1502.15.

[48] *See* Council on Environmental Quality, *Considering Cumulative Effects under the National Environmental Policy Act* 41 (January 1997).

[49] *Half Moon Bay Fishermans' Mktg. Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988).

[50] Final EA at 39.

Suggested Remedy. The San Juan National Forest should prepare a supplemental NEPA document, preferably a Draft EIS, that discloses the baseline conditions of the project area.

D. The Final EA Fails to Disclose Meaningful Information about Cumulative Effects.

The Final EA lacks the necessary detail to understand how the impacts of the Salter Project may interact with other private or Forest Service actions, in at least two key respects.

First, the Final EA fails to meaningfully address off-road vehicle travel, an activity which may have cumulative effects when viewed together with the proposed action.[51] In much of the project area, which is popular with hunters, individuals may drive off-highway vehicles up to *one mile* from Forest Service roads to retrieve game, according to the motor vehicle use map for the Dolores Ranger District. Full-sized vehicles may also travel up to 300 feet from either side of many of the open roads within the project area for dispersed camping. Thus, motor vehicle use for limited purposes can legally occur off road across the vast majority of the project area. Such vehicle use will likely hinder reforestation, compound damage to soils and watersheds, crush seedlings and make reforestation more difficult, render temporary road closures and obliteration less effective, and increase the potential for the spread of exotic weeds. The fact that the cutting units "are easily accessible, occurring mostly on roaded landscapes and relatively gentle terrain" may make it difficult to effectively close routes.[52]

The Forest Service cannot argue that a prior NEPA document (for the Oct. 2011 Boggy-Glade transportation plan) addresses these impacts. That nearly ten-year-old EA did not take into consideration the Salter Project with its more than a decade of logging, the up-to-117 miles of temporary road, nearly 150 miles of road improvement, or the beetle infestation. The existing, permissive off-road vehicle management policy is likely to have synergistic and damaging impacts with the Salter Project.

The Forest Service may have attempted to address the issue of off-road vehicle travel with a new "project design feature," but that feature does not eliminate the potential for damaging, and unanalyzed, cumulative impacts from off-road vehicles. The new feature states:

> In the event that a decrease in tree density results in easier access to dispersed camping sites beyond what is allowed by Forest Service regulations, barriers such as boulders will be installed to control the expansion of dispersed camp sites.[53]

This measure does not eliminate the mandate that the Forest Service address the potential for tree removal, skid trail and road construction, together with off-road vehicle use, to cumulatively impacts soils, hydrology, and other resources. The measure itself is vague. How will the Forest Service determine whether tree density changes "result[] in easier access to dispersed camping

[51] Existing levels of this activity could also be disclosed in the no action alternative.

[52] Final EA at 9.

[53] Final EA at 23.

sites beyond what is allowed by Forest Service regulations," particularly when the EA identifies *no monitoring activities* related to recreational impacts?[54] Does the San Juan National Forest know how many dispersed campsites are in the project area, and how large they are, so it can assess whether its action effectively "control the expansion of dispersed campsites?" What does "control the expansion" of such sites mean? Limit the number? The areal extent?

Further the measure does nothing to address whether tree removal, skid trail and road construction will impact, or interact synergistically with, off-road travel for game retrieval, which can occur up to one mile from roads. Logging will make longer off-road vehicle excursions more likely, and such trips will now occur in many areas where soils, vegetation, and watersheds have been disturbed by logging, compounding logging's impacts. The Final EA fails to acknowledge or evaluate these potential cumulative impacts, violating NEPA.

Second, the Final EA identifies several "follow-up" actions that will be required or are otherwise foreseeable, but whose impacts the EA does not appear to disclose. The Forest Service indicates that "[f]ollow-up [prescribed fire] treatments *must* occur within 6-15 years [of initial broadcast burns] in order to further reduce surface fuel loading."[55] This means more smoke and more activity in the project area are foreseeable because they could be occurring virtually constantly for 25 years following the initiation of the 10-year project. The Final EA also states within the 3,000+ acres of lands subject to commercial thinning, additional logging will occur in "these stands at roughly 20-to-25 year[]" intervals,[56] meaning more noise, more construction, more displacement of wildlife are virtually guaranteed to occur over not just the short-term but the long-term.

> <u>*Suggested Remedy*</u>. The San Juan National Forest should prepare a supplemental NEPA document, preferably a Draft EIS, that discloses the cumulative effects of the project together with foreseeable off-road vehicle use, and cumulative effects of the project together with foreseeable and planned follow-up actions.

E. The Forest Service Fails to Explain Why Lone Pine and Salter Treatments Differ.

The Forest Service fails to explain why the prescriptions in the Salter Project differ from those in the nearby (and nearly overlapping) Lone Pine project approved in 2020. At Lone Pine, the Forest Service approved:

- Basal area ranging from 60 to 80 square feet per acre with a target basal area of 70 square feet per acre in the "Large Tree Emphasis/Commercial Thin Prescription."[57]

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[54] *See* Final EA at 31-32.

[55] Final EA at 41.

[56] Final EA at 13 ("uneven-aged management calls for re-entry every 20-to-25 years. This is referred to as a cutting cycle"); *id*. at 65.

[57] San Juan National Forest, Lone Pine Decision Notice (Jan. 23, 2020) at 7, attached as Ex. 3.

- Basal area ranging from 60 to 80 square feet per acre with a target basal area of 60 square feet per acre in the commercial thinning prescription.[58]

Because the purpose and need statements for the Salter and Lone Pine projects are similar, the San Juan National Forest should explain why the agency intends to adopt different prescriptions for the Salter Project that seek to achieve a lower basal area (50-70 square feet per acre with a target of 60) than that for the Lone Pine area (60-80 square feet per acre, with a target of 70 for some prescriptions). Note that the Salter Final EA states that "[t]he infested stands [in the Salter Project area] will display similar characteristics to affected stands in the Lone Pine environment, with similar diameter classes experiencing mortality."[59] Because the two projects seek to achieve similar goals in similar stands, the Forest Service's adoption of *different* prescriptions and targets for the Salter Project, without explanation, is arbitrary.

> *Suggested Remedy*. The San Juan National Forest should prepare a supplemental NEPA document, preferably a Draft EIS, that discloses why the Forest Service chose differing basal area targets for the Lone Pine and Salter projects.

F. The Final EA Fails to Take a Hard Look at the Project's Economic Impacts.

A primary purpose and need for the project is to "provide economic support to local communities by providing timber products to local industries in a sustainable manner," and the project includes "commercial thinning" on more than 3,000 acres.[60] The Final EA indicates that the San Juan National Forest considers it important to offer large trees for sale, and lots of them, as an incentive to entice timber mills to log smaller trees:

> Offering a mixture of saw log and smaller diameters [sic] timber in the right ratio is important to ensure offerings are marketable. The size of these sales is equally important in both volume and acres to ensure the work is completed on time and has a sustained profitability. The ability to include large volumes and achieve vegetation management at landscape level is possible with the existing industry.[61]

Although supporting local industry is a project goal, and the Forest Service apparently assumes such benefit will occur, the Final EA fails to contain any projections or quantification of the volume that is says is important (for example, the likely board-feet the project will make available to local mills), nor the economic impact of the project in terms of income or employment. Because the Forest Service has detailed stand data for the project area, such an analysis would seem relatively straightforward to perform.

The Final EA's failure to quantify the potential economic impacts not only violates NEPA, it is puzzling in light of the fact that the Forest Service elsewhere routinely performs this analysis as a matter of course. For example, in a 2021 final EA for a logging project in Montana, the Forest

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[58] *Id*. at 5.

[59] Final EA at 40.

[60] Final EA at 1, 3.

[61] Final EA at 60.

Service estimates for *each alternative*: the acres harvested; the board footage to be logged; appraised stumpage rates; the predicted high bid; the total revenue to be generated; the present net value of the timber harvest and other resource activities; and the total employment and labor income estimated to be generated over the life of the project.[62] In the Rocky Mountain Region, the Forest Service has prepared similar socioeconomic analyses for logging projects.[63] The Forest Service no doubt has all of this information for the Salter Project. It is unclear why it is choosing to withhold it from the public.

Further, if an economic analysis shows no difference between Alternative 2 (cutting trees up to 26.9" dbh) and Alternative 3 (cutting trees up to 20" dbh), that would undermine the Forest Service's assertions discussed above (and those of some industry supporters) that the agency must offer significant quantities of larger trees to ensure the commercial viability of logging in this part of the San Juan National Forest.

The Final EA fails to address or estimate the potential for lost income to the town of Dolores due to the Salter Project's impacts on recreation. The area targeted for logging is popular with mountain bikers, equestrians, hikers, hunters, and other recreationists, receiving "moderate to heavy levels of recreation use" in the summer and fall.[64] In fact, "[t]he Boggy treatment block is a high use recreation area and one of the most heavily used recreation zones on the District. Over the past five years more than $300,000 of trail infrastructure projects have been completed on the Boggy non-motorized and motorized trail system."[65]

The constant presence of logging trucks, road graders, and the sound of chainsaws and heavy equipment *for a decade* (or longer, if follow-on treatments are analyzed) is likely to discourage some from visiting this part of the forest, with the potential for loss of revenue to local businesses.[66] While the Final EA admits the likelihood that recreation will be deterred,[67] it fails

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[62] Lolo National Forest, Redd Bull Environmental Assessment (Jan. 2021) at 124-128, excerpts attached as Ex. 4, and available at http://www.fs.usda.gov/nfs/11558/www/nepa/112011_FSPLT3_5580176.pdf (last viewed Aug. 6, 2021).

[63] *See, e.g.*, Medicine Bow-Routt National Forest, Social and Economic Report, Medicine Bow LaVA Project (2019), attached as Ex. 5.

[64] Final EA at 52 ("The Salter analysis area receives moderate to heavy levels of recreation use during the summer months, moderate to heavy use during big game hunting seasons and low to moderate use during the winter.")

[65] Final EA at 47.

[66] *See* Final EA at 50 ("The potential impacts to recreation from this project are anticipated to be long-term and moderate for as long as 10 years."); *see also id*. at 64 (burying a description of "the estimated 10-year time frame of the project" in a discussion about projecting the number of log trucks per day traveling through Dolores). The Final EA, like the Draft, fails to define how long it will take to implement the project's logging, a clear failure to take the hard look NEPA requires.

[67] Final EA at 52 ("The extent of negative impacts to recreationalists can be expected to increase noticeably if treatment activities are undertaken during, hiking, biking hunting or snowmobiling

to quantify the economic impacts of that result beyond admitting that there could be such impacts.[68]

The Final EA includes design features, and analyses, beyond that included in the Draft, but these neither eliminate, nor disclose the extent of, the timber sale's impacts on recreation and the local economy. Many of the design features are conditional, making it unclear if they will have any impact on the project.[69] Given that the Town of Dolores has filed an objection seeking changes to the project's potential impacts due to logging truck traffic through residential and business areas, the Town itself is expecting potentially significant impacts.[70]

We appreciate that the Forest Service has included an EA section on Socioeconomics.[71] This analysis shows that while "[a]pproximately one quarter (24.3%) of private sector employment is in the travel and tourism sector," only about one per cent (1%) of private sector employment in the area is attributable to timber harvesting and processing.[72] Despite this huge imbalance, the Forest Service here has chosen to burden the travel and tourism sector to benefit the tiny logging industry.[73]

NEPA's hard look mandate requires more than mere qualitative statements. Given that the town has begun a transition from resource extraction to recreation, the Salter Project may represent a step backward in terms of its economic development, one that should be estimated and *quantified*, so it can be compared to the alleged economic benefits of logging.

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seasons when this area witnesses marked increases in use."); *id*. at 60 ("some recreation visitors will either stay home or recreate elsewhere, which will temporarily reduce recreation-related economic activity in Dolores and Montezuma counties.").

[68] Final EA at 53 ("Any long-term removal of recreation opportunities would have an impact to local community's economies.")

[69] *See* Final EA at 23 ("When timber activity operations are suspended for two weeks or more, trails and roads that are closed within that unit will be reopened, *unless safety concerns cannot be mitigated*.") (emphasis added); *id*. at 24 ("Trails will be used as sales unit boundaries *when feasible*.") (emphasis added); *id*. ("Measures to protect winter grooming operations will *be considered* during the implementation checklist process.") (emphasis added); *id*. at 33 ("*Initiate collaboration* with the Town of Dolores and other vested partners to develop alternatives that resolve any newly identified issue (e.g. *consider* using alternative routes to mitigate increased traffic concerns") (emphases added). The Town of Dolores's objection demonstrates that the Town evidently concluded that this last measure was insufficient.

[70] *See* Objection, Town of Dolores (July 28, 2021), available at https://cara.ecosystem-management.org/Public/DownloadCommentFile?dmdId=FSPLT3_5656375 (last viewed Aug. 6, 2021) (Salter project file).

[71] Final EA at 57-60.

[72] Final EA at 57, 58.

[73] Final EA at 58 (noting "Some visitors may avoid the project area longer-term" as a result of logging.

If it is in fact a purpose of the project to "provide economic support to local communities," the Forest Service must evaluate and quantify the extent to which various alternatives will achieve that goal.

> *Suggested Remedy*. The San Juan National Forest should prepare a supplemental NEPA document, preferably a Draft EIS, that estimates and quantifies the project's impacts to socioeconomic values generally, and recreation specifically.

G. The Final EA Fails to Take a Hard Look at the Project's Climate Impacts.

1. The Climate Crisis

The climate crisis is the overriding environmental issue of our time, threatening to drastically modify ecosystems, alter coastlines, worsen extreme weather events, degrade public health, and cause massive human displacement and suffering.[74] Its impacts are already being felt in the United States, and recent studies confirm that time is running out to forestall the catastrophic damage that will result from 1.5 degrees Celsius of warming.[75] More recent studies have confirmed that climate change is accelerating, making the need to protect carbon stores even more urgent than it was just a few years ago.[76]

Climate change is impacting Colorado now. Most of the state has warmed one or two degrees Fahrenheit in the last century. Snowpack on average is declining. Fire season is lengthening. Drought periods are occurring more often.[77] I-70 will be closed for weeks due to landslide cause by heavy rainfall following a fire; both heavy rain and fire are increasing in the state due to climate change. Policymakers and legislators have responded by requiring Colorado to adopt a climate action plan that calls for a 25% reduction in greenhouse gas emissions by 2025 and a 50% reduction by 2030.

The Forest Service needs to be part of the solution, not part of the problem.

2. President Biden requires prompt action to assess and reduce climate pollution.

On the day he was inaugurated, President Biden committed to overturning the prior administration's failure to address, and its outright denial of, the climate emergency.

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[74] The Center and Guardians raised each of the issues discussed in this section with the Forest Service in comments on the Draft EA. *See* Center Draft EA Comment (Ex. 1) at 15-27.

[75] *See* IPCC, Summary for Policymakers, Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways (2018), attached as Ex. 6.

[76] *See, e.g.*, H. Fountain, Climate Change Is Accelerating, Bringing World 'Dangerously Close' to Irreversible Change, The New York Times (Dec. 4, 2019), attached as Ex. 7.

[77] *See* EPA, What Climate Change Means for Colorado (Aug. 2016), available at https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-co.pdf, and attached as Ex. 8.

> It is, therefore, the policy of my Administration to listen to the science; to improve public health and protect our environment; to ensure access to clean air and water; to limit exposure to dangerous chemicals and pesticides; to hold polluters accountable, including those who disproportionately harm communities of color and low-income communities; *to reduce greenhouse gas emissions; to bolster resilience to the impacts of climate change*; to restore and expand our national treasures and monuments; and to prioritize both environmental justice and the creation of the well-paying union jobs necessary to deliver on these goals.
>
> To that end, this order directs all executive departments and agencies (agencies) to immediately review and, as appropriate and consistent with applicable law, take action to address the promulgation of Federal regulations and other actions during the last 4 years that conflict with these important national objectives, and *to immediately commence work to confront the climate crisis*.[78]

Days later, President Biden further committed to taking swift action to address the climate crisis. Per Executive Order 14,008, he has recognized that "[t]he United States and the world face a profound climate crisis. We have a narrow moment to pursue action at home and abroad in order to avoid the most catastrophic impacts of that crisis and to seize the opportunity that tackling climate change presents."[79] Pres. Biden announced that under his administration,

> The Federal Government must drive assessment, disclosure, and mitigation of climate pollution and climate-related risks in every sector of our economy, marshaling the creativity, courage, and capital necessary to make our Nation resilient in the face of this threat. Together, we must combat the climate crisis with bold, progressive action that combines the full capacity of the Federal Government with efforts from every corner of our Nation, every level of government, and every sector of our economy.[80]

Addressing the need for the accurate assessment of climate costs, Pres. Biden announced on day one that "[i]t is *essential that agencies capture the full costs of greenhouse gas emissions as accurately as possible*, including by taking global damages into account."[81] The President also re-established Interagency Working Group on the Social Cost of Greenhouse Gases, on which the Secretary of Agriculture will serve.[82] The President directed the Working Group to publish

[78] Executive Order 13,990, 86 Fed. Reg. 7037 (Jan. 20, 2021) at Sec. 1 (emphasis added), attached as Ex. 9.

[79] Executive Order 14,008, 86 Fed. Reg. 7619 (Jan. 27, 2021), attached as Ex. 10.

[80] *Id*. at 7622 (Sec. 201).

[81] Executive Order 13,990 (Ex. 9), 86 Fed. Reg. at 7040, Sec. 5(a) (emphasis added).

[82] *Id*., Sec. 5(b).

interim values for the social cost of carbon by February 19, 2021.[83] The Working Group that month set that price at $51/ton at a 3% discount rate.[84]

3. NEPA requires the Forest Service to disclose the climate impacts of proposed actions.

The Forest Service must analyze the direct, indirect, and cumulative impacts of a proposed action.[85] NEPA and NFMA require the Forest Service to use high quality, accurate, scientific information to assess the effects of a proposed action on the environment.[86]

Meaningful consideration of greenhouse gas emissions (GHGs) and carbon sequestration (carbon storage) lies within the scope of required NEPA review.[87] As the Ninth Circuit has held, in the context of fuel economy standard rules:

> The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct. Any given rule setting a CAFE standard might have an "individually minor" effect on the environment, but these rules are "collectively significant actions taking place over a period of time."[88]

Courts have held that a "general discussion of the effects of global climate change" does not satisfy NEPA's hard-look requirement.[89]

Further, courts have ruled that federal agencies must consider indirect GHG emissions resulting from agency policy, regulatory, and fossil fuel leasing decisions. For example, agencies cannot

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[83] *Id*., Sec. 5(b)(ii)(A).

[84] Interagency Working Group on Social Cost of Greenhouse Gases, Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990 (Feb. 2021), attached as Ex. 11, and available at https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf (last viewed Aug. 6, 2021).

[85] *Colo. Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1176 (10th Cir. 1999); *see also* 40 C.F.R. § 1508.25(c) (1978) (when determining the scope of an EIS, agencies "shall consider" direct, indirect, and cumulative impacts).

[86] *See* 40 C.F.R. § 1500.1(b); 36 C.F.R. § 219.3.

[87] *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin*., 538 F.3d 1172, 1217 (9th Cir. 2008).

[88] *Id*., 538 F.3d at 1216 (quoting 40 C.F.R. § 1508.7 (1978)). *See also WildEarth Guardians v. BLM*, 870 F.3d 1222, 1237 (10th Cir. 2017) (failure to disclose climate impacts of various alternatives "defeated NEPA's purpose").

[89] *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1189-90 (D. Colo. 2014).

ignore the indirect air quality and climate change impact of decisions that would open up access to coal reserves.[90] An analysis that does not adequately consider the indirect effects of a proposed action, including climate emissions, violates NEPA.[91] Further, as the D.C. Circuit Court of Appeals ruled in August 2021, NEPA requires the agency to respond to science showing that the climate pollution impacts of an agency proposal can be quantified, and significance levels assessed.[92]

NEPA requires "reasonable forecasting," which includes the consideration of "reasonably foreseeable future actions … even if they are not specific proposals."[93] That an agency cannot "accurately" calculate the total emissions expected from full development is not a rational basis for cutting off its analysis. "Because speculation is ... implicit in NEPA," agencies may not "shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as crystal ball inquiry."[94] The D.C. Circuit has echoed this sentiment, rejecting the argument that it is "impossible to know exactly what quantity of greenhouse gases will be emitted" and concluding that "agencies may sometimes need to make educated assumptions about an uncertain future" in order to comply with NEPA's reasonable forecasting requirement.[95]

The 2016 final CEQ *Guidance on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Review* provides useful direction on the issue of federal agency review of greenhouse gas emissions as foreseeable direct and indirect effects of a proposed action.[96] The

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[90] *See Mid States Coal. For Progress v. Surface Transp. Bd.*, 345 F.3d 520, 532, 550 (8th Cir. 2003); *High Country Conservation Advocates v. U.S. Forest Serv*., 52 F. Supp. 3d 1174, 1197-98 (D. Colo. 2014); *Montana Environmental Information Center v. U.S. Office of Surface Mining*, 274 F. Supp. 3d 1074 (D. Mont. 2017), *amended in part, adhered to in part*, 2017 WL 5047901 (D. Mont. 2017).

[91] *Ctr. for Biological Diversity v. Bernhardt*, 982 F.3d 723, 2020 U.S. App. LEXIS 38033, *20 (9th Cir. 2020).

[92] *De La Comunidad v. FERC*, 2021 U.S. App. LEXIS 22881 (D.C. Cir. Aug. 3, 2021) at *14-*15 ("Because the Commission failed to respond to significant opposing viewpoints concerning the adequacy of its analyses of the projects' greenhouse gas emissions, we find its analyses deficient under NEPA and the APA. *See, e.g., TransCanada Power Mktg. Ltd. v. FERC*, 811 F.3d 1, 12-13 (D.C. Cir. 2015).").

[93] *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1079 (9th Cir. 2011) (citation omitted).

[94] *Id*. (citations omitted).

[95] *Sierra Club v. Federal Energy Regulatory Commission*, 863 F.3d 1357, 1373-74 (D.C. Cir. 2017).

[96] Notice available at 81 Fed. Reg. 51,866 (Aug. 5, 2016). *See also* Council on Environmental Quality, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews (Aug. 1, 2016) ("CEQ 2016 Climate Guidance"), attached as Ex. 12, and available at

CEQ guidance provides clear direction for agencies to conduct a lifecycle greenhouse gas analysis that quantifies GHG emissions or storage because the modeling and tools to conduct this type of analysis are available:

> If the direct and indirect GHG emissions can be quantified based on available information, including reasonable projections and assumptions, agencies should consider and disclose the reasonably foreseeable direct and indirect emissions when analyzing the direct and indirect effects of the proposed action. Agencies should disclose the information and any assumptions used in the analysis and explain any uncertainties. To compare a project's estimated direct and indirect emissions with GHG emissions from the no-action alternative, agencies should draw on existing, timely, objective, and authoritative analyses, such as those by the Energy Information Administration, the Federal Energy Management Program, or Office of Fossil Energy of the Department of Energy. In the absence of such analyses, agencies should use other available information.[97]

The guidance further specifies that estimating GHG emissions is appropriate and necessary for actions such as federal logging projects.

> In addressing biogenic GHG emissions, resource management agencies should include a comparison of estimated net GHG emissions and carbon stock changes that are projected to occur with and without implementation of proposed land or resource management actions. This analysis should take into account the GHG emissions, carbon sequestration potential, and the changes in carbon stocks that are relevant to decision making in light of the proposed actions and timeframes under consideration.[98]

Although the Trump administration withdrew the 2016 CEQ guidance, President Biden on January 20, 2021 rescinded that Trump Executive Order, and directed CEQ to "review, revise, and update" its 2016 climate guidance.[99] On February 19, 2021, CEQ effectively reinstated the 2016 GHG guidance:

> CEQ will address in a separate notice its review of and any appropriate revisions and updates to the 2016 GHG Guidance. In the interim, agencies should consider all available tools and resources in assessing GHG emissions and climate change effects of their proposed actions, including, as appropriate and relevant, the 2016 GHG Guidance.[100]

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https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa_final_ghg_guidance.pdf (last viewed Aug. 6, 2020).

[97] CEQ 2016 Climate Guidance (Ex. 12) at 16 (citations omitted).

[98] *Id*. at 26.

[99] Executive Order 13,990 (Ex. 9), 86 Fed. Reg. at 7040, Sec. 7, 86 Fed. Reg. at 7042.

[100] Council on Environmental Quality, National Environmental Policy Act, Guidance on Consideration of Greenhouse Gas Emissions, 86 Fed. Reg. 10,252 (Feb. 19, 2021), attached as

Further, regardless of the guidance, the underlying requirement from federal courts – that NEPA requires agencies to consider, quantify, and disclose climate change impacts, including indirect and cumulative combustion impacts and loss of sequestration foreseeably resulting from commercial logging decisions – has not changed.[101]

4. The Forest Service's failure to disclose and quantify the Salter Project's climate damage violates NEPA.

The Forest Service in the Draft EA categorized the climate change impacts of the Salter Project as a "Resource[] Dismissed from Detailed Analysis," and shunted the analysis to an appendix, spending a mere 11 sentences explaining why the issue is of no import.[102] The Final EA has relabeled the appendix "Other Resources," but contains the same 11 sentences with only a handful of cosmetic word changes.[103]

The Final EA asserts that: "Climate change analysis is guided by Climate Change Considerations in Project-Level NEPA Analysis (U.S. Forest Service 2009), which recommends consideration of both the effect of a proposed action on climate change, and the effect of climate change on a proposed action."[104] The Forest Service's reliance on discredited, and long out-of-date, guidance from the George W. Bush administration runs directly counter to the current administration's aggressive approach to both accounting for and addressing climate change, and conflicts with CEQ's 2016 climate guidance.

The Final EA violates NEPA and is arbitrary and capricious because it focuses exclusively (but qualitatively) on the alleged benefits of purporting to make the forest more "resilient" to the environmental factors made worse by climate change – drought and insect infestations – while effectively denying and declining to quantify the impacts on climate pollution and carbon storage of logging, burning, and trucking trees from the forest. Although responding to climate change appears to be a primary project purpose, the Final EA contains only bland and misleading statements on the project's impact on climate pollution or climate change. The Salter Project will have at least two types of climate impacts that the EA virtually ignores and fails to quantify: the

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Ex. 13, and available at https://www.govinfo.gov/content/pkg/FR-2021-02-19/pdf/2021-03355.pdf (last viewed Aug. 6, 2021).

[101] *See S. Fork Band Council of W. Shoshone v. United States Dept. of Interior*, 588 F.3d 718, 725 (9th Cir. 2009); *Ctr. for Biological Diversity*, 538 F.3d at 1214-15; *Mid States Coalition for Progress*, 345 F.3d at 550; *WildEarth Guardians v. United States Office of Surface Mining, Reclamation & Enf't*, 104 F. Supp. 3d 1208, 1230 (D. Colo. 2015) (coal combustion was indirect effect of agency's approval of mining plan modifications that "increased the area of federal land on which mining has occurred" and "led to an increase in the amount of federal coal available for combustion."); *Diné Citizens Against Ruining Our Env't v. United States Office of Surface Mining Reclamation & Enf't*, 82 F. Supp. 3d 1201, 1213-1218 (D. Colo. 2015); *High Country Conservation Advocates*, 52 F. Supp. 3d at 1174.

[102] Draft EA at 102-103.

[103] Final EA at 109.

[104] Final EA at 109.

Project will deplete carbon stores by removing trees that fix carbon; and it will result in the combustion of fossil fuels to implement logging and road construction.

a. The Forest Service fails to disclose and quantify the Salter Project's impact on carbon storage.

The Salter Project will have direct, indirect, and cumulative impacts on climate change because logging and burning forests will impact the ecosystem's ability to store carbon.

Science makes clear that the Salter Project will worsen climate emissions by removing large trees that are currently fixing carbon, turning them into wood products (which results in an immediate and significant loss of that carbon fixed in wood), and leaving a landscape with fewer trees and (eventually) seedlings that fix far less carbon than mature forests.

The Final EA fails to contain any substantive or quantitative analysis of the Salter Project's impact on climate stores and carbon pollution, although the project will likely remove tens of millions (if not hundreds of millions) of board feet of timber. In addition, the project will log potentially thousands of old and mature trees, some as large as seven feet in circumference, and likely decrease the ability of those stands and that land to sequester carbon for years to come. The proposed action will involve removing some trees over a century old, which are assuredly fixing significant amounts of carbon.

Logging old trees in particular worsens climate change by releasing significant amounts of carbon and by preventing such forests from continuing to sequester carbon. As the Forest Service has admitted regarding mature forests in Alaska, such forests "likely store considerably more carbon compared to younger forests in this area (within the individual trees themselves as well as within the organic soil layer found in mature forests)."[105] This is so because when a forest is cut down, the vast majority of the stored carbon in the forest is released over time as CO2, thereby converting forests from a sink to a "source" or "emitter."[106] According to a 2019 IPCC report, deforestation causes climate pollution, and avoiding deforestation will reduce climate pollution.[107]

[105] Forest Service, Tongass Land and Resource Management Plan, Final EIS (2016) at 3-14, excerpts attached as Ex. 14.

[106] *See, e.g.*, D. DellaSala, The Tongass Rainforest as Alaska's First Line of Climate Change Defense and Importance to the Paris Climate Change Agreements (2016) at 5, attached as Ex. 15.

[107] Intergovernmental Panel on Climate Change, Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse gas fluxes in Terrestrial Ecosystems, Summary for Policymakers (Aug. 2019) at 7, 23, attached as Ex. 16. *See also* B. Law et al., Land use strategies to mitigate climate change in carbon dense temperate forests, Proceedings of the Nat'l Academy of Sciences, vol. 115, no. 14 (Apr. 3, 2018) at 3663 ("Proven strategies immediately available to mitigate carbon emissions from forest activities include ... reducing emissions from deforestation and degradation."), attached as Ex. 17.

Recent studies agree that maintaining forests rather than cutting them can help reduce the impacts of climate change. "Stakeholders and policy makers need to recognize that the way to maximize carbon storage and sequestration is to grow intact forest ecosystems where possible."[108] One report concludes:

> *Allowing forests to reach their biological potential for growth and sequestration, maintaining large trees* (Lutz et al 2018), reforesting recently cut lands, and afforestation of suitable areas *will remove additional CO2 from the atmosphere*. Global vegetation stores of carbon are 50% of their potential including western forests because of harvest activities (Erb et al 2017). Clearly, western forests could do more to address climate change through carbon sequestration *if allowed to grow longer*.[109]

A June 2020 literature review from leading experts found thinning provided little advantage for carbon storage:

> *There is absolutely no evidence that thinning forests increases biomass stored* (Zhou et al. 2013). It takes decades to centuries for carbon to accumulate in forest vegetation and soils (Sun et al. 2004, Hudiburg et al. 2009, Schlesinger 2018), and it takes decades to centuries for dead wood to decompose. We must preserve medium to high biomass (carbon-dense) forest not only because of their carbon potential but also because they have the greatest biodiversity of forest species (Krankina et al. 2014, Buotte et al. 2019, 2020).[110]

Two experts in the field concluded in 2021:

> Recent projections show that to prevent the worst impacts of climate change, governments will have to increase their pledges to reduce carbon emissions by as much as 80%. We see the next 10 to 20 years as a critical window for climate action, and believe that *permanent protection for mature and old forests is the greatest opportunity for near-term climate benefits*.[111]

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[108] Moomaw, *et al*., Intact Forests in the United States: Proforestation Mitigates Climate Change and Serves the Greatest Good, Frontiers in Forests and Global Change (June 11, 2019) at 7), attached as Ex. 18 (emphasis added).

[109] T. Hudiburg *et al*., Meeting GHG reduction targets requires accounting for all forest sector emissions, Environ. Res. Lett. 14 (2019) (emphasis added), attached as Ex. 19.

[110] B. Law, *et al*., The Status of Science on Forest Carbon Management to Mitigate Climate Change (June 1, 2020), attached as Ex. 20.

[111] B. Law & W. Moomaw, Keeping trees in the ground where they are already growing is an effective low-tech way to slow climate change, *The Conversation* (Feb. 23, 2021) (emphasis added), attached as Ex. 21, and available at https://theconversation.com/keeping-trees-in-the-ground-where-they-are-already-growing-is-an-effective-low-tech-way-to-slow-climate-change-154618 (last viewed Aug. 6, 2021).

Further, to address the climate crisis, agencies cannot rely on the re-growth of cleared forests to make up for the carbon removed when mature forest is logged. One prominent researcher explains: "It takes at least 100 to 350+ years to restore carbon in forests degraded by logging (Law et al. 2018, Hudiburg et al. 2009). If we are to prevent the most serious consequences of climate change, *we need to keep carbon in the forests because we don't have time to regain it once the forest is logged* (IPCC, 2018)."[112]

Studies also demonstrate that significant volumes – in some cases a majority – of carbon stored in trees are *immediately* lost when trees are logged and milled, and the rest is likely to be returned to the atmosphere sooner than would occur if the trees were left standing.

> [H]arvesting carbon will increase the losses from the forest itself and to increase the overall forest sector carbon store, the lifespan of wood products carbon (including manufacturing losses) would have to exceed that of the forest. Under current practices this is unlikely to be the case. A substantial fraction (25%– 65%) of harvested carbon is lost to the atmosphere during manufacturing and construction depending on the product type and manufacturing method. The average lifespan of wood buildings is 80 years in the USA, which is determined as the time at which half the wood is no longer in use and either decomposes, burns or, to a lesser extent, is recycled. However, many forest trees have the potential to live hundreds of years ….[113]

Other studies indicate that there is little substitution benefit of using wood compared to using other products (e.g., concrete for building), and that industry talking points to the contrary vastly overestimate the carbon benefits of using wood.[114]

Even if the logging permitted in the Salter Project – when viewed in isolation – may only result in relatively minor climate impacts, NEPA expressly requires agencies to consider whether agency actions are "related to other actions with individually insignificant but cumulatively

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[112] B. Law, *et al*., The Status of Science on Forest Carbon Management (Ex. 20) (emphasis added).

[113] B. Law & M.E. Harmon, Forest sector carbon management, measurement and verification, and discussion of policy related to mitigation and adaptation of forests to climate change. Carbon Management (2011) 2(1), attached as Ex. 22, and available at https://www.researchgate.net/publication/235591616_Forest_sector_carbon_management_measurement_and_verification_and_discussion_of_policy_related_to_climate_change (last viewed Aug. 6, 2021).

[114] "Substitution of wood for more fossil carbon intensive building materials has been projected to result in major climate mitigation benefits often exceeding those of the forests themselves. A reexamination of the fundamental assumptions underlying these projections indicates long-term mitigation benefits related to product substitution may have been overestimated 2- to 100-fold." M. Harmon, Have product substitution carbon benefits been overestimated? A sensitivity analysis of key assumptions, Environmental Research Letters (2019), attached as Ex. 23, and available at https://iopscience.iop.org/article/10.1088/1748-9326/ab1e95/pdf (last viewed Aug. 6, 2021).

significant impacts."[115] Thus, the Forest Service may not dismiss and deny the climate impacts of the Salter Project without considering the cumulative significance of the project when added to other past, present, and reasonably foreseeable logging projects and Forest Service timber sales in the Forest, state, region, and nation.[116] The Forest Service failed to address these cumulative effects, violating NEPA.

The Forest Service's approach also violates NEPA because the Forest Service did not use its best efforts or the best available information to address climate impacts. Methods exist that would have allowed the agency to quantify those impacts. For example, a 2018 study concludes that carbon storage impacts can be estimated, accounted for, and factored into a model that calculated the net amount of carbon lost due to forest logging in Oregon over two five-year periods.[117] This is precisely the type of analysis the Forest Service should, and could, have undertaken for Salter EA. The agency's failure to do so, or explain why it need not do so, violates NEPA.

Similarly, Dr. DellaSala's 2016 report addressed carbon stores from wood products and concluded that logging Tongass old-growth forest under the 2016 Forest Plan would result in net annual CO2 emissions totaling between 4.2 million tons and 4.4 million tons, depending on the time horizon chosen.[118] The Bureau of Land Management more than a decade ago completed an EIS for its Western Oregon Resource Management Plan in which that agency also predicted the net carbon emissions from its forest and other resource management programs.[119] Because agencies and academics have quantified and compared the carbon emissions of alternative logging proposals, NEPA requires the Forest Service to do so here.

Further, the agency failed to use, or explain why it could not, the numerous analytical tools touted by the agency on its website, where the Forest Service has touted the importance and merits of its own modeling tools:

> Accurate estimates of carbon in forests are crucial for forest carbon management, carbon credit trading, national reporting of greenhouse gas inventories to the United Nations Framework Convention for Climate Change, calculating estimates

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[115] 40 C.F.R. § 1508.27(b)(7) (2019).

[116] 40 C.F.R. § 1508.7; *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41 (D.D.C. 2019) (holding that BLM erred by failing to consider the cumulative climate impacts of oil and gas leases together with "GHG emissions generated by past, present, and reasonably foreseeable BLM lease sales in the region and nation").

[117] *See* Law *et al*., *Land use strategies* (Ex. 17) at 3664 ("Our LCA [life-cycle assessment] showed that in 2001–2005, Oregon's net wood product emissions were 32.61 million tCO2e [tons of carbon dioxide equivalent in net GHG emissions] (Table S3), and 3.7- fold wildfire emissions in the period that included the record fire year (15) (Fig. 2) In 2011–2015, net wood product emissions were 34.45 million tCO2e and almost 10-fold fire emissions, mostly due to lower fire emissions.").

[118] DellaSala (Ex. 15) at 14.

[119] *See* Bureau of Land Management, Western Oregon Proposed RMP Final EIS (2009) at 165-181, excerpts attached as Ex. 24.

> for the Montreal Process criteria and indicators for sustainable forest management, and registering forest-related activities for state and regional greenhouse gas registries and programs.
>
> Our scientists have contributed to developing a toolbox full of basic calculation tools to help quantify forest carbon for planning or reporting.[120]

Rather than acknowledging current science or availing itself of existing methods for disclosing the climate impacts of logging and burning that the project proposes, the Final EA dismisses any climate impacts as "immeasurable," or "small."

> During project implementation there will be *small, incremental* losses of carbon sequestration due to burning of vegetation and consumption of fossil fuels by equipment. Trees would be harvested over time; however, carbon could continue to be stored in manufactured wood products that used harvested materials (Nunery and Keeton 2010). As implementation proceeds, there will immediately be small, beneficial effects to carbon sequestration due to growth of vegetation. In the long-term, carbon sequestration would be sustainably increased through continuing growth of a healthy forest. The described changes in greenhouse gas emissions resulting from the proposed action is *immeasurable*.[121]

This analysis ignores the best available science, described above, which has concluded that:

- Carbon storage in wood products is minimal compared to the carbon stored in living trees.
- There is no proven benefit to thinning forests in terms of increasing carbon storage.
- The impacts of forest logging projects on carbon stores can be estimated/quantified.
- When the impact of logging on carbon stores is estimated, it can and should be quantified in terms of the impacts of climate pollution on the globe via the social cost of carbon.

Dismissing impacts as "small" and "immeasurable" is not only inaccurate, it is a form of climate denial. Every additional molecule of CO2 emitted into the atmosphere will increase the amount of warming on Earth for centuries to come. Further, dismissing all impacts as "immeasurable" deprives the public and the decisionmaker of any understanding of the relative impacts of each alternative. For example, it is likely that the large tree retention alternative (Alternative 3) will result in the retention of more carbon stores than Alternative 2 because large trees store more carbon than smaller trees.

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[120] Forest Service, Tools for carbon inventory, management, and reporting (Nov. 2018), attached as Ex. 25, and available at https://www.nrs.fs.fed.us/carbon/tools/#cole (last viewed Aug. 6, 2021).

[121] Final EA at 109 (emphasis added).

The Forest Service's failure to address or acknowledge that there are peer-reviewed scientific approaches to estimating net climate damage caused by logging forests is another independent NEPA violation. NEPA requires agencies to explain opposing viewpoints and their rationale for choosing one viewpoint over the other.[122] Courts have set aside agency actions where the agency failed to respond to scientific analysis that called into question the agency's assumptions or conclusions.[123] Nor can agencies decline to disclose the nature and scale of climate pollution impacts because the disclosing such information may be difficult.[124]

Here, the Final EA ignores and contradicts the most recent national policy direction and science on forests and carbon sequestration, including many of the studies attached here. The Final EA ignores years of climate science that: underscores the desperate need for action on climate change; shows that forest logging like that proposed in the Salter Project will likely worsen climate pollution and the climate emergency; and demonstrates, contrary to the Forest Service's lack of analysis, that the Forest Service can quantify the Project's carbon impacts.

The U.S. District Court for the District of Montana earlier this year set aside a federal agency NEPA analysis for failing to quantify the social costs of an agency action's climate pollution.[125] As noted above, President Biden has already announced that his administration would reinstate the Interagency Working Groups' Social Cost of Carbon using a metric that includes global damage from climate-forcing pollution, and the Working Group (which includes the U.S. Department of Agriculture, the Forest Service's parent agency) has set a price for agencies (including the Forest Service) to utilize in their analyses.

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[122] 40 C.F.R. § 1502.9(b) (2019) (requiring agencies to disclose, discuss, and respond to "any responsible opposing view").

[123] *See De La Comunidad v. FERC*, 2021 U.S. App. LEXIS 22881 at *14-*15 (failure to respond to significant opposing viewpoints concerning the adequacy of agency's analyses of the project's greenhouse gas emissions violated NEPA); *Ctr. for Biological Diversity v. U.S. Forest Serv*., 349 F.3d 1157, 1168 (9th Cir. 2003) (finding Forest Service's failure to disclose and respond to evidence and opinions challenging EIS's scientific assumptions violated NEPA); *Seattle Audubon Soc'y v. Moseley*, 798 F. Supp. 1473, 1482 (W.D. Wash. 1992) ("The agency's explanation is insufficient under NEPA – not because experts disagree, but because the FEIS lacks reasoned discussion of major scientific objections."), aff'd sub nom. *Seattle Audubon Soc'y v. Espy*, 998 F.2d 699, 704 (9th Cir. 1993) ("[i]t would not further NEPA's aims for environmental protection to allow the Forest Service to ignore reputable scientific criticisms that have surfaced").

[124] *See* 40 C.F.R. § 1502.22 (1978) (concerning agency duty to disclose allegedly unavailable information); *De La Comunidad v. FERC* (citing same).

[125] *WildEarth Guardians v. Bernhardt*, 2021 U.S. Dist. LEXIS 20792 at *25-*32, 2021 WL 363955, CV 17-80-BLG-SPW (D. Mont. Feb. 3, 2021) (endorsing magistrate judge's determination that the Office of Surface Mining "failed to take a 'hard look' at the costs of greenhouse gas emissions and failed to reasonably justify its reasoning for not quantifying the costs of the mining plan when the Social Cost of Carbon Protocol ... was available to do just that").

We note that the Final EA, like the Draft, continues to rely on agency direction that is out of date and out of step with the present administration. The Forest Service relies on guidance entitled "Climate Change Considerations in Project Level NEPA Analysis," a flawed document that was the product of the final week of the George W. Bush administration in January 2009, and that has long been overtaken by both federal case law and CEQ's 2016 guidance, now restored, requiring robust project level NEPA analysis and improved modeling and scientific data.[126] The Forest Service cannot continue to rely on the 2009 guidance document unless and until it can explain how that guidance comports with current administration direction, CEQ guidance, and caselaw. Further, the Forest Service's approach here contradicts CEQ's 2016 guidance which directs that "resource management agencies should include a comparison of estimated net GHG emissions and carbon stock changes that are projected to occur with and without implementation of proposed land or resource management actions."[127]

Finally, while the Forest Service may assert that the logging the forest will prevent fires that will result in greater carbon pollution, at least one study found the opposite: that at least at an aggregate level, logging resulted in many times more carbon pollution than did wildfire.[128] The Forest Service failed to address or respond to this study, violating NEPA.

b. The Forest Service fails to disclose and quantify the carbon pollution of implementing the Salter Project.

Logging and burning within the project area for a decade will require the use of heavy equipment, almost certainly exclusively powered by fossil-fueled engines, to bulldoze a vast network of up to 117 miles of temporary road, to "reconstruct" other roads, and to chainsaw forests, remove trees, and take them to market. This activity will result in greenhouse gas pollution that will worsen climate change for centuries, and that pollution caused by the proposed action will be over and above the pollution that will occur under the no action alternative. The Final EA fails to estimate or otherwise address such impacts, saying only that "During project implementation there will be small, incremental losses of carbon sequestration due … consumption of fossil fuels by equipment."[129] The Final EA similarly fails to disclose how such pollution would vary by alternative.

[126] *See* Final EA at 109 (explicitly relying on Forest Service Jan. 2009 guidance).

[127] CEQ 2016 Climate Guidance (Ex. 12) at 26.

[128] N.L. Harris et al., Attribution of net carbon change by disturbance type across forest lands of the conterminous United States, Carbon Balance and Management (2016), attached as Ex. 26, and available at https://www.fs.fed.us/nrs/pubs/jrnl/2016/nrs_2016_harris_001.pdf (last viewed Aug. 6, 2021).

[129] Final EA at 109.

This contrasts to the approach taken elsewhere by the Forest Service and other agencies, such as the Office of Surface Mining, which have disclosed in NEPA documents the estimated pollution from internal combustion engines necessary to mine, process, and ship coal to market.[130]

We do not endorse as sufficient either the OSM or the Forest Service's Federal Coal Lease Modifications analyses cited, but they demonstrate that agencies (including the Forest Service itself) can and do attempt to disclose direct climate emissions from construction and transport activities. The Forest Service failed to respond to this comment in any way, and failed to address the science indicating such analysis is possible. The Forest Service provides no reasonable basis for failing to do the same for the Salter Project, and thus violates NEPA and the Administrative Procedure Act.

> *Suggested Remedy*. The San Juan National Forest should prepare a supplemental NEPA document, preferably a Draft EIS, that quantifies and discloses the climate impacts of the project's removal of trees, and that quantifies and discloses the climate impacts of logging, hauling, and processing timber.

III. THE FINAL EA'S RELIANCE ON 'ADAPTIVE MANAGEMENT' VIOLATES NEPA.

The Salter Final EA relies in part on an "adaptive management" strategy to "inform implementation and to provide the opportunity to solicit input from partners that could be incorporated into the decision making process when addressing changing conditions on the ground in real-time."[131] The Final EA states that pursuant to this plan, "[a]djustments to prescriptions could be made at any time as long as they are within the scope of this analysis."[132]

To be effective and legal, adaptive management must: (1) clearly identify measurable thresholds that, if exceeded as determined by monitoring, will require a change in management; (2) clearly identify what that changed management will entail; and (3) disclose in this NEPA document the impacts caused by that change in management. Because the Final EA, like the Draft, fails on at

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[130] *See, e.g.*, Office of Surface Mining & Bureau of Land Management, Environmental Assessment, Colowyo Coal Mine Collom Permit Expansion Area Project (Jan. 2016) at 4-15 – 4-18 (including table assessing "direct GHG emissions" from "drills," "dozers," "graders," "haul trucks," etc., for the proposed action), excerpts attached as Ex. 27; U.S. Forest Service, Supplemental Final Environmental Impact Statement, Federal Coal Lease Modifications COC-1362 & COC-67232 (Aug. 2017) at 102-113 (publishing tables estimating emissions of air pollutants, including greenhouse gases CO2 and Ch4 (methane) for activities including road and well pad construction, heavy equipment use, and commuter vehicle trips for the no action and proposed action alternatives), excerpts attached as Ex. 28.

[131] Final EA at 29.

[132] Final EA at 29.

least the last count, the Forest Service cannot rely on the adaptive management strategy as divulged in the EA.[133]

A. The Law of Adaptive Management.

Forest Service NEPA regulations, adopted in 2008, define adaptive management as "[a] system of management practices based on *clearly identified intended outcomes and monitoring* to determine if management actions *are meeting those outcomes*; and, if not, to facilitate management changes that will best ensure that those outcomes are met or re-evaluated. Adaptive management stems from the recognition that knowledge about natural resource systems is sometimes uncertain."[134] These regulations further state that:

> An adaptive management proposal or alternative must *clearly identify the adjustment(s) that may be made* when monitoring during project implementation *indicates that the action is not having its intended effect*, or is causing unintended and undesirable effects. The EIS must disclose not only the effect of the proposed action or alternative *but also the effect of the adjustment*. Such proposal or alternative must also *describe the monitoring that would take place* to inform the responsible official during implementation whether the action is having its intended effect.[135]

The preamble to the Forest Service's regulation that adopted the adaptive management definition states that the agency must identify the proposed changes, and their impacts, in the NEPA document. "When proposing an action the responsible official may identify possible adjustments that may be appropriate during project implementation. Those possible adjustments must be described and their effects analyzed in the EIS." 73 Fed. Reg. 43,084, 43,090 (July 24, 2008).

Federal courts have found agencies violated NEPA or the Endangered Species Act (ESA) where the agency relied on an "adaptive management" plan that was vague, set no specific triggers for future action, failed to describe that future action, or failed to ensure that resources will be protected as the adaptive management plan asserts.

In *Natural Resources Defense Council v. U.S. Army Corps of Engineers*, 457 F. Supp. 2d 198 (S.D.N.Y. 2006), the court found that the Army Corps' attempt to supplement an inadequately-explained finding of no significant impact concerning a dredging project was arbitrary and capricious where the agency relied on ill-defined "adaptive management" protocols to conclude that impacts would be mitigated below the level of significance.

> The EA makes several promises that it will alter its monitoring plan should it prove necessary. For example, the EA relies on a general promise that it will "as

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[133] The Center and Guardians raised each of the issues discussed in this section with the Forest Service in comments on the Draft EA. *See* Center Draft EA Comment (Ex. 1) at 27-31. The Forest Service failed to respond to our letter in any way.

[134] 36 C.F.R. § 220.3 (emphasis added).

[135] 36 C.F.R. § 220.5(e)(2) (emphasis added).

> appropriate, reevaluate, the need for altering its dredging methods" … through the use of its coordination plan and monitoring program. The EA also explains that the Corps will follow "adaptive management practices as it moves through construction of its contracts," thus allowing it to change future contracts should the data indicate it is necessary. These promises, however, provide no assurance as to the efficacy of the mitigation measures. The Corps did not provide a proposal for monitoring how effective "adaptive management" would be.[136]

Mountaineers v. United States Forest Service, 445 F. Supp. 2d 1235 (W.D. Wash. 2006) set aside a Forest Service decision to open motor vehicle trails where the agency proposed to monitor impacts to wildlife and potentially change the trails later based on an adaptive management plan. The court stated that these adaptive management strategies "amount … to a 'build-first, study later' approach to resource management. This backward-looking decision making is not what NEPA contemplates."[137] Other cases similarly conclude that NEPA forbids the use of ill-defined adaptive management plans to assume away likely impacts of agency action.[138]

Courts also hold unlawful agency projects that may impact species protected by the Endangered Species Act where the biological opinion is based on the assumption that a vague and ill-defined monitoring and adaptive management plan will mitigate impacts to the species at issue. These cases provide a useful analogy to adaptive management in the NEPA context. *Natural Resources Defense Council v. Kempthorne*, 506 F. Supp. 2d 322 (E.D. Ca. 2007) is key precedent. There, plaintiffs challenged a proposed plan to manage water diversions in a manner that could adversely impact the delta smelt, a species listed as threatened under the Endangered Species Act. The Fish and Wildlife Service prepared a biological opinion (BiOp) on the proposal which concluded that the project would neither jeopardize the smelt nor adversely modify the smelt's critical habitat. "Although the BiOp recognize[d] that *existing* protective measures may be inadequate, the FWS concluded that certain proposed protective measures, including … a proposed 'adaptive management' protocol would provide adequate protection."[139]

Plaintiffs alleged, among other things, that the BiOp "relie[d] upon uncertain (and allegedly inadequate) adaptive management processes to monitor and mitigate the [project's] potential impacts."[140] They asserted that the adaptive management plan, which required a working group meet and consider adaptive measures in light of monitoring, failed to meet the ESA's mandate that mitigation be

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[136] *NRDC v. United States Army Corps of Eng'rs*, 457 F. Supp. 2d at 234 (citations omitted).

[137] *Mountaineers v. United States Forest Serv.*, 445 F. Supp. 2d at 1250.

[138] *See, e.g., High Sierra Hikers Association v. Weingardt*, 521 F. Supp. 2d 1065, 1090-91 (N.D. Ca. 2007) (overturning a Forest Service decision to liberalize the rules limiting campfires in high country parts of a wilderness area on the grounds that the agency could not rely on adaptive management to overcome an inadequate response to the problems raised in the record).

[139] *NRDC v. Kempthorne*, 506 F. Supp. 2d at 333-34 (emphasis in original).

[140] *Id.* at 329.

> "'reasonably specific, certain to occur, and capable of implementation'" because: (1) the [working group] has complete discretion over whether to meet and whether to recommend mitigation measures; (2) even if the [working group] meets and recommends mitigation measures, the [agency management team] group is free to reject any recommendations; (3) there are no standards to measure the effectiveness of actions taken; (4) reconsultation is not required should mitigation measures prove ineffective; and (5) ultimately, no action is ever required.[141]

The *Kempthorne* court cited prior caselaw holding that "a mitigation strategy [in the ESA context] must have some form of measurable goals, action measures, and a certain implementation schedule; i.e., that mitigation measures must incorporate some definite and certain requirements that ensure needed mitigation measures will be implemented."[142] The court found that adaptive management plan "does not provide the required reasonable certainty to assure appropriate and necessary mitigation measures will be implemented."[143] The court concluded that

> Adaptive management is within the agency's discretion to choose and employ, however, the absence of any definite, certain, or enforceable criteria or standards make its use arbitrary and capricious under the totality of the circumstances.[144]

B. The Final EA's Plan Does Not Comply with Law for Adaptive Management.

Although the Final EA states that it relies on adaptive management, the proposal it describes does not contain key elements required to comply with NEPA. While adaptive management may be an appropriate tool to assist in management of the Salter Project area, we urge the Forest Service, as part of the NEPA process, to develop a more detailed plan, identify specific management changes in case those triggers are met, and analyze and disclose the impacts of those changes.

The adaptive management approach described in the Final EA fails to "clearly identify the adjustment(s) that may be made when monitoring during project implementation indicates that the action is not having its intended effect."[145] The Final EA includes vaguely-described adjustments, which violates Forest Service rules concerning adaptive management. For example, proposed "adaptive management actions" for several proposed factors includes – or is limited to – a statement that the agency will "Monitor and adjust" or "Monitor and adjust … as needed."[146]

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[141] *Id.* at 352. *See also id.* at 350 (explaining the "certain to occur" standard and citing *Ctr. for Biological Diversity v. Rumsfeld*, 198 F. Supp. 2d 1139, 1152 (D. Ariz. 2002)).

[142] *Id*. at 355 (citing *Rumsfeld*, 198 F. Supp. 2d at1153).

[143] *Id*. at 356.

[144] *Id*. at 387.

[145] 36 C.F.R. § 220.5(e)(2) (emphasis added).

[146] Final EA at 32.

This provides neither the Forest Service nor the public with any detail about how the agency might "adjust" its actions.

And because the Final EA does not explain what those "adjustment" may entail, the proposed adaptive management plan violates Forest Service regulations requiring that the NEPA analysis "disclose not only the effect of the proposed action or alternative *but also the effect of the adjustment*."[147] The Final EA, like the Draft, fails to disclose what the impacts will be if actions are adjusted pursuant to adaptive management.

The Forest Service has the authority to change a project and/or approve new actions within a project area in response to changes, but it can do so only in accordance with NEPA and the agency's own regulations. The adaptive management plan in the Final EA currently fails to comply with these laws. We urge the Forest Service to develop a specific plan in cooperation with the public and all stakeholders before it issues any additional NEPA document or proposed decision.

> <u>*Suggested Remedy*</u>. The San Juan National Forest should prepare a supplemental NEPA document, preferably a Draft EIS, that properly applies the agency's law and policy regarding adaptive management, or explain that it is not using that approach.

IV. THE FINAL EA FAILS TO ANALYZE A RANGE OF REASONABLE ALTERNATIVES.

In taking the "hard look" at impacts that NEPA requires, an EA must "study, develop, and describe" reasonable alternatives to the proposed action.[148] The Tenth Circuit explains that this mandate extends to EAs as well as EISs. "A properly-drafted EA must include a discussion of appropriate alternatives to the proposed project."[149] This alternatives analysis "is at the heart of the NEPA process, and is 'operative even if the agency finds no significant environmental impact.'"[150] Reasonable alternatives must be analyzed for an EA even where a FONSI is issued because "nonsignificant impact does not equal no impact. Thus, if an even less harmful alternative is feasible, it ought to be considered."[151] When an agency considers reasonable alternatives, it "ensures that it has considered all possible approaches to, and potential

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[147] 36 C.F.R. § 220.5(e)(2) (emphasis added).

[148] 42 U.S.C. § 4332(2)(C) & (E); 40 C.F.R. § 1508.9(b) (an EA "[s]hall include brief discussions ... of alternatives").

[149] *Davis v. Mineta*, 302 F.3d 1104, 1120 (10th Cir. 2002) (granting injunction where EA failed to consider reasonable alternatives).

[150] *Diné Citizens Against Ruining Our Env't v. Klein*, 747 F. Supp. 2d 1234, 1254 (D. Colo. 2010) (quoting *Greater Yellowstone Coal. v. Flowers*, 359 F.3d 1257, 1277 (10th Cir. 2004)). *See also W. Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013) (in preparing EA, "an agency must still give full and meaningful consideration to *all* reasonable alternatives" (emphasis added) (internal quotation and citation omitted)); 40 C.F.R. § 1502.14 (describing alternatives analysis as the "heart of the environmental impact statement").

[151] *Ayers v. Espy*, 873 F. Supp. 455, 473 (D. Colo. 1994) (internal citation omitted).

environmental impacts of, a particular project; as a result, NEPA ensures that the most intelligent, optimally beneficial decision will ultimately be made."[152]

In determining whether an alternative is "reasonable," and thus requires detailed analysis, courts look to two guideposts: "First, when considering agency actions taken pursuant to a statute, an alternative is reasonable only if it falls within the agency's statutory mandate. Second, reasonableness is judged with reference to an agency's objectives for a particular project."[153] Any alternative that is unreasonably excluded will invalidate the NEPA analysis. "The existence of a viable but unexamined alternative renders an alternatives analysis, and the EA which relies upon it, inadequate."[154] The agency's obligation to consider reasonable alternatives applies to citizen-proposed alternatives.[155]

Courts hold that an alternative may not be disregarded merely because it does not offer a complete solution to the problem.[156] Even if additional alternatives would not fully achieve the project's purpose and need, NEPA "does not permit the agency to eliminate from discussion or consideration a whole range of alternatives, merely because they would achieve only some of the purposes of a multipurpose project."[157] If a different action alternative "would only partly meet the goals of the project, this may allow the decision maker to conclude that meeting part of the goal with less environmental impact may be worth the tradeoff with a preferred alternative that has greater environmental impact."[158]

The courts also require that an agency adequately and explicitly explain in the EA any decision to eliminate an alternative from further study.[159]

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[152] *Wilderness Soc'y v. Wisely*, 524 F. Supp. 2d 1285, 1309 (D. Colo. 2007) (quotations & citation omitted).

[153] *Diné Citizens Against Ruining Our Env't*, 747 F. Supp. 2d at 1255 (quoting *New Mexico ex rel. Richardson*, 565 F.3d at 709).

[154] *Id.* at 1256.

[155] *See Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin*., 538 F.3d 1172, 1217-19 (9th Cir. 2008) (finding EA deficient, in part, for failing to evaluate a specific proposal submitted by petitioner); *Colo. Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1171 (10th Cir. 1999) (agency's "[h]ard look" analysis should utilize "*public comment* and the best available scientific information") (emphasis added).

[156] *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 836 (D.C. Cir. 1972).

[157] *Town of Matthews v. U.S. Dep't. of Transp.*, 527 F. Supp. 1055 (W.D. N.C. 1981).

[158] *North Buckhead Civic Ass'n v. Skinner*, 903 F.2d 1533, 1542 (11th Cir. 1990).

[159] *See Wilderness Soc'y*, 524 F. Supp. 2d at 1309 (holding EA for agency decision to offer oil and gas leases violated NEPA because it failed to discuss the reasons for eliminating a "no surface occupancy" alternative); *Ayers*, 873 F. Supp. at 468, 473.

A. The Forest Service Must Consider Alternatives that Limit the Logging of Large or Old Trees.[160]

Large and old ponderosa pine trees are relatively rare now in the Southwest compared to the period before European settlement because they were heavily logged over the last 150 years. Large, old ponderosa serve valuable ecosystem functions, have outsize value for wildlife, are more fire resistant, serve as important storehouses of genetic diversity, and store significant amounts of carbon.[161] The Forest Service confirms that large and old trees are the rarest cohort of trees in the Salter Project area, with almost no trees larger than 26" dbh, and a relatively small fraction above 20" dbh.[162]

A recent scientific review, whose authors include many Forest Service researchers, confirms the importance of protecting large, old trees to improve forest resilience and protection wildlife.[163] The study, among other things, states:

> "Forest thinning in these forest types [should be] aimed *at retaining larger, more fire-resilient tree species*, and restoring open canopy structure."[164]
>
> "Fuel treatments that modify within-stand structure to remove small trees and reduce surface fuels *while retaining large, more fire-resistant trees* and variable stand structure (Stephens et al. 2021) are most appropriate in dry pine, dry to moist mixed-conifer forests and oak woodlands, particularly where there is evidence that older fire-resistant species have been or are being replaced by younger fire-sensitive species (e.g. Yocom-Kent et al. 2015)."[165]
>
> "[*T]reatments that restore the ecological resilience of old-growth forests and patches with large and old trees are critical to long term maintenance of wildlife habitats* (Hessburg et al. 2020) of seasonally dry forests and terrestrial carbon

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[160] The Center and Guardians raised each of the issues discussed in this section with the Forest Service in comments on the Draft EA. *See* Center Draft EA Comment (Ex. 1) at 31-36. The Forest Service failed to respond to our letter in any way.

[161] *See, e.g.*, Four Forest Restoration Initiative, Old Growth Protection & Large Tree Retention Strategy (Sep. 13, 2011) at 3-4 (citing numerous studies), attached as Ex. 29.

[162] *See* Final EA at 7 (Figure 4) (showing no trees over 29" dhb).

[163] S. J. Pritchard, P. *et al*., Adapting western North American forests to climate change and wildfires: ten common questions, *Ecological Applications* (July 2021), attached as Ex. 30, and available at https://esajournals.onlinelibrary.wiley.com/doi/epdf/10.1002/eap.2433 (last viewed Aug. 6, 2021).

[164] *Id*. at PDF page 11 (emphasis added).

[165] *Id*. at PDF page 13 (emphasis added).

> stocks, and slowing the feedback cycle between fire and climate change (Hurteau and North 2009)."[166]
>
> "Several studies highlight that the most effective fuel treatments include coupled thinning and burning (Kalies and Yocom Kent 2016), *and emphasize the importance of retaining large, fire-resistant trees* in dry mixed conifer forests (Agee and Skinner 2005, DellaSala et al. 2004, Stephens et al. 2009)."[167]
>
> "Although the management situation for wNA [western North America] forests is daunting, our review of the scientific literature offers clear guidance. In seasonally dry wNA forests that were historically dominated by fire-resistant species, restoring open, fire-tolerant canopy structure and composition, *favoring larger tree sizes*, and reducing surface fuels can effectively mitigate subsequent wildfire and stabilize carbon stocks (Fig. 1)."[168]

As a result, numerous studies, collaboratives, and Forest Service decisions have emphasized the need to protect large and old ponderosa pine trees in order to achieve both ecological restoration and greater resilience to catastrophic events such as wildfire and insect infestations. These decisions have often done so by setting an upper limit for the size of trees that can be logged for forest management.

For example, the Four Forest Restoration Initiative, a collaborative guided by science and working to improve management on forests in northern Arizona, has adopted an "Old Growth Protection & Large Tree Retention Strategy."[169] As part of that strategy, "the 4FRI Collaborative has agreed that the 4FRI effort should implement large tree retention and old growth protection strategies that are … are based upon a 16" diameter threshold that limits the cutting of trees larger than 16" to circumstances and criteria set forth in pre-defined exception categories."[170] A similar collaborative in New Mexico agreed that "It is generally advisable to maintain ponderosa pines larger than 41 cm (16 inches) diameter at breast height (dbh) and other trees with old-growth morphology regardless of size (e.g. yellow-barked ponderosa pine or any species with large drooping limbs, twisted trunks or flattened tops)."[171]

One peer-reviewed study concludes:

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[166] *Id*. at PDF page 22 (emphasis added).

[167] *Id*. at PDF page 27 (emphasis added).

[168] *Id*. at PDF page 34 (emphasis added).

[169] Four Forest Restoration Initiative, Old Growth Protection & Large Tree Retention Strategy (Ex. 29).

[170] *Id*. at 7.

[171] U.S. Forest Service *et al.*, New Mexico Forest Restoration Principles (May 2006), attached as Ex. 31, available at https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5207898.pdf (last viewed Aug. 6, 2021).

> Large and old trees, especially those established before ecosystem disruption by Euro-American settlement, are rare, important, and difficult to replace. Their size and structural complexity provide critical wildlife habitat by contributing crown cover, influencing understory vegetation patterns, and providing future snags. Ecological restoration should protect the largest and oldest trees from cutting and crown fires, focusing treatments on excess numbers of small young trees. Given widespread agreement on this point, *it is generally advisable to retain ponderosa trees larger than 41 cm (16 inches) dbh and all trees with old-growth morphology regardless of size (i.e., yellow bark, large drooping limbs, twisted trunks, flattened tops)*. Despite the heterogeneity of forest site and stand conditions in the Southwest, cutting of larger trees will seldom be ecologically warranted as ''restoration'' treatments at this time due to their relative scarcity. Following this guideline would significantly reduce hazards of stand-replacing fires in most cases and also favor the development of future old-growth forest conditions (Moir and Dieterich 1988, Harrington and Sackett 1992).[172]

This article notes that managing ponderosa pine forests for ecological restoration can also help increase forest resilience.[173]

For the San Juan National Forest, the Forest Service and other stakeholders joined to establish the Ponderosa Pine Partnership (PPP) in the early 1990s. The Partnership developed "An Ecological Prescription for the San Juan Pine Zone," including this prescription: "Retain large trees. Any trees 20 inches or larger in diameter should be retained. In stands with smaller trees, the largest trees should be retained."[174] The San Juan National Forest developed and partially implemented two projects under the PPP, including the Guard Station and Ferris East timber sales. Both of these timber sales included diameter limits. The Guard Station Decision Notice prohibited the logging of trees over 16 inches dbh; the Ferris East Decision notice barred logging of ponderosa over 20 inches dbh.[175] Each of the sales was designed to meet goals that included forest restoration, supplying the needs of the local wood products industry, and reducing the risk of catastrophic wildfire.[176]

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[172] Allen *et al*., Ecological Restoration of Southwestern Ponderosa Pine Ecosystems: A Broad Perspective, Ecological Applications, 12(5) (2002) at 1425, attached as Ex. 32.

[173] *Id*. at 1429 (emphasis added).

[174] D. Lynch, Forest Restoration in Southwestern Ponderosa Pine, Journal of Forestry (Aug. 2000) at 17, attached as Ex. 33.

[175] San Juan National Forest, Guard Station Timber Sale, Decision Notice (May 1996) at 3 ("Cut no trees greater than 16" diameter breast height (DBH)"), attached as Ex. 34; San Juan National Forest, Ferris East Timber Sale, Decision Notice (Feb. 1998) at 3 ("No ponderosa pine in excess of 20 inches in diameter at breast height (DBH) will be harvested."), attached as Ex. 35.

[176] *Id*.

This science and social history demonstrate that diameter limits in ponderosa pine on the San Juan National Forest are reasonable, and should be considered in any NEPA analysis concerning logging in such pine forests.

1. The Final EA fails to address the key differences between Alternatives 2 and 3.

The Salter Project identifies purposes similar to those identified for the Guard Station and Ferris East projects, and proposes one alternative, Alternative 3, that would protect large and old trees over 20 inches dbh.

We appreciate the Forest Service analyzing Alternative 3 in detail. However, the Final EA, like the Draft, fails to disclose the different impacts of the two action alternatives.

The Final EA concludes that there would be virtually no difference in the impacts between Modified Alternative 2 (which protects the tiny fraction of trees 26.9" dbh and larger) and Alternative 3 for most of the resources analyzed. For example, the Final EA states that there would be no difference in the impacts of the two alternatives with respect to fuels and fire management: "the direct, indirect, and cumulative effects to fuels and fire management of both action alternatives *are the same*."[177] The Final EA also concludes the impacts to watersheds would be the same, and repeatedly concludes that impacts to different wildlife species under the two alternatives would be "similar."[178]

While for almost every resource the Forest Service concludes that the impacts of the two action alternatives would be the same or similar, the Final EA concludes that Alternative 3's large tree retention limits would allow the San Juan NF to meet "desired conditions … to a lesser degree" at "specific locations" (which the EA does not identify) and "over time and over cutting cycles" (though for how long is not specified).[179] The Final EA further states that under Alternative 3: "Basal area retention goals and uneven aged characteristics are being compromised, leaving stands less resilient and making long term resistance less likely to occur."[180] The EA does not disclose how much less resilient, or what the impacts of that allegedly reduced resilience might be. Because the EA concludes that there is little or no difference between Alternatives 2 and 3 in terms of their impact on fire management, watersheds, and wildlife, the level of reduced resilience would appear to be minimal at most.

The Final EA does identify one major difference: "Removing areas from treatment as result of diameter limitation reduces the amount of treatment in an area and subsequently *the amount of harvestable volume per acre*."[181] This would appear to be the primary trade-off between the two alternatives: increased volume (and perhaps a minimal amount of increased resilience) vs.

[177] Final EA at 41 (emphasis added).

[178] Final EA at 70-72 (watersheds), 80, 82, 84 (wildlife).

[179] Final EA at 66.

[180] Final EA at 66.

[181] Final EA at 66 (emphasis added).

increased protection for old and large trees. But the EA fails to sharply define the differences between the two action alternatives by failing to quantify (or qualify) the *level* of difference for any of these factors: how much extra timber would be available for mills under Alternative 2? How much additional resilience would Alternative 2 provide compared to Alternative 3? How many more large trees would remain under Alternative 3 and what would that mean for the potential for increased wildlife snags, carbon storage, etc.? Because the Forest Service fails to grapple with these critical issues, the alternatives analysis fails to address the "heart" of the environmental analysis, violating NEPA.

> *Suggested Remedy.* The San Juan National Forest should prepare a supplemental NEPA document, preferably a Draft EIS, that discloses and quantifies the differences between the two action alternatives, including but not limited to the differences in the volume of timber removed from the Forest.

2. The Forest Service should analyze a restoration alternative that protects trees 16" dbh and larger.

Because the PPP recommended protecting trees 16" dbh and larger in some cases, and because the Forest Service found little difference between Alternatives 2 (modified or not) and 3, we specifically requested that the Forest Service analyze in detail (or explain why it cannot) an alternative that protects trees 16" dbh and larger.[182] Analyzing such an alternative would allow the public and the decisionmaker to compare the relative merits of protecting different size classes of trees, and to understand whether protecting trees 20" dbh (per Alternative 3) is a reasonable middle ground. It is also an alternative that is most likely to protect all pre-settlement trees, which studies have concluded is critical to restore ponderosa pine forests in the Southwest.

Neither the Final EA nor the Draft Decision Notice responds in any way to this proposed alternative, violating NEPA, which federal courts in Colorado have held requires the agency to analyze reasonable alternatives suggested by the public or provide a reasonable explanation for not doing so.[183]

> *Suggested Remedy*. The San Juan NF should prepare a supplemental NEPA document, preferably a Draft EIS, that analyzes a restoration alternative that protects trees 16" dbh and larger.

V. THE FINAL EA FAILS TO ACCOUNT FOR STUDIES PREDICTING THE IMPACT OF CLIMATE CHANGE TO THE FOREST IN THE PROJECT AREA.

For the Final EA to meet NEPA's mandate that environmental analysis include information "of high quality" and must include "[a]ccurate scientific analysis."[184]

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[182] *See* Center Draft EA Comment (Ex. 1) at 35-36.

[183] *Wilderness Soc'y v. Wisely*, 524 F. Supp. 2d at 1309 (D. Colo. 2007).

[184] 40 C.F.R. § 1500.1(b).

Forests within the project area are likely to undergo significant changes in the coming years due to climate change. However, the Final EA, fails to account for the fact that these changes may undercut key project assumptions and goals. The Forest Service's failure to accurately address these impacts by including and addressing in detail relevant, expert information violates NEPA.[185]

The Salter Project is premised in part on the conclusion that thinning and other logging projects would, over the "long term," enhance the forest's resilience to fire, insect infestation, and drought; all of these threats are driven and exacerbated by climate change. The likelihood that the project could achieve benefits over the long term must be weighed against the predicted impacts of climate change, which could make the recovery of ponderosa pine in this area difficult if not impossible, even assuming the Salter treatments take place.

A Forest Service study concluded that by the 2050s to 2060s, current forest types in the project area will be lost due to climatic changes brought on by the warming of the planet due to anthropogenic climate change.

In 2017, Forest Service Rocky Mountain Region staff and researchers presented results from bioclimate models concluding that ponderosa pine would likely be lost from the Salter Project area in the 2056-65 time period.[186]

The Final EA fails to cite or directly respond to this expert study generated by the Forest Service; the agency must do both in any subsequently prepared NEPA document to comply with the law. Indeed, the Final EA fails to identify climate change as something likely to have a cumulative impact on vegetation, relegating discussion of the issue to a section the Draft EA entitled "Resources dismissed from detailed analysis," but that the Final EA renamed "Other Disclosures," and buried in an appendix.[187] This appears to directly conflict with Forest Plan direction that requires vegetation management will "anticipates[]climate-related plant succession changes."[188]

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[185] The Center and Guardians raised each of the issues discussed in this section with the Forest Service in comments on the Draft EA. *See* Center Draft EA Comment (Ex. 1) at 36-37.

[186] J. Worrall *et al*., Projected Impacts of Climate Change on Forests of the Dolores Watershed, presentation to the Dolores Watershed Resilient Forest Collaborative (2017) at slides 29, 39 & 52 (showing results of bioclimate models predicting the likely persistence of various forest types, which characterize ponderosa pine as "lost" for most of the project area), attached as Ex. 36, and available at http://dwrfcollaborative.org/wp/wp-content/uploads/2018/06/projected-impacts-of-climate-change-on-forests-of-the-dolores-watershed.pdf (last viewed Aug. 6, 2021). Other forest types will suffer in the area as well. *See id.* at slide 33 (showing Gambel oak "threatened"); *id*. at slide 35 (showing aspen "lost" in the project area, even in a "favorable climate" scenario).

[187] *See* Draft EA at 102-03; Final EA at 109.

[188] Final EA at 10 (quoting San Juan Forest Plan at 2.9.1).

At a bare minimum, the Forest Service should have been honest with the public about the likely fate of the forest in the Salter area in light of climate change, and what that means about the efficacy of the project. The Final EA failed to take this required step, violating NEPA.

Suggested Remedy. The San Juan NF should prepare a supplemental NEPA document, preferably a Draft EIS, that

VI. THE FINAL EA FAILS TO RESPOND TO SCIENTIFIC EXPERTS AND CONFLICTING SCIENTIFIC CONCLUSIONS.

A. NEPA Requires Agencies to Respond to Comments, Especially Opposing Scientific Views.

NEPA requires agencies to explain opposing viewpoints and their rationale for choosing one viewpoint over the other.[189] Federal courts have set aside NEPA analysis where the agency failed to respond to scientific analysis that calls into question the agency's assumptions or conclusions.[190]

B. The Final EA Fails to Address or Acknowledge Expert Opinions of Forest Scientists.

The Final EA fails to respond or acknowledge comments timely submitted by Dr. Bill Baker in March 2020 concerning scoping, and in February 2021 responding to the Draft EA.[191] Nor does the Final EA address or respond to the studies he cited questioning the efficacy of the treatments the Forest Service proposes, or those studies demonstrating the need to protect old and large

[189] 40 C.F.R. § 1502.9(b) (requiring agencies to disclose, discuss, and respond to "any responsible opposing view").

[190] *See De La Comunidad v. FERC*, 2021 U.S. App. LEXIS 22881 at *14-*15 (finding agency violated NEPA where it "failed to respond to significant opposing viewpoints concerning the adequacy of its analyses"); *Ctr. for Biological Diversity v. U.S. Forest Serv.*, 349 F.3d 1157, 1168 (9th Cir. 2003) (finding Forest Service's failure to disclose and respond to evidence and opinions challenging EIS's scientific assumptions violated NEPA); *Seattle Audubon Soc'y v. Moseley,* 798 F. Supp. 1473, 1482 (W.D. Wash. 1992) ("The agency's explanation is insufficient under NEPA – not because experts disagree, but because the FEIS lacks reasoned discussion of major scientific objections."), *aff'd sub nom. Seattle Audubon Soc'y v. Espy,* 998 F.2d 699, 704 (9th Cir. 1993) ("[i]t would not further NEPA's aims for environmental protection to allow the Forest Service to ignore reputable scientific criticisms that have surfaced"); *High Country Conservation Advocates v. Forest Service*, 52 F. Supp. 3d 1174, 1198 (D. Colo. 2014) (finding Forest Service violated NEPA by failing to mention or respond to expert report on climate impacts).

[191] Dr. Baker's comments, and studies he cited, are in the Salter project file. The Center and Guardians raised each of the issues discussed in this section with the Forest Service in comments on the Draft EA. *See* Center Draft EA Comment (Ex. 1) at 37-38.

trees. Merely citing some of these studies in the EA's "References" section is not sufficient to comply with NEPA's hard look mandate.

Among other things, Dr. Baker's comments presented a detailed reconstruction of ponderosa pine diameter distributions under the historic range of variability (HRV) for an area that includes the Salter Project area, and which demonstrated the importance of retaining trees 16" dbh and larger, given the current deficit in those size classes compared to the HRV. The Forest Service violated NEPA by failing to acknowledge, review, respond to, or incorporate the data and scientific Dr. Baker presented in comments on scoping and in comments on the Draft EA.

Further, the Final EA fails to address Worrall's conclusion that much of the Salter Project area may be devoid of ponderosa pine by 2065.

> *Suggested Remedy*. The San Juan NF should prepare a supplemental NEPA document, preferably a Draft EIS, responding to experts who question the utility and impacts of the Salter proposal.

VII. THE FINAL EA FAILS TO ANALYZE THE EFFECTIVENESS OF MITIGATION MEASURES.

A. NEPA Mandates That Agencies Analyze Potential Mitigation Measures.

NEPA's statutory language implicitly charges agencies with mitigating the adverse environmental impacts of their actions.[192] NEPA's implementing regulations require that agencies analyze the effectiveness of proposed mitigation measures.[193]

The CEQ also has stated: "All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperation agencies."[194] According to the CEQ, "[a]ny such measures that are adopted must be explained and committed in the ROD."[195]

The Tenth Circuit has held that an agency's analysis of mitigation measures "must be 'reasonably complete' in order to 'properly evaluate the severity of the adverse effects' of a

[192] *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351-52 (1989); *Holy Cross Wilderness Fund v. Madigan*, 960 F.2d 1515, 1522 (10th Cir. 1992).

[193] 40 C.F.R. §§ 1502.14(f), 1502.16(h).

[194] Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18026, 18031 (March 23, 1981).

[195] Forty Questions, 46 Fed. Reg. at 18036.

proposed project prior to making a final decision."[196] Mitigation "must be discussed in sufficient detail to ensure that environmental consequences have been fairly evaluated."[197]

"[O]mission of a reasonably complete discussion of possible mitigation measures would undermine the 'action-forcing' function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects."[198] A "perfunctory description," of mitigation, without "supporting analytical data" analyzing their efficacy, is inadequate to satisfy NEPA's requirements that an agency take a "hard look" at possible mitigating measures.[199] An agency's "broad generalizations and vague references to mitigation measures ... do not constitute the detail as to mitigation measures that would be undertaken, and their effectiveness, that the Forest Service is required to provide."[200] Moreover, in its final decision documents, an agency must "[s]tate whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not."[201]

B. The Final EA Fails to Analyze the Effectiveness of Mitigation Measures.

The Final EA does not focus on "mitigation," instead asserting that "Project design elements … were developed to minimize or eliminate potential adverse effects during implementation."[202] While the Final EA lists many "design features,"[203] it does not evaluate the effectiveness of each measure. Whether some of these measures would be effective at all is open to question because many of them are vague or ill-defined.[204]

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[196] *Colo. Envt'l Coalition v. Dombeck,* 185 F.3d 1162, 1173 (10th Cir. 1999) (quoting *Robertson,* 490 U.S. at 352).

[197] *City of Carmel-by-the-Sea v. U.S. Dept. of Transp.*, 123 F.3d 1142, 1154 (9th Cir. 1997) (quoting *Robertson,* 490 U.S. at 353).

[198] *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 353 (1989).

[199] *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1380 (9th Cir. 1998).

[200] *Id*. at 1380-81. *See also Northwest Indian Cemetery Protective Association v. Peterson*, 795 F.2d 688, 697 (9th Cir. 1986), rev'd on other grounds, 485 U.S. 439 (1988) ("A mere listing of mitigation measures is insufficient to qualify as the reasoned discussion required by NEPA."); *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1151 (9th Cir. 1988) ("Without analytical data to support the proposed mitigation measures, we are not persuaded that they amount to anything more than a 'mere listing' of good management practices.").

[201] 40 C.F.R. § 1505.2(c).

[202] Final EA at 20.

[203] Final EA at 20-29.

[204] The Center and Guardians raised each of the issues discussed in this section with the Forest Service in comments on the Draft EA. *See* Center Draft EA Comment (Ex. 1) at 38-41.

For example, one design element directs the agency to "[m]onitor noxious weeds/invasive species and treat infestations as needed for containment, minimizing rate of spread."[205] Treating "as needed" to "minimize[e]" the rate of spread provides neither the public nor the decisionmaker with useful information as to what methods the Forest Service will employ or how effective those measures will be.

At least one mitigation measure appears almost certain to be ineffective. The Final EA proposed to "reduce conflicts with recreation users during federal holidays" by barring hauling "on FSR 527 from the junction of FSR 527C to FSR 259 (Boggy Draw Trailhead) from 12 P.M. Friday to 12:01 A.M. Monday on Memorial Day [and] Labor Day."[206] This means hauling would be allowed for all but one minute of the Mondays of Memorial and Labor Days, when recreationists are likely to be using Forest Service roads in higher-than-usual numbers, and conflicts with log hauling are likely to occur. At a minimum, the Forest Service must explain why it intends to permit log hauling on these routes on Memorial Day and Labor Day, but not on the Saturday and Sunday before those days. The Forest Service declined to respond to this comment submitted on the Draft EA.

The provision allegedly mitigating impact to "elk production habitat" allows the "line officer" to approve operations in those areas.[207] No criteria or benchmarks are provided to limit the officer's discretion, and thus it is impossible to tell whether this measure can be effective.

A design element concerning road construction states that "[t]emporary roads would be held to the minimum feasible number, width and total length," but fails to explain how the agency would do so, or how minimal that width could be.[208] The measure also states that temporary roads "would be located sufficiently far from streams and other water bodies to minimize discharge into those waters except at necessary water crossings."[209] How far will that be? How will the Forest Service determine that distance? How much discharge is "minimized" discharge? Any subsequent NEPA document must address this lack of definition.

Further, some "design elements" are little more than keeping track of damage with no proposal to respond to it. One measure states that "[e]ffectiveness of road closure would also be monitored," with no explanation as to what actions the Forest Service would take it closures were found to be ineffective.[210]

In addition, the agency failed to consider how effective "design elements" are at controlling nonpoint pollution from roads. Both the rate of implementation, and their effectiveness should be considered. The Forest Service tracks the rate of implementation and the relative effectiveness of Best Management Practices (BMPs) from in-house audits, which are typically more protective

[205] Final EA at 23.

[206] Final EA at 24.

[207] Final EA at 28.

[208] Final EA at 22.

[209] Final EA at 22.

[210] Final EA at 26.

than nebulous "design elements." Information from those audits are summarized in the National BMP Monitoring Summary Report with the most recent data being the fiscal years 2013-2014.[211] The rating categories for implementation are "fully implemented," "mostly implemented," "marginally implemented," "not implemented," and "no BMPs." "No BMPs" represents a failure to consider BMPs in the planning process. More than a hundred evaluations on roads were conducted in FY2014. Of these evaluations, only about one third of the road BMPs were found to be "fully implemented."[212]

The monitoring audit also rated the relative effectiveness of the BMP. The rating categories for effectiveness are "effective," "mostly effective," "marginally effective," and "not effective." "Effective" indicates no adverse impacts to water from projects or activities were evident. When treated roads were evaluated for effectiveness, almost half of the road BMPs were scored as either "marginally effective" or "not effective."[213]

Further, a technical report by the Forest Service entitled, "Effectiveness of Best Management Practices that Have Application to Forest Roads: A Literature Synthesis," summarized research and monitoring on the effectiveness of different BMP treatments for road construction, presence and use.[214] The report found that while several studies have concluded that some road BMPs are effective at reducing delivery of sediment to streams, the degree of each treatment has not been rigorously evaluated. Few road BMPs have been evaluated under a variety of conditions, and much more research is needed to determine the site-specific suitability of different BMPs.[215] Edwards et al. (2016) cites several reasons for why BMPs may not be as effective as commonly thought. Most watershed-scale studies are short-term and do not account for variation over time, sediment measurements taken at the mouth of a watershed do not account for in-channel sediment storage and lag times, and it is impossible to measure the impact of individual BMPs when taken at the watershed scale. When individual BMPs are examined there is rarely broad-scale testing in different geologic, topographic, physiological, and climatic conditions. Further, Edwards et al. (2016) observe, "[t]he similarity of forest road BMPs used in many different states' forestry BMP manuals and handbooks suggests a degree of confidence validation that

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[211] Carlson, J. P. Edwards, T. Ellsworth, and M. Eberle. 2015. National best management practices monitoring summary report. Program Phase-In Period Fiscal Years 2013-2014. USDA Forest Service. Washington, D.C. attached as Ex. 37, and available at https://www.fs.fed.us/biology/resources/pubs/watershed/FS-1070BMP_MonitoringSummaryReport2015_reduced.pdf (last viewed Aug. 6, 2021).

[212] *Id.* at 12.

[213] *Id.* at 13.

[214] Edwards, P.J., F. Wood, and R. L. Quinlivan. 2016. Effectiveness of best management practices that have application to forest roads: a literature synthesis. General Technical Report NRS-163. Parsons, WV: U.S. Department of Agriculture, Forest Service, Northern Research Station. 171 p. attached as Ex. 38, and available at https://www.fs.usda.gov/treesearch/pubs/53428 (last viewed Aug. 6, 2021).

[215] *See also* Anderson, C.J.; Lockaby, B.G. 2011. Research gaps related to forest management and stream sediment in the United States. Environmental Management. 47: 303-313. Available at https://link.springer.com/article/10.1007%2Fs00267-010-9604-1 (last viewed Aug. 6, 2021).

may not be justified," because they rely on just a single study.[216] Therefore, ensuring BMP effectiveness would require matching the site conditions found in that single study, a factor land managers rarely consider.

Climate change will further put into question the effectiveness of many road BMPs.[217] While the impacts of climate will vary from region to region, more extreme weather is expected across the country which will increase the frequency of flooding, soil erosion, stream channel erosion, and variability of streamflow.[218] BMPs designed to limit erosion and stream sediment for current weather conditions may not be effective in the future. Edwards et al. (2016) states, "[m]ore-intense events, more frequent events, and longer duration events that accompany climate change may demonstrate that BMPs perform even more poorly in these situations. Research is urgently needed to identify BMP weaknesses under extreme events so that refinements, modifications, and development of BMPs do not lag behind the need."[219]

Significant uncertainties persist about BMP or design element effectiveness as a result of climate change, which compound the inconsistencies revealed by BMP evaluations and suggest that the Forest Service cannot simply rely on them to mitigate project-level activities. This is especially relevant where the Forest Service relies on the use of BMPs or design features instead of fully analyzing potentially harmful environmental consequences from road design, construction, maintenance or use, in studies and/or programmatic and site-specific NEPA analyses. Moreso, the Forest Service must demonstrate how BMP effectiveness will be maintained in the long term, especially given the lack of adequate road maintenance capacity.

Further, while the Final EA identifies several design standards for northern goshawk, one appears to be at odds with best available science, and two prescriptions suggested by that science are omitted.

The Management Recommendations for Northern Goshawk (1992) suggests that "[a]ll management activities in the PFA [northern goshawk post fledging-family area] should be limited to the period from October through February."[220] The Final EA does not limit activities in PFAs, but does state that "if active northern goshawk nests are discovered, all project operations would be restricted annually from March 1st to August 31st within one-half (½) mile

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[216] Edwards *et al*. 2016 at 133.

[217] Edwards *et al*. 2016.

[218] Furniss, Michael J.; Roby, Ken; Cenderelli, Daniel *et al*. (2013). Assessing the vulnerability of watersheds to climate change: Results of national forest watershed vulnerability pilot assessments. USDA PNW Research Station. General Technical Report PNW-GTR-884. Attached as Ex. 39, and available at https://www.fs.usda.gov/treesearch/pubs/43898 (last viewed Aug. 6, 2021).

[219] Edwards *et al*. 2016, at 136.

[220] R.T. Reynolds *et al*. Management Recommendations for the Northern Goshawk in the Southwestern United States, GTR-RM-217 (1992) at 6. The Management Recommendations are in the Salter project file, according to the Final EA's "References" list. *See* Final EA at 89.

of the active nest."[221] Despite our request to do so, the Forest Service failed to explain why the limitation on activities for the Salter Project is one month shorter than that recommended by the Management Recommendations, which we understand remain the best available science concerning goshawk management.

Further, the Management Recommendations state that "forests in the PFAs should contain overstories with a canopy cover greater than 50%," and that in ponderosa pine forested PFAs, the Forest Service should "[l]eave 5 - 7 tons per acre of woody debris (greater than 3 inches in diameter) and downed logs distributed across areas, after timber harvesting, for small animal habitat and to maintain long-term productivity.[222] The Salter Project contains no such prescription(s) that we could find, and the Forest Service again failed to respond to our comments on this issue, violating NEPA.

The Management Recommendations also suggest that the PFAs ensure suitable prey habitat is available and that "[f]eatures of prey habitat in the PFA include:

1) large (>18 inches DBH) feeding and/or nesting trees for tree squirrels,

2) large (>18 inches DBH and >30 feet tall) snags and/or trees with exposed heartwood for nest cavity excavation by woodpeckers,

3) patches of mid-aged forests with high canopy cover (up to 70%) that provide mesic conditions for fungi (important foods for all the mammalian prey),

4) small (>2 inches in diameter and >8 feet long) downed logs and other woody debris that provide hiding, feeding, denning, and nesting sites used by goshawk prey.

5) large (>12 inches in diameter and >8 feet long) downed logs and other woody debris that provide hiding, feeding, denning, and nesting sites used by goshawk prey."[223]

Despite comments raising this issue on the Draft EA, the Final EA contains no comparable guidance, but it does permit the logging of trees up to 22 inches dbh, which could conflict with goshawk guidance to retain trees 18 inches dbh and greater for specific purposes.[224] The Forest Service failure to comply with the Northern Goshawk Management Recommendations – the best available science on these birds – or explain why it would ignore that science, violates NEPA.

In sum, because the Final EA fails to analyze the effectiveness of individual design elements, and because some of the design elements are unlikely to be effective, the EA violates NEPA.

Finally, we note that the Intermountain Forest Association has filed objections seeking to terminate specific design features, or to require clarification that the Forest Service (not the

[221] Final EA at 18; 80.

[222] Management Recommendations for the Northern Goshawk at 14, 24.

[223] Management Recommendations for the Northern Goshawk at 16.

[224] Final EA at 28.

companies seeking to profit from public resources) implement or pay for them.[225] Eliminating these design features or shifting costs to taxpayers as industry suggests would increase the project's environmental damage and/or economic costs, and therefore would require the Forest Service to prepare supplemental NEPA analysis and provide additional opportunities for public comment.

> *Suggested Remedy*. The San Juan National Forest should prepare a supplemental NEPA document, preferably a Draft EIS, that evaluates the effectiveness of each individual mitigation measure and design element, and must explain or correct its failure to adopt measures recommending by the Northern Goshawk Management Recommendations.

VIII. THE FOREST SERVICE MUST PREPARE AN ENVIRONMENTAL IMPACT STATEMENT ON THE SALTER PROJECT.

A. Agencies Must Prepare EISs When Impacts 'May' Be Significant.

NEPA requires federal agencies to prepare a full environmental impact statement (EIS) before undertaking "major Federal actions significantly affecting the quality of the human environment."[226] As the Tenth Circuit has explained, "[i]f the agency determines that its proposed action *may* 'significantly affect' the environment, the agency must prepare a detailed statement on the environmental impact of the proposed action in the form of an EIS."[227] The Ninth Circuit agrees.

> We have held that an EIS *must* be prepared if 'substantial questions are raised as to whether a project ... *may* cause significant degradation to some human environmental factor.' To trigger this requirement a 'plaintiff need not show that significant effects *will in fact occur*,' [but instead] raising 'substantial questions whether a project may have a significant effect' is sufficient.[228]

If an agency "decides not to prepare an EIS, 'it must put forth a convincing statement of reasons' that explains why the project will impact the environment no more than insignificantly. This account proves crucial to evaluating whether the [agency] took the requisite 'hard look.'"[229]

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[225] *See* M. Pitts, Intermountain Forest Association, Objection to Salter Vegetation Management Project (Aug. 4, 2021) (Salter project file).

[226] 42 U.S.C. § 4332(C).

[227] *Airport Neighbors Alliance v. U.S.*, 90 F.3d 426, 429 (10th Cir. 1996) (citation omitted) (emphasis added).

[228] *Idaho Sporting Cong. v. Thomas*, 137 F.3d 1146, 1149-50 (9th Cir. 1998) (citations omitted) (emphasis original). *See also Ocean Advocates v. U.S. Army Corps of Eng'rs*, 402 F.3d 846, 864-65 (9th Cir. 2005) ("To trigger this [EIS] requirement a plaintiff need not show that significlant effects will in fact occur, but raising substantial questions whether a project may have a significant effect is sufficient." (internal quotations, citations, and alterations omitted)).

[229] *Ocean Advoc.*, 402 F.3d at 864.

"Significance" under NEPA requires consideration of the action's context and intensity.[230] An agency must analyze the significance of the action in several contexts, including short- and long-term effects within the setting of the proposed action (including site-specific, local impacts).[231] Intensity refers to the severity of the impact and requires consideration of ten identified factors that may generally lead to a significance determination, including: (1) whether the action is likely to be highly controversial; (2) whether the effects on the environment are highly uncertain or involve unique or unknown risks; and (3) whether the action may have cumulative significant impacts.[232] With respect to the degree to which the environmental effects are likely to be highly controversial, the word "controversial" refers to situations where "'substantial dispute exists as to the size, nature, or *effect* of the major federal action.'"[233]

B. The Salter Project May Have Significant Impacts.

The Salter Project may have significant impacts, triggering the Forest Service's duty to prepare an EIS.[234]

The scale of the project itself may be significant. The proposed action alternatives permit the construction of up to 117 miles of temporary road, a significant amount, and reconstruction or "improv[ing] the condition of [another] 149 miles" of road.[235] Logging may take place on more than 35 square miles of forest land, and will occur continuously across this landscape for as long as a decade. Road construction, logging, and road use will conflict with recreational use which is categorized as "moderate to high" for much of the year. The large scale of the project supports a conclusion of significance.

The project may significantly impact soils and watersheds. Construction of temporary roads and landing areas, and the use of an unknown number, length and location of skid trails, have the potential to significantly impact sensitive soils and watersheds. The Final EA states that "[p]roposed design features for Hydrology and Soils also restrict roads, landings, skid trails, concentrated-use sites, and similar soil disturbances to designated sites to no more than 15 percent of any timber sale unit."[236] Because there are 22,790 acres of logging units, the design

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[230] 40 C.F.R. § 1508.27.

[231] *Id.* § 1508.27(a).

[232] *Id.* § 1508.27(b)(4)-(5), (7)

[233] *Town of Cave Creek v. FAA*, 325 F.3d 320, 331 (D.C. Cir. 2003) (quoting *North American Wild Sheep v. U.S. Department of Agriculture*, 681 F.2d 1172, 1182 (9th Cir. 1982)) (emphasis in original). *See also Middle Rio Grande Conservancy Dist. v. Norton*, 294 F.3d 1220, 1229 (10th Cir. 2002) (same); *Town of Superior v. U.S. Fish and Wildlife Serv.*, 913 F. Supp. 2d 1087, 1120 (D. Colo. 2012) (same).

[234] The Center and Guardians raised each of the issues discussed in this section with the Forest Service in comments on the Draft EA. *See* Center Draft EA Comment (Ex. 1) at 41-44.

[235] Final EA at 62 (149 miles), 63 (up to 117 miles).

[236] Final EA at 49.

features permit skid trails, roads, etc. to impact soils on up to 3,400 acres – an area of more than five square miles, roughly a third the size of the island of Manhattan. This impact is significant.

The project may significantly impact wildlife. The proposed action will render much of the project area unsuitable for northern goshawk, a potentially significant impact. The Final EA proposes to reduce basal area outside of the tiny 30-acre nest area to as low as 50 square feet per acre. Such logging may damage goshawk habitat in the short term (for years). As the EA admits:

> [The project] will reduce the number of large, live overstory trees and may negatively impact [goshawk] breeding site selection….
>
> Basal area reductions below 80 square feet per acre in mature stands will affect nesting behavior of northern goshawk because thermal and protective sight cover for nesting will be reduced, which will reduce reproduction. A reduction in canopy cover may also impact foraging success as there will be less ability to hide from prey. These impacts may reduce habitat effectiveness in the short-term … for this species….[237]

The project thus will *certainly* damage goshawk habitat over a vast area for the 10 years of project implementation and beyond. The *promise* of increased habitat effectiveness is over the "long term," so the nature of the trade-off between present, certain damage and indeterminant future benefit cannot be understood or compared. The potential for significant impacts to goshawk requires preparation of an EIS.

The EA contains contradictory information about impacts to forests that have significant repercussions for goshawk. In evaluating potential impacts to the bird, the Final EA states that: "In areas that receive single tree selection and commercial thinning, basal area after treatment is expected to average around 60-80 square feet per acre, with clumps of trees having higher basal areas."[238] Elsewhere, the EA states that both single tree selection and commercial thinning "will target a residual basal area of 50-to-70 ft2" per acre, clearly a lower residual basal area than assumed by the agency when addressing goshawk impacts.[239] The Forest Service fails to explain this significant discrepancy.

The project is highly controversial. The project's impacts are uncertain. The Forest Service's proposed prescription of a 26.9" dbh cap, and its rejection of 20" dbh or 16" dbh diameter caps, conflicts with that developed by the San Juan National Forest's earlier Ponderosa Pine Partnership. Scientific studies, including those cited by Dr. Baker and to which the San Juan National Forest declined to respond, suggest that the project will result in the loss of pre-settlement ponderosa pine within the project area, and trees more than a century old, and Forest Service studies indicate that ponderosa pine and aspen may be lost in the project area within a

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[237] Final EA at 79; *see also* San Juan National Forest, Biological Evaluation, Salter Vegetation Project (2020) at 40 (making similar statement) (Salter project file).

[238] Final EA at 79. *See also* San Juan National Forest, Biological Evaluation, Salter Vegetation Project (2020) at 40 (making identical statement) (Salter project file).

[239] Final EA at 14.

few decades. But the Final EA asserts the project will lead to a diverse-aged forest able to resist future insect infestations. Thus, the effects of the Salter Project meet the "highly controversial" standard, requiring preparation of a full environmental impact statement.

The Forest Service's failure to quantify the project's climate impacts, and reliance on climate outdated guidance, conflict with new administration guidance and federal caselaw, and the Final EA appears to rely on discredited science and law. The Forest Service's climate denial also crosses the "highly controversial" threshold.

> *Suggested Remedy*. The San Juan National Forest should prepare a Draft EIS for the project.

CONCLUSION.

The Center and Guardians request a meeting to discuss potential resolution of issues raised in this objection, pursuant to 36 C.F.R. § 218.11(a).

We hope that the Forest Service will use the objection process and such a meeting as opportunities to engage with stakeholders, including the Center and Guardians, to develop a project that is legally and ecologically sound.

Sincerely,

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TABLE OF EXHIBITS

Exhibit 15. D. DellaSala, The Tongass Rainforest as Alaska's First Line of Climate Change Defense and Importance to the Paris Climate Change Agreements (2016)

Exhibit 16. Intergovernmental Panel on Climate Change, Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse gas fluxes in Terrestrial Ecosystems, Summary for Policymakers (Aug. 2019)

Exhibit 17. B. Law et al., Land use strategies to mitigate climate change in carbon dense temperate forests, Proceedings of the Nat'l Academy of Sciences, vol. 115, no. 14 (Apr. 3, 2018)

Exhibit 18. Moomaw, *et al*., Intact Forests in the United States: Proforestation Mitigates Climate Change and Serves the Greatest Good, Frontiers in Forests and Global Change (June 11, 2019)

Exhibit 19. Hudiburg *et al*., Meeting GHG reduction targets requires accounting for all forest sector emissions, Environ. Res. Lett. 14 (2019)

Exhibit 20. B. Law, *et al*., The Status of Science on Forest Carbon Management to Mitigate Climate Change (June 1, 2020)

Exhibit 21. B. Law & W. Moomaw, Keeping trees in the ground where they are already growing is an effective low-tech way to slow climate change, *The Conversation* (Feb. 23, 2021)

Exhibit 22. B. Law & M.E. Harmon, Forest sector carbon management, measurement and verification, and discussion of policy related to mitigation and adaptation of forests to climate change. Carbon Management (2011)

Exhibit 23. M. Harmon, Have product substitution carbon benefits been overestimated? A sensitivity analysis of key assumptions, Environmental Research Letters (2019)

Exhibit 24. *See* Bureau of Land Management, Western Oregon Proposed RMP Final EIS (2009) (excerpts)

Exhibit 25. Forest Service, Tools for carbon inventory, management, and reporting (Nov. 2018)

Exhibit 26. N.L. Harris et al., Attribution of net carbon change by disturbance type across forest lands of the conterminous United States, Carbon Balance and Management (2016)

Exhibit 27. Office of Surface Mining & Bureau of Land Management, Environmental Assessment, Colowyo Coal Mine Collom Permit Expansion Area Project (Jan. 2016) (excerpts)

Exhibit 28. U.S. Forest Service, Supplemental Final Environmental Impact Statement, Federal Coal Lease Modifications COC-1362 & COC-67232 (Aug. 2017) (excerpts)

Exhibit 29. Four Forest Restoration Initiative, Old Growth Protection & Large Tree Retention Strategy (Sep. 13, 2011)

Exhibit 30. S. J. Pritchard, P. *et al*., Adapting western North American forests to climate change and wildfires: ten common questions, *Ecological Applications* (July 2021)

Exhibit 31. U.S. Forest Service *et al.*, New Mexico Forest Restoration Principles (May 2006)

Exhibit 32. Allen *et al*., Ecological Restoration of Southwestern Ponderosa Pine Ecosystems: A Broad Perspective, Ecological Applications, 12(5) (2002)

Exhibit 33. D. Lynch, Forest Restoration in Southwestern Ponderosa Pine, Journal of Forestry (Aug. 2000)

Exhibit 34. San Juan National Forest, Guard Station Timber Sale, Decision Notice (May 1996)

Exhibit 35. San Juan National Forest, Ferris East Timber Sale, Decision Notice (Feb. 1998)

Exhibit 36. J. Worrall et al., Projected Impacts of Climate Change on Forests of the Dolores Watershed, presentation to the Dolores Watershed Resilient Forest Collaborative (2017)

Exhibit 37. Carlson, J. P. Edwards, T. Ellsworth, and M. Eberle. 2015. National best management practices monitoring summary report. Program Phase-In Period Fiscal Years 2013-2014. USDA Forest Service. Washington, D.C.

Exhibit 38. Edwards, P.J., F. Wood, and R. L. Quinlivan. 2016. Effectiveness of best management practices that have application to forest roads: a literature synthesis. General Technical Report NRS-163. Parsons, WV: U.S. Department of Agriculture, Forest Service, Northern Research Station.

Exhibit 39. Furniss, Michael J.; Roby, Ken; Cenderelli, Daniel *et al.* (2013). Assessing the vulnerability of watersheds to climate change: Results of national forest watershed vulnerability pilot assessments. USDA PNW Research Station. General Technical Report PNW-GTR-884.