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Alaska Roadless Rule

USDA Forest Service, Alaska Region

P.O. Box 21628

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Submitted electronically at: www.fs.usda.gov/project/?project=54511

Attn: Roadless Area Conservation; National Forest System Lands in Alaska Dear Alaska Roadless Rulemaking Team:

The Alaska Longline Fishermen's Association (ALFA) is a southeast Alaska-based commercial fishing organization that represents and advocates for community-based, small commercial fishing businesses. ALFA represents commercial fishing vessel owners, deckhands and business members from nearly every community in southeast Alaska who participate in, or otherwise support and benefit from the commercial fishing economy.¹ ALFA has received national and statewide recognition for its work to rebuild fish stocks, improve fishery monitoring and to protect fish habitat and ensure the socio-economic viability of coastal communities. Its members participate in longline fisheries and in all southeast Alaska commercial salmon fisheries - seine, gillnet and troll.

According to the Alaska Sustainable Fisheries Trust's Sea Bank 2018 Annual Report, southeast Alaska ecosystems contain a wealth of natural capital that makes southeast Alaska the leading region for commercial salmon production by volume.² Coastal ecosystems are among the most economically productive ecosystems in the world, but at the same time are vulnerable and experiencing rapid environmental change through developments that degrade high value habitats such as coastal forests.³ Any activities that reduce ecosystem services are likely to adversely impact commercial fishing.

¹ ALFA also has members throughout the United States, including numerous members in Washington State.

² See Alaska Sustainable Fisheries Trust. 2019. Sea Bank 2018 Annual Report. Available at: <http://www.thealaskatrust.org/seabank-annual-report-web>. Sea Bank is a program that seeks to inform better resource management decisions by recognizing southeast Alaska's ecosystems as "bank" composed of natural capital that provides annual dividends to local communities, national economies and even global trade.

³ Id.

These comments thus respond to the proposal to exempt the Tongass National Forest from the 2001 Roadless Area Conservation Rule ("Roadless Rule").⁴ All action alternatives would allow the Forest Service to make decisions on timber harvest and road construction in Tongass National Forest inventoried roadless areas on a

case-by-case basis.⁵ ALFA requests that you adopt the no-action alternative. The Forest Service enacted the Roadless Rule in large part to maintain aquatic ecosystems that provide habitat to numerous fish species.⁶ Inventoried roadless areas provide essential and intact spawning, rearing and migratory habitat for salmon - southeast Alaska's most valuable crop.⁷

Southeast Alaska's ecosystems have historically supported the most productive and highly valued salmon fisheries in the world: commercial salmon fisheries, sport fisheries and subsistence harvests that sustain Alaska native cultures.⁸ But recent declines in salmon fishery outputs have resulted in risks to the economic viability of commercial fishermen throughout southeast Alaska. The productivity of marine habitat is variable and cyclical, increasing the importance of freshwater habitat in order to maintain salmon populations during times of unfavorable ocean conditions.⁹ Any development that threatens the recovery of these fish - or worse, further diminishes the population - risks long-term adverse impacts on southeast Alaska fisheries.

Salmon populations have diminished throughout the species' range because of high levels of development in freshwater habitat throughout the west Pacific coast of North America.¹⁰ There are numerous scientific studies linking those declines in salmon productivity to logging road density and clearcutting. Southeast Alaska and coastal British Columbia comprise the largest temperate rainforest in the world.¹¹ Southeast Alaska's remaining old-growth temperate rainforests support salmon species that are no longer abundant or even extirpated from other forested habitats.¹² These forests support one of the largest remaining

4 84 Fed. Reg. 201 at 55,553. Special Areas; Roadless Area Conservation; National Forest System Lands In Alaska. October 17, 2019.

5 Id. at 55,523.

6 U.S. Dept. of Agriculture Forest Service. 2000. Forest Service Roadless Area Conservation Final Environmental Impact Statement Vol. I. at 1-1. Washington, D.C. November 2000.

7 Alaska Sustainable Fisheries Trust. 2019. Sea Bank 2018 Annual Report at 28. Available at: <http://www.thealaskatruster.org/seabank-annual-report-web>.

8 U.S. Forest Service. 1995. Report to Congress: Anadromous fish habitat assessment. Pacific Northwest Research Station, Alaska Region. Rr10-MB-279.

9 Id.

10 Bryant, M.D. 2008. Global climate change and potential effects on Pacific salmonids in freshwater ecosystems of southeast Alaska; M.D. Bryant & F.H. Everest. 1998. Management and conditions of watersheds in Southeast Alaska: the persistence of anadromous salmon.

11 Alaska Sustainable Fisheries Trust. 2019. Sea Bank 2018 Annual Report. Available at: <http://www.thealaskatruster.org/seabank-annual-report-web>.

12 Id.

salmon fisheries, making it critical to maintain inventoried roadless habitat throughout the region in order to provide stability to the regional economy.

ALFA's scoping comments explained that the Draft Environmental Impact Statement (DEIS) for this proposal needed to analyze: (1) Southeast Alaska community dependence on salmon fisheries; (2) current salmon population escapements and harvest trends by species; (3) adverse and cumulative impacts of barrier culverts and (4) climate change effects on southeast Alaska's salmon populations and the value of remaining forested, roadless habitat as a buffer against adverse environmental changes. But the proposed action and all exemption alternatives fail to adequately respond to the influence of the region's commercial fisheries on community socio-economic well-being. The DEIS ignored current salmon population trends, mischaracterized climate change effects, and failed to explain how the agency can justify additional habitat degradation when it lacks the capacity to deal with existing fish passage problems.

II. The DEIS violates NEPA by failing to discuss baseline fish population and habitat conditions and failing to discuss or disclose adverse impacts

A. Intro: NEPA requires a revised DEIS

ALFA's scoping comments requested that the DEIS identify areas with the highest historical salmon productivity, describe ecological features that

contribute to productivity, and evaluate the extent to which maintaining intact inventoried roadless areas can offset or ameliorate disproportionate levels of past and present landscape disturbances in some areas.

The DEIS ignored this concern and instead relied on outdated, generalized analysis from the 2016 Forest Plan amendment FEIS.¹³ The DEIS identifies potential "localized effects" that the Forest Service anticipates to be "minimal overall."¹⁴ Remarkably, it also asserts that Roadless Rule repeal alternatives would make little difference to salmon and fish habitat relative to maintaining intact inventoried roadless areas.¹⁵ Based on these flawed findings, the DEIS concludes that "none of the alternatives are expected to have a significant change to the commercial fishing or fish-processing industries."¹⁶

The conclusions in the DEIS rely on a flawed analysis that violates the National Environmental Policy Act (NEPA) by: (1) failing to discuss current status southeast Alaska salmon population trends; (2) failing to analyze the environmental consequences of this action on fish habitat in southern southeast

¹³ DEIS at 3-115-116

¹⁴ Id. at 2-21; 2-24.

¹⁵ Id. at 3-113-116.

¹⁶ Id. at 2-21; 2-24

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Alaska island ecosystems most at risk from Roadless Rule repeal alternatives and (3) ignoring decades of scientific studies demonstrating a clear relationship between logging-related habitat degradation and salmon population declines.

The Forest Service cannot shirk its responsibility to provide an adequate NEPA analysis by relying on analysis in the Forest Plan FEIS

. Until now, the agency has recognized that inventoried roadless areas provide unique habitat values for salmon. Also, location matters, and the "minimal" localized effects will occur in the context of planned timber sales on islands where inventoried roadless areas provide critical refugia from past and planned large scale clearcutting.

NEPA requires the Forest Service to produce a higher quality DEIS because it is reasonably possible to anticipate and analyze the effects of clearcutting and road construction in inventoried roadless areas on Prince of Wales Island, Wrangell Island, southern Revillagigedo Island, Wrangell Island and other island ecosystems that are critical to salmon productivity in the region.¹⁷ Also, a DEIS must include "a discussion of adverse impacts that does not improperly minimize side effects."¹⁸ This DEIS fails this standard by avoiding any discussion of adverse impacts to fish and fish habitat in southeast Alaska. If the Forest Service wishes to proceed with a Roadless Rule repeal alternative, it cannot rely on this flawed DEIS to support such a decision.

B. The DEIS violates NEPA by ignoring the current status of southeast Alaska salmon populations

ALFA's scoping comments requested that the DEIS review current trends in southeast Alaska salmon production. The discussion of the affected environment in the DEIS arbitrarily failed to discuss the current status of fish populations or the relevance of salmon production trends across southeast Alaska.¹⁹ These comments focus on the two most prevalent commercial salmon species that rely on southeast Alaska's island ecosystems - coho and pink salmon. The Tongass National Forest produces 95% or more of southeast Alaska's pink salmon harvest and roughly two-thirds of the coho harvest.²⁰ The DEIS relied on outdated harvest

¹⁷ See, e.g. *Kern v. U.S. Bureau of Land Management*, 284 F.3d 1062, 1071-1072 (9th Cir. 2002).

¹⁸ *N. Alaska Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006).

¹⁹ DEIS at 3-109. The failure to respond to our informed concern about declining pink salmon returns violates NEPA. "Public scrutiny [is] essential to implementing NEPA," making it incumbent on the agency to assess public comment on resource specific issues. See 40 C.F.R. [sect] [sect] 1500.1(b), 1503.4(a). The agency must provide a "reasoned discussion ... that would reflect how the agency considered, evaluated or rejected concerns." See *Idaho Conservation League v. Guzman*, 766 F.Supp.2d 1066, 1075 (D. Idaho 2011).

²⁰ See Johnson, A.C., J.R. Bellmore, S. Haught, and R. Medel. 2019. Quantifying the monetary value of Alaskan National Forests to commercial Pacific salmon fisheries at 2. *North American Journal of Fisheries Management*. Chum and sockeye salmon also depend on Tongass National Forest

statistics from the 2016 Forest Plan FEIS which predated recent, ongoing and significant declines in pink salmon productivity.²¹

NEPA's purpose is to "help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore and enhance the environment."²² High quality information and accurate scientific analysis are essential to implementing NEPA.²³ An EIS must explain baseline conditions as part of the agency responsibility to "succinctly describe the environment of the area(s) to be affected ... by the alternatives under consideration" and "insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken."²⁴ Thus agencies must "consider every significant aspect of the environmental impact of a proposed action" and to "inform the public that it has indeed considered environmental concerns in its decisionmaking process."²⁵ The omission of any current harvest data

or information about southeast Alaska's salmon populations violated these standards.

1. The Forest Service must supplement the DEIS and address significant declines in pink salmon populations

NEPA imposes "a continuing duty to gather and evaluate new information" relevant to environmental impacts.²⁶ The Forest Service must address the continuing decline in pink productivity in a supplemental EIS rather than rely on outdated analyses. The 9th Circuit explains that:

When new information comes to light, the agency must consider it, evaluate it and make a reasoned determination whether it is of such significance as to require implementation of formal NEPA filing requirements. Reasonableness depends on the environmental significance of the new information, the probable accuracy of the information, the degree of care with which the agency considered the information and evaluated its impact, and the degree to which the agency supported its decision not to supplement with a statement of explanation or additional data.²⁷

freshwater habitat, but have a larger hatchery component (chums) or originate in watersheds outside of the Tongass National Forest to a significant degree (sockeye).

21 Id.

22 40 C.F.R. [sect] 1508.1(c).

23 40 C.F.R. [sect] 1508.1(b).

24 40 C.F.R. [sect] 1502.15; 1500.1(b); N. Plains Res. Council v. Surface Transp. Bd., 668 F.3d 1067, 1084 (9th Cir. 2011); Oregon Natural Desert Ass'n v. Jewell, (9th Cir. 2016)

25 Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, Inc., 462 U.S. 87, 97 (1983).

26 Warm Springs Dam Task Force v. Gribble, 621 F.2d 1017, 1023-24 (9th Cir. 1980)

27 Id.

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Forest Service analysts identify pink salmon as "by far - the most dominant 'forest fish' comprising the commercial Pacific salmon harvest"²⁸ On average, pink salmon represented over 90 percent of the total commercial harvest from the Tongass National Forest from 2007-2016.²⁹

The DEIS relies on the 2016 Forest Plan FEIS to assess baseline conditions for salmon.³⁰ That FEIS considered harvest data through 2013.³¹ Since that time, pink populations plummeted. During the decade preceding the 2016 Forest Plan FEIS (2006-2015), southeast Alaska commercial fishermen harvested an annual average of 38.2 million pinks.³²

Then, the 2016 harvest of 18.4 million pinks was a declared federal fishery disaster for all of southeast Alaska.³³ 2018 returns were even worse.³⁴ Across southeast Alaska the 2018 pink salmon run failed to meet even low expectations, with a 7.3 million fish harvest - the lowest since 1976 and over ten million fewer fish than fishermen caught during the 2016 disaster year.³⁵ Juvenile abundance indices developed by NOAA for 2018 were the lowest since that agency began surveys and predicted the extremely low harvests.³⁶ The 2019 pink salmon

harvest of 21.1 million fish was the lowest odd-year harvest in over three decades.³⁷ ADF&G projects a 12 million fish harvest for 2020.³⁸ If realized, this project equates to an average pink salmon harvest of 18.7 million fish from 2016[shy]2020 - less than half the harvest rate contemplated in this DEIS.

28 Johnson, A.C., J.R. Bellmore, S. Haught, and R. Medel. 2019. Quantifying the monetary value of Alaskan National Forests to commercial Pacific salmon fisheries at 2. North American Journal of Fisheries Management.

29 Id. at 7.

30 DEIS at 3-109.

31 TLMP FEIS at 3-105-106.

32 Conrad, S. & D. Gray. 2018. Overview of the 2017 Southeast Alaska and Yakutat commercial, personal use, and subsistence salmon fisheries. Alaska Department of Fish and Game, Fishery Management Report No 18-01. Anchorage.

33 See <https://gov.alaska.gov/newsroom/2017/01/federal-government-declares-fishery-disaster-for-low-pink-salmon-harvest-in-gulf-of-alaska/>

34 <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyfisherysalmon.bluesheet>

35 <https://www.kfsk.org/2018/08/29/southeast-pink-salmon-catch-lowest-in-over-four-decades/>;
<http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyfisherysalmon.bluesheet>

36 NOAA 2018; Gray, D., T. Thynes, E. Coonradt, A. Piston, D. Harris, and S. Walker. 2018.

37 See Conrad, S. & D. Gray. 2018. Overview of the 2017 Southeast Alaska and Yakutat commercial, personal use, and subsistence salmon fisheries. Alaska Department of Fish and Game, Fishery Management Report No 18-01. Anchorage at 64, Table 1. It is important to note that overall, even year cycles of pink salmon runs have historically been lower than odd years. See U.S. Forest Service. 2016. Tongass Land and Resource Management Plan Final Environmental Impact Statement at 3-106, Figure 3.6-2. A large downturn in the even-year cycle beginning in 2006 exacerbated this disparity, and the last seven even year cycles have produced just half of historical average harvests. See id.

38 <https://www.adfg.alaska.gov/static/applications/dcfnewsrelease/1126221367.pdf>

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The pink production has been particularly poor in northern southeast Alaska inside watersheds adjacent to Frederick Sound and Chatham Straits and worsened during even year cycles.³⁹ These poor returns have caused an ongoing failure to meet escapement goals in northern southeast Alaska inside waters and extensive fishery closures across the region.⁴⁰ However, commercial salmon harvest data from 2017 and 2018 showed significant declines in productivity from Prince of Wales Island watersheds relative other portions of southeast Alaska, raising serious questions about whether effects from timber sales over the past decade are adding to losses associated with declines in marine productivity.⁴¹

In sum, harvests of southeast Alaska's largest crop and most prevalent "forest fish" pink salmon - have declined by more than half. The Forest Service must prepare a supplemental or revised DEIS prior to adopting any of the

Roadless Rule repeal alternatives. These declines make it essential to consider the need to preserve remaining roadless refugia to recover and maintain fishery resources.

2. Coho salmon depend on specific habitat qualities provided by inventoried roadless areas

ALFA also has significant concerns about the impacts of Roadless Rule repeal alternatives on southeast Alaska coho populations, which support the troll fishery - the second largest fishing fleet in the state.⁴² Logging related degradation of habitat quality "has contributed to a decline in abundance of coho salmon in [the Pacific Northwest]."⁴³ ADF&G harvest data show that coho harvests

39 Conrad, S.D. & D. Gray. 2018.

40 ADF&G 2017, Heintz, S.C., E.L. Jones III, A. W. Piston, P.J. Richards, L. D. Shaul, B.W. Elliott, S.E. Miller, R.E. Brenner, and J.V. Nichols. 2017. Review of salmon escapement goals in Southeast Alaska, 2017. Alaska Department of Fish and Game, Fishery Manuscript Series No. 17-11; <https://www.adfg.alaska.gov/FedAidPDFs/FMR18-24.pdf> ;

<http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareasoutheast.salmon>.

<https://www.kfsk.org/2017/11/21/southeast-pink-salmon-catch-disappoint-2018/><https://www.kfsk.org/2019/08/14/pink-salmon-harvests-are-poor-in-northern-southeast-alaska-but-average-in-southern-areas/><https://www.kfsk.org/2018/08/29/southeast-pink-salmon-catch-lowest-in-over-four-decades/>

41 Alaska Sustainable Fisheries Trust. 2019. Sea Bank 2018 Annual Report. Available at: <http://www.thealaskatrust.org/seabank-annual-report-web>. Among other indicia of low productivity, ADF&G harvest data showed a remarkably low pink salmon harvest of 200,000 pink salmon in Area 2 in 2017. See also: http://www.adfg.alaska.gov/index.cfm?adfg=cfnews.search_results&mgmt=1&district=&spec=∓gear=2&act=&year=2017; see also <https://www.kfsk.org/2017/08/23/southeast-pink-salmon-catch-falls-short/>; <https://www.adfg.alaska.gov/FedAidPDFs/FMR17-35.pdf>; <https://www.adfg.alaska.gov/FedAidPDFs/FMR18-24.pdf>

42 Alaska Sustainable Fisheries Trust. 2019. Sea Bank 2018 Annual Report. Available at: <http://www.thealaskatrust.org/seabank-annual-report-web>.

43 Halupka, K., M. Bryant, M. Willson, and F. Everest. 2000. Biological characteristics and population status of anadromous salmon in southeast Alaska at 54. Gen. Tech. Rep. PNW-GTR-461. Portland, OR. U.S. Dept. of Agriculture, Forest Service. Pacific Northwest Research Station 255 p.;

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have been below the 2006-2015 annual average of 2.6 million fish in three of the last four years. The 2018 and 2019 harvests of 1.5 million and 1.7 million fish are over a third lower. Inventoried roadless areas offer specific protections for coho populations that are unavailable under the Forest Plan - particularly because the Forest Service refuses to provide riparian buffers for smaller streams.

Coho salmon inhabit freshwater ecosystems for at least a year before migrating to the marine environment and most juveniles will remain in freshwater for two years.⁴⁴ Research specific to southeast Alaska, for example, shows that coho populations would be particularly vulnerable to habitat changes because of the need for suitable rearing habitat, particularly smaller streams that are more sensitive to disturbances and offer fewer refuges.⁴⁵

Indeed, the majority of coho stocks are populations of less than 1,000 fish that use smaller to medium stream systems, which support 60 percent of the annual return.⁴⁶ Unfortunately, unbuffered, smaller streams comprise the bulk of the stream mileage in southeast Alaska watersheds.⁴⁷ Alaska Department of Fish and Game fishery managers believe that decades of logging have reduced habitat capability for coho salmon through alterations in stream channels, culverts that block fish passage on logging roads and effects on smaller streams.⁴⁸

Additionally, location matters. Prince of Wales Island is also the leading island ecosystem for coho salmon. North Prince of Wales Island provides 1,904 stream miles of coho habitat, making it the most important island ecosystem for cohos.⁴⁹ Scientists believe that North Prince of Wales Island karst landscapes are particularly productive for coho.⁵⁰ Planned logging on Prince of Wales Island is

see also 2000 U.S. Dept. of Agriculture Forest Service. 2000. Forest Service Roadless Area Conservation Final Environmental Impact Statement Vol. I. at 3-165-169. Washington, D.C. November 2000 (identifying declines in coho populations caused by logging and timber roads).

44 Halupka, K., Bryant, M. Willson, and F. Everest. 2000. Biological characteristics and population status of anadromous salmon in southeast Alaska at 54. Gen. Tech. Rep. PNW-GTR-461. Portland, OR. U.S. Dept. of Agriculture, Forest Service. Pacific Northwest Research Station 255 p.

45 Halupka, K., . Bryant, M. Willson, and F. Everest. 2000. Biological characteristics and population status of anadromous salmon in southeast Alaska at 16, 54. Gen. Tech. Rep. PNW-GTR-461. Portland, OR. U.S. Dept. of Agriculture, Forest Service. Pacific Northwest Research Station 255 p

46 Alaska Sustainable Fisheries Trust. 2019. Sea Bank 2018 Annual Report. Available at: <http://www.thealaskatrust.org/seabank-annual-report-web>.

47 U.S. Forest Service. 1995. Anadromous Fish Habitat Assessment.

48 Shaul, L., E. Jones, K. Crabtree, T Tydingco, S. McCurdy and B. Elliot. 2008. Coho salmon stock status and escapement goals in Southeast Alaska. Alaska Department of Fish and Game, Special Publication No. 08-20, Anchorage.

49 Alaska Sustainable Fisheries Trust. 2019. Sea Bank 2018 Annual Report. Available at: <http://www.thealaskatrust.org/seabank-annual-report-web>.

50 Bryant, M.D. & D.N. Swanston. 1998. Coho salmon populations in the karst landscapes of North Prince of Wales Island, Southeast Alaska. In: Transactions of the American Fisheries Society 127: 425-433.

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one of the most serious concerns for the viability of coho fisheries.⁵¹ By ignoring this species, the DEIS violated NEPA by failing to take a hard look at their specific habitat needs and how the proposed roadless rule repeal would affect smaller headwater streams utilized by coho salmon.

C. The DEIS failed to provide an appropriate scope of analysis

All Roadless Rule repeal alternatives would increase risks to southern southeast Alaska's island ecosystem salmon productivity by building roads in fish habitat accompanied by intensive logging of old growth and second

growth recovering forests - and do so at a time when the region's salmon production capacity is at risk due to multiple environmental factors. All Roadless Rule repeal alternatives will most likely increase clearcutting and timber road construction in areas closest to mills or export facilities.⁵² This means further degradation of island aquatic ecosystems in southern southeast Alaska.⁵³

1. The Forest must analyze the impacts of logging inventoried roadless areas in southern and central southeast Alaska

The DEIS admits that "some local regions may have fish resources affected where watershed harvest levels and road density are high under the current Forest Plan." ⁵⁴ But then the agency wrongly insists there will be no additional cumulative effects from any Roadless Rule alternative.⁵⁵ The DEIS does not provide enough information to support its negligible to no effects conclusions in light of planned landscape scale clearcutting in southern and central southeast Alaska. The purpose of an EIS is to "evaluate the possibilities in light of current and contemplated plans and produce an informed estimate of environmental consequences."⁵⁶ This DEIS unlawfully avoids this obligation. It is reasonably possible to assess adverse impacts to fish populations exposed to habitat degradation through projects implementing the 2016 Forest Plan.⁵⁷

Moreover, the 2016 Forest Plan FEIS did not analyze adverse impacts to fish and fish habitat associated with clearcutting and timber road construction in southern southeast Alaska inventoried roadless areas. Roadless Rule repeal alternatives proposed in this EIS entail activities that alter the environment in a

⁵¹ Alaska Sustainable Fisheries Trust. 2019. Sea Bank 2018 Annual Report. Available at: <http://www.thealaskatrust.org/seabank-annual-report-web>.

⁵² Alaska Roadless Rulemaking Cost-Benefit Analysis at 26, 30. Alternatives 2 and 3 appear to also sacrifice salmon habitat southern southeast Alaska ecosystems by removing Roadless Rule protections from extensions of existing road systems and logging areas. ALFA thus views all Roadless Rule repeal alternatives as equally harmful to the interests of commercial fishermen.

⁵³ Id. at 30.

⁵⁴ DEIS at 3-118.

⁵⁵ Id..

⁵⁶ Kern v. U.S. Bureau of Land Management, 284 F.3d 1062, 1071-1072 (9th Cir. 2002).

⁵⁷ Id.

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significant and different way, requiring a revised DEIS to remedy this flawed DEIS.⁵⁸ Indeed, the very first page in the 2001 Roadless Area Conservation Rule FEIS explains that inventoried roadless areas provide unique values for salmon:

Lakes, streams and rivers within inventoried roadless areas can also function as biological strongholds for many fish species. These considerations are particularly important given the wide range and broad decline of species such as salmon ... that depend on habitat in NFS lands for their continued survival. Numerous studies show that watersheds with fewer roads are often associated with healthier fish populations, and roads may have

unavoidable effects on streams, regardless of how well they are located, designed, or maintained.⁵⁹

Rivers, streams and lakes in inventoried roadless are also increasingly important because they "play a relatively much greater role in supporting aquatic species viability and biodiversity than in the past due to cumulative degradation and loss of other, potentially more biologically rich habitat within associated drainages."⁶⁰ And, "[s]maller streams, such as many of those found in inventoried roadless areas, provide important habitat for resident and migratory aquatic species and also influence the quality of habitat in larger, downstream reaches."⁶¹

These concerns are particularly pertinent to southern southeast Alaska. The most highly productive fish habitat overlaps with areas intensively managed for timber production. These areas - particularly northern and central Prince of Wales Island - have also suffered habitat loss at a much greater rate than other portions of southeast Alaska.⁶²

2. Roadless Rule Repeal alternatives will focus clearcutting and road construction in southern and central southeast Alaska

The Forest Service has completed or initiated the three timber projects it intends to use over the next fifteen years to meet 2016 Forest Plan timber targets: the Prince of Wales Landscape Level Analysis, Central Tongass Project and South Revilla Integrated Resource Project. Together, these three massive timber sales will remove nearly a billion board feet of timber from over 60,000 acres.

⁵⁸ Pacific Rivers Council v. U.S. Forest Service, 689 F.3d 1012, 1024-1030 (9th Cir. 2012).

⁵⁹ U.S. Dept. of Agriculture Forest Service. 2000. Forest Service Roadless Area Conservation Final Environmental Impact Statement Vol. I. at 1-1. Washington, D.C. November 2000.

⁶⁰ Id. at 3-160.

⁶¹ Id.

⁶² D. Albert & J. Schoen. 2007. A conservation assessment for the coastal forests and mountains ecoregion of southeast Alaska and the Tongass National Forest. In: Southeast Alaska Conservation Assessment, Ch. 2

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Prince of Wales Island is the largest island in southeast Alaska and the 3rd largest island in the United States.⁶³ It is the most important island ecosystem in southeast Alaska for commercial fish production based on sockeye habitat, stream miles for coho and pink salmon and numbers of Alaska Department of Fish and Game "Primary Salmon Producer" watersheds. ⁶⁴ Remaining watersheds on Prince of Wales Island if allowed to function as fish habitat are the most important part of the Alexander Archipelago ecosystem that is a primary refuge for a large proportion of wild salmon stocks remaining in the Pacific Northwest. ⁶⁵

Under any of the Roadless Rule repeal alternatives, the Forest Service would increase the scale of clearcutting and road construction under the Prince of Wales Landscape Level Analysis.⁶⁶ The Prince of Wales Island project alone would remove nearly two-thirds of a billion board feet of timber over the next fifteen years.⁶⁷ This project would occur shortly after the largest federal timber project in decades, the Big Thorne Project, creating unacceptable environmental risks. The Forest Service has already considered timber entries into Prince of Wales Island inventoried roadless areas, but deferred those entries pending this rulemaking.⁶⁸ The Forest Service has

also initiated planning road construction activities in the islands inventoried roadless areas.⁶⁹

On Prince of Wales Island alone there are a number of watersheds at risk, 447 red pipes blocking 90 miles of salmon habitat, and a need for a number of watershed treatments deemed necessary to mitigate losses to salmon production.⁷⁰ Prior Forest Service project analyses show that there is substantial deferred maintenance and chronic sedimentation throughout the area and ample evidence that landscape scale modifications, such as the island's system of logging roads, impair and reduce salmon production capacity. The new project would add 122 miles of road construction within 300 feet of fish habitat, cause peak flow rate increases in nearly a quarter of the project area watersheds, increase risks of sedimentation and low summer stream flows, and add 436 stream crossings.⁷¹

⁶³<http://raincoastdata.com/sites/default/files/POW%20presentation%20web%20version%20updated.pdf>

⁶⁴ Alaska Sustainable Fisheries Trust. 2019. Sea Bank 2018 Annual Report. Available at: <http://www.thealaskatruster.org/seabank-annual-report-web>.

⁶⁵ Id.

⁶⁶ USDA Forest Service. 2018. Prince of Wales Landscape Level Analysis Environmental Impact Statement at 2-36. R10-MB-833e. U.S. Forest Service, Alaska Region. October 2018. P. 3-66 - 24 IRAs

⁶⁷ Id. at 2-23, 27.

⁶⁸ Id. at 2-36.

⁶⁹<https://naturalresources.house.gov/download/hanna-autumn-written-testimony>

⁷⁰ USDA Forest Service. 2018. Prince of Wales Landscape Level Analysis Environmental Impact Statement at 3-131, 137, 154.

⁷¹ Id. at 3-135 - 3-143.

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Similarly, for the pending Central Tongass Project, the Forest Service has already planned to maximize the acreage available for clearcutting and road construction by authorizing entries into inventoried roadless areas.⁷² Again, the agency deferred action on these entries pending the completion of this rulemaking.⁷³ In the Central Tongass Project area, there are 432 existing red crossing blocking 82 miles of habitat, and the Forest Service proposes 700 new stream crossings, including 128 on anadromous streams.⁷⁴ For some watersheds, the agency proposes to remove between 20 and 40 percent of existing forested habitat.⁷⁵ As with the Prince of Wales timber project, there are a number of watersheds already in poor condition, with existing high risks of peak flows. ⁷⁶

The only other old-growth timber sale project proposed over the next decade is the South Revilla Integrated Resource Project.⁷⁷ Roadless Rule repeal alternatives would vastly expand the acreage available for clearcutting and road construction associated with that project, and exacerbate cumulative effects to Revillagigedo Island fish populations.⁷⁸

Further, second growth timber targets will negatively affect southern southeast Alaska watersheds currently

recovering from past clearcutting. Importantly, it takes over a century for watersheds to recover from intensive logging and road construction, and short timber rotations cycles of less than 100 years prevent recovery: "[f]ew refuges remain in a watershed that fish can use during such widespread, intense, and recurrent disturbances." 79 This means that the high levels of second growth logging proposed in southern southeast Alaska may permanently degrade aquatic habitat and fish production.

3. The Tongass 77 watersheds do not support commercial fisheries

The DEIS states that "none of the alternatives are expected to have a significant change to the commercial fishing or fish-processing industries."⁸⁰ The DEIS relies to a large extent on unlogged "Tongass 77" watersheds to assess fish

72 USDA Forest Service. 2019. Central Tongass Project Draft Environmental Impact Statement Vol. 1 at 3-26. R10-MB-832a. U.S. Forest Service, Alaska Region. July 2019. There are 43 IRAs in the CTP project area (p. 3-51).

73 Id. at 3-26.

74 Id. at 3-160.

75 Id. at 3-160.

76 Id. at 3-171-176.

77 <https://www.fs.fed.us/sopa/components/reports/sopa-111005-2019-10.pdf>;
https://www.fs.usda.gov/nfs/11558/www/nepa/108739_FSPLT3_4403638.pdf

78 https://www.fs.usda.gov/nfs/11558/www/nepa/108739_FSPLT3_4403638.pdf

79 U.S. Forest Service. 1995. Anadromous Fish Habitat Assessment.

80 DEIS at 2-21; 2-24.

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productivity.⁸¹ "Tongass 77" watersheds reflect an abstract model that erroneously excludes many southern southeast Alaska watersheds and selects others with no reference to actual escapements, harvests or other empirical data.⁸²

It is arbitrary and wrong to rely on "strong protections" for 77 watersheds to support commercial fisheries.⁸³ The Alaska Department of Fish and Game has identified a total of 934 salmon producing watersheds in southeast Alaska.⁸⁴ Most of southeast Alaska's salmon production occurs in just over a quarter of those 934 watersheds identified by the Alaska Department of Fish and Game as Primary Fish Producers - the core of sport, commercial and subsistence fisheries.⁸⁵ Across the entire region, 243 of 934 watersheds produce 60 percent of the pink salmon and 72 percent of cohos.⁸⁶ But nearly 40% of the Forest Service's Tongass 77 watersheds fail to qualify as Primary Salmon Producers.

An even greater concern is the spatial distribution of the Tongass 77 watersheds across the region. It appears that the Tongass 77 scheme would "protect" primarily watersheds where the Forest Service has no plans for

timber extraction for the next decade, if ever. Only a third of the Tongass 77 acreage lies within the southern southeast portion of the region that supports fishery harvests in ADF&G regulatory fishing districts 1-7. Roughly a third (ironically, 77) of the ADF&G Primary Salmon Producer watersheds are on Prince of Wales Island (regulatory districts 2 & 3).⁸⁷

There are only three Tongass 77 watersheds on north central Prince of Wales Island. How could this be? There are no Tongass 77 watersheds on Revillagigedo Island, Gravina Island, Zarembo Island, Mitkof Island or Lindenberg Peninsula on Kupreanof Island. These are the islands with extensive planned logging under the 2016 Forest Plan. There are nine Tongass 77 watersheds on southern Prince of Wales Island and the outer coast of Dall Island - far outside planned timber extraction areas.

Worse, the spatial distribution of the Tongass 77 occurs disproportionately in northern southeast Alaska areas with serious salmon productivity issues discussed in preceding sections. Roughly two-thirds of the Tongass 77 acreage lies adjacent to ADF&G regulatory districts 9 - 15 in northern southeast Alaska, where pink salmon productivity is so low that ADF&G has closed most of these areas to directed pink salmon fishing during the past four years. It is unclear why

81 Id. at 2-21; 2-24; 84 Fed. Reg. at 55,524.

82 DEIS at 3-113.

83 Id. at 2-21, 2-24.

84 ADF&G. 1998. Tongass Fish and Wildlife Resource Assessment. ADF&G Technical Bulletin No. 98-4.

85 Id.

86 Id.

87 Id., Appx. A.

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or how the Forest Service believes that the concentration of these areas in Peril Straits, Tenakee Inlet, Stephens Passage, Yakutat and Frederick Sound would support the thousands of southeast Alaskans who depend on the salmon fisheries across the entire region.

The likelihood of significant restrictions in northern southeast Alaska heightens the importance of returns to Prince of Wales Island and other southern southeast Alaska pink salmon producing watersheds sacrificed under the Tongass 77 zoning scheme. This zoning approach creates "protected" fish habitat primarily in areas of water hauls and skunks and sacrifices inventoried roadless habitat that supports hundreds of fishing businesses. The practical effect of this zoning scheme is to concentrate fishermen into smaller areas with lower productivity, increasing expenses and reducing profits.

D. The Forest Service needs to admit that logging and road construction have adverse impacts to fish habitat

ALFA's scoping comments requested that the DEIS provide a detailed analysis of adverse impacts to salmon habitat identified in the 2000 Roadless Area Conservation FEIS. The Roadless Area Conservation Rule FEIS

identified "numerous negative direct, indirect and cumulative effects" to aquatic and riparian habitat associated with roading and clearcutting in inventoried roadless areas."⁸⁸ These negative effects "could potentially reduce the capacity and capability of key watersheds important for maintaining salmonid populations."⁸⁹ For example, timber roads and clearcutting can increase sedimentation, degrade water quality, fragment habitat, and increase high temperature regimes.⁹⁰ Sedimentation alone has caused salmon productivity to decline in numerous studied watersheds.⁹¹ These "numerous" adverse impacts reduce salmon productivity in the following ways:⁹²

88 U.S. Dept. of Agriculture Forest Service. 2000. Forest Service Roadless Area Conservation Final Environmental Impact Statement Vol. I. at 3-169. Washington, D.C. November 2000.

89 Id.

90 Id. at 3-163.

91 Id. at 3-166; see also Endangered and Threatened Species: Threatened status for Southern Oregon/Northern California Evolutionarily Significant Unit (ESU) of coho salmon. 62 Fed. Reg. 24588 at 24593 and 24599. May 6, 1997 (identifying sedimentation of stream beds caused by clearcutting and timber road construction as a major cause of salmon population declines throughout the species' range).

92 Id. at 3-164.

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Given these impacts, it is not surprising that the 2000 Roadless Area Conservation Rule FEIS identified clearcutting and timber road construction in inventoried roadless areas as having "the greatest potential for adverse effects to ... commercial ... fishing because it could cause declines in the populations of desirable fish species."⁹³ The FEIS also referenced scientific studies showing that roadless watersheds or watersheds with low road densities are two to three times as likely to support strong salmon populations as watersheds with high road densities.⁹⁴ Indeed, numerous studies show that watersheds with fewer roads are often associated with healthier fish populations.⁹⁵

All Roadless Rule repeal alternatives thus present significant risks of continued and serious fish population declines associated with habitat degradation caused by clearcutting and road construction on lands that currently provide refugia for fish populations in otherwise highly degraded landscapes. The DEIS, however, identifies "negligible" and minimal localized effects to fish and fish habitat and insists that clearcutting and timber road construction in inventoried roadless areas will not affect commercial fishermen.⁹⁶ The DEIS admits there may be indirect effects to fish caused by increased sedimentation, blocked fish passage and loss of riparian vegetation.⁹⁷ But it assumes these effects will be minimal because the clearcut acreage and road construction will be within the scale anticipated by the 2016 Forest Plan. 98

93 Id. at 3-285-287.

94 Id. at 3-161.

95 Id. at 1-1.

96 DEIS at 2-21; 2-24.

97 Id. at 3-112-113.

98 Id. at 3-113-116.

15

The analysis in the DEIS is a significant departure from the Roadless Area Conservation Rule FEIS and the findings of expert scientists who reviewed the impacts of road construction and clearcut logging on anadromous fish habitat. These prior assessments identify adverse impacts ignored in the DEIS. An agency must "explain cogently the bases of its decisions" when it "departs directly from an earlier path" or when its environmental assessments conflict with previous findings.⁹⁹ Also, the DEIS failed NEPA's "hard look" requirement to disclose known and likely environmental risks or evaluate fundamental scientific uncertainties about the predicted consequences.¹⁰⁰ A DEIS must include "a discussion of adverse impacts that does not improperly minimize side effects."¹⁰¹

At one time, the Pacific Northwest supported the largest salmon runs and fisheries in the world.¹⁰² But logging activities and roads played a significant role in causing run failures and declines in salmon populations over the past century.¹⁰³ Scientists have long recognized that industrial logging in anadromous watersheds has contributed to declines in salmon abundance and diversity.¹⁰⁴

Most of the clearcutting and timber road construction in southeast Alaska coincided with the most highly productive fish habitat - there very well may be a significant but undocumented loss of salmon production from heavily logged watersheds.¹⁰⁵ Forest Service scientists and state fishery managers have long anticipated that habitat degradation will cause some level of reduction in southeast Alaska salmon populations as the federal timber sale program exposed highly productive streams to significant risks.¹⁰⁶ Consequently, they urged the agency to adopt site-specific analysis aimed at developing a better understanding of ways to provide for long-term sustainability of southeast Alaska's fish populations.¹⁰⁷ The Forest Service has never undertaken this effort, making it impossible for the agency to detect whether or to what extent the agency has reduced salmon productivity in the region.

99 *Humane Society v. Locke*, 626 F.3d at 1040, 1049, 1051-1052 (9th Cir. 2010).

100 *Seattle Audubon Society v. Moseley*, 798 F.Supp. 1473, 1478, 1482 (W.D. Wash. 1992); *Ecology Center v. Austin*, 430 F.3d 1057, 1067 (9th Cir. 2005).

101 *N. Alaska Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006).

102 Johnson, A.C., J.R. Bellmore, S. Haught, and R. Medel. 2019. Quantifying the monetary value of Alaskan National Forests to commercial Pacific salmon fisheries at 2. *North American Journal of Fisheries Management*.

103 Id.; U.S. Dept. of Agriculture Forest Service. 2000. Forest Service Roadless Area Conservation Final Environmental Impact Statement Vol. I. at 3-285-287.

104 ADF&G. 1998. Tongass Fish and Wildlife Resource Assessment at 17.

105 M.D. Bryant & F.H. Everest. 1998. Management and conditions of watersheds in Southeast Alaska: the persistence of anadromous salmon.

106 ADF&G. 1998. Tongass Fish and Wildlife Resource Assessment at 17.

107 Halupka, K., M. Bryant, M. Willson, and F. Everest. 2000. Biological characteristics and population status of anadromous salmon in southeast Alaska at 54.

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Alaska Department of Fish and Game fishery scientists have also identified strong negative correlations between logging road density, timber extraction and salmon productivity.¹⁰⁸ These concerns are consistent with the numerous scientific studies showing that clearcutting and timber road construction in salmon habitat harms habitat productivity for salmon.¹⁰⁹

The DEIS cannot hide behind the 2016 Forest Plan protections to support its "no effects" conclusions. Clearcutting "substantially" reduces habitat quality, even if there are forested buffers on known anadromous streams.¹¹⁰ Buffers in southeast Alaska are too narrow and tend to blow down, losing their effectiveness over time.¹¹¹ According to the National Marine Fisheries Service, roads are a primary cause of salmonid decline, and may have unavoidable effects on streams regardless of how well they are located, designed or maintained.¹¹²

E. Barrier Culverts

ALFA's scoping comments specifically requested that the DEIS provide a detailed analysis of barrier culverts in southeast Alaska. The DEIS acknowledges that fish passage obstructions cause "indirect"¹¹³ effects to fish, but failed to discuss the current number of blocked culverts, number of stream miles impacted, and the average number of blocked culverts addressed each year.¹¹⁴ The discussion of impacts to fish claims that Roadless Repeal alternatives may cause "slightly" increased adverse impacts to fish in terms of stream crossings, but insists impacts will be similar to those projected in the 2016 Forest Plan FEIS.¹¹⁵

The transportation section in the DEIS, however, identifies some "uncertainty" about funding for road maintenance, potentially causing adverse effects to fish.¹¹⁶ ALFA's concern about this "uncertainty" is that Roadless Rule repeal alternatives exacerbate the Forest Service's existing refusal to address the

108 Id. at 54, 58, 205.

109 USDA Forest Service. 2000. Forest Roads - a synthesis of scientific information (identifying degraded fish habitat by roads and a clear correlation between road density and fish production); M.D. Bryant & F.H. Everest. 1998. Management and conditions of watersheds in Southeast Alaska: the persistence of anadromous salmon; Halupka, K., M. Bryant, M. Willson, and F. Everest. 2000. Biological characteristics and population status of anadromous salmon in southeast Alaska at 54. Gen. Tech. Rep. PNW-GTR-461. Portland, OR. U.S. Dept. of Agriculture, Forest Service. Pacific Northwest Research Station 255 p.; U.S. Forest Service. 1995. Anadromous Fish Habitat Assessment.

110 U.S. Forest Service. 1995. Anadromous Fish Habitat Assessment.

111 Id.

112 U.S. Dept. of Agriculture Forest Service. 2000. Forest Service Roadless Area Conservation Final Environmental Impact Statement Vol. I. at 3-169. Washington, D.C. November 2000.

113 It is unclear why the Forest Service thinks preventing successful salmon spawning is an "indirect" effect.

114 DEIS at 3-112-113.

115 *Id.* at 3-113-116.

116 *Id.* at 3-148.

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large number of fish passage problems in the region. The 2000 Roadless Area Conservation Rule FEIS identified higher costs specific to logging and road construction in inventoried roadless areas in general.¹¹⁷ Tongass National Forest costs may be worse because its roadless areas are remote and hard to access.¹¹⁸

A primary purpose of the Roadless Area Conservation Rule related to concerns about "the wisdom of building new roads, particularly in inventoried roadless areas, when each year's uncompleted maintenance increases the backlog as existing roads deteriorate and the cost of repair continues to rise."¹¹⁹ This is a significant issue given that the Forest Service retains long-term maintenance and operational responsibilities.¹²⁰ When the Forest Service enacted the Roadless Rule, the agency provided a conservative estimate of an \$8.4 billion backlog on deferred maintenance, including culvert replacement.¹²¹ At that time, Congress funded roughly 20 percent of the backlog.¹²² By 2003, the Tongass National Forest was the second worst offender on a national basis (next to the entire state of California's Forest Service road system), with a deferred maintenance backlog was nearly \$1 billion (in 2002 dollars).¹²³ In 2019, the agency estimates its total maintenance backlog as \$5.2 billion, but its budget is \$450 million.¹²⁴

The absence of barrier culverts and stream crossings from inventoried roadless areas is another distinctive habitat feature that makes the impacts of this rulemaking different from impacts predicted under the 2016 Forest Plan FEIS. Taxpayers will need to fund 1,000 miles of road construction to meet timber targets.¹²⁵ As previously noted, inventoried roadless areas function as biological strongholds and refuges for many species, and unroaded or low road density watersheds are more likely to support healthy salmon populations.¹²⁶ The 2000 Roadless Area Conservation Rule FEIS explains that migration barriers caused by red culverts can reduce habitat connectivity for aquatic species, increasing vulnerability to local extirpations and reduced ability to respond to changing

¹¹⁷ U.S. Dept. of Agriculture Forest Service. 2000. Forest Service Roadless Area Conservation Final Environmental Impact Statement Vol. I. at 3-303. Washington, D.C. November 2000.

¹¹⁸ *Id.*; 2016 TLMP FEIS at 3-441.

¹¹⁹ U.S. Dept. of Agriculture Forest Service. 2000. Forest Service Roadless Area Conservation Final Environmental Impact Statement Vol. I. at 1-5. Washington, D.C. November 2000.

¹²⁰ *Id.* at 3-22.

¹²¹ *Id.* at 1-5.

¹²² *Id.* at 1-5.

¹²³ <https://www.lpfw.org/archive/docs/RoadlessBacklog.pdf>

124 <https://naturalresources.house.gov/download/hanna-autumn-written-testimony>

125 DEIS at 3-144; <https://naturalresources.house.gov/download/hanna-autumn-written-testimony>

126 U.S. Dept. of Agriculture Forest Service. 2000. Forest Service Roadless Area Conservation Final Environmental Impact Statement Vol. I. at 3-160. Washington, D.C. November 2000.

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environmental conditions.¹²⁷ The FEIS further explains that "[w]hile the localized effect of an individual road-stream crossing may not have a substantial adverse effect, the cumulative effect of road networks and multiple crossings increased the potential for major adverse effects to aquatic habitats."¹²⁸

Red culverts are a significant issue for fishermen. Roadless Rule repeal alternatives would add numerous stream crossings within the Prince of Wales and Central Tongass Project inventoried roadless areas, where nearly 800 red culverts already block at least 170 miles of spawning habitat in nearby watersheds.¹²⁹ Canadian researchers in 2003 developed habitat values (which the authors described as conservative estimates) that ranged from \$.026 to \$1.40 per acre of watershed, or \$1,491 to \$7,914 per mile of spawning stream (converted to 2003 U.S. dollars - or roughly \$10,000 per mile of spawning stream today).¹³⁰ The 250 miles of spawning habitat blocked because of deferred maintenance across the entire Forest costs commercial fishermen at least \$2.5 million each year.¹³¹ This rulemaking will add to the existing maintenance backlog and divert funds away from work needed to mitigate economic costs to fishermen.

Indeed, the issue of blocked culverts is so important to salmon habitat that tribes sued the state of Washington in order to require it to fix barrier culverts in order to increase salmon populations in the region. As explained by Earthjustice in an amicus brief filed in that case on behalf of the Pacific Coast Federation of Fishermen's Associations, Alaska Trollers Association and sportfishing groups:

... because barrier culverts block access to habitat entirely, barrier removal is frequently the most effective recovery measure (and often the measure with the most immediate positive impact) when compared with other habitat recovery efforts, such as reforestation, repairing stream-straightening or channelization, or increasing flows. And obviously, other habitat restoration efforts will be futile if salmon are unable to access the restored habitat.

¹²⁷ Id. at 3-166.

¹²⁸ Id.

¹²⁹ Central Tongass Project DEIS at 3-160; Prince of Wales Landscape Level Analysis at 3-131-154.

¹³⁰ Foley, et al. 2012. A review of bioeconomic modelling of habitat-fisheries interactions. In: International Journal of Ecology, Vol. 2012. Doi:10.1155/2012/861635; Exh. 46, Knowler, D. et al. 2001. Valuing the quality of freshwater salmon habitat - a pilot project. Simon Fraser University. Burnaby, B.C.: January 2001; Knowler, D.J., B.W. MacGregor, M.J. Bradford, and R.M. Peterman. 2003. Valuing freshwater salmon habitat on the west coast of Canada. In: Journal of Environmental Management, 69: 261-273 (Nov. 2003). Available at: www.sciencedirect.com/science/article/pii/S0301479703001543.

¹³¹ Alaska Sustainable Fisheries Trust. 2019. Sea Bank 2018 Annual Report. Available at: <http://www.thealaskatrust.org/seabank-annual-report-web>.

Earthjustice further explains that "[s]almon production is directly related to the amount and quality of habitat available." 132 Simply put, "less habitat where fish can reproduce means fewer fish."133 Conversely, repairing or removing culverts that block fish habitat can result in rapid increases to salmon populations.134

Roadless Rule repeal alternatives will result in planned and costly road construction in inventoried roadless areas, further increasing the agency's maintenance backlog. The Forest Service's refusal to fix existing barrier culverts reduces salmon productivity with real costs to commercial fishermen. The DEIS and Cost-Benefit Analysis arbitrarily ignore these costs. 135

III. The DEIS improperly dismisses adverse climate change effects on southeast Alaska's fishery resources

The DEIS states that climate change effects on southeast Alaska's fishery resources are unclear and uncertain.136 The Forest Service believes that changes related to warming and altered precipitation such as inundation of estuaries through sea level rise, lower summer stream flows, hotter stream temperatures and precipitation changes "would be both positive and negative."137 Perhaps "some of the changes could be detrimental to fish resources."138 In other words, the Forest Service believes climate change is irrelevant to analyzing the cumulative effects of Roadless Rule repeal alternative on fishery resources.

This is wrong. As previously noted, a DEIS must include "a discussion of adverse impacts that does not improperly minimize side effects."139 NEPA's purpose is to "help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore and enhance the environment."140 High quality information and accurate scientific analysis are essential to implementing NEPA.141 This guidance

132 Brief of Amici Curiae Pacific Coast Federation of Fishermen's Associations et al, *Washington v. U.S.*, 584 U.S. ____ (2018)(No. 17-269). Available at: https://www.supremecourt.gov/DocketPDF/17/17-269/42003/20180402170951297_Amici%20Brief%20on%20Behalf%20of%20Pacific%20Coast%20Federation%20of%20Fishermens%20Associations%20et%20al.pdf

133 *Id.*

134 *Id.*

135 Alaska Roadless Rulemaking Cost-Benefit Analysis at 35, Table 6.

136 DEIS at 3-119.

137 *Id.* at 3-118

138 *Id.* at 3-119.

139 *N. Alaska Ctr. v. Kempthorne*, 457 F.3d 969, 975 (9th Cir. 2006).

140 40 C.F.R. 1508.1(c).

141 40 C.F.R. 1508.1(b).

necessarily entails consideration of climate change impacts based on available information. The Council on Environmental Quality explains that:

The analysis of impacts on the affected environment should focus on those aspects of the human environment that are impacted by both the proposed action and climate change. Climate change can affect the environment of a proposed action in a variety of ways. Climate change can increase the vulnerability of a resource, ecosystem, human community or structure, which would then be more susceptible to climate change and other effects and result in a proposed action's effects being more environmentally damaging. For example, a proposed action may require water from a stream that has diminishing quantities of available water because of decreased snow pack in the mountains, or add heat to water body that is exposed to increasing atmospheric temperatures. Such considerations are squarely within the realm of NEPA, informing decisions on whether to proceed with and how to design the proposed action so as to minimize these impacts, ultimately enabling the selection of smarter, more resilient actions.

A major concern of fishery scientists is that high levels of habitat degradation may coincide with periods of low marine productivity, creating a potential for "double jeopardy."¹⁴² Intensively logged watersheds may have some habitat value during periods of high marine productivity, but these degraded habitats will be of lower value during periods of environmental stress. ¹⁴³ Smolt production will likely be more variable in logged watersheds, and other environmental disturbances such as droughts, flooding or landslides will be more severe in logged watersheds.¹⁴⁴

The double jeopardy scenario is highly relevant to this rulemaking process. The Forest Service's 1995 Anadromous Fish Habitat Assessment explained that:

...Should freshwater habitats be degraded for long periods, salmon and steelhead stocks will eventually be confronted simultaneously with low marine productivity and degraded freshwater habitat. The likely result of such double jeopardy could be high, long-term risk of extinction.¹⁴⁵

Given the changing climate and current trends in pink salmon production, Roadless Rule exemptions would present the "double jeopardy" situation described above. For example, fishery managers identify the marine heat wave in the Gulf of Alaska from 2013 through 2016 as a potential cause of the recent

¹⁴² Id.

¹⁴³ M.D. Bryant & F.H. Everest. 1998. Management and conditions of watersheds in Southeast Alaska: the persistence of anadromous salmon.

¹⁴⁴ Id.

¹⁴⁵ U.S. Forest Service. 1995.

decline in pink salmon productivity.¹⁴⁶ Another marine heat wave is building in the Gulf of Alaska:

Southeast Alaska will have the largest change in winter days above freezing in all of North America, which may have significant ecological effects as

146 <https://www.adfg.alaska.gov/FedAidPDFs/FMR18-24.pdf>

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https://eoimages.gsfc.nasa.gov/images/imagerecords/145000/145602/pacifc_crw_201908_lrg.jpg ;
<https://www.fisheries.noaa.gov/feature-story/new-marine-heatwave-emerges-west-coast-resembles-blob>

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watersheds currently fed by snowpack will change into rain-fed systems. 148 Glacial-fed watersheds will shift to relying on snow melt and eventually also become dependent on rainfall. 149 This change likely means increased winter flows, reduced summer flows and higher stream temperatures all year.150 The rain-snow transition zone will increase in elevation, resulting in less precipitation stored as snowpack.151 Some climate models project a decline in precipitation for southeast Alaska in both summer and winter.152 Evidence of this changing balance is already appearing with decreases in the number and area of some systems.153

Fishery scientists expect that these changes are likely to stress southeast Alaska salmon populations.154 One of the more predictable aspects of climate change will be stream warming and changes in stream flow that will likely have primarily adverse effects on southeast Alaska salmon..155 Decreased snowpack and changes in glacial system runoff will alter stream flow patterns that

148 Shanley, C.S. et al. 2015.

149 Id.

150 Id.

151 Id.

152 E.A. Parson, L. Carter, P. Anderson, B. Wang, G. Weller. 2001. Wolken, J.M. et al. 2011).

153 Id.

154 Bryant, M.D. 2008. Global climate change and potential effects on Pacific salmonids in freshwater ecosystems of southeast Alaska

155 E.A. Parson, L. Carter, P. Anderson, B. Wang, G. Weller. 2001. Potential consequences of climate variability and change for Alaska. In, Climate change impacts on the U.S. Foundation report, National Assessment Synthesis Team. April 2001. 618 pp. Ch. 10).

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historically maintained cooler summer temperatures.¹⁵⁶ Late summer low stream flow and high temperature events which periodically occur in southern southeast Alaska are likely to become more common and spread to northern southeast Alaska, increasing pre-spawning mortality for pink and chum salmon.¹⁵⁷ Temperature increases in freshwater systems will adversely affect coho and sockeye salmon at various stages of their life cycle.¹⁵⁸ Southeast Alaska is experiencing a prolonged drought that is most severe in southern southeast Alaska where the Forest Service intends to construct roads and authorize clearcutting in inventoried roadless areas.¹⁵⁹

In sum, recent changes in both the marine and freshwater environment are highly relevant to this rulemaking, yet the DEIS improperly minimized the effects of the warming climate on fishery resources.

¹⁵⁶ Shanley, C.S. et al. 2015.

¹⁵⁷ Id.

¹⁵⁸ Id.

¹⁵⁹ <https://casc.alaska.edu/news/what-does-drought-look-southeast-alaska>

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IV. The No-Action Alternative is the only alternative that will manage roadless areas for the benefit of southeast Alaska's socio-economic well-being

The Forest Service's Pacific Northwest Research Station in Juneau published a 2019 study explaining that:

... the Tongass and Chugach national forests-the largest national forests in the United States-were major contributors to the overall number and value of commercially caught Pacific salmon in southeastern and southcentral Alaska. In turn, these commercial fisheries are significant contributors to community well-being and the regional economy. Alaska typically accounts for 12-15% of the global supply of Pacific salmon, and the Tongass and Chugach national forests, with a land area less than 100,000 km², contributed an estimated 25% of the state's commercial Pacific salmon harvest. These findings further emphasize the importance of forest rivers and lakes for sustaining healthy fisheries.

Our estimates of the value of Pacific salmon from the Tongass and Chugach national forests can contribute to discussions about alternative land management strategies that might adversely impact salmon populations and associated commercial fisheries (e.g. road building, mining and logging), as well as those management strategies aimed at improving forest conditions for Pacific salmon (e.g. habitat restoration) Moreover, our estimates provide the basis for a more inclusive evaluation of the socioeconomic value of Pacific salmon from forests that include sport, personal-use, and subsistence fisheries, as well as the indirect value of these fish to local communities."¹⁶⁰

The Roadless Rule is precisely the management that best reduces risks to commercial fishing communities. The Forest Service has previously found that prohibiting clearcutting and road construction in inventoried roadless areas was valuable in terms of conserving commercial fisheries and maintaining the commercial fishing culture and economy.¹⁶¹ In contrast, Roadless Rule repeal alternatives that allow clearcutting and road construction in

inventoried roadless areas will adversely affect commercial fishing by reducing populations of desirable fish species.¹⁶² For example, roads have caused the decline of salmonid populations in the Pacific Northwest.¹⁶³ Additionally, declines in fish populations

¹⁶⁰ Johnson, A.C., J.R. Bellmore, S. Haught, and R. Medel. 2019. Quantifying the monetary value of Alaskan National Forests to commercial Pacific salmon fisheries at 8-9. North American Journal of Fisheries Management.

¹⁶¹ U.S. Dept. of Agriculture Forest Service. 2000. Forest Service Roadless Area Conservation Final Environmental Impact Statement Vol. I. at 3-287. Washington, D.C. November 2000.

¹⁶² Id. at 3-285.

¹⁶³ Id.

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that depend on Forest Service lands would also reduce recreational catches, with negative consequences and "potentially threatening livelihoods."¹⁶⁴ Now the Forest Service arbitrarily reverses course and rejects these findings, insisting that none of the Roadless Rule repeal alternatives would affect commercial fishing - indeed, the Cost-Benefit Analysis identifies ZERO costs to commercial fisheries associated with allowing clearcutting and logging road construction in inventoried roadless areas.¹⁶⁵

The Roadless Area Conservation Rule FEIS notes that "[t]he well-being of rural communities connected to Forest Service administered lands has been an important factor in forming many social and economic policies enacted by the Forest Service and Congress."¹⁶⁶ The notice of proposed rulemaking asserts that "[t]he overarching goal of the proposed rule is to reach a long-term, durable approach to roadless area management that accommodates the unique biological, social, and economic situation found in an around the Tongass National Forest."¹⁶⁷

As explained in the previous sections discussing salmon population trends, the no-action alternative is the only alternative that will manage southeast Alaska's inventoried roadless areas for the socio-economic well-being of southeast Alaska communities. The commercial fishing industry comprises the primary rural workforce and economy dependent on Forest Service managed lands. Commercial fishing is Alaska's largest private sector employer.¹⁶⁸ There are roughly 2,700 commercial fishing permit holders and 2,400 crew members living in southeast Alaska communities.¹⁶⁹ There are nearly 1,000 salmon troll permit holders active each year, making the troll fishery the second largest fleet in the state, second only to Bristol Bay. Alaska residents comprise well over 80% of active permit holders.¹⁷⁰ Seine, gillnet and troll harvests are the largest component of a regional fishery economy that supports over 4,500 processing jobs which generate over \$50 million in wages.¹⁷¹ Earnings generated by commercial fishing support every business in southeast Alaska communities as well as a significant employment in the transportation, marine, academic and

¹⁶⁴ Id.

¹⁶⁵ DEIS at 2-21; 2-24; Alaska Roadless Rulemaking Cost-Benefit Analysis at 24-25; 34-35.

¹⁶⁶ U.S. Dept. of Agriculture Forest Service. 2000. Forest Service Roadless Area Conservation Final Environmental Impact Statement Vol. I. at 3-326. Washington, D.C. November 2000.

¹⁶⁷ 84 Fed. Reg. at 55,523-24; see also DEIS at 1-4.

168 <http://www.ufafish.org/wp-content/uploads/2018/09/Commercial-fishing-facts-ALL-IN-ONE-2016-v.7.0-REDUX.pdf>

169 Id.

170 <https://www.cfec.state.ak.us/pstatus/14052017.htm> (see Row S15B).

171 <http://www.ufafish.org/wp-content/uploads/2018/09/Commercial-fishing-facts-ALL-IN-ONE-2016-v.7.0-REDUX.pdf>

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government sectors.¹⁷² Economists estimate the total impact of commercial fishing, and processing jobs as more than \$700 million annually. ¹⁷³

Southeast Alaska is one of the most important fishing regions in the United States, with more fishery workers than any region in Alaska other than the Bering Sea. Seven of the top fishing ports by value and/or volume in the entire country are within southeast Alaska, including top 20 ports Sitka and Ketchikan.¹⁷⁴ Nearly a quarter of the residents in the 29th ranked port, Petersburg, are commercial fishermen.¹⁷⁵ Salmon is the most abundant and valuable seafood species for fishermen in these communities.¹⁷⁶ Earnings generated by the salmon economy support every business in southeast Alaska communities as well as a significant employment in the transportation, marine, academic and government sectors.¹⁷⁷ These businesses also provide substantial direct support to regional communities through landings and fisheries business taxes.¹⁷⁸

Salmon fisheries are critical to nearly all of southeast Alaska's 33 communities.¹⁷⁹ Salmon is the most abundant and valuable seafood species for fishermen in southeast Alaska communities and supports 1 in 10 jobs in the region.¹⁸⁰ Many of the more remote communities such as Port Protection, Port Alexander and Pelican are historical fishing villages that rely almost exclusively on commercial fishing and new economic activity associated with sport fishing lodges.¹⁸¹ Every resident of Point Baker has a fishing permit.¹⁸² Historical native communities such as Hoonah, Klawock, Metlakatla and Yakutat also heavily rely on commercial fishing; in Yakutat more than a quarter of the population participates in commercial fishing.¹⁸³

"Mid-sized" southeast Alaska communities of Haines, Petersburg and Wrangell are heavily dependent on commercial fishing and especially on the

172 Id.

173 McDowell Group. 2017. The economic value of Alaska's seafood industry.

174 <http://www.ufafish.org/wp-content/uploads/2018/09/Commercial-fishing-facts-ALL-IN-ONE-2016-v.7.0-REDUX.pdf>

175 Id.

176 Id.

177 Id.

178 <http://www.ufafish.org/wp-content/uploads/2015/02/4a-Alaska-Seafood-Industry-Taxes-Fees-021115-v1s.pdf>

179 2016 TLMP FEIS at 3-537 - 3-691.

180 Id.; <http://www.ufafish.org/wp-content/uploads/2018/09/Commercial-fishing-facts-ALL-IN-ONE-2016-v.7.0-REDUX.pdf> C.S. Shanley & D. Albert. 2014. Climate change sensitivity index for Pacific salmon habitat in southeast Alaska. McDowell Group. 2017.

181 Id.

182 Id.

183 <http://www.ufafish.org/wp-content/uploads/2018/09/Commercial-fishing-facts-ALL-IN-ONE-2016-v.7.0-REDUX.pdf>

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salmon fishery.¹⁸⁴ Petersburg is 29th ranked fishing port in the United States based on the economic value of fishery resources harvested by its fishermen.¹⁸⁵ There are over 800 commercial fishing permit owners in the three communities who own 1,652 permits with nearly 1,000 vessels home ported.¹⁸⁶ More than one in every ten residents owns a fishing permit.¹⁸⁷ Including crew, over 1,300 individual fishermen live in the three communities with vessels generating over \$63 million in fishing income in 2016.¹⁸⁸ Fishery resources harvested by these fishermen supported over 1,400 processing jobs generating over \$15.5 million in wages.¹⁸⁹ Virtually every business in the three communities benefits from fishing dollars and state and local governments receive \$1.3 million in fishery business and landing taxes.¹⁹⁰

Prince of Wales Island is the third largest island in the United States with 4,200 residents living in 12 communities.¹⁹¹ Commercial fishing is a "cornerstone" of the economy and current trends show increases in revenues and harvests.¹⁹² There are 294 fishing permit holders and 274 crew, with roughly ten percent of the population participating in commercial fishing.¹⁹³

The region's three largest communities - Juneau, Ketchikan and Sitka - have diversified economies that rely on commercial fishing as the primary private sector small business generator and employer.¹⁹⁴ Sitka is 16th ranked fishing port in the United States by volume and value, producing 56 million pounds of seafood worth \$55 million in 2016.¹⁹⁵ Both Ketchikan and Juneau are among the country's top 50 fishing ports.¹⁹⁶ There are over 2,300 permit holders and crew in the three communities - and 1,655 fishing boats.¹⁹⁷ Each community has multiple

184 Id.

185 Id.

186 Id.

187 Id.; 2016 TLMP FEIS at 3-537 - 3-691;

188 <http://www.ufafish.org/wp-content/uploads/2018/09/Commercial-fishing-facts-ALL-IN-ONE-2016-v.7.0-REDUX.pdf>

189 Id.

190 Id.; North Pacific Fishery Management Council. 2017. Stock assessment and fishery evaluation report for the groundfish resources of the Gulf of Alaska and Bering Sea/Aleutians Island Area: economic status of the groundfish fishery off Alaska, 2016. Anchorage, AK. December 2017.

191 Rain Coast Data. 2016. Prince of Wales Alaska economy.

192 Abrahamson, M. 2012. Prince of Wales area redefines its economy after the timber decline. In: Alaska Economic Trends. August 2012.

193 <http://www.ufafish.org/wp-content/uploads/2018/09/Commercial-fishing-facts-ALL-IN-ONE-2016-v.7.0-REDUX.pdf>

194 2016 TLMP FEIS at 3-537 - 3-691.

195 <http://www.ufafish.org/wp-content/uploads/2018/09/Commercial-fishing-facts-ALL-IN-ONE-2016-v.7.0-REDUX.pdf>

196 Id.

197 Id.

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processing facilities which cumulatively employ over 2,500 workers earning over \$31 million in wages.¹⁹⁸ In short, commercial fishing is the most critical industry for the workforce in every southeast Alaska community.

V. Conclusion

In sum, ALFA requests that the Forest Service adopt the no-action alternative and maintain existing inventoried roadless acreage in an unlogged and unroaded condition. Any other action on this rulemaking will require the production of an EIS that fully examines the impacts of clearcutting and logging road construction in inventoried roadless areas that provide biological strongholds and critical habitat features for salmon, particularly in southern southeast Alaska. The impacts of losing additional spawning and rearing habitat in southeast Alaska aquatic ecosystems are substantial given current population vulnerabilities. Further declines in salmon productivity may result in prolonged periods of fishery closures, risking the viability of hundreds of Alaska resident-owned small fishing businesses, southeast Alaska salmon processors, and the communities and support businesses that rely on the salmon economy. As explained by one of ALFA's family fishing members, "[e]very fish counts."¹⁹⁹

Thank you,

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198 Id.

199 Tele Aadsen, Vanishing Boats, Lost Fishermen, and the Price of Fish, Word Press (Mar. 12, 2012). Available at:<http://www.teleaadsen.com/vanishing-boats-lost-fishermen-and-the-price-of-fish>.

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