SOUTHEAST ALASKA CONSERVATION COUNCIL - DEFENDERS OF WILDLIFE CENTER FOR BIOLOGICAL DIVERSITY – EARTHJUSTICE ALASKA OFFICE – AUDUBON ALASKA - SITKA CONSERVATION SOCIETY – WOMEN'S EARTH AND CLIMATE ACTION NETWORK

September 16, 2019

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Via web portal: https://cara.ecosystem-management.org/Public/CommentInput?Project=53098

Re: Comments on Central Tongass Project Draft Environmental Impact Statement

Project Leader Carey Case:

The U.S. Forest Service is analyzing the Central Tongass Project (the Project) and has prepared a Draft Environmental Impact Statement (DEIS). The undersigned organizations submit these comments on the Central Tongass DEIS. These groups have a long-standing interest in the social and ecological values of the Tongass National Forest and any developments that may affect those values. For the reasons described below, the Forest Service should not pursue the logging aspects of the Central Tongass Project.

This Central Tongass Project is a proposal under the 2016 Amended Forest Plan, to authorize logging up to 230 million board of Tongass timber, 150 million board feet from old-growth forests and 80 million board feet of young growth, over the next 15 years from somewhere inside the Petersburg and Wrangell Ranger Districts – a 3.7 million acre project area. The project also calls for building up to 25 miles of new road and 93 miles of temporary road, and approving 128 miles of off-highway vehicle trails on roads currently closed or planned for closure.

The Central Tongass Project is the agency's latest attempt to authorize large, multi-year projects without any consideration of impacts to specific resources. This is precisely the type of environmentally blind decision-making Congress intended the National Environmental Policy Act (NEPA) to avoid when it enacted this bulwark against hasty and wasteful agency actions. As a result, neither the Forest Service nor the public can adequately analyze the site-specific impacts and alternatives proposed and make a reasoned choice among the alternatives. The Forest Service is now defending this very type of flawed decision before the Alaska Federal District Court in *Southeast Alaska Conservation Council et al. v. U.S. Forest Service et al.*, Case No. 1:19-cv-00006-SLG.

To fulfill NEPA's twin aims of informed agency decision-making and public participation, the Forest Service must provide a detailed statement of the impacts of agency activity. The Forest Service lacks the discretion to determine what level of specificity NEPA requires.

The agency violates NEPA by disclosing only conditions for treatment rather than site-specific information about logging, roadbuilding, or where herbicides will be used until sometime in the future – after the agency has authorized those activities and after the public has any chance to object to the decision. This violates NEPA. Without providing the public with information about the specific location of proposed logging and roads within the 3.7 million-acre project area, the Forest Service fails to provide the detailed assessment of impacts that NEPA requires. The information provided for public review conveys next to nothing about what activities might actually happen, when, or where, and how those activities will affect wildlife, salmon, and people, or what the alternatives might minimize those impacts.

The level of detail provided to the public in the Central Tongass draft environmental impact statement is of little or no value to subsistence users because subsistence activities are inherently location-specific. People care about the places they use for subsistence and how the action will affect those places and nearby habitat. Displaying one giant map covering millions of acres, of which nearly 9,500 acres of old-growth forest may be logged from anywhere within the about 43,000 acres available for logging, conveys next to nothing about what might actually happen, or how the project will impact wildlife and people, or what the alternatives might be to minimize those impacts.

The proposed action is all the more remarkable given U.S. taxpayers spend tens of millions of dollars every year to subsidize the Tongass timber industry, which contributes a miniscule amount to the regional economy and allows virtually all of the logs to be exported out of Alaska. "The Forest Service reported an average of $12.5 million annually in timber-related expenditures for the Tongass from fiscal years 2005 to 2014. During that period, it reported receiving an average of $1.1 million in revenues associated with timber harvested from the Tongass."[1] "Analyzing the benefits and costs of the Tongass old-growth timber sale program illustrates that beyond being the last industrial scale old-growth logging in the U.S., the Tongass is also the most socially inefficient timber program in the U.S."[2]

[1] U.S. Government Accountability Office, Tongass National Forest, Forest Service's Actions Related to Its Planned Timber Program Transition at 7 (2016); *see also* Taxpayers for Common Sense, Money Losing Timber Sales: Tongass National Forest at 1 (Mar. 2015) ("From 2008 through 2013, the Forest Service spent $139.1 million on timber sales (including road construction) in the Tongass and received $8.6 million in proceeds from these sales, a net loss of $130.5 million."); U.S. Forest Service, State of the Tongass National Forest (FY 2009 – 2013); Headwaters Economics, The Tongass National Forest and the Transition Framework: A New Path Forward? at 2-5 (Nov. 2014).

The undersigned submit any documents cited in this comment letter (with the exception of statutes, regulations, the 2016 Amended Forest Plan and related documents, documents in the Central Tongass Project planning record, and documents cited in the agency's planning documents) to the Petersburg Ranger District on September 16, 2019 with these comments. These documents are now part of the planning record for the Central Tongass Project.

[2] Hjerpe, E. and A. Hussain, *Willingness to Pay for Ecosystem Conservation in Alaska's Tongass National Forest: a choice modeling study*, Ecology and Society 21(2)8 http://dx.doi.org/10.5751/ES-08122-210208.

For all of these reasons, the Forest Service should not proceed with the logging aspects of the Central Tongass Project. However, if the agency chooses to proceed, then it must prepare and publish a supplementary DEIS that complies with the agency's legal obligations. Today's economic drivers depend upon the forest's old-growth stands to support Southeast Alaska's fish, wildlife, and outdoor recreation industries. Clearcut logging old-growth forests on the Tongass compromises the United States' climate preparedness, and reduces the country's ability to address the effects of climate change worldwide. The logging aspects of the Central Tongass Project represent a wasteful and unsustainable logging program that threatens values important to residents of Southeast Alaska and the nation. We strongly urge the Forest Service to take a different approach with regard to the logging contemplated in the Central Tongass Project.

I. THE CENTRAL TONGASS PROJECT'S USE OF CONDITION-BASED MANAGEMENT VIOLATES NEPA.

A. NEPA Requires The Forest Service To Produce A Spatially And Temporally Specific Analysis Because This Is A Project-level Decision.

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."[3] 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."[4]

To advance these policy objectives, NEPA "establishes 'action-forcing' procedures that require agencies to take a 'hard look' at environmental consequences."[5] A hard look does not allow the agency to take "a soft touch or brush-off of negative effects."[6] 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."[7]

In *Natural Resources Defense Council v. U.S. Forest Service,* for example, the Court faulted the Forest Service for providing empty disclosures that lacked any analysis, explaining the agency "d[id] not disclose the effect" of continued logging on the Tongass and "d[id] not give detail on whether or how to lessen the cumulative impact" of the logging.[8] Elsewhere, the Court explained

[3] 42 U.S.C. § 4331(a).
[4] *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.'").
[5] *Metcalf v. Daley*, 214 F.3d 1135, 1141 (9th Cir. 2000) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989)).
[6] *Native Ecosystems Council v. U.S. Forest Serv.*, 428 F.3d 1233, 1241 (9th Cir. 2005).
[7] *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 371 (1989) (citation omitted).
[8] *Natural Res. Def. Council v. U.S. Forest Serv.*, 421 F.3d 797, 812 (9th Cir. 2005).

that "general 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."[9] The Forest Service also must provide the public "'the underlying environmental data' from which the Forest Service develop[ed] its opinions and arrive[d] at its decisions."[10] 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."[11] "The agency must explain the conclusions it has drawn from its chosen methodology, and the reasons it considered the underlying evidence to be reliable."[12]

At the project level, as compared to a programmatic decision, the required level of analysis is far more stringent.[13] At the "implementation stage," the NEPA review is more tailored and detailed because the Forest Service is confronting "individual site specific projects."[14] Indeed, the Ninth Circuit has faulted the Forest Service for failing to provide site-specific information in a landscape level analysis:

> This paltry information does not allow the public to determine where the range for moose is located, whether the areas open to snowmobile use will affect that range, or whether the Forest Service considered alternatives that would avoid adverse impacts on moose and other big game wildlife. In other words, the EIS does not provide the information necessary to determine how specific land should be allocated to protect particular habitat important to the moose and other big game wildlife. Because the Forest Service did not make the relevant information available . . . the public was limited to two-dimensional advocacy—interested persons could argue only for the allocation of more or less land for snowmobile use, but not for the protection of particular areas. As a result, the Forest Service effectively stymied the public's ability to challenge agency action.[15]

When the Forest Service fails to conduct that site-specific analysis, the agency "does not allow the public to 'play a role in both the decisionmaking process and the implementation of that decision.'"[16] "Although the agency does have discretion to define the scope of its actions, . . . such discretion does not allow the agency to determine the specificity required by NEPA." *City of Tenakee Springs v. Block*, 778 F.2d 1402, 1407 (citing *California v. Block*, 690 F.2d 753, 765 (9th Cir. 1982)). In *State of Cal. v. Block*, for example, the decision concerned 62 million acres

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[9] *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").
[10] *WildEarth Guardians v. Mont. Snowmobile Ass'n*, 790 F.3d 920, 925 (9th Cir. 2015).
[11] *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 973 (9th Cir. 2006).
[12] *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1075 (9th Cir. 2011) (citation and internal quotation marks omitted).
[13] *See, e.g., Friends of Yosemite Valley v. Norton*, 348 F.3d 789, 800-01 (9th Cir. 2003).
[14] *Forest Ecology Ctr., Inc. v. U.S. Forest Serv.*, 192 F.3d 922, 923 n.2 (9th Cir. 1999).
[15] *WildEarth Guardians v. Montana Snowmobile Ass'n*, 790 F.3d 920, 927 (9th Cir. 2015).
[16] *Id*. at 928 (quoting *Methow Valley Citizens Council*, 490 U.S. at 349).

of National Forest Service Land and the Ninth Circuit still required an analysis of "[t]he site-specific impact of this decisive allocative decision."[17] In short, NEPA's procedural safeguards are designed to guarantee that the public receives accurate *site-specific* information regarding the impacts of an agency's project-level decision *before* the agency approves the decision.

B. The Forest Service's Condition-based NEPA Approach Fails To Analyze The Project's Direct And Indirect Impacts.

Because the Central Tongass Project is a "project-level analysis,"[18] the DEIS is analyzing a site-specific, not a programmatic decision. As a result, the DEIS must include the detailed information and analysis that NEPA and the CEQ regulations require because as the agency makes clear in Chapter 1 of the DEIS, there will not be any further NEPA analysis after this "large landscape-scale NEPA analysis."[19] As discussed below, this approach violates NEPA because the DEIS fails to describe the characteristics of the specific logging and road-building projects (e.g., when, where, how much, what sequence, old-growth versus young-growth, location and length of roads, etc.) and then analyze the direct, indirect, and cumulative impacts from the action alternatives, as well as necessary mitigation associated with implementing decisions.

Because the Forest Service employs condition-based management (although it does not explicitly use that term), the DEIS does not and cannot disclose site-specific impacts until after the decision is made, subverting NEPA's command that agencies look before they leap. The DEIS admits that "[s]pecific locations and methods [of logging, etc.] will be determined *during implementation*," and not before.[20]

For example, in describing timber economics, the DEIS explains that the agency will not define where logging will occur until after NEPA is complete:

> Until the actual units for a timber sale offering are defined, located, and field-reviewed, reductions in acreage and volume cannot be accurately quantified. As described in the Implementation Plan (Appendix A), further refinement of the gross unit pool would be made and a logging plan developed at the time a commercial timber offer is planned.[21]

The problem with timber economics is further compromised given the effect of project falldown during implementation. In discussing methodology and environmental effects with regard to the suitability and gross unit pool development, the DEIS acknowledges that on one island, "there has been a reduction of around 75 percent from the mapped old-growth which defined the gross unit pool for Alternative 2 to the potential [logging] units as identified through recent field

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[17] *California v. Block*, 690 F.2d 753, 763 (9th Cir. 1982).
[18] DEIS at 9.
[19] DEIS at 1.
[20] DEIS at 1 (emphasis added). *See also id.* at i (same); *id.* at 159 ("*During the implementation phase*, careful consideration of timing, location, and characteristics of harvest and roads would minimize adverse effects on aquatic resources.") (emphasis added).
[21] DEIS at 57.

surveys."[22] Please explain whether the acreage estimates of suitable acres disclosed in Tables 7 & 8 of DEIS actually reflect this predicted project-level falldown.

In short, the Forest Service does not know, and cannot analyze or disclose to the public, precisely where logging will occur. As such, the DEIS fails to disclose the project's site-specific impacts. The Forest Service also states:

> *Because it is unknown which acres … will be harvested*, an estimated average volume of 15.8 MBF per acre is assumed for all old-growth harvest acres for this analysis.[23]

Again, the Forest Service's inability to identify the site-specific location for logging, prevents it from taking the hard look NEPA requires.[24]

Similarly, the Forest Service acknowledges that its failure to disclose the location and nature of logging impacts the agency's ability to disclose impacts to scenery.

> With the activities proposed in this project *being general in nature, and not specific with regards to location or appearance*, the scenic analysis is focused on determining if there is capacity within the analysis area and gross unit pool to support the alternatives.[25]

Further reinforcing this conclusion, the Forest Service admits that it will undertake surveys that could inform an impact analysis only *after* the NEPA process is complete.

> Comprehensive stream, rare and sensitive plant, invasive plant, geology, soil, landslide, wetlands, wildlife and cultural surveys *have not been conducted* within the entirety of the project area, but are ongoing throughout the project planning process . . . . It is likely that additional streams, plant populations, karst features, unsuitable soils, landslides, wetlands, nests, dens and cultural sites may be found prior to implementation in currently un-surveyed areas . . . .[26]

The information the Forest Service declined to gather is precisely the information that NEPA and federal courts require the agency to gather, analyze and disclose to the public before the agency approves an action. Failure to provide this information in an EIS renders that document arbitrary and capricious.

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[22] DEIS at 56.
[23] DEIS at 59 (emphasis added).
[24] *See also* DEIS at 64 ("For young growth all harvest is assumed even-aged *because the amount of partial harvest will not be known until implementation of a young-growth timber offering and silvicultural prescriptions are determined*.") (emphasis added); *id*. at 262 (in discussion of impacts to karst resources. stating that: "Until the exact extent and location of any proposed action is determined, *a determination of specific effects cannot be made*.") (emphasis added).
[25] DEIS at 291 (emphasis added).
[26] DEIS at 45 (emphasis added).

II. THE FOREST SERVICE'S FAILURE TO DISCLOSE SITE-SPECIFIC LOGGING AND ROAD INFORMATION IN THE DEIS VIOLATES SECTION 810 OF ANILCA.

ANILCA Section 810 contains procedural requirements parallel to NEPA's: It requires federal land agencies to evaluate the effects of, and alternatives to, any disposition of federal public land on subsistence uses and needs.[27] ANILCA, though, imposes additional requirements beyond the NEPA-like disclosures and analysis. Where the disposition of the land may significantly restrict subsistence uses, the agency must conduct hearings in the project vicinity and make certain findings justifying the restriction.[28] When an EIS is required, the agency must also conduct hearings in affected communities and make substantive findings.[29] Congress enacted Title VIII of ANILCA to "cause the least adverse impact possible on rural residents who depend upon subsistence uses of" federal public lands in Alaska.[30]

Because of the parallel procedural requirements in both statutes, the courts have found NEPA's requirements—including those for site-specificity—apply to the section 810 subsistence evaluations.[31] Section 810's hearing requirements—an obligation not in NEPA—reinforce this conclusion. Where impacts are significant, the agency is required to hold "a hearing in the vicinity of the area involved,"[32] reflecting Congressional recognition of the local nature of subsistence practices.

The DEIS finds "a significant possibility of a significant restriction for the subsistence use of deer."[33] The project area contains three communities spread over 3.7 million acres, 1.8 million of which are in the national forest. Without knowing where the logging will occur, however, it is impossible to convey meaningful information about how the Project may affect their uses. Similarly, site-specific information is needed to make meaningful findings, as required in section 801(a)(3).[34] Under that section, the agency may authorize the action only after determining that:

> (A) such a significant restriction of subsistence uses is necessary, consistent with sound management principles for the utilization of the public lands,

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[27] 16 U.S.C. § 3120(a).
[28] *Id*. § 3120(a)(2)-(3).
[29] *Id*. § 3120(b).
[30] *Id.* § 3112(a); *see Alaska Wilderness Recreation and Tourism Ass'n v. Morrison*, 67 F.3d 723, 725 (9th Cir. 1995).
[31] *See, e.g., City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1310-13 (9th Cir. 1990) (evaluating adequacy of alternatives and cumulative impacts under NEPA and ANILCA together); *Alaska Wilderness Recreation and Tourism Ass'n v. Morrison*, 67 F.3d 723, 731 (9th Cir. 1995) (failure to consider alternatives violated both NEPA and ANILCA); *City of Tenakee Springs v. Clough*, 750 F. Supp. 1406, 1422-23 (D. Alaska 1990) (applying NEPA case law to ANILCA analysis for site-specificity), rev'd on other grounds, 915 F.2d 1308 (9th Cir. 1990).
[32] 16 U.S.C. § 3120(a)(2).
[33] DEIS at 349.
[34] 16 U.S.C. § 3120(a)(3).

(B) the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other disposition, and

(C) reasonable steps will be taken to minimize adverse impacts upon subsistence uses and resources resulting from such actions.[35]

The DEIS violates ANILCA by attempting to evaluate impacts to subsistence users and resources without identifying where the logging and road building will occur. As all Tongass citizens know, location is critical: each parcel of land is unique, with distinct considerations regarding its management. Consequently, the failure to disclose effects without evaluating location results in an analysis of merely general or generic effects and eliminates the public's ability to compare alternatives based upon their effects. Subsistence is an inherently location-specific activity rooted not only in access to resources, but in human geography, history, and clan relationships. Without an assessment of the specific, local impacts of the proposed action, neither the agency or subsistence users can evaluate the availability of reasonable steps to minimize adverse impacts to subsistence users and resources.

III. THE FOREST SERVICE'S FAILURE TO PROVIDE SITE SPECIFIC INFORMATION VIOLATES NFMA AND THE FOREST PLAN.

The Forest Service violates the National Forest Management Act (NFMA) when it acts contrary to a governing forest plan.[36] Standards established in forest plans "are binding limitations typically designed to prevent degradation of current resource conditions."[37] Thus, "[a] site-specific project must comply with the standards set forth in the governing forest plan, and a project's deviation from a standard requires amendment to the forest plan."[38]

A. The Forest Service Violates Forest Plan Standards Requiring Site-Specific Timber And Road Resource Data, Including Unit Cards And Road Cards.

The 2016 Amended Forest Plan establishes standards that require the Forest Service to provide site-specific information regarding the Central Tongass Project to inform the agency's environmental analysis prior to approval and prevent habitat degradation. The agency violates those standards, rendering the Project unlawful under NFMA. Alternatively, if one or more of these provisions is a guideline, then the agency acts arbitrarily in failing to provide the information prior to approving the Project.

The 2016 Amended Forest Plan defines a "standard" as follows:

> A course of action or level of attainment required by the Forest Plan to promote achievement of goals and objectives.

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[35] *Id*.
[36] *See* 16 U.S.C. § 1604(i) ("Resource plans and permits, contracts, and other instruments for the use and occupancy of National Forest System lands shall be consistent with the land management plans.").
[37] *All. for the Wild Rockies v. United States Forest Serv.*, 907 F.3d 1105, 1113 (9th Cir. 2018).
[38] *Id*.

> A mandatory constraint on project and activity decision-making, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements. (36 CFR 219.12)[.][39]

It explains that:

> Standards in Chapters 3 and 4, which can usually be identified by words such as 'must' or 'will,' are *mandatory requirements or minimums that must be met*.
>
> Project-level analysis may determine that additional requirements beyond these minimums are necessary.[40]

"The Forest Service must strictly comply with a forest plan's 'standards,' which are considered binding limitations ...."[41] To do otherwise, the agency violates NFMA.

Regarding logging, the 2016 Amended Forest Plan establishes standards that require the Forest Service to assess site-specific conditions, logging impacts, and mitigation and include that information in its NEPA analyses before it approves a project. For example, the Plan states:

> Timber harvest unit cards *will* document resource concerns and protection measures. The unit cards, including a map with relevant resource features, *will be provided electronically when Draft or Final NEPA documents and decisions are published*. (Consult Tongass National Forest Supplement 1909.15-2015-1.)[42]

It also requires the agency to provide other site-specific "timber resource information", including "inventories, analysis of data, and input *for environmental analysis*."[43] It requires the agency to provide information to "[d]etermine operability based on *site-specific project conditions*."[44] The agency must evaluate "management prescriptions . . . within the project area in project design and *environmental analysis* for timber activities."[45] It requires the agency to "[c]omplete all [silvicultural] prescriptions *before* project implementation where implementation is defined as . . . the Final Record of Decision . . . ."[46]

The general area-wide maps or activity guidelines offered by the Forest Service in the Project DEIS fail to meet the Plan requirements because they simply lack the unit specific information

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[39] 2016 Amended Forest Plan at 7-59.
[40] 2016 Amended Forest Plan at 1-4 (emphasis added).
[41] *All. for the Wild Rockies v. United States Forest Serv.*, 907 F.3d 1105, 1110 (9th Cir. 2018); *see also id*. at 1113 (rejecting the Forest Service's argument that its approach was "substantially similar" to the forest plan standard).
[42] 2016 Amended Forest Plan at 4-68 (TIM3.I.C) (emphasis added).
[43] *Id*. at 4-68 (TIM3.I.A) (emphasis added).
[44] *Id*. at 4-68 (TIM3.I.B) (emphasis added).
[45] *Id*. at 4-68 (TIM3.I.C) (emphasis added).
[46] *Id*. at 4-67 (TIM2.C) (emphasis added); *see also id*. at 4-49 (RIP2.C.1.) ("Logging engineers and aquatic specialists should conduct joint reviews of preliminary harvest unit designs to ensure that site-specific stream protection measures meet riparian objectives.").

necessary to meet forest plan standards. The DEIS mentions unit cards only once – to state that such cards will be made available "during final project design," that is, *after* NEPA is completed.[47] According to the Implementation Plan (Appendix A), unit cards are not mentioned until Step 7, after the Responsible Official gives approval to implement (Step 6).[48] Thus, the agency has not: (1) assessed site-specific project conditions and impacts; (2) evaluated site-specific management prescriptions and silvicultural prescriptions; and (3) used that information to inform the agency's environmental analysis and justify its substantive decision-making.

With regard to road construction and reconstruction, the 2016 Amended Forest Plan also establishes standards that inform the environmental review and the agency's decisions. For example, "[d]uring project planning, [the Forest Service must] identify *resource concerns and site-specific mitigation measures*."[49] The 2016 Amended Forest Plan lists specific habitats for which impacts must be minimized.[50] The agency is directed to "[c]learly document these mitigation measures [during project planning] to facilitate project implementation and monitoring."[51] The agency must "[p]erform route or site selection, location, geotechnical investigations, survey, and design to a technical level sufficient to meet the intended use and commensurate with both ecological objectives and the investment to be incurred."[52] "When stream crossings are required to harvest timber," the agency must "assess the environmental effects of road crossings versus yarding corridors, and select the action of least environmental impact where practicable."[53] This the Forest Service has failed to do, violating the Forest Plan, and therefore also violating NFMA. The DEIS's provision of a gross scale map depicting proposed road construction and OHV routes[54] is insufficient for both NEPA and Forest Plan compliance purposes, because those maps make it impossible for the public or the decision-maker to understand the routes' precise location, or the impacts to values along the course of those routes.

The Forest Service also has failed to provide road cards with the DEIS. The agency fails to assess the route and site selection, including the length and character, of any of the roads and fails to demonstrate how those individual decisions are commensurate with the ecological objectives and the investment for any given road approved by the Project. The agency fails to provide the specific road information that the 2016 Amended Forest Plan requires.

In short, the Forest Service violates NFMA by failing to comply with the 2016 Amended Forest Plan's standards governing logging and road building. The Forest Service is required to provide unit and road cards and make other site-specific assessments and evaluations of timber resources, logging and road building impacts, and the necessary mitigation measures to inform the NEPA

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[47] DEIS at v.
[48] *See* DEIS, Appendix A at A-5.
[49] 2016 Amended Forest Plan at 4-77 (TRAN3.I.D).
[50] *See id*. at 4-78 (TRAN4.II.A.); id. at 4-79 (TRAN4.III.A.); id. at 4-91 (WILD1.XIV.A.3.a) ("No road construction is permitted within 600 feet of a [wolf] den unless site-specific analysis indicates that local landform or other factors will alleviate potential adverse disturbance.").
[51] *Id*. at 4-77 (TRAN3.I.D).
[52] *Id*. at 4-77 (TRAN4.I.A.).
[53] *Id*. at 4-51 (RIP.II.E.5).
[54] *See* DEIS Appendix B at B-15.

analysis and *prior* to project approval. By failing to disclose to the public in the DEIS the required site-specific information about proposed activities and their impacts, the agency violates NEPA.[55]

To the extent one or more of the provisions described in this section is a guideline rather than standard, then the Forest Service acts in an arbitrary and capricious manner in failing to comply and provide the information. Failing to provide this information is arbitrary because it violates longstanding agency guidance in the Forest Service Handbook for the Tongass: "Unit and road cards will be provided electronically *when Draft or Final NEPA documents and decisions are published*."[56] The handbook continues: "*For Draft Environmental Impact Statements (DEIS's) . . . completed unit and road shall be published on the project webpage* . . . in bookmarked PDF format for review by other agencies or interested parties *when the NEPA document is published*."[57] Elsewhere the handbook explains that road cards must be developed during the NEPA process to "[d]escribe or display site specific application of required resource protection measure . . . [d]emonstrate field knowledge pertaining to site specific Forest Plan standards and guidelines, [p]rovide a tracking tool for project implementation and monitoring, and [p]rovide road level information for the public and other agencies."[58] The Forest Service provides none of this information and, in so doing, fails to assess the project-level impacts, necessary mitigation, and alternatives prior to authorizing the Project.

Additionally, the Forest Service acts arbitrarily because it is departing from decades of consistent agency practice regarding Tongass management without a reasonable explanation. Prior to the contested Prince of Wales project, the Forest Service prepared site-specific analyses to inform the public and affected communities of the adverse impacts of logging and road building before it approved projects.[59] The 2015 Navy Record of Decision (ROD) recognizes "[t]he unit cards and road cards are an integral part of this decision because they document the specific resource concerns, management objectives, and mitigation measures to govern the layout of the harvest units and construction of roads." [60] Likewise, in 2017, the final ROD for the Wrangell Island Project "incorporat[ed]the project design features and measures to minimize adverse

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[55] *City of Tenakee Springs v. Block*, 778 F.2d at 1407 (citing *California v. Block*, 690 F.2d 753, 765 (9th Cir. 1982)).

[56] FSH 1909.15-2015-1, Environmental Policy and Procedures Handbook, Chapter 10 (Apr. 27, 2015), 13.1 (emphasis added), available at https://www.fs.fed.us/im/directives/field/tongass/fsh/1909.15/1909.15_13-2015_TNF.docx (last viewed Sept. 16, 2019). The handbook states: "This supplement is effective until superseded or removed."

[57] FSH 1909.15-2015-1, Environmental Policy and Procedures Handbook, Chapter 10 (April 27, 2015), 13.1 (emphasis added); *see also id*. at 13.2c (directing the Forest Service to "display unit-specific information necessary for project implementation on one unit card map representing the selected alternative or alternatives in a DEIS").

[58] FSH 1909.15-2015-1, Environmental Policy and Procedures Handbook, Chapter 10 (Apr. 27, 2015), 13.3.1-4; *see also id*. at 13.3a, c-e.

[59] *See, e.g.*, Big Thorne DEIS, Vol. III (Unit Cards 1-120), IV (Unit Cards 121-476), V (Unit Cards 500-582), VI (Road Cards); Big Thorne FEIS, Appendix C; Logjam DEIS, Appendix B (Unit Cards); Logjam DEIS, Appendix C (Road Cards); Logjam FEIS, Appendix C.

[60] Navy ROD at 1 (Aug. 11, 2015).

environmental effects of the Selected Alternative . . . . These are described in chapter 2 of the FEIS and in the unit cards and road cards (appendices 1 and 2 of this ROD.)"[61] In describing the effects common to all Action Alternatives, the DEIS for the Wrangell Island Project states "[s]ite-specific resource concern and design criteria are discussed in the road and unit cards."[62] In contrast, the Central Tongass Timber Project will not prepare unit and road cards until Step 7 of the Implementation Plan, after the Responsible Official approves activity implementation.[63] For this additional reason, the Forest Service acts arbitrarily under NFMA because it provides none of that information to explain and justify its decision.

In sum, the 2016 Amended Forest Plan requires the Forest Service to conduct a site-specific assessment, analysis of impacts and mitigation measures relating to logging and road activities to inform the NEPA review and *before* it approves the Central Tongass Project. The agency is violating those provisions and, as a result, violates NFMA. For the same reason, the Forest Service reaches arbitrary conclusions under the other statutes governing timber sale projects on the Tongass.

B. The Forest Service's Condition-Based Analysis Renders Its Decision-Making Arbitrary Under NFMA And The Other Laws Governing Timber Sales.

NFMA and the other statutes under which the Forest Service operates when the agency evaluates a timber sale project require the agency to balance logging objectives with other forest values such as wildlife, recreation, and subsistence.[64] Here, the Forest Service acts arbitrarily because the agency fails to explain when, where, and how the logging and road building authorized by the Project will occur and how the agency balances competing uses and interests in those locations and at a given time. Stated more directly, the agency fails to balance the adverse impacts caused by logging or road building in any particular location at any given time, rendering the conclusions regarding the balance of impacts and values arbitrary. Any balancing based on this record cannot have taken into consideration the kind of site and temporally-specific information about impacts and alternatives that must underlie those choices.

The Administrative Procedure Act (APA) requires that "the agency must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'"[65] A decision is arbitrary if the agency "entirely failed to consider an important aspect of the problem" or "offered an explanation for its decision

[61] Wrangell Island Project ROD at 1 (Nov. 12, 2017).
[62] Wrangell Island Project DEIS at 147.
[63] Central Tongass DEIS, Appendix A at A-5.
[64] *See* 16 U.S.C. § 1604(e) (National Forest Management Act); *id.* § 529 (Multiple-Use Sustained-Yield Act); *id.* § 539d(a) (Tongass Timber Reform Act); id. § 3120(a)(3)(A) (Alaska National Interest Lands Conservation Act); *see also Natural Res. Def. Council*, 421 F.3d at 808-09 (explaining balancing of timber and other goals in the Tongass).
[65] *Motor Vehicle Mfrs. Ass'n of the U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (quoting *Burlington Truck Lines v. United States*, 371 U.S. 156, 168 (1962)).

that runs counter to the evidence before the agency."[66] Similarly, an action may be arbitrary if the record does not support the agency's reasoning.[67]

The Forest Service's failure to conduct a spatially and temporally specific analysis means the agency's conclusions lack a rational connection regarding the impacts and tradeoffs of the Central Tongass Project. The agency's decision-making also ignores important aspects of the Project (*e.g.*, site-specific impacts, alternatives, etc.), fails to provide a rational connection between the facts found and the decision to proceed, and offers an explanation that runs contrary to the evidence. As such, any Forest Service decision to approve the Central Tongass Project based on the current condition-based analysis would be arbitrary and unlawful under NFMA and the other statutes governing timber sale projects

IV. THE CENTRAL TONGASS DEIS FAILS TO ANALYZE A RANGE OF REASONABLE ALTERNATIVES.

"Under NEPA's applicable regulations, a federal agency's EIS must '[r]igorously explore and objectively evaluate *all* reasonable alternatives [to a proposed action], and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.'"[68] As the courts have made clear: "The agency must look at *every* reasonable alternative within the range dictated by the nature and scope of the proposal. The existence of reasonable but unexamined alternatives renders an EIS inadequate."[69] An agency's consideration of alternatives becomes meaningless if the agency arbitrarily constrains the range of alternatives considered and fails to consider alternatives that avoid the adverse effects of the proposed action, frustrating NEPA's goal of protecting the environment.[70] As explained below, the DEIS violates NEPA because the Forest Service fails to analyze reasonable alternatives to the Central Tongass Project.

A. The Forest Service's Condition-Based Analysis Fails to Consider Site-Specific and Temporal Alternatives.

The Central Tongass Project is a single decision to authorize numerous logging projects and road construction across vast swaths of Mitkof, Kupreanof, Kuiu, Wrangell, Zarembo and Etolin islands and parts of the U.S. mainland over a 15-year period. The DEIS violates NEPA because it fails to examine reasonable alternatives to the location, timing, sequencing, and sizes of the specific logging and road construction activities the decision will authorize.

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[66] *Id*. at 43.
[67] *See, e.g.*, *Ctr. for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1201-03 (9th Cir. 2008); *Pac. Coast Fed'n of Fishermen's Ass'ns v. NMFS*, 265 F.3d 1028, 1037-38 (9th Cir. 2001).
[68] *Se. Alaska Conservation Council v. Fed. Highway Admin.*, 649 F.3d 1050, 1056 (9th Cir. 2011) (quoting 40 C.F.R. § 1502.14(a)) (emphasis added).
[69] *'Ilio'ulaokalani Coal. v. Rumsfeld*, 464 F.3d 1083, 1095 (9th Cir. 2006) (emphasis added); *see also Se. Alaska Conservation Council*, 649 F.3d at 1056 (courts "have repeatedly recognized that if the agency fails to consider a viable or reasonable alternative, the EIS is inadequate.").
[70] *See Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1123 (9th Cir. 2002); *California v. Block*, 690 F.2d 753, 765-69 (9th Cir. 1982).

Given the Forest Service's reliance on the condition-based analysis, the agency never describes the precise location, configuration, sizes, and timing of the logging and road construction activities. The DEIS reiterates that the details regarding the logging will only come after the agency approves the Central Tongass Logging Project:

> No alternative would harvest all potential stands identified within the gross unit pool. Only the acreage needed to meet alternative volume would be harvested. Not all roads in the gross unit pool would be constructed, only those needed for access to harvest the selected stands.[71]

Thus, because the Forest Service will not make decisions about when, where, and how much habitat will be logged (or which or where roads will be built) until after completion of the NEPA process, the DEIS fails to analyze alternatives to those specific logging and road construction activities.[72] For example, the Forest Service fails to examine the impacts and alternatives to logging any particular watershed or forgoing logging in favor of improved habitat connectivity in a particular location. Similarly, the agency fails to examine variations in the timing of the logging projects and the sequencing of timber sale projects on any particular portion of the Central Tongass project area (*e.g.*, will a given area experience repeated years of adverse impacts, etc.). The DEIS also fails to consider whether the agency will allow a particular sale for export as compared to domestic processing (*e.g.*, might a smaller logging project in a particular area support a larger number of Alaskan jobs with fewer adverse impacts). With regard to roads, the DEIS fails to analyze the impacts of alternatives to particular roads and routes (*e.g.*, building a permanent road versus a temporary road in any particular location, varying lengths and locations of that road, timber operators paying for the roads instead of taxpayers, etc.). Finally, with the exception of the minor differences between Alternatives 2 and 3, the DEIS fails to examine the site-specific impacts on communities and subsistence users arising from alternative locations, sizes, and timing of any particular timber sale project and road building.

The Forest Service violates NEPA by refusing to examine alternatives to individual logging and/or road construction projects in the DEIS (*e.g.*, location, distribution, connectivity, sizes, characteristics, timing, etc.). The agency's all or nothing approach skews the consideration of alternatives in favor of the environmentally-damaging generic logging and road building alternatives, entirely frustrating NEPA's goals of fostering informed decision making and protecting the environment.[73] In so doing, the Forest Service violates NEPA.

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[71] DEIS at 56. *See also id.* at 360 (same).

[72] *See* DEIS at 1 ("Specific locations and methods [of project activities] will be determined during implementation").

[73] *See Kootenai Tribe,* 313 F.3d at 1123 (NEPA's purpose "is first and foremost to protect the natural environment"); *Block*, 690 F.2d at 765-69 (9th Cir. 1982) (considering a range of alternatives becomes meaningless if the range is skewed by arbitrary constraints).

B. The Forest Service Fails To Analyze Different Action Alternatives To Achieve The Transition Outlined In The 2016 Amended Forest Plan.

SEACC and others requested the Forest Service to consider an alternative "that focuses on supplying timber, both young and old-growth, for value-added industries in a steady supply of micro and small sales for local entrepreneurs."[74] The agency declined to do so, asserting that such an alternative "could not meet the purpose and need for the . . . Project" and "would not meet the requirement of the TTRA [Tongass Timber Reform Act] to seek to provide a supply of timber which meets the annual demand *even in conjunction with other Tongass timber projects*."[75] The agency's reasoning is arbitrary for several reasons.

First, the purpose and need chosen by the agency does not prescribe a timber target for the Central Tongass Project. Consequently, any supply of timber offered from this project would contribute to meeting market demand for Tongass timber. Moreover, it is arbitrary to conclude that each of the several ongoing timber development projects on the Tongass, must be sufficient, on its own to satisfy so-called demand estimates calculated annually and over the planning cycle for Tongass timber. The TTRA does not require each timber sale to meet some inflexible supply level "but a balancing of the market, the law, and other uses, including preservation."[76]

With regard to young growth, the Forest Service recently completed the most expansive young forest inventory ever conducted on the Tongass. The agency inventoried over 40,000 acres of young growth, supplemented by data supplied by the Geos Institute, and combined with inventory data collected by the Forest Service Pacific Northwest Research Station. Collectively, these inventories uncovered a 'wall of wood' soon available to support an appropriately scaled forest industry without industrial logging of old growth or developing additional roadless areas.

Recent analysis of the updated young growth inventory data indicates that the Forest Service can begin sustainably logging second growth, now. The analysis was compiled by Mater Engineering in *Tongass in Transition: 2019 Update*.[77] The report identified 138,760 acres stocked with young trees now 55 to 70-years old in suitable (low environmental risk) areas located within 800 feet of existing and open Forest Service roads and at less than 1,000 feet in elevation. This data clearly shows the transition to logging only young growth is currently possible on the Tongass. If the Forest Service is truly serious about a continued logging industry in Southeast Alaska, it is more evident than ever that young growth is the answer. As a result, the timber industry in Southeast Alaska can immediately stop the controversial practice of industrial-scale old-growth clearcutting.

Existing mills in the region will need to retool to handle the emerging smaller diameter young growth logs instead of old growth logs. Capital for needed renovations could come from public and private funding. After 3 years of project design and field work by the Forest Service

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[74] *See* SEACC scoping comments at 3 (AR 832_0304); *see also* AR 832_0171 (Petersburg Economic Development Council).
[75] DEIS at 26 (emphasis added).
[76] *AWRTA v. Morrison*, 67 F.3d 723, 731 (9th Cir. 1995).
[77] Mater Engineering, *Tongass in Transition: 2019 Update*.

Research Station, paid with congressional funds secured by Senator Murkowski, the next step is to establish a young growth wood quality pilot mill to test for lumber grade recovery and market demand.

According to the DEIS, "[t]he [Timber Analysis Areas] with the best opportunities for positive-appraising young-growth timber sales are Thomas Bay, Mitkof Island, Zarembo and western Kupreanof."[78] This information is consistent with the latest inventory findings, and supporting analysis.[79] The Forest Service inventoried 563 acres of 50-54 year old stands at an estimated volume of 26 mbf/acre. The Pacific Northwest Research Station estimate showed 24 mbf/acre.

The Forest Service violates NEPA because the DEIS fails to examine alternatives that implement the 2016 Amended Forest Plan's objective to transition the Tongass away from a predominant old-growth industry. As explained below, the agency fails to consider a range of alternatives that result in significant variation in the amount and timing of old-growth timber sales over the 15 years from the project area.

The Forest Service adopted the 2016 Amended Forest Plan in response to the Secretary of Agriculture's Memorandum 1044-009,[80] which directed the Tongass National Forest "to expedite the transition away from old-growth timber harvesting and towards a forest products industry that uses predominantly second-growth . . . forests."[81]

The 2016 Amended Forest Plan contains several objectives to accomplish the Secretary's directed transition, including:

- "**O-YG-01:** During the 15 years after plan approval, the amount of young-growth offered would gradually increase to exceed 50 percent of the timber offered annually."[82]

- "**O-YG-02:** During the 15 years after plan approval, offer increasing annual volumes of economically viable young-growth timber. Old-growth timber harvest would gradually be reduced to an average of 5 million board feet (MMBF) annually, to support Southeast Alaska mills."[83]

The 2016 Amended Forest Plan makes clear that "[s]pecific activities and projects will be planned and implemented to carry out the direction in this Forest Plan."[84]

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[78] DEIS at 69.
[79] *See supra* Mater Engineering, *Tongass in Transition: 2019 Update*.
[80] 2016 Amended Forest Plan FEIS at 1-8 to 1-9; *see also* PR 769_01_000046 at PDF 1 (U.S. Department of Agriculture, Office of the Secretary, Secretary's Memorandum 1044-009 Addressing Sustainable Forestry in Southeast Alaska at 1-5 (July 2, 2013)) (Secretary's Transition Memorandum).
[81] 2016 Amended Forest Plan FEIS at 1-9; *see generally* Secretary's Transition Memorandum.
[82] 2016 Amended Forest Plan at 5-2.
[83] *Id*. at 5-3.
[84] *Id*. at 1-2.

Groups raised several concerns regarding the Forest Plan FEIS and its consideration of alternatives at the forest plan stage.[85] Among those concerns, groups explained that all of the alternatives in the 2016 Amended Forest Plan FEIS offered the same purported transition out of old-growth logging to bring about the transition, including: (1) all of the action alternatives lacked any means of limiting old-growth timber sales to bring about the transition; (2) all of the action alternatives offered 10-15 years transition timeframes; (3) all of the action alternatives established a projected timber sale quantity of 46 MMBF per year; and (4) all of the alternatives contemplated continued application of the Limited Export Policy.[86] The undersigned reiterate these concerns given the Forest Service's project-level decision-making manifests these failings.

Now at the implementation stage, the Forest Service again fails to consider any alternatives that contemplate different approaches to the transition regarding the Central Tongass Project (*e.g.*, limiting the amount of old-growth logging *every year* on a declining basis, etc.). Both of the action alternatives are based on the same market demand projections, despite the fact the agency itself acknowledges it cannot predict future market demand with any degree of reliability more than a few years out.[87] And finally, both of the action alternatives apparently contemplate the same treatment with regard to the Limited Export Policy.

The Forest Service also arbitrarily rejects calls to evaluate alternatives that would offer no old-growth sales, as well as an alternative that "focuses supplying old- and young-growth timber through microsales or small sales only."[88] In rejecting the "no old-growth" alternative, the DEIS states: "Commercial old-growth harvest is part of the purpose and need because the Tongass National Forest managers are obligated to seek to meet demand for timber from the forest to comply with the Tongass Timber Reform Act (TTRA Section 101)."[89] But the TTRA does not mandate old-growth logging. Instead, it provides:

> (a) Subject to appropriations, other applicable law, and the requirements of the National Forest Management Act of 1976 (Public Law 94-588), except as provided in subsection (d) of this section, the Secretary shall, *to the extent consistent with providing for the multiple use and sustained yield of all renewable forest resources*, seek to provide a supply of timber from the Tongass National Forest which (1) meets the annual market demand for timber from such forest and (2) meets the market demand from such forest for each planning cycle.[90]

This provision does not mandate the sale of any forest type, let alone old-growth. It also clearly grants the Forest Service the discretion to find that protecting old-growth serves the agency's multiple use mandate better than liquidating carbon stores, wildlife habitat and America's (and tribes') natural heritage.

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[85] *See* SEACC et al. Forest Plan Objection at 12-19, 29-40 (Aug. 30, 2016).
[86] *See id.* at 12.
[87] DEIS at 58.
[88] *Id.* at 25, 26.
[89] *Id.*
[90] 16 U.S.C. § 539d(a) (emphasis added).

The DEIS also states that "the Forest Plan authorizes old-growth harvest as a means to help the forest industry and other stakeholders remain financially viable during the transition to predominantly young-growth timber harvest."[91] But simply because the Plan permits old-growth harvest does not mean that *this* project must be used to fulfill *all* (or even some) of the Plan's proposed logging in the project area, as Alternative 2 would do.[92] The DEIS's summary dismissal of the old-growth protection alternative is arbitrary and capricious.

In short, the Forest Service violates NEPA because the DEIS and 2016 Amended Forest Plan Final EIS unlawfully analyze only action alternatives that depend on clearcutting old growth. As the Ninth Circuit has explained, agencies cannot make an informed decision on a project's environmental impacts when "[t]here is no meaningful difference between the . . . alternatives considered in detail[.]"[93] The Forest Service's failures render the DEIS and the 2016 Amended Forest Plan Final EIS unlawful under NEPA.

V. The DEIS's Action Alternatives Are Too Similar.

The DEIS also violates NEPA because the two action alternatives are too similar to one another in fundamental ways with regard to most project elements, including logging and road construction.

For example, the two action alternatives – 2 and 3 – are identical in terms of their proposals for: stream, lake shore, and floodplain restoration; fish improvements; invasive plant treatments; 45,000 acres of young-growth "silvicultural intermediate treatments;" fish passage; marine access facilities; recreation facilities; and the construction of up to 300 miles of pedestrian trails.[94] Further, the differences in terms of logging, road construction, and related activities are small. Alternative 3 proposes only modest reductions from the maximum development proposed under Alternative 2. Specifically, when compared to Alternative 2, Alternative 3 would:

- log 87.4% of the total timber volume (84.7% of the old growth and 92.5% of the young growth);
- log 86.9% of the total acreage;
- log 89.5% of the total acres of old- and young-growth on karst;
- construct 88% of the new road miles and 88.2% of the temporary road miles; and

[91] DEIS at 26.
[92] *See* DEIS at iv ("Timber offered for purchase is expected to total a maximum of 150 MMBF of old-growth timber and 80 MMBF of young-growth timber for a total volume of 230 MMBF over 15 years over the entire project area"); *id*. at 58 ("The 2016 Forest Plan estimates approximately 150 MMBF of old-growth timber and 80 MMBF of young-growth timber harvest during the first 15 years, from lands suitable for timber production within the Petersburg and Wrangell Ranger Districts").
[93] *W. Watersheds Project v. Abbey*, 719 F.3d 1035, 1051 (9th Cir. 2013).
[94] DEIS at 28, 29.

- construct 100% of the total road miles on karst.[95]

In short, the DEIS considers no middle-ground action alternative, only two alternatives that are essentially similar in many ways and differ only at the margins in terms of logging and road building. NEPA requires the Forest Service to examine meaningful differences between the action alternative and other alternatives. The agency should examine differences in the sizes of individual sales, the locations of those sales, and the timing and sequence of the sales. The lack of substantial variation among the alternative components proposed in the DEIS violates NEPA.

VI. ALTERNATIVES FAIL TO ADDRESS IMPLICATIONS OF, AND ALTERNATIVES TO, DECISIONS TO ADOPT AND IMPLEMENT THE EXPORT POLICIES.

The Forest Service's decision to adopt various versions of the Export Policy has had direct environmental effects because the agency admits it increases the volume of logging on the Tongass, thereby increasing adverse environmental impacts, while decreasing the number of jobs created per unit of timber cut. The Export Policy has, however, never been subject to NEPA review or public notice, review and comment pursuant to the APA. By attempting to evade public review of the adoption and implementation of these policy decisions at both the forest plan and project level, the Forest Service is acting contrary NEPA, NFMA, and the other timber sale statutes governing timber sale decisions.

As explained in SEACC's objections to the 2016 Amended Forest Plan,[96] the Forest Service violated NEPA because the Forest Plan FEIS fails to disclose and analyze the significant environmental and economic impacts of the agency's decisions to adopt export policies. The agency's decisions to adopt various export policies also raises infirmities under NFMA and the other statutes under which the Forest Service operates, as the decisions directly influence the agency's ability to balance multiple competing interests when managing the national forests, including the agency's decision to select an alternative that maximizes the amount of large-scale old-growth logging approved.[97] The undersigned incorporate those previous arguments in their entirety.

At the project level, the "Current Region 10 Export Policy" has a significant, if not the most important, impact on the likelihood that timber sales allowed under various alternatives could be sold and, therefore, on the environmental impacts of the Central Tongass Project. Thus, it has a direct effect on the environmental impacts and economic impacts for Southeast Alaska and, as a result, the Forest Service must evaluate and disclose those impacts in a new DEIS. This analysis should also consider the impacts of the trade war with China on the Alaska industry, and the difficulties of tariffs on Alaska's market share (1 percent).[98] In particular, will the uncertainty

[95] DEIS at 27 (Tables 2).
[96] *See* SEACC Forest Plan Objection at 25-35.
[97] *See* 16 U.S.C. § 1604(e) (NFMA); *id*. § 529 (Multiple-Use Sustained-Yield Act); *id*. § 539d(a) (Tongass Timber Reform Act); *id*. § 3120(a)(3)(A) (Alaska National Interest Lands Conservation Act); *see also Natural Res. Def. Council*, 421 F.3d at 808-09 (explaining balancing of timber and other goals in the Tongass).
[98] *See* (Board of Forestry Excerpts (Aug. 28, 2019).

resulting from tariffs soften export demand and reduce the competitiveness of Alaska in the world marketplace?[99]

The DEIS, however, fails to consider alternatives in which the agency's Export Policy is not adopted and/or applied to the Central Tongass Project.[100] Variations on the Limited Export Policy are not even included among the "Alternatives Considered But Eliminated From Detailed Review."[101] The DEIS fails to explain why domestic alternatives with smaller volumes could not fulfill the Project's purpose and need. The DEIS offers no explanation why the agency did not consider these variations and the resulting differential environmental impacts. By excluding variations on the "Current Region 10 Export Policy," the DEIS excludes reasonable alternatives that fall within the project's "purpose and need," in violation of NEPA.[102]

The Forest Service's decision to apply any export policy, including the "Current Region 10 Export Policy," to the Central Tongass Project requires analysis of the resulting impacts in a new DEIS. The agency must provide a "full and fair discussion of significant environmental impacts" of the decision to allow exports, including but not limited to resultant increases in logging and the impacts on ecosystems that will follow from the resultant logging.[103] At one end, with no export, there would be less logging but more jobs per unit of timber logged and greater protection of wildlife, biological diversity, carbon stores, carbon sequestration, subsistence uses, and the recreation, tourism, and fishing sectors of the economy. At the other end is the "Current Region 10 Export Policy," which emphasizes timber production with fewer jobs and higher adverse impacts and costs on all other values. The agency must analyze these impacts in a supplemental DEIS; the failure to do so will violate NEPA. It will also violate NFMA and the other statutes under which the Forest Service operates when it approves a timber sale given the inherent tradeoffs and balancing the agency must make in deciding how to pursue competing objectives.

For the reasons stated above, the Central Tongass Project accomplishes nothing more than miring Southeast Alaska in the destructive and controversial practices of industrial-scale old-growth logging. As the Project demonstrates with vivid clarity, the Tongass timber program is economically and environmentally unsustainable and, as a result, the Forest Service should not move ahead with the logging aspects of the Project. If the Forest Service decides to move ahead with logging, then the agency must prepare a supplemental DEIS that corrects the deficiencies described above.

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[99] *See* DEIS at 318.
[100] DEIS at 25-26.
[101] *Id.* at 26.
[102] *See City of Carmel-By-The-Sea v. U.S. Dep't of Transp.*, 123 F.3d 1142, 1155 (9th Cir. 1997) ("Project alternatives derive from an Environmental Impact Statement's 'Purpose and Need' section, which briefly defines the underlying purpose and need to which the agency is responding in proposing the alternatives . . . [and which] necessarily dictates the range of reasonable alternatives." (quotation marks omitted)); *Natural Res. Def. Council*, 421 F.3d at 814.
[103] *See Conservation Cong. v. Finley*, 774 F.3d 611, 616 (9th Cir. 2014) (quoting 40 C.F.R. § 1502.1).

VII. THE FOREST SERVICE FAILS TO DISCLOSE THE COSTS, IMPACTS, AND ALTERNATIVES TO PUBLICLY SUBSIDIZING Roads AND ACCESS MANAGEMENT.

Given the uncertainty of the "condition-based" analysis, the Forest Service's assessment, disclosure, and consideration of road costs and impacts (including construction, maintenance, and decommissioning) is incomplete and misleading. This renders the DEIS unlawful under NEPA and would render any decision arbitrary under NFMA and the other statutes governing timber sales.

The DEIS contemplates public subsidies for transportation infrastructure: "In some years, appropriated funds are available to pay for all or a portion of NFS road costs for roads used for a timber sale, as well as the long-term administration of the national forest."[104] In an attempt to counteract the troubling economic realities of the Tongass timber program, the Forest Service appears poised to take an extraordinary and costly measure: the agency might contract to perform most, if not all, of the road construction and reconstruction required for the project at public expense, reducing the costs to the logger but shifting them to the taxpayer. This decision must be analyzed and disclosed in a new DEIS and the implications of this decision explained in the agency's balancing of competing interests under NFMA and the other statutes governing timber sales.

Based on recent experience, the Forest Service's decision whether to pay for some or all of the road costs associated with Tongass timber sale projects directly affects the agency's balancing of competing interests. By way of illustration, in advance of the North Kuiu Timber Sale, advertised in 2018 at 13.5 MMBF,[105] the Forest Service spent $3.1 million to construct and recondition over 80 miles of roads on Kuiu Island.[106] This amount more than quadrupled the road costs the agency projected for the Kuiu sale in its EIS.[107] By pre-roading the sale, the agency shifted these road costs from the purchaser to the public. Moreover, the fact the North Kuiu sale had a minimum bid of less than $200,000 - or less than 7% of the cost to taxpayers of

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[104] DEIS at 64.

[105] U.S Forest Service, Bid Letter for North Kuiu #2 Sale (May 5, 2018).

[106] *See* Kuiu Rd & Bridge Replacement, AG-0120-S-14-0011, Amendment 003, Replacement Pages Section B, Kuiu Contract_Redacted at PDF 11-25 (2014) (identifying roadwork covered by the base bid and options 1-7); Amendment of Solicitation/Modification of Contract (Apr. 23, 2014), Kuiu_sf30_Mod_6_Redacted (Modification 6) (adding roadwork to one road and providing the final contract total of $3,083,813.00). These records were submitted with SEACC's Sept. 24, 2018 scoping comments for the Central Tongass Project (CTPR 832_0304).

[107] Compare U.S. Forest Service, Kuiu Timber Sale Area, Final Environmental Impact Statement at 2-15 (Tbl. 2-2, Alt 5), 3-60 (Tbs. 3-19 & 3-20, Alt 5) (July 2007) (projecting road costs of $54.09/MBF) with Amendment of Solicitation/Modification of Contract (Apr. 23, 2014), Kuiu_sf30_Mod_6_Redacted (Modification 6) (providing $3,083,813.00 road cost, which, divided by the current proposed timber sale volume of 13,643 MBF, yields a cost of $226.04/MBF). These records were submitted with SEACC's Sept. 24, 2018 scoping comments for the Central Tongass Project (CTPR 832_0304).

road construction - demonstrates the arbitrary nature of the Forest Service's balancing of competing interests.

In sum, the Forest Service's decisions in this regard have direct bearing on the agency's analysis of the costs and benefits of the Central Tongass Project, as well as the resulting impacts and alternatives. The DEIS admits that the Forest Service might force the public to pay for some or all of the road costs for the Central Tongass Project over the next 15 years.[108] Yet, inexplicably, the agency fails to examine those costs and the resulting impacts of that decision (*i.e.*, likelihood a timber sale will appraise positively) and justify the decision to use taxpayer funds to cover those costs. A supplemental DEIS should include consideration of an alternative that requires the bidder to pay all the costs associated with road construction and maintenance, and evaluate whether this will mean fewer clearcuts and less miles of roads bulldozed. Thus the information presented in the DEIS is incomplete and presents an inaccurate assessment. The agency must prepare a new DEIS that corrects these failings and examine the impacts that approach will have on the Central Tongass Project. To do otherwise, the agency will violate NEPA and reach an arbitrary conclusion under NFMA.

VIII. THE FOREST SERVICE Fails TO TAKE A HARD LOOK AT THE IMPACT OF HERBICIDES.

The DEIS fails to take a hard look at the impacts of herbicide use in the Central Tongass project. The DEIS overlooks the impact of herbicide use on non-target species. For example, the DEIS fails to give any consideration to the impacts of herbicide use on pollinators. Alaska boasts a great diversity of native bee species, yet the DEIS fails to consider the impacts of herbicide use on native bees or even mention them at all. The vast majority of native bee species are cavity or ground nesting, thus the preferred alternative could result in these species creating nests and leaving eggs to hatch in sites where herbicides have been applied. Herbicide use in these sites could lead to the failure of brooding sites for years to come. In addition, many native bees and pollinators are incredibly specialized and do not travel more than a couple hundred yards, thus the killing or even disturbance of a small patch of plants via herbicide could have significant impacts on an important population.[109] Herbicide use is a leading cause of the decline of butterflies, and other pollinator species, because of its impacts to the floral resources they rely on.[110] Many species of native bees and pollinators remain understudied and rely on federal public lands, but the use of herbicides proposed in the action alternatives could have significant harmful impacts on these populations.

In addition to native pollinators, the DEIS fails to consider impacts to honeybees. Recent, peer reviewed and scientific studies have shown that herbicides interfere with the microbiomes, and

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[108] DEIS at 64 ("In some years, appropriated funds are available to pay for all or a portion of NFS road costs for roads used for a timber sale, as well, as the long-term administration of the national forest.").

[109] Endangered mutualisms: The Conservation of Plant-Pollinator Interactions, Carol A. Kearns, David W. Inouye, and Nickolas M. Waser, Annual Review of Ecology and Systematics 1998 29:1, 83-112.

[110] *See e.g.*, Petition to List Monarch Butterfly, Center for Biological Diversity et al, 2014. https://www.biologicaldiversity.org/species/invertebrates/pdfs/Monarch_ESA_Petition.pdf.

subsequently the survival of honeybees.[111] This new and emerging body of research indicates that herbicide use, once considered relatively benign for honey bees outside of the impacts to floral resources, has a more significant impact than previously considered.

The DEIS also fails to adequately consider the impacts of proposed herbicide use on avian species, especially those cavity nesting species that may use sites where herbicides would be used under the action alternatives.

The DEIS fails to take a hard look at the impacts of herbicide use on ESA listed plants and animals, or indeed the impacts on any wildlife species. The DEIS summarily dismisses such potential impacts. "All treatment methods have the potential to disturb, temporarily displace, or directly harm various wildlife species. However, impacts from treatments tend to be short term . . . ."[112] General statements about effects and risks without providing definitive information does not constitute a hard look as required by NEPA.

Regarding the specific chemicals at use, it must be noted that the EPA has never completed ESA consultation on any of these pesticides and thus their impacts to non-target listed species cannot be described with any certainty. The EPA's systematic failure to engage in ESA consultation on pesticides is the subject matter of numerous lawsuits by the Center for Biological Diversity and others.

The DEIS fails to take a hard look at the impacts of herbicide use within municipal watersheds or near areas of human habitation. Herbicide treatments may occur within watersheds used as drinking water supplies.[113] The DEIS contains no description of the current levels of pollution within these watersheds, and states only that "Appendix A describes design features to protect drinking water consistent with 2016 Forest Plan direction."[114] Those design features (buffers for application of herbicides) do not guarantee a lack of impacts, and in any event the DEIS contains no information evaluating the effectiveness of such buffers.

On the subject of human health, the DEIS fails to take a hard look at the impacts of herbicide use on the health of the workers applying the pesticides. What kind of worker protection and training would be required for pesticide handlers? Would pesticide handlers be required to obtain training on safe pesticide application or obtain certified pesticide handler training? How will emergencies such as accidental pesticide exposure by individuals inexperienced in pesticide application if such emergencies occur in remote locations? What about impacts to those who harvest wild food and other plant materials? Further, despite the fact that Alaskans and tourists harvest berries,

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[111] The Herbicide Glyphosate Negatively Affects Midgut Bacterial Communities and Survival of Honey Bee during Larvae Reared in Vitro**,** Pingli Dai, Zhenxiong Yan, Shilong Ma, Yang Yang, Qiang Wang, Chunsheng Hou, Yanyan Wu, Yongjun Liu, and Qingyun Diao. *Journal of Agricultural and Food Chemistry* **2018** *66* (29), 7786-7793 DOI: 10.1021/acs.jafc.8b02212.
[112] DEIS at 116.
[113] DEIS at 164 ("Multiple surface water rights near Wrangell and Petersburg, as well as potential potable water supply users on private property are in watersheds with proposed harvest units in both Wrangell and Petersburg"); *see also* DEIS Appendix A at A-40.
[114] *Id*. *See also* DEIS Appendix A at A-40 (resource-specific design features for invasive treatments within Public Water Sources).

mushrooms, and other flora for subsistence or recreation, the DEIS contains little analysis of pesticide impacts via such pathways.

We encourage the Forest Service to consider and adopt an alternative that utilizes only manual and mechanical treatments to eradicate and control existing and or new infestations of invasives. Herbicides have substantial adverse effects. They can also be ineffective. For example, herbicides often do not kill whole plants but do cause leaves to wither, giving the appearance of an invasive species treatment being effective for a couple weeks, until the crew has left the area, the plant recovers and starts putting on leaves once more.

The list of resource-specific design features for invasive treatments on karst requires: "Determin[ination of] karst vulnerability" but only "areas of high vulnerability karst, catchment areas contributing to them, and required protections."[115] This feature is inconsistent with direction in the 2016 TLMP because it applies only to "areas of high vulnerability karst [and] catchment areas contributing to them." The Forest Plan, however, requires a karst vulnerability assessment before any surface management practices, including application of herbicides, occurs on moderate and high vulnerability karst terrain.[116] Instructions included with Objection Response POWLLA # 19-1-00-0010 require that: "A karst vulnerability assessment will be completed prior to any surface management practice, including application of herbicide in karst terrain." At a minimum, the Central Tongass Project should contain the same direction to ensure consistency with the 2016 TLMP, as required by the NFMA.

IX. THE CENTRAL TONGASS DEIS FAILS TO TAKE A HARD LOOK AT CUMULATIVE IMPACTS.

NEPA's implementing regulations require that EISs must consider the cumulative impacts of the action under consideration, and defines cumulative impacts as "the incremental impact[s] of the action when added to other past, present, and reasonably foreseeable future actions."[117] Forest Service regulations define a reasonably foreseeable future action as an "[i]dentified proposal[]," [118] which exists where the agency "has a goal and is actively preparing to make a decision on one or more alternative means of accomplishing that goal and the effects can be meaningfully evaluated."[119]

Federal case law and agency guidance make clear that an agency is required to consider a proposal's cumulative effect, even if an agency has not approved that action, because agencies must review impacts when they are "reasonably foreseeable," not when they are "absolutely certain." "[P]rojects need not be finalized before they are reasonably foreseeable."[120] "NEPA requires that an EIS engage in reasonable forecasting. Because speculation is . . . implicit in NEPA, [ ] we must reject any attempt by agencies to shirk their responsibilities under NEPA by

[115] DEIS Appendix A at A-42.
[116] 2016 TLMP Amendment, Appendix H, Sec. III.4.
[117] 40 C.F.R. § 1508.7.
[118] 36 C.F.R. § 220.3.
[119] 36 C.F.R. § 220.4(a)(1).
[120] *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1078-79 (9th Cir. 2011).

labeling any and all discussion of future environmental effects as crystal ball inquiry."[121] As the Environmental Protection Agency also has concluded, "reasonably foreseeable future actions need to be considered even if they are not specific proposals."[122] "It is not appropriate to defer consideration of cumulative impacts to a future date when meaningful consideration can be given now."[123]

For the Central Tongass EIS, the Forest Service has failed to disclose the cumulative effects of this proposed project along with at least four other proposals: one already approved, one categorically excluded from NEPA review, and two projects for which scoping is completed and a DEIS expected.

A. The Prince of Wales Logging Project.

The Forest Service fails to address or acknowledge the potential cumulative impacts from an already-approved project, the Prince of Wales Landscape Level Analysis Project (Prince of Wales Project). That project, for which the Forest Service issued its record of decision in March 2019, authorizes 15 years of logging on Prince of Wales Island and smaller surrounding islands in the Tongass National Forest. It would cut up to 42,635 acres of mostly old-growth forest and build up to 164 miles of new roads.[124] While the Forest Service drew the "project boundaries" of the Prince of Wales Project and the Central Tongass Project so that they do not overlap, the boundaries are separated by a few miles of water or less in many places.[125] Neither project's environmental analysis mentions the other project.

The two projects will have numerous overlapping and cumulative impacts because resources impacted by each project extend beyond the project boundaries of either project. For example, both projects will have overlapping and cumulative effects on the local economy, as the lumber from both projects is likely to feed the same mill (Viking Lumber), which the Forest Service describes as "the last operating medium-sized sawmill in Southeast Alaska."[126] As discussed below, the two projects together appear to exceed the old-growth target set in the Forest Plan for transitioning away from old-growth logging.

The Tongass Plan Amendment of 2016 proposed accelerating the transition of the Forest's timber program from primarily old-growth to almost exclusively young growth within 15 years,

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[121] *Selkirk Conservation Alliance v. Forsgren*, 336 F.3d 944, 962 (9th Cir. 2003) (internal quotation marks and citation omitted).
[122] EPA, *Consideration of Cumulative Impact Analysis in EPA Review of NEPA Documents*, Office of Federal Activities, 12-13 (May 1999), available at https://www.epa.gov/sites/production/files/2014-08/documents/cumulative.pdf (last viewed Sep. 16, 2019).
[123] *Envtl. Prot. Info. Ctr. v. U.S. Forest Serv.*, 451 F.3d 1005, 1014 (9th Cir. 2006) (internal quotation marks and citation omitted).
[124] *See* Prince of Wales Project, Record of Decision at 1.
[125] Compare Forest Service, Prince of Wales Project Final EIS at 9 (Figure 2) with Central Tongass Project DEIS at 3 (Figure 1).
[126] DEIS at 309.

or by the end of 2031.[127] This direction implemented the consensus recommendations from the Tongass Advisory Committee, "a formally established Federal Advisory Committee that included representatives from Federally Recognized Tribes, Alaska Native organizations, Alaska Native corporations, national and regional environmental and conservation organizations, timber industry operators, Federal, State, and local governments, permittees, other commercial operators, and the general public."[128] The TAC recommended that:

> In regards to the harvest of old growth trees, the principle employed is to replace old growth harvest with young growth harvest within 10-15 years, except for small operators dependent on low-volume, niche markets. The 2016 Plan Amendment should provide the flexibility for USFS staff, partners, and collaborators to succeed in transitioning the Southeast Alaska timber industry from predominantly old growth to young growth.[129]

The Forest Plan ROD adopted this direction.

> [U]nder Alternative 5 [the selected alternative] the Agency expects to sell an average of about 12 MMBF of young growth and 34 MMBF of old growth per year during the first 10 years. From Year 11 through Year 15, it expects to sell an average of 28 MMBF of young growth and about 18 MMBF of old growth per year. Alternative 5 is expected to reach a full transition of 41 MMBF of young growth about Year 16. Young-growth sales are expected to continue to increase at a rapid rate after Year 16 and are expected to reach an upper limit of 98 MMBF about Year 18. Old-growth timber will continue to be offered at an average rate of 5 MMBF per year to support small operators and specialty products such as wood for musical instruments.[130]

Year 1 of the Forest Plan was 2017.

The Prince of Wales project itself could supply a significant amount of the old-growth timber target under the Amended Plan. The Prince of Wales Record of Decision indicates that the project will offer "[u]p to an average of 25 million board feet . . . of old-growth timber annually from suitable timber lands . . . during the first 5 years of implementation," or roughly from 2020-2024.[131] During the next 5-year period, or from 2025-2029, the Forest would offer "up to an average of 15 MMBF of old-growth timber annually.[132] From 2030-2031 "up to 10 MMBF of

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[127] Forest Service, 2016 Tongass National Forest Plan Record of Decision (ROD)) at 5 ("Changes to the Plan are focused on accelerating the transition from a primarily old growth to a primarily young-growth timber program").
[128] 2016 Tongass Amendment ROD at 6.
[129] Tongass Advisory Committee, Final Recommendations (Dec. 2015) at 2, attached as Appendix B to the 2016 Tongass Plan Amendment; *see also id*. at 7 ("the overall transition period is defined by the TAC [Tongass Advisory Committee] as a period *not to exceed 15 years* from the date of this Amendment's ROD," December 9, 2016) (emphasis added).
[130] Forest Service, Tongass National Forest Plan Record of Decision (2016) at 7.
[131] Prince of Wales Project, Record of Decision at 2.
[132] *Id*.

old-growth timber may be offered," and during the final 3 years, 2032-2034, "up to 5 MMBF of old-growth timber" could be sold."[133]

The Central Tongass DEIS proposes the following schedule for logging the 150 million board feet of old-growth the project proposes to be logged:

> An average of approximately 20 MMBF of harvest from suitable timber lands is proposed annually during the first 5 years of implementation [or roughly 2020-2024, assuming the ROD is issued next year]. During the next 5-year period [or roughly from 2025-2029], the average annual old-growth harvest is proposed to drop to 7 MMBF and drop again for the last 5-year period [or roughly from 2030-2034] (4 MMBF of annual old-growth harvest).[134]

If combined, the old-growth logging schedules for both projects will exceed the old-growth timber targets for 9 of the next 15 years. *See* Table 1 below.

Table 1. Old-Growth Logging Offered Annually (in MMBF)

Year	Prince of Wales[1]	Central Tongass[2]	Prince of Wales + Central Tongass[3]	Tongass Forest Plan (2016) Target[4]
2020-2024	25	20	***45***	34
2025-2026	15	7	22	34
2027-2029	15	7	***22***	18
2030-2031	10	4	14	18
2032-2034	5	4	***9***	5

[1] Prince of Wales Record of Decision at 2.
[2] Central Tongass DEIS at 23.
[3] This column sums the previous two columns. Years where the two projects combine exceed Plan direction are bolded and italicized. [4] Tongass Forest Plan Record of Decision (2016) at 7.

[133] *Id.*
[134] DEIS at 23.

In short, these two projects alone could exceed the Tongass Forest Plan's target for average level of old-growth cut for most of the next 15 years. A cumulative impact analysis could inform the public and decision makers as to the likelihood that the agency can meet the transition goals set in the 2016 Forest Plan.

In addition, clearcutting and road-building on the massive scale as contemplated in both projects are likely to impact cumulatively endemic species, including the Alexander Archipelago wolf and the Sitka black-tailed deer, that inhabit both project areas.[135] This cumulative damage to wolf and its habitat in particular may be significant.

Both projects will also degrade habitat for the Queen Charlotte goshawk.[136] The goshawk's range includes both project areas, and goshawk are likely to travel between the two areas. With downward population trends likely in both project areas, the potential for impacts across the entirety of this specie's range increases, a cumulative impact that neither EIS analyzes. Similarly, the American marten occurs within both project areas, and each project will degrade habitat for that mammal, raising the specter of cumulative impacts.[137]

B. South Revillagigedo Logging Project.

The Central Tongass DEIS also fails to consider, or even mention, the potential impacts of the South Revillagigedo Integrated Resource Project (South Revilla Project). This project is reasonably foreseeable because the Forest Service has issued a detailed proposal, and is currently preparing a DEIS which the agency estimates could be published this month, or a few months from now.[138] This project "would authorize the harvest up to 46 million board feet of timber from up to 5,500 acres of old-growth forested land and up to 1,000 acres of young-growth in the modified landscape and timber production land use designations (LUDs) using one or more

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[135] DEIS at 104 (Table 27) (predicting "moderate impacts" to the wolf and deer from the Central Tongass Project); Prince of Wales Project Final EIS at 235 ("89 percent of the project area WAAs [wildlife analysis areas] have some level of wolf mortality concern"); *id*. at 99 (disclosing a "significant possibility of a significant restriction" to subsistence uses of deer); Prince of Wales Project Record of Decision at 15 (predicting "Moderate to Major" to wolf and deer in light of this substantial pre-existing loss of habitat).

[136] DEIS at 133 (under proposed action, "there will be adverse impacts to individuals and or habitat"); Prince of Wales Project Record of Decision at 13 ("the overall loss of HPOG [high volume productive old-growth] habitat on all lands could contribute to downward population trends for this species in the project area.").

[137] *See* DEIS at 340 ("Timber harvest with removal of [productive old-growth], and the associated fragmentation and road building which increases subsistence harvester access, could affect the local abundance and distribution of … American marten"); *id*. at 104, Table 27 (concluding project would have "moderate" impacts to American marten); Prince of Wales Project Record of Decision at 14 (concluding project would have "moderate" impacts on American marten and that "The overall loss of average snow marten habitat on all lands could contribute to downward population trends for this species in the project area.").

[138] 84 Fed. Reg. 31,288 (July 1, 2019) ("The DEIS is expected to be published in September 2019"); South Revilla Scoping Information document at 1 (DEIS expected in January 2020).

timber sales, with activities occurring over the course of 15 years" in the Ketchikan Misty Fjords Ranger District.[139]

Because of its proximity to Ketchikan, Saxman, and Metlakatla, the South Revilla project area is an important deer hunting area for these communities. Given the existing and reasonably foreseeable cumulative impacts from logging and road building on old-growth across all land ownerships within and adjacent to the South Revilla project area, we have serious concerns about the impact from additional old-growth logging within this project area on the distribution and abundance of deer for subsistence and sport use. The most recent NEPA analysis for lands within the project area between George and Carroll Inlets concluded, "[c]urrent deer populations on Revillagigedo Island are thought to be at very low levels."[140] The anticipated habitat reductions will cause substantial adverse effects to subsistence use of deer for these communities and result in increased competition for local hunters.

As with the Prince of Wales Project, South Revilla is not directly adjacent to the Central Tongass Project Area though it is only a 20 or so miles south of it. Forty-six million board feet of timber, largely from old growth logging, will further add to the likely exceedance of Forest Plan direction, and further undermine the transition to young growth logging directed by the Forest Plan. In addition, old-growth logging may further degrade habitat for the Alexander Archipelago wolf, Queen Charlotte goshawk, American marten and other old-growth-dependent wildlife. The triple assault from the Prince of Wales, South Revilla, and Central Tongass projects may have cumulative impacts on these (and other) species.

C. Repeal Of The Roadless Area Conservation Rule In Alaska.

The Central Tongass DEIS fails to acknowledge or consider the potential impacts of another reasonably foreseeable Forest Service proposal: the proposed repeal of the National Roadless Rule on the Tongass National Forest. The Forest Service issued a scoping notice to eliminate the Roadless Rule on the Tongass National Forest within the State of Alaska over a year ago, and expects to issue a DEIS imminently.[141] The draft rule only awaits clearance from the Office of Management and Budget, and the office of the Secretary of the Department of Agriculture.[142] A

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[139] Forest Service, Scoping Information, South Revillagigedo Integrated Resource Project (July 2019) at 1, available at https://www.fs.usda.gov/nfs/11558/www/nepa/108739_FSPLT3_4659829.pdf (last viewed Sep. 16, 2019); *see also* Forest Service, Revised Notice of Intent to prepare an Environmental Impact Statement, 84 Fed. Reg. 31,288, 31,289 (July 1, 2019) (scoping notice, similarly characterizing project).

[140] *See* Saddle Lakes FEIS at 3-175 (2015).

[141] *See* 83 Fed. Reg. 44252 (Aug. 30, 2018) (notice of intent to prepare an EIS to address the management of inventoried roadless areas on the Tongass); *id*. at 44,253 ("The DEIS and proposed rule are estimated to be released in early summer 2019. The Final EIS is estimated to be released in spring 2020, with a final rule expected in June 2020.").

[142] *See* website of the Office of Information and Regulatory Affairs (stating that the proposed Roadless Rule repeal is "pending review" before OMB), available at https://www.reginfo.gov/public/jsp/EO/eoDashboard.myjsp?agency_cd=0500&agency_nm=USDA&stage_cd=3&from_page=index.jsp&sub_index=0 (last viewed Sep. 16, 2019).

DEIS on that proposed rule is thus likely almost complete, rendering its impacts foreseeable in the Central Tongass EIS.

Press reports indicate that President Trump has ordered the Forest Service to adopt the most destructive alternative: one that exempts all inventoried roadless areas of the Tongass from the National Roadless Rule, eliminating the Rule's protection from more than nine million acres of roadless forest, and also converting about 165,000 old-growth acres and 20,000 young-growth acres to suitable timber lands.[143] "The Central Tongass Project area includes 43 roadless areas," and each of these areas would no longer have regulatory protection from road construction for logging or for a variety of other activities.[144] Given additional logging and road construction are thus reasonably foreseeable within some or all of these 43 areas within the Central Tongass Project boundary, the impacts of these two proposals must be reviewed together, and must be reviewed before *either* of the projects is approved.

D. Proposed Plan Amendment For Moderate Vulnerability Karst.

In evaluating the effects of proposed management activities on karst resources, the agency explains that according to GIS data, over 25,000 acres of karst terrain exist on Tongass lands within the project area, but the agency has not yet assessed their vulnerability.[145] The agency proposes logging between 2,747 to 2,898 acres of young growth and assumes, based on other projects across the Tongass, about "73 percent of these lands will be found to be of moderate vulnerability."[146] When addressing cumulative effects, however, the agency explains that:

> Until the exact extent and location of any proposed action is determined, a determination of specific effects cannot be made. Assuming 2016 Forest Plan karst and cave management direction and Appendix A are fully implemented there should be no detrimental effects to those resources.[147]

This statement is incorrect based on the agency's current proposal to amend the 2016 Tongass Plan by removing the existing forest plan limits (S-YG-KC-02) for how much young growth is operable for logging on moderate vulnerability karst lands. According to the analysis of young growth suitability, removal of this standard increases by seventeen percent the number of moderate vulnerability karst lands 100% suitable for clearcut logging in surveyed young growth stands on Prince of Wales Island.[148] Thus, between around 2,005 and 2,100 acres of moderate vulnerability could become 100 % suitable within the Central Tongass project record. Clearly,

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[143] *See* J. Eilperin & J. Dasey, *Trump pushes to allow new logging in Alaska's Tongass National Forest*, Washington Post (Aug. 27, 2019) and available at https://www.washingtonpost.com/climate-environment/trump-pushes-to-allow-new-logging-in-alaskas-tongass-national-forest/2019/08/27/b4ca78d6-c832-11e9-be05-f76ac4ec618c_story.html (last viewed Sep. 16, 2019).
[144] DEIS at 44.
[145] DEIS at 257.
[146] *Id.* at 259.
[147] *Id.* at 262.
[148] *See* Tongass Young Growth Suitability Synopsis at 3 (R.Sheets, 2018) (AR 832_0631).

this will have some detrimental effects on karst resources that the Forest Service failed to consider.

E. Other Projects.

Even where the Forest Service does purport to address cumulative impacts, however, the agency fails to take the hard look NEPA requires. The DEIS identifies numerous past, present, and foreseeable future projects in Appendix C, but that appendix simply lists the location, a timeframe, and a very general description of each project. It does not disclose any useful information about the impacts those projects may have when considered cumulatively with the Central Tongass Project, as NEPA requires. The DEIS itself contains only the most general discussion of cumulative impacts aside from the list at Appendix C. Federal courts conclude that the Forest Service must not only give a "sufficiently detailed catalogue of past, present, and future projects," it must also "provide an adequate analysis about how these projects . . . are thought to have impacted the environment."[149] The Forest Service failed to provide such "adequate analysis."

F. Clarification Needed About Ongoing Alaska Mental Health Trust Exchange.

In describing land status within the project area, the DEIS states that there are about 4,942 acres of lands within the Petersburg and Wrangell Ranger Districts currently owned by the Alaska Mental Health Trust that are to be exchanged to the Forest Service.[150] This acreage appears to exclude the currently owned Trust parcel at No Name Bay, on Kuiu Island within the Petersburg Ranger District, which comprises approximately 3,374 acres. Any subsequently prepared NEPA document must explain this discrepancy.

X. THE FOREST SERVICE'S EVALUATION OF ROADS AND MOTOR VEHICLE TRAILS VIOLATES THE TRAVEL MANAGEMENT RULE AND NEPA.

The Central Tongass Project proposes to undertake two actions related to transportation and travel management within the project area. First, Alternative 2 would approve the construction of 25 miles of new roads that would be added to the National Forest road system, and construct 93 miles of "temporary" road.[151]

Second, Alternative 2 proposes to "[d]esignate 128 miles of existing NFS road as Motorized Trails open to OHV < 50 inches wide (such as ATVs or motorcycles). These roads would follow criteria outlined in 36 CFR 212.55, and be displayed on the district's annual Motor Use Vehicle Map. The roads are currently closed, or are already planned for future closure."[152]

[149] *Te-Moak Tribe v. U.S. Dep't of the Interior*, 608 F.3d 592, 603 (9th Cir. 2010) (internal quotation marks omitted).
[150] DEIS at 53.
[151] DEIS at 29 (Table 4).
[152] DEIS at 21.

To date, the Forest Service has failed to comply with federal law and regulations concerning these proposed actions.

A. The Travel Management Rule Governs The Forest Service's Consideration Of New Roads And Trails.

1. The Forest Service Must Identify the "Minimum Road System."

The Travel Management Rule (TMR) sets forth rules for travel and transportation systems in national forests.[153] The TMR was promulgated "to improve implementation of the [relevant] executive orders and establish a national system of roads, trails, and areas with restricted ORV use."[154] Under the Rule, the Forest Service must "identify the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands."[155]

> The minimum system is the road system determined to be needed to meet resource and other management objectives adopted in the relevant land and resource management plan . . . , to meet applicable statutory and regulatory requirements, to reflect long-term funding expectations, to ensure that the identified system minimizes adverse environmental impacts associated with road construction, reconstruction, decommissioning, and maintenance.[156]

The Forest Service must also designate roads for decommissioning.[157] Designation of the minimum road system and road decommissioning must be accomplished by completing a "science-based roads analysis at the appropriate scale," and incorporating, to the degree practicable, the interests of affected citizens and state, local, and tribal governments.[158] This process results in a "travel analysis report" for a given area, which sets forth a recommended minimum road system for a given area. Generally speaking, the analysis and recommendation provided in the travel analysis report will inform the agency's analysis during the subsequent NEPA process for a particular site-specific project.

2. The Forest Service Must Demonstrate How It Achieved the Objective of Minimizing Environmental Damage.

Executive Order 11644 directs "agencies to promulgate regulations that require that all 'areas and trails' allowing off-road vehicles ('ORVs') on public lands be located in areas that"

> (1) ... minimize damage to soil, watershed, vegetation, or other resources of the public lands[;]

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[153] Administration of the Forest Development Transportation System, 66 Fed. Reg. 3206 (Jan 12, 2001) (Subpart A codified at 36 C.F.R. §§ 212.1 to 212.21).
[154] *WildEarth Guardians v. Montana Snowmobile Ass'n*, 790 F.3d 920, 929 (9th Cir. 2015).
[155] 36 C.F.R. § 212.5(b)(1).
[156] *Id.*
[157] *Id.* § 212.5(b)(2).
[158] *Id.* § 212.5(b)(1).

> (2) ... minimize harassment of wildlife or significant disruption of wildlife habitats[; and,]
>
> (3) ... minimize conflicts between off-road vehicle use and other existing or proposed recreational uses of the same or neighboring public lands, and to ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors.[159]

The Travel Management Rule requires National Forests to specify routes, vehicle types, and seasons of motorized travel on roads, trails, and other areas.[160] It prohibits motor vehicle use off designated roads and trails and outside designated areas.[161]

In designating roads, trails, and areas, the Forest Service must

> consider effects on National Forest System natural and cultural resources, public safety, provision of recreational opportunities, access needs, conflicts among uses of National Forest System lands, the need for maintenance and administration of roads, trails, and areas that would arise if the uses under consideration are designated; and the availability of resources for that maintenance and administration.[162]

The Forest Service must also

> consider effects on the following, with the objective of minimizing:
>
> (1) Damage to soil, watershed, vegetation, and other forest resources;
>
> (2) Harassment of wildlife and significant disruption of wildlife habitats;
>
> (3) Conflicts between motor vehicle use and existing or proposed recreational uses of National Forest System lands or neighboring Federal lands; and
>
> (4) Conflicts among different classes of motor vehicle uses of National Forest System lands or neighboring Federal lands.
>
> In addition, the responsible official shall consider:
>
> (5) Compatibility of motor vehicle use with existing conditions in populated areas, taking into account sound, emissions, and other factors.[163]

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[159] *WildEarth Guardians v. Mont. Snowmobile Ass'n*, 790 F.3d 920, 929 (9th Cir. 2015) (footnote omitted) (quoting Exec. Order 11644 §§ 3(1)-(3) ("Use of Off-Road Vehicles on the Public Lands") (Feb. 8, 1972)).
[160] 36 C.F.R. §§ 212.50(a), 212.51(a).
[161] *Id.* §§ 212.50(a), 261.13.
[162] *Id.* § 212.55(a).
[163] *Id.* § 212.55(b).

These are known as the "minimization criteria."[164] "[T]he TMR requires the Forest Service to apply the minimization criteria to each area designated for [OHV use].[165] "[T]he Forest Service must provide a more granular minimization analysis to fulfill the objectives of . . . which the TMR was designed to implement."[166] "What is required is that the Forest Service document how it evaluated and applied the" TMR analysis "on an area-by-area basis with the objective of minimizing impacts as specified in the TMR."[167]

"[M]ere consideration of the TMR's minimization criteria is not sufficient to comply with the regulation."[168] "Rather, the Forest Service must apply the data it has compiled to show how it designed the areas open to [OHV] use with the objective of minimizing damage to" various forest resources.[169] "The TMR is concerned with the effects of each *particularized area and trail designation*."[170] Forest Service NEPA documents evaluating ORV routes will be set aside where the agency "fails to demonstrate, at the 'granular' area-and trail-level, how routes were designated or located, how the minimization criteria were evaluated and implemented, how data was applied, [and] how impacts were minimized."[171]

B. The Forest Service Fails To Identify The Minimum Road System.

The DEIS and appendices fail to demonstrate that the Forest Service has ensured that the 25 miles of new road are necessary to achieve the "minimum road system," as required by 36 C.F.R. § 212.5. In fact, none of the documents even contains the phrase "minimum road system." The DEIS contains boilerplate language asserting that the agency will mitigate the impacts of route construction and use, but this is not the same as ensuring that the routes comply with the TMR's "minimum road system" mandate.[172]

The only rationale provided for adding 25 miles to the road system is: "The need for road construction is mostly determined by the need to access timber units."[173] Whether all of these miles of road meet the definition of a route that fits within the "minimum road system" is questionable because the DEIS admits that: "Not all roads of the gross unit pool may be

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[164] *Mont. Snowmobile Ass'n,* 790 F.3d at 930.
[165] *Id.*
[166] *Id.* at 931.
[167] *Id.*
[168] *Id*. at 932.
[169] *Id.* (quotation omitted).
[170] *Id.* (emphasis added). *See also WildEarth Guardians v. Jeffries,* 370 F. Supp. 3d 1208, 1248-49 (D. Or. 2019) (setting aside Forest Service decision where agency merely considered the minimization criteria).
[171] *Id*., 370 F. Supp. 3d at 1250, citing *Mont. Snowmobile Ass'n*, 790 F.3d at 930-32.
[172] *See* DEIS at ii, 7 (road construction and related "activities are intended to maintain and manage a safe, cost-effective transportation system that supports management activities and provides Forest users access to subsistence, recreation and traditional use opportunities, and minimizes effects on wildlife and fish habitat, riparian habitat, and wetlands.").
[173] DEIS at 360. *See also* DEIS Appendix A at A-94 ("NFS road construction occurs when vehicular access is needed … generally for timber harvest").

constructed or needed, however."[174] If some of the roads may not be "needed," it is difficult to see how they could be part of the *minimum* road system necessary.

The DEIS further justifies changing the level of vehicle use on routes in order to "align with how roads are currently being used."[175] The fact that routes are "being used" does not mean that the routes are needed or are not having detrimental impacts, or that the current level of use is the minimum needed "to meet resource and other management objectives."[176] The DEIS does not address these critical factors as required by law.

Although Forest Service regulations require that the minimum road system "reflect long-term funding expectations,"[177] the DEIS does not address whether the Forest Service can afford the added construction and maintenance costs of roads the proposed action would add to the system. The Forest Service estimates road construction and maintenance costs, but does not explain how they fit within the agency's budget.[178] In fact, the Forest Service admits: "There is no indication that additional maintenance funds would be available" for the additional miles of road, "so the existing budget would need to accommodate additional miles."[179] In fact, the Forest Service fails to disclose that the road maintenance backlog on the Tongass is currently $68 million dollars.[180] The Forest Service fails to explain if or how the agency will do more with less. Because the Forest Service fails to describe "long-term funding expectations," except to admit that the agency is unlikely to be able to maintain new roads, the agency fails to comply with the TMR's provisions concerning roads. Any subsequently-prepared NEPA document must cure these errors.

Further, lack of road maintenance can cause significant negative impacts in the form of erosion, soil degradation, water pollution and sedimentation, the spread of noxious weeds, and decreased visitor safety, among other harms. The Forest Service fails to analyze or disclose these impacts. These types of impacts also demonstrate that the road system the Forest Service proposes here will fail to "ensure that the identified system minimizes adverse environmental impacts associated with road construction, reconstruction, decommissioning, and maintenance," as required by 36 C.F.R. § 212.5(b)(1).

The Forest Service has also failed to engage in a road-by-road analysis to determine whether each route is needed. The DEIS asserts that the "project record" contains a "[r]oute-by-route ranking by resource and methodology."[181] But that ranking document is little more than a checklist of potential impacts to various characteristics without any explanation or evaluation as to why, given the impacts marked, the Forest Service would choose to close some roads, while

[174] DEIS at 364. *See also* DEIS Appendix B at B-1 ("It is acknowledged that not all roads of the gross unit pool will be constructed or needed.").
[175] DEIS at 364.
[176] 36 C.F.R. § 212.5(b)(1).
[177] 36 C.F.R. § 212.5(b)(1).
[178] *See* DEIS Appendix B at B-11 – B-13.
[179] DEIS Appendix B at B-12.
[180] USFS Answers to Mr. Quigley, Q1 (2019).
[181] DEIS Appendix B at B-7.

choosing to add some newly-constructed routes to the system.[182] Further, beyond the location of the island on which the route is located, the table contained in the record does not identify the location, course, or length of any route, making it impossible for the public to understand the agency's logic or to identify routes on the maps provided.[183] This violates both the TMR and NEPA's "hard look" mandate.

Finally, because the specific location and impacts of individual roads are not disclosed, it is impossible for the public (or the agency) to understand whether certain routes might be particularly damaging, and therefore whether the agency should consider a reasonable alternative of removing certain routes from the system. This failure to present potential impacts in a way that would allow for the promulgation and evaluation of reasonable alternatives also violates NEPA.[184]

C. The Forest Service Fails To Comply With The Minimization Criteria For OHV Routes.

As noted, in implementing the TMRs, federal courts require the Forest Service to do more than consider the impacts of OHV routes on specific resources and allege that those impacts have been minimized. The Forest Service must *explain* "[h]ow the routes comply with the minimization criteria, specifically as to how they are located and designated to minimize these effects."[185] Further, the agency must "demonstrate, at the 'granular' area- and trail-level, how routes were designated or located, how the minimization criteria were evaluated and implemented, how data was applied, or how impacts were minimized."[186] This the Forest Service failed to do.

The DEIS itself contains little information about the 128 miles of routes to be designated as open to OHV use. The Forest Service notes that OHV use "has grown in popularity," and identifies the number of miles of new OHV trails proposed.[187] It does not indicate, for example, how wildlife may be impacted by increased trapping pressure that will result from the significant increase in lands open and adjacent to OHV routes.

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[182] *See* Central Tongass Travel Analysis (no date), in Project Record at file 832_0954.
[183] The DEIS does provide a gross scale map depicting proposed road construction and OHV routes. DEIS Appendix B at B-15. But the relationship between that map and the route segments identified in the Travel Analysis document is nowhere explained The map itself provides no segment numbers or identification of any kind. As noted above, the scale of the makes it impossible for the public or the decision-maker to understand the routes' precise location, or the impacts to values along the course of those routes.
[184] Despite this fact, some alternatives are called to mind by the map the agency does provide. The map shows a significant concentration of new road construction on Zarembo and Kupreanof Islands, despite the existence of substantial road networks in close proximity to the proposed routes. The Forest Service should consider alternatives that reduce the road mileage on both islands.
[185] *WildEarth Guardians*, 370 F. Supp. 3d at 1249.
[186] *Id*. at 1250.
[187] DEIS at 274, 364.

The DEIS's "Travel Analysis" appendix, which the DEIS cites as the location of additional analysis, does not meet the standards for minimization as required by law. For example, the appendix indicates that the evaluation of whether routes will be open or closed may be put off until after the Forest Service issues the ROD for this project:

> Approval of OHV < 50 inches in width and showing the trail on the MVUM *would occur* on a route-by-route basis. See Implementation Guide Activity 5 for information on criteria considered before allowing OHV < 50 inches in width and designating as a Motorized Trail.[188]

To the extent that the Forest Service will undertake a route-by-route analysis after completion of the NEPA process and after the decision in the Central Tongass ROD to add these routes to the system, the agency's decision to punt the actual analysis until after the agency makes its decision violates both the TMR and NEPA.

The Travel Analysis appendix further fails to demonstrate that each of the routes proposed that will make up the 128 miles of new OHV routes will meet the minimization criteria because the Forest Service admits it does not know how the routes will be maintained in a manner that will prevent environmental degradation:

> Recreation budgets are constrained, and maintenance of currently designated motorized trails does not occur. At this time *it is hard to predict* future budgets and *how the addition of motorized trails would be maintained*. Partnering with user groups who use the trails *could be* one source for maintaining trails worth investigating by the Forest Service.[189]

The appendix also contains almost no information about individual routes (disclosing only a rough approximation of their length and containing a map displaying the routes' rough location, but without any way to cross-reference the data about length), thus it does not and cannot represent the "granular" analysis that the courts have mandated.[190]

Nor can the Forest Service rely on the "Central Tongass Travel Analysis" in the project record to meet the agency's minimization duties. That document identifies individual routes by number, and, in a table or matrix, indicates whether the route will have a low, medium or high impact to a half-dozen categories of natural resources.[191] This document lacks any information to explain why certain routes are opened while others remain closed, or how those routes minimize harm to impacted resources at the route-by-route level. This is precisely the type of analysis struck down by the federal courts in *Idaho Conservation League v. Guzman*, 766 F. Supp. 2d 1056 (D. Idaho 2011). There, the Forest Service argued that a matrix identifying certain values, and whether the

[188] DEIS Appendix B at B-5.
[189] DEIS Appendix B at B-5 (emphasis added).
[190] DEIS Appendix B at B-7 – B-11; B-15.
[191] *See* Central Tongass Travel Analysis (no date), in Project Record at file 832_0954, at PDF pages 21-31.

routes would impact such values, was sufficient analysis to meet the minimization criteria. The court rejected this approach.

> The Route Designation Matrices are not evidence of the implementation of such criteria. Instead, they contain a large number of subject boxes with a variety of different checkmarks and other notations recorded. There is no way to know how or if the Forest Service used this information to select routes with the objective of minimizing impacts. Without some explanation for how this information was implemented, the Forest Service has failed to meet the regulatory requirements contained in the 2005 Travel Management Rule.[192]

The court held that neither the NEPA analysis nor "conclusory statements in the record" were enough to "connect the dots" from the matrix to the Forest Service's decision.[193] The same is true here.

The Forest Service may not allege that design features or mitigation measures discharge the agencies' duties under the TMR. As the *WildEarth Guardians* court ruled:

> Defendants attempt to rely on project design features of the Project, as well as the SFEIS environmental analysis, to show compliance with the TMR. Defendants argue that minimization of effects occur in the analysis of the environmental impacts of the Project. However, this is not the same as an analysis and application of how the Forest Service sought to minimize such impacts with regard to the designation of routes. Education, enforcement, increased compliance, maintenance, and monitoring may all serve to reduce impacts, but this does not meet the TMR's requirement to show application of the criteria to minimize impacts when locating routes.[194]

In sum, the Forest Service's "analysis" of the OHV routes it intends to open fails to comply with the TMR's minimization requirements. Further, because the agency failed to disclose the impacts of opening each route, the DEIS fails to take the hard look NEPA requires.

As with its analysis of new National Forest System roads, the DEIS's failure to disclose site-specific impacts makes it difficult for the decision-maker or the public to propose reasonable alternatives. However, based on what little information the Forest Service does provide, the agency could have considered an alternative that would open only that portion of the 128 miles of OHV routes for which the agency concluded there would be "low" risk of impacts to all of the following values: fisheries, cultural resources, soils, watershed resources, invasive species, and wildlife habitat. Further, the Forest Service could have considered an alternative that identified certain areas (such as northern Kuiu Island) where new OHV routes would not be approved because road densities are already high and so additional OHV routes would further degrade

[192] *Idaho Conservation League*, 766 F. Supp. 2d at 1072.
[193] *Id*.
[194] *WildEarth Guardians*, 370 F. Supp. 3d at 1250.

habitat. We urge the Forest Service to consider such alternatives in any subsequently prepared NEPA document. Failure to analyze such reasonable alternatives would violate NEPA.

XI. THE DEIS FAILS TO TAKE A HARD LOOK AT THE PROJECT'S CLIMATE IMPACTS.

The climate crisis is the preeminent environmental issue of our time, threatening to drastically modify ecosystems, alter coastlines, worsen extreme weather events, degrade public health, and cause massive human displacement. Its impacts are already being felt in the United States, and particularly and increasingly in Alaska.

Proposals such as the Central Tongass Project are likely to have significant climate pollution impacts because the Tongass National Forest is one of the planet's critical carbon sinks. As the Forest Service has recognized:

> The Tongass National Forest stores more forest carbon than any other national forest in the United States . . . . As such, a critical ecosystem service sustained by this forest is carbon sequestration (i.e., the removal of carbon dioxide from the atmosphere and keeping that carbon inactive by storing it in live or dead biomass as well as organic soil matter). This makes the Tongass National Forest a critical component in the global carbon cycle.[195]

The Forest Service has stated that "the carbon stored in the Tongass National Forest makes up about 8 percent of the carbon currently stored in the forests of the United States."[196] Other Forest Service experts have concluded that prior studies have underestimated the Tongass's ability to sequester carbon in soils; as a result they estimate that the Tongass may store up to 12 percent of the carbon of all U.S. forests.[197] Whatever the number, the Tongass "plays an important role in [the] amount of carbon that is stored globally as well as the global climatic condition … *land management and other actions taken on the Tongass National Forest can affect climate change at a local, regional, and global scale*."[198] The Tongass's moist, old forests, and the soil they protect, are particularly efficient at sequestering carbon.[199]

Logging old-growth forests in particular worsens climate change by releasing significant amounts of carbon and by preventing such forests from continuing to sequester carbon. "[M]ature forests on the Tongass National Forest 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)."[200] This is so because when a forest is cut down,

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[195] Forest Service, Tongass Land and Resource Management Plan, Final EIS (2016) at 3-13.
[196] *Id.* at 3-15. *See also* D. DellaSala, *The Tongass Rainforest as Alaska's First Line of Climate Change Defense and Importance to the Paris Climate Change Agreements* (2016).
[197] M.C. Martin, *From rock to forest: Southeast's carbon sink*, Juneau Empire (Feb. 19, 2016) (paraphrasing Forest Service scientist.
[198] Forest Service, Tongass Land and Resource Management Plan, Final EIS (2016) at 3-19 (emphasis added).
[199] *Id*. at 3-14.
[200] *Id*. at 3-14.

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."[201] According to a recent IPCC report, deforestation causes climate pollution, and avoiding deforestation will reduce climate pollution.[202]

This science makes clear that the proposed Central Tongass Project will worsen climate emissions. It will do so by cutting down and eliminating 9,500 acres of old-growth forest, destroying the ability of those stands and that land to sequester carbon. Further the act of chainsawing forests, building roads and other facilities, and moving wood to mills or overseas markets will result in fossil fuel emissions, adding to climate pollution. The project also proposes to increase opportunities for off-highway vehicle use on the Forest, which will lead to more fossil fuel combustion.

The DEIS acknowledges the Tongass forest's role in capturing carbon, and thus mitigating climate pollution. "Forest ecosystems, such as those managed on the Tongass National Forest, represent a large terrestrial sink for carbon, such that the United Nations Framework Convention on Climate Change has recognized forest management as an effective strategy for off-setting GHG [greenhouse gas] emissions (Wilson et al. 2013). A widely recognized ecosystem service provided by the Tongass is carbon flux regulation."[203] Despite the critical importance of intact Tongass old-growth to maintaining carbon stores, and the fact that the clearcuts proposed for this project will degrade those stores, the DEIS relegates climate change to: "Resources Not Discussed in Detail. Resources likely to remain unaffected by this project, or those that do not have measurable effects."[204] Both of these contentions are incorrect. Climate pollution will be worsened because of this project, and the effects are capable of estimation.

The Forest Service further explains that it declines to undertake a more detailed analysis of climate analysis because the agency consider it too hard. "How carbon storage, carbon sequestration, timber harvest, vegetative regrowth and carbon emissions interact over time *is very complex*, making it unrealistic to define a temporal scope of analysis."[205]

Instead, the DEIS contains about five sentences that address the climate pollution impacts of the action alternatives only in the most vague and qualitative terms:

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[201] *See, e.g.*, D. DellaSala, *The Tongass Rainforest*, *supra* note 196 at 5.
[202] 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. TZ3. *See also* 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. TZ4.
[203] *See* DEIS at 49.
[204] DEIS at 48.
[205] DEIS at 48. *See also id*. at 50 ("The relationship between timber harvests, reforestation, wood building materials, and the net storage of carbon is *complicated*.") (emphasis added).

> Both of the action alternatives involve old-growth and young-growth timber harvest along with road construction which would result in a net release of GHG and other pollutants into the atmosphere through varying amounts of road construction, timber harvest, use of administrative vehicles of all kinds, mining, recreation development and use, and other land management actions. Some proposed activities involve removing vegetation, grading and contouring the ground, hardening roads, extraction of materials such as gravel, soil, and rock, and the construction of bridges, all of which require fossil fuel-burning machinery and an increase in construction vehicle traffic for the next 15-year period. All these construction activities would increase GHG and other fossil fuel combustion emissions.
>
> Effects of timber harvest and roads in Alternatives 2 and 3 combined with effects of climate change could exacerbate adverse effects of peak streamflow increases on aquatic resources.[206]

In short, the Forest Service's complete analysis is that the action alternatives would increase GHG emissions. That analysis fails to quantify the climate impacts, nor does it even try to provide the public or the decision-maker with a sense of the scale of the climate harm. It does not permit a comparison among alternatives, nor does it identify measures to mitigate those impacts.

The Forest Service's approach violates NEPA. There is no loophole in NEPA allowing agencies to turn a blind eye to potential impacts because doing so is "complex" or "complicated." To the contrary, federal courts have long ruled that NEPA requires agencies to make reasonable estimates of potential impacts. "Reasonable forecasting and speculation is . . . implicit in NEPA, and we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as 'crystal ball inquiry.'"[207] "If it is reasonably possible to analyze the environmental consequences in an [EIS], the agency is required to perform that analysis."[208] "NEPA analysis necessarily involves some 'reasonable forecasting,' and ... agencies may sometimes need to make educated assumptions about an

[206] DEIS at 51. *See also id.* at 50 ("construction activities" including roads, trails, quarries, etc., "would increase GHG and other fossil fuel combustion emissions, airborne dust, and particulate matter from wood burning.").
[207] *Scientists' Inst. for Pub. Info., Inc. v. Atomic Energy Comm'n*, 481 F.2d 1079, 1092 (D.C. Cir. 1973). *See also City of Davis v. Coleman*, 521 F.2d 661, 676 (9th Cir. 1975) (because "the basic thrust of an agency's responsibilities under NEPA is to predict the environmental effects of proposed action before the action is taken and those effects fully known . . . . [r]easonable forecasting and speculation is . . . implicit in NEPA.").
[208] *Kern v. U.S. Bureau of Land Mgmt.*, 284 F.3d 1062, 1072 (9th Cir. 2002) (finding both EIS and later EA inadequate under NEPA).

uncertain future."[209] "While foreseeing the unforeseeable is not required, an agency must use its best efforts to find out all that it reasonably can."[210]

Here, the Forest Service did not use its "best efforts" to address climate impacts. Rather it invested no effort, instead summarily concluding – without evidence or analysis – that it need perform no analysis at all. The agency's conclusion is arbitrary and capricious.

The only example the Forest Service provides for complexity relates to the effects of carbon stored in wood products. The DEIS notes that "carbon is stored in building materials, but the storage value does not last as long as a living old-growth tree, as carbon stored in buildings generally outlives its usefulness or is replaced within decades (Law et al. 2018)."[211] But the article by Dr. Law that the Forest Service cites disproves the agency's point. Dr. Law concludes that those 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.[212] This is precisely the type of analysis the Forest Service should, and could, have undertaken for the DEIS.

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.[213] The Bureau of Land Management 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.[214] Because agencies and academics have quantified and compared the carbon emissions of alternative logging proposals, the Forest Service cannot fail to undertake a similar analysis on the basis that it is too "complex" or "complicated."

The Forest Service failure to address or acknowledge that there are peer-reviewed scientific approaches to estimating net climate damage caused by logging temperate forests is an independent NEPA violation. NEPA requires agencies to explain opposing viewpoints and their

[209] *Sierra Club v. FERC*, 867 F.3d 1357, 1374 (D.C. Cir. 2017) (quoting *Del. Riverkeeper Network v. FERC, 753 F.3d 1304,* 1310 (D.C. Cir. 2014)).
[210] *Barnes v. United States Dep't of Transp.*, 655 F.3d 1124, 1136 (9th Cir. 2011) (internal quotation marks omitted)).
[211] DEIS at 50.
[212] *See* Law et al., *Land use strategies* 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.").
[213] DellaSala at 14.
[214] *See* Bureau of Land Management, Western Oregon Proposed RMP Final EIS (2009) at 165-181.

rationale for choosing one viewpoint over the other.[215] Courts will set aside an EIS where the agency fails to respond to scientific analysis that calls into question the agency's assumptions or conclusions.[216] Here, while the DEIS cites Dr. Law's and Dr. DellaSala's reports, the agency fails to address either report's key finding that the life-cycle impacts of forest logging can be estimated and quantified. The agency's failure to address these studies violates NEPA.

We note that the 2016 Tongass Forest Plan Amendment declined to undertake a quantitative assessment of climate impacts because although such a "quantitative (i.e., numeric) assessment is feasible, . . . the quantitative results would include a large amount of error or uncertainty, such that the calculated differences between the alternatives would be difficult to discern."[217] While we reject that EIS's contention that some uncertainty renders quantification useless, we note that the Forest Service declined to address climate impacts at the Forest Plan level in part because "it is unknown when forests will be harvested or the extent of harvest that would occur at any particular time . . . for any alternative."[218] That uncertainty is not present here. The Central Tongass Project proposes a specific amount of logging (230 million board feet) including 150 million board feet of old-growth on a schedule. Now that the agency has the information it lacked at the Plan level, it cannot kick the can down the road again based on uncertainty about the scope of logging.

We note that the DEIS carefully quantifies the economic benefits of logging – a complex task – while ignoring the climate costs. The DEIS tallies the "[a]nnualized timber industry and associated jobs" and direct income.[219] Yet the Forest Service fails not only to estimate the volume of climate emissions, it fails to weigh the economic benefits of the project against the costs of climate change, which can be estimated using the Interagency Working Group's global estimate of the social cost of carbon.[220] Once an agency chooses to "trumpet" a set of benefits, it also has a duty to disclose the related costs.[221] "There can be no hard look at costs and benefits unless all costs are disclosed."[222]

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[215] 40 C.F.R. § 1502.9(b) (requiring agencies to disclose, discuss, and respond to "any responsible opposing view").
[216] *See 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").
[217] Forest Service, Tongass Land and Resource Management Plan, Final EIS (2016) at 3-21.
[218] *Id*.
[219] DEIS at 67-68 (estimating that the proposed action would result in precisely $34,243,540 in "direct income").
[220] *See High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1190-93 (D. Colo. 2014).
[221] *Sierra Club v. Sigler*, 695 F.2d 957, 979 (5th Cir. 1983).
[222] *Id*.

Finally, the Forest Service cannot allege that it need not quantify the climate impacts of logging, hauling, and road construction by relying on NEPA regulations concerning "incomplete or unavailable information."[223] Those NEPA provisions require the agency to identify the information as such, to "make clear that such information is lacking," and nonetheless include the information in the EIS if the overall costs of obtaining it are not "exorbitant" and the information is "essential to a reasoned choice among alternatives."[224] The DEIS makes none of these required findings. Further, given the importance of the Tongass for carbon storage, it is essential for the Forest Service to disclose such impacts in order to understand whether the climate damage caused by logging outweighs any alleged economic benefits of logging. Only then can the no action and action alternatives be placed in sharp relief, which is essential to the comparison and analysis of alternatives.

XII. THE DEIS FAILS TO TAKE A HARD LOOK AT IMPACTS TO ROADLESS AREAS.

The DEIS acknowledges that there are "43 IRAs [Inventoried Roadless Areas] within the project area."[225] The Forest Service dismisses impacts to each and every roadless area because no roads will be constructed within them.[226] This despite the fact that the DEIS admits that logging, the construction of trails, including for OHV use, and other actions, "could" occur in one, or more, or all, of the roadless areas within the project area.

The DEIS fails to include a map of IRAs, nor does it identify whether multiple project components may occur in one or more IRAs. For example:

- "recreation activities, such as winter trail designations, *could* occur in, or near, inventoried roadless areas. The activities . . . would allow travel into the IRAs . . . snowmobiles, or other off-highway vehicles."[227]

- "The action alternatives include dispersed recreation activities, three-sided shelters and beach access, which *could* occur in IRAs."[228]

- "Watershed improvement activities which may include *some timber harvest* are also included in the action alternatives."[229]

The DEIS thus anticipates that IRAs could be impacted by new trails, an increase in motor vehicle use, the construction of new facilities, and timber harvest. Although these activities are

[223] 40 C.F.R. § 1502.22.
[224] *Id*. § 1502.22(a).
[225] DEIS at 51.
[226] DEIS at 52 ("No direct impacts to IRAs are expected from timber harvest or road construction for any of the alternatives.").
[227] DEIS at 52 (emphasis added).
[228] DEIS at 52 (emphasis added).
[229] DEIS at 52 (emphasis added).

not always prohibited by the Roadless Rule, they may still degrade roadless characteristics, which the Rule defines to include

> (1) High quality or undisturbed soil, water, and air; (2) Sources of public drinking water; (3) Diversity of plant and animal communities; (4) Habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land; (5) Primitive, semi-primitive non-motorized and semi-primitive motorized classes of dispersed recreation; (6) Reference landscapes; (7) Natural appearing landscapes with high scenic quality; (8) Traditional cultural properties and sacred sites; and (9) Other locally identified unique characteristics.[230]

Trail construction and use (especially by motor vehicles), and the noise, air pollution, and other impacts that accompany such use, the building of recreational structures, and logging could degrade many of these values, including naturally appearing landscapes, sacred sites, habitat for sensitive species, and undisturbed soil. Further, the DEIS does not address whether any of these activities, especially the construction and use of motor vehicle trails within the IRAs, may be incompatible with the designation of these areas as wilderness.

In sum, the Forest Service fails to address these impacts relative to the inventoried roadless area(s) that may be impacted. Nor does the DEIS identify which areas could be impacted by which type of project. Any subsequently prepared NEPA document must remedy the lack of analysis of impact to roadless areas and characteristics.

XIII. THE DEIS UNDERESTIMATES IMPACTS TO WILDLIFE.

An important Forest-wide Wildlife Standard is to provide the abundance and distribution of habitat necessary to maintain viable populations of existing species well-distributed in the planning area.[231] There are three references in the DEIS to maintaining "viable, well-distributed populations" of wildlife,[232] but no acknowledgement that that is the standard that the Forest Service must demonstrate that this directive will be attained for species at issue for this project. The FEIS must acknowledge the standards that apply to this project from the Forest Plan and NFMA and implementing regulations, and explain how the project will comply with them. As noted, compliance with a habitat threshold that lacks the scientific basis to serve as a proxy for ensuring viable, well-distributed wildlife populations will not suffice to demonstrate compliance with NFMA.

The comments below address marten, deer and wolves specifically, but the DEIS's analysis of all wildlife species is compromised by the lack of sufficient specificity noted above - especially endemic species whose viability is highly dependent on site-specific conditions. The analysis is inadequate to support the conclusion that this project will maintain viable, well-distributed populations of wildlife in general.

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[230] 36 C.F.R. § 294.11 (Jan. 12, 2001).
[231] 2016 Tongass Forest Plan at 4-85.
[232] DEIS at 111, 136, 139.

A. Marten

From the information available in the DEIS, it appears that the Central Tongass project would likely have unacceptable impacts to marten in the project area. Due to the programmatic nature of the analysis, it is impossible to quantify those effects with any specificity because the precise logging and road locations are unknown, preventing any rigorous assessment of remaining habitat quality and connectivity on any meaningful scale. But in general we concur with the Forest Service that impacts to marten will be "major," and available information indicates that the project area will likely not support viable, well-distributed populations of marten across the landscape.

1. Habitat

Large, continuous blocks of old-growth forest are very important for martens, which are extremely sensitive to the loss and fragmentation of mature forest habitat and rarely occupy landscapes after 30 percent of the mature forest has been harvested.[233] Martens especially select for higher volume old-growth forest types at low elevation (<250 meters).[234]

The DEIS identifies 30% forest removal as an important threshold for marten, but fails to note the fact that they rarely occupy these areas where the 30% threshold has been crossed. Areas "rarely occupied" by a species can be safely assumed to be areas where viable, well-distributed populations do not occur. There are numerous such areas that already exist within the project area, and this project will create more such areas. The Central Tongass DEIS incorrectly applies habitat thresholds developed for deer to marten. In other words, deer habitat requirements are used as an umbrella for marten habitat standards, when often marten are considered umbrella species in old growth forests. Marten are more dependent on prey species densities, whereas deer foraging habitat thresholds are based on deer foraging behavior and needs. Rather, the body of research available for Pacific marten, and marten species in general, indicates that both forest structure and landscape pattern are important indicators for marten.[235] This research also indicates that *less than* 25% open canopy created by both clearcuts and natural openings is the threshold for marten in areas greater than or equal to 9 km^2. When we apply these thresholds to islands, we also have to consider edge effects caused by landscape heterogeneity along shorelines. Marten studies across North America, including Southeast Alaska, indicate marten prefer high gradients of forest complexity that are reliant on a number of features. The amount of unsuitable habitat, as mentioned above, does impact marten occupancy at 25% thresholds.[236] Marten also rely on structurally complex understory, particularly in winter. This, more than snow depth, along with prey availability, are variables used to assess the quality of marten habitat and

[233] Wildlife Resource Report (WRR) at 130, citing Chapin et al. 1998, Hargis et al. 1999, Potvin et al. 2000, Moriarty et al. 2016a) (emphasis added).
[234] WRR at 130.
[235] Hargis, C.D., J.A. Bissonette, and D.L. Turner. 1999. The influence of forest fragmentation and landscape pattern on American martens. Journal of Applied Ecology 36: 157-172.
[236] Dumyahn, J., P. Zollner, and J. Gilbert. 2005. Winter Home-range Characteristics of American Marten (Martes Americana) in Northern Wisconsin. American Midland Naturalist. 158. 382-394.

persistence.[237] Southeast Alaska creates very complex habitat characteristics because of the diversity of prey species shifting across islands.[238] *Microtus spp*. (voles), primary prey sources for marten, are available disproportionately across the Tongass, with some islands having more species of *Microtus* than others. *Tamiasciurus spp.* (squirrels) are another prey species distributed unevenly across the Tongass. These ranges impact the range and distribution of Pacific marten and American marten.

Of the most favorable "deep snow" marten habitat, high POG below 800 feet, only 76% currently remains in the project area as a whole, and many VCUs have between 21% and 70% HPOG remaining on NFS lands.[239] Marten are already nearing the critical 30% threshold for their preferred habitat project area-wide. The DEIS notes that this project will severely compromise preferred marten HPOG habitat below 250 meters:

> In VCUs where the percentage of historic average winter and deep snow marten habitat remaining would be below 70 percent under either alternative there would be an increased potential for marten population declines. The potential would be even more elevated where the percentages of habitat that would remain would be low in adjoining VCUs. This situation is particularly evident on north Zarembo where both VCUs would be below 50 percent of the historic average winter and deep snow marten habitat; and one of these VCUs is already below 50 percent deep snow marten habitat remaining.
>
> On Mitkof Island four adjoining VCUs would all fall below 70 percent remaining of average winter marten habitat, and deep snow habitat would be below 50 percent remaining. West Kupreanof is similar to Mitkof Island. Wrangell Island would also have some VCUs that adjoin each other that would be below 70 percent average winter marten habitat and 50 percent deep snow marten habitat. Two VCUs on Kuiu Island would also fall below 70 percent of average winter habitat though they are not immediately adjacent to each other and there are several VCUs adjoining each other that are currently below 70 percent deep snow marten habitat and one of these would fall below 50 percent remaining.[240]

Additionally, this project will adversely impact "average" marten habitat – POG below 1500 feet. The Forest Service has identified five VCUs (4370, 4550, 4560, 4570 and 4600) in the project area where removal exceeds 33%, and an additional 16 VCUs that will meet that criterion if this project proceeds, including adjoining VCUs which exacerbate the fragmentation problem

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[237] Allen, A.W. 1982. Habitat Suitability Index Models: Marten. U.S.D.I. Fish and Wildlife Service. FWS/OBS-92/10.11. 9 pp.; Ben-David, M., Flynn, R. & Schell, D. 1997. Oecologia. 111: 280. https://doi.org/10.1007/s004420050236; Ruggiero, L.F., D.E. Pearson, S.E. Henry. 1998. Characteristics of American marten den sites in Wyoming. Journal of Wildlife Management 62(2):663–673; Buskirk, S. W. and R. A. Powell. 1994. Habitat ecology of fishers and American martens. Comstock Publishing Assoc. Cornell Univ. Press.
[238] S.O. MacDonald and J.A. Cook. Mammals and Amphibians of Southeast Alaska. 2007. Special Publication, Museum of Southwestern Biologist, University of New Mexico. Pp. 88-92.
[239] DEIS at 93.
[240] DEIS at 100-101.

for marten. Two more VCUs on Zarembo Island that are currently between 50-70% intact will fall below 50%.[241] Thus, a total of 23 VCUs will not include sufficient habitat to support viable marten populations if the project moves forward. Figure 9 visually depicts the areas of preferred marten habitat already decimated to or beyond the point where marten can be expected to rarely occur.[242]

The DEIS does recognize that "the relatively low amount of important marten habitat that could remain in certain VCUs would have the potential to cause localized declines in marten populations. Therefore, Alternatives 2 and 3 would have major effects to American marten as a Management Indicator Species."[243] What the analysis ultimately indicates, however, is that the project area as a whole cannot be expected to support viable, well-distributed populations of marten because of these major impacts to key marten habitat. There are no provisions to ensure viable populations in the numerous areas noted that will lack sufficient habitat, e.g., Zarembo, Mitkof, West Kupreanof, Etolin or Wrangell island. The Forest Service must demonstrate that any selected alternative contains sufficient habitat to support viable, well-distributed populations of wildlife, including marten. Because the DEIS fails to do so, the proposed action alternatives will violate NFMA.[244]

2. Legacy Standards and Guidelines

The DEIS notes that the Legacy standards and guidelines within the Forest Plan were developed in part to address marten habitat concerns.[245] These standards and guidelines only apply to harvest units greater than 20 acres in VCUs where 33% or more of POG was harvested by 2005, or more than 67% of POG is projected to be harvested by the end of the Forest Plan planning horizon.[246] That is, they only apply in areas that have already been logged, or will be logged, past the point where they can serve as suitable marten habitat. The Legacy standards serve to hopefully retain a measure of connectivity and decrease the effects of fragmentation by facilitating the movement of marten through unsuitable habitat. They don't add or create suitable habitat themselves.

The DEIS states that two legacy VCUs are identified in the Forest Plan that are in the project area, VCU 4550 and VCU 4570. That was true as of 2008. As noted above, however, there are actually 23 VCUs in the project area that will trigger the application of the Legacy standards and guidelines, including numerous adjoining VCUs, painting a much more bleak outlook for marten than suggested by the reference to just two VCUs in sufficiently beleaguered condition as to trigger the Legacy standards. To comply with NEPA, any subsequently prepared NEPA document must address this inconsistency and address the potentially significant impacts to marten.

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[241] *Id*.
[242] DEIS at 94.
[243] DEIS at 92.
[244] *See* Forest-wide Standard WILD1 II.B, 2016 Tongass Forest Plan at 4-85; 16 U.S.C. § 1604(i).
[245] 2016 Tongass Forest Plan at 4-86-87.
[246] *Id*.

3. Mortality

Increased road densities associated with timber harvest activities have improved trappers' access to furbearers' habitat in some locations, reducing their refugia and making the animals increasingly vulnerable to overharvest (Lowell 2014). The only regulatory mechanisms that ADF&G can enact is closing the season by emergency order. For that reason, maintaining unroaded refugia for martens is very important. Access is also provided via the shoreline.

The DEIS largely dismisses any consideration of legal and illegal marten harvest, or of road density as a proxy for assessing the risk posed by harvest to marten populations in the project area. This is despite the plain recognition that, at least up to a certain point such as 1.5 miles per square mile, road density correlates with harvest. The DEIS notes only that, after that point, ever-increasing road density may not continue to correlate with increased harvest.[247]

Further, while the DEIS mentions in passing road density and "motorized access" generally as potential threats to marten, the DEIS makes no attempt to account for the impacts of 128 miles of OHV routes.[248] Clearly, OHV routes will make it easier for those seeking marten pelts to set traps into new territory. New shoreline access and new pedestrian trails will also increase the ease of access for trappers. But the DEIS fails to disclose, or characterize, qualitatively or quantitatively, the nature of these compounding impacts on marten.

This does not constitute taking a "hard look" at road and trail density and mortality that may be expected from legal and illegal harvest over the course of 15 years in a large project area. Again, identifying the areas where logging and roadbuilding will occur is necessary to then calculate road density, distance from population centers, past harvest, and other relevant considerations in estimating legal and illegal harvest of marten in the project area. This information will factor into conclusions regarding whether viable, well-distributed marten populations can be expected on the landscape.

The DEIS does not address the fact that ADFG has not reopened the trapping season on Kuiu Island due to the high mortality rates of Pacific marten and American marten on Kuiu Island.[249] Up to 60% mortality occurs on Kuiu Island. The DEIS also states that population information is not known on Kuiu Island, however, researchers from ADFG and the University of New Mexico illustrated that the marten population on Kuiu Island is in decline.[250]

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[247] DEIS at 101.

[248] *See, e.g.*, DEIS at 100 (noting that "roads would further increase the road density and add to the potential for increased trapping pressure," but failing to address OHV routes); *id*. at 116 (stating very generally that "Changes in access ... would not be likely to cause effects to most species, except for species that … are hunted or trapped by humans," and mentioning "road construction" but not the opening of OHV trails as a 'change of access').

[249] Flynn et al., (2012) Population Dynamics, Movements and Habitat Selection of Martens on Kuiu Island, Southeast Alaska. Interim Wildlife Research Report. Alaska Department of Fish and Game. Juneau, AK.

[250] *Id.*

4. Hybridization

Pacific marten on Kuiu and Kupreanof Island hybridize. It is unknown whether this hybridization contributes to low population numbers on these islands, however, research indicates that the hybridization between these two species may be maladaptive.[251] Disturbance events, such as clearcut logging and loss of habitat, increase hybridization events.[252] Therefore, a mitigation strategy for maintaining viable populations of marten on Kuiu and Kupreanof islands must include management that addresses the impacts of hybridization on the declining and rare populations of Pacific marten across their global range, which is focused in Southeast Alaska and within the Central Tongass DEIS project area. Management prescriptions for maintaining viable populations of marten in lieu of hybridization focus on protecting landscapes where both species are located.

5. Mitigation

The Forest Service's recognition that this project would bring major impacts to marten and habitat seems to drive the inclusion of measures to reduce those impacts. Alternative 3 contains these provisions specific to marten on Kuiu island:

> **Gross unit pool, old growth:** On Kuiu Island, defer harvest of old growth in areas of High or Very High focal areas of use by marten. Koch (2016) mapped focal areas of use by marten on Kuiu Island using a resource selection function (RSF) model. Habitats were binned into five categories based on RSF scores, which are proportional to the probability of marten occurrence on the landscape. Five categories were used to map the scores on the RSF map as follows: very high (most important for marten), high, medium, low, and very low (least important).
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> **Gross unit pool, young growth:** On Kuiu Island, in areas of High or Very High focal areas of use by marten, the maximum size of any created young-growth opening for commercial timber harvest must not exceed 10 acres and a maximum removal of up to 35 percent of the acres of the original harvested stand is allowed. Commercial thinning is limited to 33 percent of the stand's basal area. A combination of the two treatments may be used, with no more than 35 percent of the total stand removed in either basal area and/or acres. TTRA and other administratively withdrawn areas do not count towards the stand's total acreage.[253]

These measures appear inadequate to address or significantly reduce the major impacts to marten from this project based on the best available science. First, while marten populations are very low on Kuiu island, mitigation is necessary on more that just one island in order to ensure viable and well-distributed marten populations across the landscape. As noted, marten habitat will also

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[251] Colella JP, EJ Johnson, JA Cook. (2018b) Reconciling molecules and morphology in North American Martes. Journal of Mammalogy: gyy140. DOI: https://doi.org/10.1093/jmammal/gyy140.
[252] Todesco et al., Hybridization and Extinction, Evolutionary Applications (2016).
[253] DEIS at 75.

face major impacts on Zarembo, Mitkof, West Kupreanof, Etolin and Wrangell islands. The Forest Service must identify more precisely where the habitat destruction is proposed, and then assess marten viability across the planning landscape using that information.

Additionally, we suggest using already-known indicators of preferred marten habitat (especially high POG below 800 feet, and also beach fringes, riparian corridors and POG below 1500 feet) in determining which areas to prioritize protecting. The resource selection function (RSF) model noted reflects habitat use that was observed on Kuiu island but with important constraints in terms of temporal and spatial survey scope.[254] Mitigation should not be limited to Kuiu Island and the RSF model from the Koch study should not be interpreted to exclude any key marten habitat on Kuiu Island that would otherwise be identified as likely to be used by marten pursuant to the numerous other marten studies referenced in the WRR.[255] Research indicates the Pacific marten from Kuiu Island is also present on Kupreanof Island,[256] so at the very minimum, any guidelines to protect Pacific marten on Kuiu Island should be applied to Kupreanof Island. We included the updated range map for Pacific marten and American marten. As another example of missing mitigation, the DEIS states that the "Etolin Island Biogeographic Province is considered a high-risk province for marten habitat because of the amount of past timber harvest (1997 Forest Plan FEIS, p. 4-118)."[257] Yet there is no assessment of the present implications of this observation, and nothing about the project (apart from the Kuiu provision in Alternative 3) that appears designed to account for it. For every alternative, any subsequently prepared NEPA document must explain how further logging and roadbuilding will effectively account for and manage the "high risk" for marten habitat that already exists in the project area.

In sum, we agree that impacts to marten from the proposed old-growth logging in Alternatives 2 and 3 would be "major."[258] But the Forest Service must explain how, in light of those major impacts to marten and habitat, marten populations will continue to be viable and well-distributed across the landscape. Failure to do so will violate NEPA and NFMA.

B. Deer

[254] The paper cited in the project record, *Effects of demography on resource selection by martens on Kuiu Island, Alaska*, (Koch 2016), is a thesis manuscript "to be submitted to the peer-reviewed Journal of Wildlife Management," so as cited has not been peer-reviewed. The manuscript upholds the existing general understanding about preferred marten habitat, but its limitations in terms of identifying actual high-use marten areas throughout the island are discussed at pp.9-10 of the paper.
[255] *E.g.*, WRR at 130.
[256] Dawson, NG, JP Colella, MP Small, KD Stone, SL Talbot, JA Cook. (2017) Historical biogeography sets the foundation for contemporary conservation priorities for mesocarnivores (genus Martes) of Pacific Northwest. Journal of Mammalogy 98(3):715-730. Colella JP, RE Wilson, SL Talbot, JA Cook (2018a) Implications of introgression for wildlife translocations: the case of North American martens. Conservation Genetics 20(2): 153-166. DOI: https://doi.org/10.1007/s10592-018-1120-5.
[257] DEIS at 93.
[258] DEIS at 105.

High value winter habitat is the limiting factor for deer populations in the project area. There are 162,483 acres of high and moderately high value deer winter habitat in the project area, and this project could log up to 5,417 of those acres.[259]

Here again, the DEIS analysis fails to identify the specific locations where high or moderately high value deer winter habitat will be lost. The actual impacts of logging and roadbuilding on deer and habitat could vary widely depending on the location of those 5,417 acres, or more generally the 9,500 total acres of old growth that could be harvested from the old growth unit pool of 42,779 acres.

The Forest Service seems to have abandoned the novel view espoused in the POWLLA EIS that the post-project continued existence of 50% of the original (1954) habitat type will ensure that effects to deer will be "minor." The agency now states that "though there are no known thresholds for the amount of deer winter habitat required, reductions in this important deer winter habitat (high and moderately high value deer winter habitat) increase the risk of severe winters in not sustaining a healthy deer population in the long term, and may result in periodic declines from infrequent severe winters."[260]

We concur that there is no clear threshold for the amount of deer winter habitat required to maintain healthy deer populations, accounting also for both wolf predation and human subsistence use. We restate our recommendation on the POWLLA project, however, that the agency re-evaluate winter deer habitat and impacts of the chosen alternative using the large-tree (SD67) habitat type. Continued high-grading of large-tree old growth will have significant impacts on winter deer habitat and habitat for other wildlife species dependent on these forest types as well as affecting overall forest diversity.[261] The Forest Service must assess the impact of the actual harvest authorized by this project on this exceedingly rare habitat type – and to do that, it must specify where the logging and roadbuilding will occur.

The DEIS states that "the most important habitat for deer is high and moderately high value deer winter habitat (all POG less than 800 feet elevation on south facing slopes)."[262] Continuing to lump the rare SD67 habitat type in with other HPOG habitat types obfuscates the impacts that high-grading this habitat type will have on overall forest composition as well as on species that depend in particular on this habitat type for critical life functions – including Sitka black-tailed deer. We also reiterate that restricting the deep snow habitat to south-facing slopes is problematic because many deer do not have access to south-facing slopes, and deer inhabiting north-facing habitat are most affected by snow and most dependent on deep-snow habitat.

Finally, while there may not be a clear winter deer habitat threshold set forth, there is the applicable Alexander Archipelago wolf Forest Plan Standard directing the agency to provide,

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[259] DEIS at 84.
[260] DEIS at 76.
[261] Alaska Rainforest Defenders, et al., Comments on POWLLA DEIS at 40-41, June 18, 2018 (citing the comments of Dr. John Schoen); *see also* Albert, David M. & Schoen, John W. 2012, Use of Historical Logging Patterns to Identify Disproportionately Logged Ecosystems within Temperate Rainforests of Southeastern Alaska, 27 Conservation Biology, No.4, 774-784.
[262] DEIS at 76.

where possible, sufficient deer habitat capability to first maintain sustainable wolf populations, and then to consider meeting estimated human deer harvest demands.[263] This generally equates to the habitat capability to support 18 deer per square mile.[264] This Standard is tied to the two overarching Goals and Objectives for Wildlife for the entire Forest Plan:

> Maintain the abundance and distribution of habitats, especially old-growth forests, to sustain viable populations in the planning area; and
>
> Maintain habitat capability sufficient to produce wildlife populations that support the use of wildlife resources for sport, subsistence, and recreational activities.[265]

The DEIS briefly notes in its analysis of wolves that 29 of the 40 WAAs in the project area do not provide the habitat capability to support 18 deer per square mile.[266] But the DEIS fails to examine why this is the case, or to discuss how different project alternatives, designs or actions may promote compliance with this important wildlife standard. Instead, the Forest Service simply concludes that the action alternatives would further reduce the theoretical deer density, increasing the risk that a severe winter would cause declines in the deer population.[267] This observation falls woefully short of taking the requisite "hard look" at the impacts of the proposal and a reasonable range of alternatives.

C. The DEIS's Analysis Of The Alexander Archipelago Wolf Violates NEPA And NFMA, And Is Arbitrary and Unlawful.

The Central Tongass Project—which authorizes massive levels of old-growth logging and road construction across vast swaths of Mitkof, Kupreanof, Kuiu, Wrangell, Zarembo and Etolin islands over the next 15 years—will cause substantial harms to the Alexander Archipelago wolf in Game Management Unit 3 (GMU 3) which overlaps the Project Area. Yet the DEIS arbitrarily determines that impacts to the wolf will only be "moderate," failing to provide a clear or rational basis for this determination. On multiple counts as detailed below, the DEIS omits critical information relevant to the Project's harms to the wolf, fails to justify its conclusions, and reaches conclusions unsupported by the record. As such, the Forest Service's analysis of the adverse impacts of the Central Tongass Logging Projects on the Alexander Archipelago wolf fails to take the hard look NEPA requires and is inadequate, arbitrary, and unlawful.

1. The DEIS fails to address important information from the USFWS indicating that Alexander Archipelago wolf populations in the Project Area already face substantial threats.

The DEIS fails to disclose important information from the USFWS's 2015 Status Review and 2016 Endangered Species Act listing determination for the Alexander Archipelago wolf, in which the Service determined that wolves in the GMU 3 region already face "intermediate" levels of stressors: "the primary stressors for wolves in GMU 3 occur at intermediate levels

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[263] 2016 Tongass Forest Plan at 4-91.
[264] *Id*.
[265] 2016 Forest Plan at 2-6.
[266] DEIS at 138.
[267] DEIS at 146.

compared to other GMUs and Regions."[268] Key sources of stress to wolves in GMU 3 identified by the Service's Status Review include: (1) substantial prior logging (i.e., 14% of the region's forests had been logged) which has reduced deer habitat capability by 13% to 23% since 1954;[269] (2) the highest scheduled levels of future logging on the Tongass National Forest; (3) wolf harvest levels that are higher than in any other GMU, with the mean reported annual harvest estimated at 21% of the population, not including unreported harvest; and (4) the second highest ratio of shoreline to land area (0.62 compared with 0.81 for GMU 2), which allows more boat access for hunters and trappers and thus increases wolf mortality risks.[270]

In addition, USFWS warned of the threat from an approved deer management plan for GMU 3 that, if activated, would cull up to 80 percent of the region's wolves and would increase the vulnerability of wolves on Prince of Wales Island which are already in peril:

> Intensive management of black-tailed deer, which includes the culling of wolves with the aim of increasing deer populations and deer harvest by humans, is authorized for GMU 1A (ADFG 2013a) and in GMU 3 (ADFG 2013b). Currently, these programs are inactive, but operational plans exist and could be implemented in the future… In GMU 3, the treatment area constitutes 22% of the total land area and is located in the northern portion of the unit including Woewodski, Mitkof, and part of Kupreanof Island (ADFG 2013b, p. 6). Within the GMU 3 treatment area, up to 80% (or ~50 wolves in 5–6 packs) would be removed; duration of the culling effort would be a minimum of five years (ADFG 2013b, pp. 8–9).[271]
>
> Although the program currently is inactive, if implemented the GMU 3 wolf population would be reduced, given that it is the goal of the program, potentially having an effect on the GMU 2 population because GMU 3 provides the most reasonable transit path for wolves to move or disperse between the mainland and GMU 2 (Figure 2). Therefore, maintaining or reducing current rates of wolf harvest in GMU 3 would benefit the rangewide population of Alexander Archipelago wolves; an increase in mortality rates likely would lower immigration rates to GMU 2, which apparently are uni-directional (Breed 2007, p. 22), thereby increasing the vulnerability of the GMU 2 wolf population.[272]

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[268] U.S. Fish and Wildlife Service, Species status assessment for the Alexander Archipelago wolf (*Canis lupus ligoni*), Version 1.0, December 2015, Alaska Region, Anchorage, Alaska. 162 pp, at 120.

[269] According to Albert & Schoen 2007 (Table 5), Kupreanof and Mitkof Islands in GMU 3 lost 16 percent of productive old-growth forests and 48 percent of large-tree forests; and Etolin and Zarembo Islands lost 15 percent of productive old-growth forests and 50 percent of large-tree forests.

[270] U.S. Fish and Wildlife Service, Species status assessment for the Alexander Archipelago wolf (*Canis lupus ligoni*), Version 1.0, December 2015, Alaska Region, Anchorage, Alaska. 162 pp, at Table 24.

[271] *Id.* at 88.

[272] *Id.* at 120.

The DEIS must incorporate this critical information for adequately assessing the cumulative impacts of the Project on wolf populations in GMUs 3 and 2.

2. The DEIS fails to analyze the Project's site-specific impacts to wolves.

As discussed above, the DEIS analysis fails to identify the precise location, configuration, sizes, and timing of the logging and road construction activities, including failure to identify the specific locations where high or moderately high value deer winter habitat will be lost. The actual impacts of logging and roadbuilding on wolf mortality and reproductive success, wolf habitat, habitat connectivity, and Sitka black-tailed deer prey could vary widely depending on the location of logging projects and roads, and the DEIS's failure to provide required specificity prevents a rigorous impacts assessment. Wolf experts have previously faulted the Forest Service for failing to be site-specific in the EIS for the Prince of Wales Logging Project, explaining that the distribution of forest stands and connectivity between stands "can have dramatic effects on the survivorship" of wolves because they have large home range territories.[273] For these reasons, they explained that the site-specific "geography of the proposed logging . . . is essential to evaluating the impact[s]" on wolves.[274]

3. The DEIS fails to incorporate the recommendations from the Wolf Habitat Management Program.

The DEIS claims that it has incorporated treatments from the Wolf Habitat Management Program into its action alternative.[275] However, the DEIS incorporates only three recommendations from the Wolf Habitat Management Program, all related to young-growth thinning, while failing to incorporate the Program's recommendations related to road management, wolf mortality, human dimensions, and research and monitoring. Furthermore, the DEIS fails to disclose that the three incorporated thinning recommendations have not been shown to produce population-level benefits to deer, and therefore to wolves, as acknowledged the Wolf Habitat Management Program.[276] The DEIS further fails to disclose new research by Roffler and colleagues (2018) that found that young-growth thinning treatments have not been effective in improving habitat for wolves.

In a study of the habitat preferences of Alexander Archipelago wolves, Gretchen Roffler, a wildlife research biologist with ADFG, and colleagues concluded that young-growth thinning treatments, conducted to improve habitat value in seral forests, do not enhance habitat for

[273] *See generally* J. Cook et al. Statement on DEIS Prince of Wales Landscape Level Analysis, and attachments at PDF 7 (Jun. 11, 2018) (Cook Comments).
[274] *Id*. at 7.
[275] DEIS at 20.
[276] Wolf Technical Committee, Interagency Wolf Habitat Management Program: Recommendations for Game Management Unit 2, Management Bulletin R10-MB-822, USDA Forest Service, USDI Fish and Wildlife Service, and Alaska Department of Fish and Game (2017) at 6 ("Habitat management has been shown to reduce the impacts of post-clearcut forest succession on deer forage though population-level benefits to deer remain undocumented.").

wolves.[277] During fall and winter, wolves avoided clearcuts more than 30 years old as well as thinned young-growth "indicating that young-growth forest has a limited time frame of potential use by wolves, similar and likely related to predictions for use by deer (≤30 years post clearcut)."[278] They further explained:

> Young growth treated with pre-commercial thinning is intended to enhance deer habitat by delaying stem exclusion and prolonging forage production. However, wolves avoided thinned forest during winter, and did not display patterns of selection for thinned forest stands during other seasons confirming previously described patterns of avoidance of second growth in the stem exclusion phase, in particular pre-commercially thinned stands. Thus far, the benefits of thinning treatments on maintaining understory vegetation have proven to be short-term (5–10 years), diminishing the potential for sustaining wildlife through the long-lasting stem exclusion phase. In this study we demonstrate that thinning treatments do not thus far appear to enhance habitat for wolves.[279]

Roffler et al. (2018) warned that "the amount of habitat available to wolves could decline with an increasing proportion of the forest transitioning to the stem exclusion phase, with potential population-level consequences for wolves."[280]

Although the DEIS briefly asserts that "a wolf mortality concern has not been identified in the project area"[281] as a justification for not implementing the full recommendations of the Wolf Habitat Management Program, the current threats to wolf populations in GMU 3, as well as future impacts from this Project, do raise wolf mortality concerns for this region, as detailed below.

4. The DEIS fails to analyze the Project's impacts on wolf den sites and incorporate significant new published research and recommendations for wolf den site protection.

The DEIS acknowledges that "Alternatives 2 and 3 have the potential to directly and indirectly affect den sites" and that "project activities under either action alternative could cause disturbance to denning."[282] Yet the DEIS fails to analyze the Project's impacts to wolf dens or incorporate new published research and recommendations for wolf den site protection.

Importantly, the DEIS fails to incorporate new research by Roffler and Gregovich (2019) which found that Alexander Archipelago wolves use larger core areas during the breeding season than previously assumed, and recommends that the wolf den buffer be expanded from the 1,200 feet

[277] Roffler, Gretchen H. et al., Resources selection by coastal wolves reveals the seasonal importance of seral forest and suitable prey habitat, 409 Forest Ecology and Management 190 (2018).
[278] *Id.* at 197.
[279] *Id.* at 197.
[280] *Id.* at 199.
[281] DEIS at 139.
[282] *Id.* at 139.

to at least 2,400 feet.[283] The study reported that the distance from active Alexander Archipelago wolf den sites to the edge of core habitat ranged from 1,186 to 6,326 meters (~3,900 to 21,000 feet), and for breeding wolves the core use area ranged from 734 to 2,308 meters (~2,400 to 7,600 feet) from the den site. Significantly, the study concluded that "all distances exceeded the existing recommended den buffer distance" and further that "[w]olf managers should recognize the current protection buffer around dens constitutes only a portion of the core area used by breeding wolves, and habitat alterations near den sites may force breeding wolves to use sub-optimal habitat they would normally avoid."[284]

The study made a number of important specific recommendations for "land managers working to protect den sites" that the DEIS must assess and incorporate: (1) For all wolves associated with an active den, the median distance between the den and the core home range edge was 3,756 meters (~12,300 feet); therefore, land managers working to protect den sites should consider expanding the much smaller guideline den site buffers in place now to this larger size; (2) the shape of the protected polygon surrounding the den should be selected to maximize high quality denning habitat: flat, low elevation terrain, in old growth forests, near freshwater and distant from high density road areas; importantly, the den buffer width should not be less than 734 m (~2,400 feet); (3) to maintain foraging habitat for wolves during denning season, the proportion of old growth forest should not be reduced below the current values (61% of the core home range area for wolves associated with an active den); (4) the recommended period for seasonal management activity restrictions around active dens is 15 March to 15 July based on earlier work by Person and Russell (2009; Wolf Technical Committee 2017); however, wolves were documented during this study at dens as late as 21 July, and the mean den occupancy was nearly two months; thus extending the restriction period to late July would be a conservative management action; (5) because wolves display a flexible response to road density throughout the year by avoiding areas with high road densities during denning season, but selecting these areas during winter (Roffler et al. 2018), timing is also a consideration in road closures as a management action.[285]

5. The DEIS's analysis of cumulative impacts on wolves is inadequate.

The DEIS impermissibly fails to provide a clear conclusion regarding the overall cumulative effects of the Project and past, present and reasonably foreseeable actions on wolves, merely stating that "there would be cumulative effects."[286] With regard to roads, the DEIS vaguely states that "roads would further increase the road density and add to the potential for increased hunting and trapping pressure."[287] The DEIS is equally vague with regard to the cumulative impacts from

[283] Roffler, Gretchen H. & David P. Gregorovich, Wolf space use during denning season on Prince of Wales Island, Alaska, Wildlife Biology, doi.org/10.2981/wlb.00468 (2019).
[284] *Id.* at 1.
[285] *Id.* at 9.
[286] DEIS at 145.
[287] *Id.* at 145.

timber harvest on wolves: "The alternatives would further reduce the theoretical deer density, thus increasing the risk that a severe winter would cause declines in the deer population."[288]

As discussed above, the DEIS also fails to address or acknowledge the cumulative impacts from the approved Prince of Wales Logging Project which will have significant adverse impacts on wolves and deer due to its massive proposed levels of old-growth clearcutting and road-building. The DEIS also fails to address and acknowledge the potential impacts of the nearby South Revilla Project which would authorize harvest of up to 46 million board feet of timber largely from old-growth logging, and further degrade wolf habitat. Nor does the DEIS address the impacts of the proposed rollback of the roadless rule for wolves.

6. The DEIS fails to include any monitoring program for wolves to assess the impacts from the Project.

Alexander Archipelago wolves in the Project Area are vulnerable to adverse impacts from the massive levels of logging and road-building proposed by the Project, yet the DEIS proposes no monitoring for wolves to track and assess the harms. As noted by USFWS in its 2015 Status Review, the status and trend of the GMU 3 wolf population is unknown, and the USFWS has only a rough estimate of the wolf population of 150–350 wolves. Thus, the DEIS should require implementation of the recommendation from the Wolf Habitat Management Program and Forest-wide Standards and Guidelines to conduct interagency monitoring of wolf populations on the Forest for GMU 3.

7. The DEIS's determination that the impacts from the Project on the Alexander Archipelago wolf would only be "moderate" is arbitrary.

The DEIS's impacts analysis makes clear that the Project will cause substantial adverse impacts to wolf populations from timber harvest through old-growth logging and subsequent reductions in deer densities, and from road-building by improving access for hunters and trappers. Yet the DEIS determines the Project's impacts to the Alexander Archipelago wolf would only be "moderate" without providing a rational explanation connecting this determination to its impacts analysis and the evidence in the record.

In regard to evaluating the impacts of timber harvest, the DEIS uses the Interagency Deer Model Habitat Capability outputs by WAA, calculated to deer density (deer per square mile), as the indicator. The DEIS notes that the Forest Plan Forest-wide Standard and Guideline "emphasizes providing, where possible, sufficient deer habitat capability to first maintain sustainable wolf populations then to meet estimated human deer harvest demands" which is "generally considered to equate to the habitat capability to support 18 deer per square mile (using habitat capability model outputs) in biogeographic provinces where deer are the primary prey of wolves."[289]

Because 29 of 40 WAAs in the Project Area have deer habitat capability less than 18 deer per square mile, and all but two WAAs where timber harvest is planned have deer habitat capability below 18 deer per square mile, the DEIS concludes that this "suggests the project would result in

[288] *Id.* at 145.
[289] *Id.* at 141.

higher risk that there could be insufficient numbers of deer for sustainable wolf populations and human harvest. This concern exists despite the availability of alternative prey (such as moose and salmon) due in part to the fact that alternative prey may delay a decline in wolf numbers."[290] In addition, the DEIS finds that deer habitat capability would be further lowered by the Project's logging in 13 WAAs, including large-scale declines in areas such as Portage Bay (18.6 percent from the existing condition at stem exclusion estimated at Year 2045), Zarembo (14.8 percent reduction), and Mitkof (11.5 percent reduction). The DEIS reports that two of the top three most affected WAAs (Zarembo and Mitkof) also receive a substantial amount of hunter harvest demand, with Zarembo receiving more deer harvest demand than any other WAA in the project area. In sum, the DEIS concludes that "[t]he alternatives would further reduce the theoretical deer density, thus increasing the risk that a severe winter would cause declines in the deer population."[291] Despite these harms, the DEIS fails to explain how different project alternatives, designs or actions may promote compliance with the critical deer habitat capability standard.

In regard to road density, the DEIS notes that, according to the Wolf Habitat Management Program and Forest-wide Standards and Guidelines, a total road density of 0.7 to 1.0 mile per square mile or less is recommended to reduce harvest-related mortality risk where locally unsustainable wolf mortality has been identified. Similarly, the DEIS notes that "[i]n order to maintain viable, well-distributed wolf populations, the VPOP committee recommended that road densities should be held below 1.0 mi/mi2 in any three contiguous WAAs."[292] The DEIS then reports that 3 of the 13 WAAs in the Project Area on NFS lands below 1,200 feet in elevation with proposed new road construction have road densities below 0.7 mi/mi2, and the Project would push 2 of them above the 0.7 mi/mi2 thresholds. When all land ownerships below 1,200 feet are considered, 4 WAAs have road densities below 0.7 mi/mi2, and the Project would push 3 of them above the threshold. When considering the 1.0 mi/mi2 threshold, 8 WAAs in the Project Area with proposed road construction have road densities below 1.0 mi/mi2 on all land ownerships below 1,200 feet, but the Project would reduce that number to just 5. As a result, the DEIS concludes that "[r]oad density would increase the risk of overharvest of wolves in certain WAAs. The risk would likely be greatest in WAAs near communities, on western Kupreanof Island, Mitkof Island, and Wrangell Island."[293] Similar to the logging impacts analysis, the DEIS fails to explain how different project alternatives, designs or actions may promote compliance with the important road density standard, nor does it propose or consider a reasonable alternative that would bar road construction in those areas where the road density is above or would lead to the exceedance of the 0.7 mi/mi2 threshold.

Furthermore, the DEIS's road density analysis is deficient because it does not appear to factor in the 128 miles of routes to be designated as open to OHV use, even though OHV routes are used for hunting. The DEIS highlights that OHV trails are often used for hunting: "OHV use has grown in popularity especially in association with subsistence hunting" and "OHV owners from Wrangell transport OHVs to Zarembo and Etolin Islands to ride the road systems and OHV trails, often in search of deer."[294] Yet the DEIS fails to consider how the Alexander Archipelago

[290] *Id.* at 141.
[291] *Id*. at 146.
[292] *Id.* at 139.
[293] *Id.* at 149.
[294] DEIS at 274.

wolf will be impacted by the increased hunting and trapping pressure that will result from the significant increase in lands open and adjacent to OHV routes.

Despite these substantial impacts to wolves from logging and road-building, which do not factor in harms to wolf dens, the DEIS vaguely concludes that the Project's impacts would be "moderate" without providing a rational explanation connecting the determination to the evidence: "because of the combined reductions of important deer habitat and theoretical deer density, as well as increases in road density in certain WAAs that could amplify wolf harvest in certain areas, the determination is that the effects to wolves (management indicator species) from Alternatives 2 and 3 would be moderate."[295] As such, the Forest Service impermissibly fails to explain whether/why wolves will remain sustainable in Game Management Unit 3 given the additional loss of habitat and prey due to logging and the increases in wolf mortality due to road-building. The Forest Service fails to explain whether (or why) sufficient old-growth habitat (and deer) will remain in GMU 3 to support sustainable wolf populations as the 2016 Amended Forest Plan contemplates. For similar reasons, the Forest Service reaches an arbitrary conclusion that it can approve the Central Tongass Logging Project and still meet NFMA's substantive obligation to manage habitat in such a way as to ensure that wolves remain well-distributed and viable on the Tongass.

XIV. THE FOREST SERVICE MUST INCLUDE AN ALTERNATIVE THAT IMPLEMENTS THE BIOLOGICALLY- PREFERRED OLD GROWTH RESERVES IN THE PROJECT AREA.

Appendix K of the Tongass Forest Plan addresses the process for modifying Old Growth Reserve (OGR) boundaries to conform to Forest Plan criteria as part of project-level reviews.[296] The Forest Service has completely failed to follow this process despite clear evidence in the planning record that numerous OGRs in the very large planning area do not meet Forest Plan OGR criteria. The Forest Service simply notes that OGRs in the project area have been reviewed at various other times and, without disclosing whether the OGRs in the project area currently comply with Forest Plan criteria, states that "it was decided that OGR review was not needed for this project."[297] This decision is arbitrary and contrary evidence before the agency.

In fact, the DEIS language was cut-and-pasted from the Wildlife Resource Report, with the ensuing text omitted.[298] That omitted text and Table 17 identifies 21 VCUs with OGRs that the agency biologists who prepared the WRR recommended for interdisciplinary team review. The reasons for these recommended reviews are usually because the existing OGRs are of inadequate size or composition and need to be modified in order to comply with Forest Plan criteria for small, medium and large OGRs. One VCU, #4490 on Mitkof Island, contains no OGR at all. Another, #4520 also on Mitkof Island, should include important deer winter habitat but does not.

[295] *Id.* at 149.
[296] 2016 Tongass Plan Amendment, Appendix K, at K-2.
[297] DEIS at 110.
[298] WRR at 28-29.

There are many instances noted where biologically recommended OGRs were not adopted and Appendix K requires consideration of the best biological location for the OGR.[299]

The size, composition and spacing of OGRs are a critical element of the conservation strategy designed to ensure viable, well-distributed populations of wildlife on the Tongass.[300] The Forest Plan provides that project-level reviews will "ensure" that OGR criteria are met in the project area, or at least that any failure to meet that criteria is identified and explained in the NEPA process. These reviews ground-truth the areas labeled as OGRs on maps and ensure that the old-growth habitat conservation strategy is not a fictional paper exercise.

It is also critical to examine OGRs at the project level with regard to their ability to support specific species in the project area. For example, the conservation strategy assumes that large OGRs can support 25 female marten, an amount assumed sufficient to support viable populations in concert with matrix standards and guidelines and other Forest Plan components. But that may or may not be the case in a given large OGR, especially one that in fact does not meet Forest Plan criteria for large OGRs. In such a case, the biologically-preferred OGR could be configured to meet Forest Plan criteria in the way best suited to benefit, for example, marten.[301]

Despite the identification of 21 OGRs that do not meet Forest Plan criteria or otherwise are not currently in their biologically-preferred configuration, the DEIS dismisses the entire subject as unnecessary to address. The final EIS for this project must, at a minimum, include the biologically-recommended OGRs as an alternative. If the Forest Service does not select this alternative, it must explain why.

XV. THE FOREST SERVICE FAILS TO COMPLY WITH NFMA AND NEPA IN PROPOSING TO AMEND THE FOREST PLAN'S SCENIC INTEGRITY OBJECTIVES.

The DEIS includes a proposal for the Forest Service to amend the Forest Plan to downgrade scenic integrity objectives drastically to permit clearcutting on over 10,000 acres on lands which TLMP currently allocates to protect undisturbed scenery. In proposing and analyzing this amendment, the Tongass National Forest fails to comply with NFMA regulations.

In describing the amendment generally, the DEIS states:

[299] *Id*; 2016 Forest Plan, Appendix K at K-2.
[300] *See, e.g.*, 1997 Tongass Forest Plan Appendix D; 2016 Forest Plan Amendment Record of Decision at 19-25.
[301] Indeed, travel corridors may need to be wider than the minimum suggested under the Forest Plan to effectively promote marten dispersal. Flynn, et al., Abundance, Prey Availability and Diets of American Martens: Implications for the Design of Old-Growth Reserves in Southeast Alaska (December 2004) at v (CTAR 832_0743). Proximity to salmon streams would be another important consideration for a project-level adjustment of OGR boundaries. *Id*.

> a project-specific Forest Plan amendment is proposed and analyzed in both action alternatives to allow less restrictive Scenic Integrity Objectives (SIOs) in selected portions of four of ten timber analysis areas (TAAs) . . . .[302]

In describing the amendment in greater detail, the DEIS states:

> There is a proposed 2016 Forest Plan amendment that would allow the SIOs of certain areas of old-growth harvest to be lowered during the implementation phase to provide for a positive timber sale offer. As planning becomes site-specific, the scenic effects will be more easily assessed, and where proposed harvest opening sizes are not compatible with the current plan, the areas' SIOs may be selectively lowered as needed to provide for a positive timber sale offering.
>
> For analysis, it is assumed that all areas would be lowered from their current SIO to Very Low SIO. During implementation, it may end up that some areas are lowered to Moderate or Low SIO, depending on the implementation plans.[303]

The Forest Service provides no specific language for the amendment for the public to review. The agency fails to provide a map delineating the precise areas where the amendment would have effect. And the agency makes clear that it will not even know where or whether an amendment will be necessary until "planning becomes site-specific," which will occur after approval of the ROD – and the amendment.[304] The location and extent of the amendment "depend[s] on the implementation plans.[305]

The DEIS alleges that the proposed amendment will permit more economic, logging. "The proposed 2016 Forest Plan amendment would allow for greater opportunities to provide positive timber sales by reducing any constraints that scenery may have on the unit design and layout."[306]

This "amendment" fails to comply with NFMA's planning in numerous respects.

For example, the planning regulations require that the agency must "[b]ase an amendment on a preliminary identification of the need to change the plan [that] may be based on a new assessment; a monitoring report; or other documentation of new information, changed conditions, or changed circumstances."[307] The agency provides only a single basis for downgrading scenic integrity objectives over more than ten thousand acres: to reduce the potential for deficit appraised timber sales. The Forest Service cites no new assessment, monitoring or other new information; deficit appraisals for timber sales are not a "changed

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[302] DEIS at 19.
[303] DEIS at 294.
[304] *Id*.
[305] *Id*.
[306] DEIS at 290. *See also id*. at 69-70 (describing impact of scenic integrity objectives on timber volume).
[307] 36 C.F.R. § 219.13(b)(1).

condition" or "changed circumstance" on the Tongass.[308] In fact, the Forest Service was well aware, when it adopted SIOs that provide direction and objectives for landscapes that the objectives would restrict logging to protect the scenic integrity of particular areas.. Because the DEIS fails to provide any valid basis for the proposed plan amendment, the agency must withdraw it.

In addition, the Forest Service has failed to comply with the planning regulations public involvement and notification requirements because the amendment itself is an undefined, moving target. NFMA's regulations mandate that in developing plan amendments, the Forest Service must "provide opportunities to the public for participating in the assessment process" and "engage the public."[309] The Forest Service cannot do so effectively because it has failed to: (1) provide the public with the text of any amendment; (2) disclose where, exactly, the amendment will apply; and (3) disclose the effects of those changes on an area's scenic integrity level.

We note that other forests have understood compliance with the planning regulations to require the agency to provide specific text for a proposed amendment, which enables the public to effectively understand the amendment and provide effective input.[310] This DEIS fails to do so.

The DEIS defines broad areas where the amendment may apply (four TAAs), but within those tens and hundreds of thousands of acres, it fails to provide any information as to where, precisely, clearcuts may occur to violate existing standards. Indeed, it is hard to imagine an impact that depends more on the location than scenery. Scenic impacts may vary depending on where they can be viewed from, whether they constitute foreground, middle-ground or background, whether terrain may obscure impacts, etc. As noted above, the Forest Service admits that it will not know where the amendment will apply until after the agency approves the amendment. The DEIS states: "*As planning becomes site-specific*," that is after the ROD is signed, "the scenic effects will be more easily assessed, and where proposed harvest opening sizes are not compatible with the current plan, the areas' SIOs *may be* selectively lowered *as needed* to provide for a positive timber sale offering."[311] Not only does this approach – approving the amendment first, and defining it later – put the cart before the horse, it makes it impossible for the public to provide meaningful input. For example, planning regulations mandate that the Forest Service shall seek out "Native knowledge [and] indigenous ecological knowledge."[312] The agency cannot seek out and engage tribes without knowing the location or impacts of its proposal. The ill-defined nature of the amendment renders public input fruitless.

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[308] DEIS at 295 (plan amendment lowering scenic integrity objectives would "increase the capacity of the entire project area while providing for a positive timber sale offer.").
[309] 36 C.F.R. § 219.4(a).
[310] *See, e.g.*, Lincoln National Forest, South Sacramento Restoration Project (2019) at Appendix A, available at https://www.fs.usda.gov/nfs/11558/www/nepa/106117_FSPLT3_4623831.pdf (last viewed Sep. 16, 2019).
[311] DEIS at 294 (emphasis added).
[312] 36 C.F.R. § 219.4(a)(3).

The DEIS makes clear the agency's failure to define the location of the clearcuts makes it impossible for the Forest Service to know whether it could, in fact, design a project that yields the desired 150 million board feet of old growth and 80 million feet of young growth without amending the plan. Concerning young growth logging, the DEIS states that harvest in areas where the existing scenic integrity equals the scenic integrity standard required in the plan "would need to be carefully sited and designed in order to maintain the existing scenic integrity of the area, and compliance with the SIO [Scenic Integrity Objectives] *may be difficult* to achieve."[313] It is this careful siting and design that needs to happen *before* the "project-specific" NEPA analysis and ROD are complete, not after. The Forest Service needs to complete the required NEPA analysis before it can reasonably decide where and whether a project-specific Plan amendment is appropriate.

Similarly, "[i]mplementation of even-aged management [on old growth stands] will *likely be difficult* in the implementation phase with almost 60 percent of the 9,000 acres needing to be [logged] from areas where the [existing scenic integrity] equal[s] to the [scenic integrity objective]."[314]. The agency concludes that the "existing condition of the project area is *unlikely* to be able to absorb visible effects of the proposed old-growth and young-growth [logging] of Alternative 2 while complying with the current 2016 Forest Service Standards and Guidelines."[315] But "unlikely" and "difficult" do not mean "impossible." Unfortunately, the agency completely fails to evaluate the effects of silvicultural prescriptions other than clearcutting, including two-aged or uneven-aged management (Scene2.III.). The Forest Service must first determine, with careful siting and an appropriate silvicultural objective, whether and how it could meet the Forest Plan rather than changing the plan to ignore existing standards.

The Forest Service's failure to identify where clearcutting will occur, or the potential to mitigate those effects by using silvicultural prescriptions other than clearcutting, and to what extent the current plan could be complied with while still allowing logging, violates NEPA as well. The DEIS fails to analyze in detail an alternative that would require compliance with the existing plan, including careful siting and alternative silvicultural prescriptions to ensure SIOs are met. It appears that tens of millions of board feet could still be logged under this alternative, making it distinct from the no action alternative, as well as capable of meeting at least some of the purposes of the proposal.[316] The Forest Service must either consider such an alternative or explain why it cannot.

The DEIS also fails to comply with NFMA's planning regulations because it does not accurately "[d]etermine which specific substantive requirement(s) within §§ 219.8 through 219.11 are directly related to the plan direction being added, modified, or removed by the amendment and

[313] Draft EIS at 293 (emphasis added).
[314] *Id*. (emphasis added).
[315] *Id*. (emphasis added).
[316] DEIS at 70 ("an estimated 60 MMBF could be harvested given the assumptions for partial harvest" and applying the existing SIOs). The DEIS does not explain why the Forest Service reaches this number when the DEIS leaves the door open for careful siting to allow more clearcutting.

apply such requirement(s) within the scope and scale of the amendment."[317] The DEIS recognizes the application of this provision, stating:

> If the Responsible Official selects this Forest Plan amendment as part of the Selected Alternative, he will identify which substantive requirements of the 2012 Planning Rule are likely related to a proposed land management plan amendment, as required by the Rule (36 CFR § 219.13(b)(2)). At this time, he believes the following requirements of the Rule will apply: 36 CFR § 219.8(b)(2); 36 CFR § 219.10(a)(1); and 36 CFR § 219.10(b)(1)(i).[318]

We agree that 36 C.F.R. § 219.8(b)(2) applies. It requires that the Forest Plan and amendments thereto "include plan components, including standards or guidelines, to guide the plan area's contribution to social and economic sustainability, taking into account . . . scenic character."[319] However, the proposed plan amendment will allow the destruction of scenic character, without explanation or analysis as to how such character could be protected, and ignoring the social and economic benefits (through cruise ship, small boat tours, and other tourism that rely on the area's scenic beauty) that protection of viewsheds provide. Section 219.10(a)(1) requires that in developing plan and amendment components, the Forest Service "shall consider . . . [a]esthetic values" and "viewsheds."[320] Again, it is unclear how the agency "considered" those values other than to ignore them in order to clearcut old-growth forest. Section 219.10(b)(1)(i) mandates that a Forest Plan and amendments must include "components, including standards or guidelines, to provide for … scenic character."[321] Here again, the plan amendment provides for a *loss* of scenic character over a timespan beyond the average human lifespan, thereby undermining any claim that the amendment complies with this regulation.[322]

Further, the DEIS fails to acknowledge that additional provisions are "directly related to the plan direction being added, modified, or removed." For example, NFMA provisions require that plans and amendments include components that ensure "[logging] would be carried out in a manner consistent with the protection of . . . aesthetic resources."[323] The DEIS fails to explain how gutting scenic integrity objectives over thousands of acres through plan amendment will be "consistent with the protection" of scenic values, and we do not believe that the Forest Service can do so. Any subsequently prepared NEPA document must explicitly address this provision. Because the Forest Service has failed to do so thus far, its analysis violates both NFMA and NEPA.

Forest Service planning regulations also mandate that plans and amendments contain components to "maintain or restore the ecological integrity of terrestrial and aquatic ecosystems

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[317] 36 C.F.R. § 219.13(b)(5).
[318] DEIS at 7.
[319] 36 C.F.R. § 219.8(b)(2).
[320] 36 C.F.R. § 219.10(a)(1).
[321] 36 C.F.R. § 219.10(b)(1)(i).
[322] DEIS at 295 ("the changes in scenic integrity will last … up to approximately 60 to100 years.").
[323] 36 C.F.R. § 219.10(d)(3).

and watersheds in the plan area."[324] By amending the scenic integrity standards, the plan amendment will directly permit the destruction of thousands of acres of old growth forest, which the DEIS admits will degrade habitat for marten, wolves and other wildlife, as discussed in Section XIII, above.

Further, planning regulations mandate that in developing plans and amendments, the Forest Service "shall consider … [r]easonably foreseeable risks to … economic sustainability."[325] Yet the DEIS contains virtually no disclosure of the impact of thousands of acres of massive clearcuts on the millions of visitors who visit southeast Alaska each year to view wild, not degraded, forests. Failure to disclose the reasonably foreseeable impacts from degrading viewsheds with clearcuts violates NEPA's hard look requirement as well, especially given the wealth of information demonstrating that tourism and scenery viewing are much more important economically than timber to Southeast Alaska's economy.[326]

What little analysis the DEIS contains concerning impacts to the tour boat industry is fragmentary and poorly explained. The DEIS downplays the impacts on this industry in a table that shows that the action alternatives will result in only a few hundred "acres with high Scenic Integrity Objectives modified at popular tourist destinations and along high profile excursion routes on the Tongass with the project area."[327] The DEIS provides specific numbers for both Alternative 2 and Alternative 3, disclosing for example that "0 Acres of Foreground Views, 304 Acres of Middleground Views [with an] Avg patch size between 2-12 acres" will be so modified.[328] These are oddly specific numbers given that the DEIS, as described above, states that it has yet to identify where the logging units will be. At the same time, the DEIS provides no explanation for how the agency defined key terms at issue in the table, including "popular tourist destinations," and "high profile excursion route[s]." To take the required hard look, the Forest Service must do more than disclose acres impacted at "popular" or "high profile" routes; all tourists on all routes to which these clearcuts are visible are likely to be negatively impacted. It is also unclear why the Forest Service neglects to calculate the acreage of background views that the project will impact. Further, it is unclear what an "average patch size" of 2-12 acres means. Could there be a couple of 100-acre clearcuts, and numerous 1-acre cuts? Further, if the Forest Service can define the patch size and precise acreage, it should provide a *map* showing the location of these 304 acres of clearcuts. Finally, given the small amount of acreage involved, the Forest Service should consider an alternative that eliminates all clearcuts that will impact foreground and middle-ground views at popular tourist destinations and alone high profile excursion routes. If the agency fails to do so, it must explain why.

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[324] 36 C.F.R. § 219.8(a)(1).
[325] 36 C.F.R. § 219.10(a)(7).
[326] *See, e.g.*, Rain Coast Data, Southeast Alaska by the Numbers, 2018, at 4 (available at http://www.raincoastdata.com/sites/default/files/Southeast%20Alaska%20by%20the%20numbers%202018%20updated%20Sept%2025.pdf (last viewed Sep. 16, 2019) (showing "visitor industry" accounting for 17% of jobs and 11% of income in Southeast Alaska, while timber and three other industries lumped together represent less than 4% of jobs and income).
[327] DEIS at 31 (Table 5).
[328] *Id*.

CONCLUSION

For the reasons set forth above, we respectfully request that the Forest Service not proceed with the logging aspects of the Central Tongass Project. However, if the agency chooses to proceed, then it must prepare and publish a supplementary DEIS that complies with the agency's legal obligations.

Best Regards,

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