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Erin Mathews—Tongass Plan Revision Coordinator Tongass National Forest Supervisor's Office 648 Mission Street, Suite 110, Ketchikan, AK 99901-6591, Submitted electronically at: <u>US Forest Service NEPA Projects Home</u>

Re: Tongass Plan Revision Draft Resource Assessments

Dear Ms. Mathews:

I submit these comments on behalf of The Boat Company. The Boat Company is a small cruise vessel eco-tour company that has been operating in Southeast Alaska for over forty years, providing visitors with scenic views of Southeast Alaska coastlines, fjords and forests, hiking, beach combing, wildlife viewing, guided sport fishing, and other unique Southeast Alaska experiences. The Boat Company's two vessels rotate out of Sitka and Juneau each weekend during the summer, each bringing twenty to twenty-four visitors who enjoy local harbors, fishing fleets, retailers and restaurants serving Southeast Alaska seafood. The Boat Company is part of Southeast Alaska's small cruise vessel fleet - a diverse group of overnight commercial passenger vessels including yachts and smaller motor vessels that carry between 6 and 250 passengers. Many small cruise companies have Forest Service special use permits and provide visitors with remote recreational opportunities. All of these vessels operate in or adjacent to Southeast Alaska roadless areas.

I. Introduction: Tongass Ecotourism and the Need for Change

The Recreation Assessment notes that there are diverse businesses that provide services to Tongass visitors. The Boat Company, and many of our colleagues, are ecotour operators. The merger of conservation and recreation is known as "ecotourism" - the subject of an emerging body of socio-economic literature contemplating how low-impact tourism can contribute to conservation and socio-economic sustainability. Researchers define ecotourism as "travel to natural areas to admire, study or enjoy wild nature in a way that contributes to its conservation." Ecotourism includes an educational component and is sensitive to impacts on local communities. Visitors learn about Southeast Alaska's fish and wildlife and the surrounding environment. Ecotour operators provide diverse experiences to meet visitors' varied interests: scenery, glaciers, wildlife, hiking, cultural and local shopping experiences. Ecotourism in Southeast Alaska relies on remote, undeveloped areas such as forests, which are massive value generators for recreation. There is ample evidence that forest protection policies aimed at preserving ecotourism opportunities provide economic benefits that outweigh extractive resource uses which would otherwise occur. Preserving forests for low-impact recreational uses also preserves a large array of other ecosystem service values - including numerous health benefits, such as improvements in physical health and emotional and psychological well-being. Intact forest ecosystems today provide significant benefits for the hundreds of thousands of Americans who comprise the guided public, the outfitter/guides who serve the guided public, and small businesses in Southeast Alaska "gateway communities" that benefit from the visitor economy because of their proximity to undeveloped public lands.

Since the 1980s, The Boat Company has been working since its inception to advance ecotourism as a sustainable alternative to extractive uses of the forest such as clearcut logging. By the end of the 1990s, the Forest Service realized that broader economic trends and community adaptation could lead to growth in the regional recreation economy.¹ At a national level, demand for remote recreation opportunities was increasing even as the supply was diminishing.² On the Tongass National Forest, recreation and tourism levels had more than doubled between the mid-1980s and mid-1990s.³ If protected by the Roadless Rule, Southeast Alaska's supply of intact, forested ecosystems was expected to benefit the region by "preserving [...] economic opportunity associated with remote recreation and adventure tourism" and generating economic benefits to outfitter/guides and other small businesses in gateway communities.⁴

The Forest Service anticipated that intact forested areas would provide the region with a comparative advantage if its economy shifted away from timber towards recreation and related uses by maintaining the region's main visitor attractions: sustainable fish and wildlife populations, natural scenery, and remoteness.⁵ This comparative advantage in the national and global economy is Southeast Alaska's "remarkable and unique combination of features including inland waterways with over 11,000 miles of shoreline, mountains, fiords, glaciers and large or unusual fish and wildlife populations that provide opportunities for a wide range of outdoor recreation experiences."⁶

Since 2000, demand for outdoor recreation in this forest and throughout the National Forest system has accelerated. By 2009, recreation-related spending and job generation dwarfed employment and income generated by extractive uses such as logging and grazing.⁷ In 2021, the U.S. Department of Agriculture recently recognized that large areas of mostly

¹ U.S. Dept. of Agriculture Forest Service. 2000. Forest Service Roadless Area Conservation Final Environmental Impact Statement Vol. I. at 3-389. Washington, D.C. November 2000 (explaining that "[t]he protection of roadless areas will benefit communities with a strong economic ties to dispersed recreation uses")(hereinafter 2000 Roadless Rule FEIS)

² Id. at 3-213-215; -220, -223.

³ Id. at 3-275.

⁴ Id. at 3-275-3-389.

⁵ Id. at 3-373, 3-389.

⁶ U.S. Forest Service. 2016. Tongass Land and Resource Management Plan Final Environmental Impact Statement at 3-357. R10-MB-769e (hereinafter 2016 TLMP FEIS).

⁷ U.S. Forest Service. 2012 Final rule and record of decision 77 Fed. Reg. 21162, 21177. (Monday, April 9, 2012)

intact forests, are "increasingly scarce, and therefore, increasingly valuable ecosystems" and described the Tongass as a national and global treasure in terms of recreation opportunities.⁸

The 2024 Recreation and Tourism Assessment today identifies the Tongass as a critically important outdoor recreation resource for both local residents who may recreate on the forest dozens of times each year and visitors who may come from hundreds of miles away for a once in lifetime experience.⁹ There are over two million recreational visits each year, for diverse activities and in diverse areas, both remote and developed: hiking, viewing natural features, visitor center activities, fishing, viewing wildlife, or hunting and projections are for even more recreational use of the area. ¹⁰ The most frequently engaged in activities are (1) hiking/walking; (2) viewing scenery and (3) viewing wildlife.

The outdoor recreation economy is still growing in the U.S. and Alaska, which has the second fastest growing outdoor recreation sector in the nation.¹¹ Outdoor recreation activities bring visitors to Alaska, accounting for 1 in 10 jobs and over \$3.2 billion in spending in the state.¹² The sector has been stable, growing even through the recession and other significant downturns in Alaska's economy.¹³

Forest Service lands account for roughly half of regional visitor activity, accommodating 2,874,000 visits which generate \$382 million in spending and support 3,947 direct jobs and 1,110 indirect jobs. Inventoried roadless areas account for over two-thirds of Tongass National Forest visitor spending (\$245 million). Forest Service data show strong demand for services provided by the region's 242 outfitters and guides, including small cruise vessels. The number of guided clients on the Tongass National Forest is increasing at a high rate - from 533,388 client service days during the recession in 2011 to 641,149 clients in 2017 - a 17 percent increase.

The figures in the preceding paragraph are from Forest Service environmental impact statements and differ from data found in the socioeconomic assessment and recreation assessment – those assessments may understate both the number of outfitter/guides and guided visitors. The Boat Company encourages the assessment authors to cross-reference their figures with other agency documents.¹⁴ The Boat Company also noted that Table 24 in the Socio-economic assessment identified special use fee receipts ranging between \$75,000 and \$111,000. This figure may come from an agency database, but it definitely does not include fees paid to the agency by outfitters and guides – every permitted outfitter or guide on the Tongass pays a client fee that may range between ~\$6 and ~\$12 per forest stop, depending on the activity. In other words, special use fee receipts paid by outfitters and guides easily run in the millions of dollars each year.

The Draft Recreation and Tourism Assessment recognizes that the existing Forest Plans and subsequent amendments have focused on the Tongass timber sale program and there has been no management response yet to the shift from the regional timber economy to

12 Id.

⁸ 86 Fed. Reg. No. 223 at 66499.

⁹ Johnston, J. 2024. Draft Recreation and Tourism Resource Assessment. ¹⁰ Id

¹¹ Alaska Trails. 2022. Tongass National Forest sustainable trails strategy. *Available at:* <u>https://www.alaska-trails.org/trails-initiative</u>

¹³ Id.

¹⁴ The Boat Company's guide and guided client data derive from three sources: the 2020 Alaska Roadless Rulemaking FEIS, the Alaska Roadless Rulemaking Cost-Benefit Analysis and the 2017 Shoreline II Outfitter/Guide Final Environmental Impact Statement (R10-MB-793c)

tourism. ¹⁵ The 1997 Tongass Land Management Plan did not prepare for increases in the volume of recreation occurring on the forest or the current recreational needs of local communities.¹⁶ The Boat Company agrees with this Assessment and it supports the need to make significant revisions to the 1997 plan.

II. The need to maintain scenic values and reduce clearcutting

Southeast Alaska has a combination of assets that have high value for scenery and landscape character that are hard to find anywhere else – steep snowcapped mountains, coastal islands facing the open ocean, long inland saltwater beaches, old-growth temperate rain forests, ice fields and glaciers.¹⁷ There is high demand for scenic values shown both by increases in tourism and local resident values.¹⁸ The Tongass National Forest Land and Resource Management Plan identifies "[t]he outstanding scenery of the Forest" as a major attraction for recreation users.^{"19} The supporting FEIS recognizes a strong link between scenery and economy:

...demand for scenic quality can best be represented by the increase in touristrelated travel to the Tongass, as well as a heightened awareness and sensitivity of Alaskan residents to scenic resource values. These facts result in a strong indirect connection between scenic resource values and the economy of Southeast Alaska. For example, Southeast Alaska's Inside Passage is advertised and promoted by the Division of Tourism, cruise ship operators, and the Southeast Alaska Tourism Council. Their marketing strategy focuses on the scenery of the Tongass National Forest as a major attraction. The visitors to Southeast Alaska would, therefore, arrive with expectations and an image of the environment and scenery awaiting them. <u>If current trends continue, demand for</u> *viewing scenic landscapes will increase*.

...Lands adjacent to the Alaska Marine Highway, cruise ship routes, flight-seeing routes, high-use recreation areas, and other marine and land-based travel routes will be seen by more people, more frequently, and for greater duration.²⁰

The agency's projection that rising visitor numbers would reflect increased market demand for scenic landscapes is consistent with findings in scientific and academic literature from both the forestry and recreation disciplines research showing that landscape quality generates significant economic value. In other words, scenery – particularly more natural appearing forest scenery – is a major driver of destination choices and conversely, the degradation of scenic landscapes significantly reduces values for nature-based tourism.²¹

¹⁵ Johnston, J. 2024.

¹⁶ *Id*.

¹⁷ USDA Forest Service. 2020. Final Environmental Impact Statement Rulemaking for Alaska Roadless Areas. Forest Service, Alaska Region. R10-MB-867b. September 2020; USDA Forest Service. 1997. Tongass Land Management Plan Final Environmental Impact Statement.

¹⁸ Forest Plan at 1-2, 2-1; TLMP FEIS at 3-389-3-390

¹⁹ Forest Plan at 1-2, 2-1.

²⁰ TLMP FEIS at 3-389-3-390.

²¹ See, e.g. Ahtikoski, A. et al. 2011. Potential trade-offs between nature-based tourism and forestry, a case study in norther Finland. In: Forests 2011(2), pp. 894-912; Horak, S., Marusic, Z. 2004. The role of forests in view of coastal destination attractiveness. In: Reinventing a Tourism Destination. Facing the Challenge. Eds. S. Weber

Scenic values are thus a primary factor in the increasing popularity of nature-based tourism in Alaska - particularly southeast Alaska which hosts two-thirds of all state visitors, making it the most visited region of the state.²² Indeed, the region's natural beauty is recognized as its top strength for the visitor industry.²³

The Draft Scenery Resource Assessment recognizes that natural appearing scenery procides socio-economic benefits.²⁴ It identifies Southeast Alaska's scenery one of the Tongass National Forest's "outstanding features" and a major draw for over half of Southeast Alaska's visitors.²⁵ Scenery also is critical for 21st century residents quality of life, whether enhancing their own outdoor activities or providing economic dividends resulting from the visitor economy.²⁶ It recognizes that scenic values have increased in importance since 1997 as the recreation economy has grown.²⁷

Current Forest Plan goals and objectives direct the agency to "[p]rovide Forest visitors with visually appealing scenery, with emphasis on areas seen from the Alaska Marine Highway, tour ship and small boat routes, ... and popular recreation places.²⁸ However, the current Forest Plan also states that logging activities "may visually dominate the characteristic landscape."29 The Scenery Assessment explained that the agency must balance scenery with other resource values, and "visitors to a multi-use National Forest should expect to see some evidence of multi-use activities."30

Forest Service regulations requires that plans provide for sustainable recreation and scenic character and consider aesthetic values and viewsheds.³¹ Even if these provisions are not a mandate, it is not reasonable to interpret the planning rule as mandating that the agency allow clearcuts to dominate portions of the landscape. The Boat Company suggests that a proper balancing of scenery with other resource values should generate the same result as the recent Chugach National Forest Plan Revision – which deemed nearly all of the Forest as unsuitable for timber production. Moreover, National Forest scenery is even more important now because of the recent and ongoing degradation of scenic values in areas visible from waterways that have lowered scenic integrity due to extensive clearcuts by other landowners.32

The Boat Company does support a re-evaluation of Visual Priority Routes, Scenic Integrity Objectives and revisiting the extent to which existing land use designations allow for

[&]amp; R. Tomljenovic. Institute for Tourism, Zagreb, pp. 261-269 (finding that coastal forests enhance tourism activity); Karjalainen, E. 2006. The visual preferences for forest regeneration and field afforestation - four case studies in Finland. University of Helsinki, Faculty of Biosciences. Dissertations Forestales 31 (identifying negative perception of clearcutting); Picard, P. & Sheppard, S. 2001. The effects of visual resource management on timber availability: ar review of case studies and policy. BC Journal of Ecosystems and Management.1(2): 1-12 (people prefer natural appearing conditions as opposed to highly modified landscapes); Ribe, R. 2006. Perceptions of forestry alternatives in the US Pacific Northwest: information effects and acceptability distribution analysis. Journal of Environmental Psychology. 26:100-115; Tyrvainen, L. et al. 2008.

²² http://www.seconference.org/sites/default/files/FINAL%20Southeast%20by%20the%20Numbers%202019.pdf ²³ https://www.seconference.org/wp-content/uploads/2021/05/Final-CEDS-2025.pdf?2070f3&2070f3 ²⁴ Noesser, E. 2024. Draft Scenery Resource Assessment. Tongass National Forest Plan Revision. Forest Service,

Alaska Region. December 2024.

²⁵ Id.

²⁶ Id. ²⁷ Id.

²⁸ TLMP Goals and Objectives, p. 2-4

²⁹ Id.

³⁰ Noesser, E. 2024.

³¹ 36 CFR 219.8(b)(2); 36 CFR 219.10 (a)(1).

³² Noesser, E. 2024. Draft Scenery Resource Assessment.

clearcutting and other timber industry activities. We agree with the Scenery Resource Assessment that scenery management under the existing plan needs an update along with simplification and clarification. There are different Scenic Integrity Objectives, multiple visual priority routes and use areas and different Scenic Integrity Objectives for different land use designations and for areas zoned by the Recreation Opportunity Spectrum.³³ Ironically, clearcutting, which has the most significant impact to Southeast Alaska's scenery, is an allowed use in areas zoned as "Scenic Viewsheds."³⁴ Also, during recent project-specific timber sale planning by the Ketchikan, Wrangell and Petersburg Ranger Districts, there were frequent efforts to waive applicable scenery standards in order to increase timber sale sizes, meaning that the current Forest Plan does not adequately ensure application of the scenery standards it does have.

Forested areas generally have high scenic integrity that contributes to nature-based tourism and gateway community economies.³⁵ Tongass roadless areas provide "natural appearing landscapes with very high scenic integrity" and "high value for landscape character."³⁶ These areas "represent wildlife habitats, ecosystems, and visual character that exist nowhere else in the National Forest System, such as coastal islands facing the open Pacific, extensive beaches on inland saltwater, old-growth temperate rain forests, ice fields, and glaciers."³⁷ Outfitter/guides seek these natural appearing landscapes to meet client expectations of a wild and unspoiled Alaska.³⁸

Clearcutting may have high impacts in areas that are used for activities dependent on high scenic integrity and undisturbed landscapes."³⁹ The 2000 Roadless Area Conservation FEIS explained that the absence of Roadless Rule protections would negatively affect recreation by reducing the land base available for recreation opportunities in relatively undisturbed landscapes outside of Wilderness in large part because developments would reduce the high scenic integrity or roadless areas and in turn their value for recreation.⁴⁰ At the time forest managers in the Tongass and Pacific Northwest were confronting the social acceptability of clearcutting and changing social values, including a strong preference for forest aesthetic values.⁴¹ During the 1996 Tongass Forest Plan revision process, the Forest Service identified a negative public perception of clearcuts - "[a]lmost all of those who commented on harvest methods were opposed to the continuation of clearcutting in the Tongass National Forest Commenters found clearcuts unappealing and unsightly."⁴² According to Pacific Northwest forester John Bliss:

Social research focused on public aesthetic judgments of forest practices has overwhelmingly concluding that Americans find clearcutting aesthetically

⁴⁰ *Id.* at 3-278.

³³ Id.

³⁴ Id.

³⁵ 2001 Roadless FEIS at 3-228.

³⁶ USDA Forest Service. 2020. Final Environmental Impact Statement Rulemaking for Alaska Roadless Areas at 3-16. Forest Service, Alaska Region. R10-MB-867b. September 2020.

³⁷ USDA Forest Service. 1997. Tongass Land Management Plan Final Environmental Impact Statement.

³⁸ 2001 Roadless Rule FEIS at 3-373.

³⁹ USDA Forest Service. 2020. Final Environmental Impact Statement Rulemaking for Alaska Roadless Areas at 2-21. Forest Service, Alaska Region. R10-MB-867b. September 2020.

 ⁴¹ USDA Forest Service. 2004. Social acceptability of alternatives to clearcutting: discussion and literature review with emphasis on southeast Alaska. Pacific Northwest Research Station. PNW-GTR-594. January 2004.
⁴² USDA Forest Service. 2003. Social implications of alternatives to clearcutting on the Tongass National Forest. Pacific Northwest Research Station at 9. PNW-GTR-575. March 2003.

offensive. Most research on scenic beauty assessment finds that forest scenes rated high in aesthetic quality contain large trees, low to moderate stand densities, grass and herb cover, color variation, and multiple species. Scenic beauty is reduced by small trunks, dense shrugs, bare ground, woody debris, and evidence of fire or other disturbance.⁴³

Bliss's findings are consistent with academic studies that consider the growth of nature-based tourism in areas formerly dominated by timber development:

Forest preference studies conclude that people appreciate mature forests with good visibility, some undergrowth and a green field layer with no signs of soil preparation. Forests are thought to be in their natural state, or that look natural and bear no visible traces of human activity are usually preferred. Correspondingly, the view after clearcuts is the least preferred environment. In particular, the large size of the regeneration area and direct traces of cutting, such as signs of soil preparation and logging residues, have a negative impact. Furthermore, on average, people do not prefer dead or fallen trees.⁴⁴

Surveys and other research reporting perceptions and preferences of forest visitors similarly identify preferences for undeveloped and remote sites with intact patterns of forest cover and negative reactions to logging trucks and activities.⁴⁵ Extensive research inspects forest aesthetic values for visitors and local residents.⁴⁶ In general, it shows that the highest rated scenes for aesthetic quality are diverse, mature forests in their natural state with little trace of human activity.⁴⁷ Forest visitors also prefer remote, undeveloped sites.⁴⁸ They generally avoid the visual disturbance of industrial logging (such as logging trucks, bare ground or fallen trees), the opposite of scenic beauty.⁴⁹

Visitors arrive seeking natural appearing landscapes to meet their expectations of a wild and unspoiled Alaska.⁵⁰ Indeed, natural beauty and outdoor adventure opportunities

⁴³ Bliss, J.C. 2000. Public perceptions of clearcutting. *Journal of Forestry*, Volume 98, Issue 12, December 2000, Pages 4–9.

⁴⁴ Tyrvainen, L, H Silvennoinen & Ville Halliakainen. 2016. Effect of the season and forest management on the visual quality of the nature-based tourism environment: a case from Finnish Lapland. In: Scandinavian Journal of Forest Research 2017. Vol 32, No. 4, 349-359; *see also* Hunt, L., Twyman, G.D., Haider, W. & Robinson, D. 2000. Examining the desirability of recreating in logged settings. Society and Natural Resources. 13:717-734 (finding that logging residues "are not in general appreciated").

⁴⁵ Hilsendager, K. 2014. Tourists' visual perceptions of forest management in Vancouver Island and Tasmania. *Available at:*

https://www.hd-research.ca/wp-content/uploads/Kyle-Hilsendager-PhD-Thesis-Final.pdf; Ribe, R. 2004. Aesthetic perceptions of green-tree retention harvests in vista views: the interaction of cut level, retention patterns and harvest shape. Landscape and Urban Planning 73:277-293; Shrestha, R.K. et al., 2006. Valuing nature-based recreation in public natural areas of the Apalachicola River region, Florida. Journal of Environmental Management (2007). *Available at:*

https://www.uwsp.edu/cnrap/UWEXLAKES/Documents/people/economics/39_natureBasedRecreation_shresth a_paper.pdf

⁴⁶ Tyrvainen, L, H Silvennoinen & V. Halliakainen. 2016. Effect of the season and forest management on the visual quality of the nature-based tourism environment: a case from Finnish Lapland. In: Scandinavian Journal of Forest Research 2017. Vol 32, No. 4, 349-359; USDA Forest Service. =2004. PNW-GTR-594; see also Ribe, R. 2004; Ribe, R. 2006; USDA Forest Service. 2003. PNW-GTR-575.

⁴⁷ Tyrvainen, L. et al. 2016; Hunt, L. et al. 2000; Picard, P. & Sheppard, S. 2001; Bliss, J.C. 2000.

⁴⁸ Hilsendager, K. 2014; Shrestha, R.K. et al., 2006.

⁴⁹ Bliss, J.C. 2000.

⁵⁰ U.S. Department of Agriculture 2000.

are recognized as the top strength of the region's visitor industry, conferring a competitive advantage by which the industry thrived over the past decade.⁵¹

The scenic environment also has high local value for resident recreation, and other amenity values that extend well beyond revenues from tourism.⁵² Many remote, unroaded areas are the 'backyard' for Southeast Alaska communities. They are where people work, walk, camp, ski and hunt amidst the region's scenic beauty.⁵³ Whether using the forest for subsistence, sport fishing, hunting or recreation, Southeast Alaskans have long held a deep commitment to protecting the forest for its scenic value.⁵⁴

As with protecting areas for climate mitigation, managing areas for scenic values also protects other ecosystem services. 55

III. The Need to maintain and improve recreation infrastructure

The Socioeconomic Assessment states that the agency can improve local economies and resident well-being by increasing or improving recreation infrastructure, particularly trails. Southeast Alaska's trails enable people to access the forest for recreation, providing physical health, mental health and economic benefits to visitors and residents of nearby communities.⁵⁶ Investments in trails and outdoor recreation infrastructure can contribute to local employment and business opportunities by attracting visitors and increasing visitor spending.⁵⁷

As noted in the recreation assessment, many visitors today are outdoor adventure enthusiasts who seek more active experiences.⁵⁸ Small cruise operators several decades ago could sell "cocktails and a glacier" cruises; today, our guests want to hike and kayak while learning about the region's wildlife and their habitats. Hiking and nature walks are the fastest growing area of participation of all visitor activities for both independent and cruise visitors in Alaska, mirroring a nationwide trend of growing trail use.⁵⁹ Increasing numbers of visitors, including small cruise ship passengers, seek active, outdoor adventure experiences – particularly hiking and walking tours.⁶⁰ 224,000 visitors to the Sitka and Hoonah Ranger Districts in 2016 went for a hike or a walk.⁶¹ Trail users are diverse – they may be residents or visitors, and wilderness adventurers or individuals seeking a short, out-the-backdoor stroll.⁶²

⁵⁷ Id.

⁶⁰ Id.

62 Id.

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http://www.seconference.org/sites/default/files/FINAL%20Southeast%20by%20the%20Numbers%202019.pdf https://www.seconference.org/wp-content/uploads/2021/05/Final-CEDS-2025.pdf?2070f3&2070f3

⁵² USDA Forest Service. 2003, *supra*.

⁵³ 2001 Roadless FEIS at 3-229; USDA Forest Service. 2004.

⁵⁴ USDA Forest Service. 2004, supra. USDA Forest Service. 2003.

⁵⁵ Balmford, A., Beresford, J., Green, J. Naidoo, R., Walpole M. & Manica, A. 2009. A Global Perspective on Trends in Nature-Based Tourism. PLoS Biol 7(6); e1000144; Bayliss, J. et al. 2013; Kirkby, CA, R. Gludice-Granados, B. Day, K. Turner, Velarde-Andrade L.M. et al. 2010; Miura, S., M. Amacher, T. Hofer, J. San-Miguel-Ayanz, Ernawati & R. Thackway. 2015. Protective functions and ecosystem services of global forests in the past quarter-century. In: Forest Ecology and Management.

⁵⁶ Alaska Trails. 2022.

⁵⁸ Johnston, J. 2024.

⁵⁹ Alaska Trails. 2022.

⁶¹ Id.

The supply of trails and outdoor recreation infrastructure on the Tongass falls well short of existing and anticipated demand, by both visitors and residents. ⁶³ Use of trails for health, recreation, business infrastructure and food security purposes, by both residents and visitors, is strong and growing, even as agency resources to meet this demand decline. ⁶⁴

The Boat Company requests that the Forest Service devote the same energy to outdoor recreation management that it once applied to timber sales. Nationally and in Alaska the public wants the Forest Service to shift its budget priorities to outdoor recreation and trails - particularly in the Tongass where recreation economic activity greatly exceeds the economic benefits of logging. ⁶⁵ The Revision process should include an analysis, whether direction to prepare an programmatic EA, or action-forcing alternative in the Revision Environmental Impact Statement itself, that addresses the recommendations of the 2022 Tongass Sustainable Trail Strategy.⁶⁶ Frankly it would be better if the Forest Service jump-started a programmatic trail EA now in response to the findings in the relevant assessments.

One of the major challenges is funding. The Boat Company and other ecotour operators have been working together for over a decade to ensure that ecotour operators continue to provide sustainable recreation opportunities. UnCruise Adventures developed a communication platform that we use to avoid overlap with other operators and unguided visitor or resident recreators. We have repeatedly met with and encouraged the Forest Service to plan for and implement new trails in remote areas. Nothing has happened.

During this time we have lost access to a number of trails that have deteriorated. Trails where we have permitted use may become unuseable due to blow down, and there no longer are trail crews to remove it before operating season. We have been told by Forest Service leadership that there currently is not enough funding to build half a mile of new trail a year – even as the agency continues to spend millions on roads used to access timber. As previously noted, special use fees paid by ecotour operators are significant, but it is unclear where those funds end up. The Boat Company would greatly appreciate a fuller description of the agency's budget for recreation and other uses in the final assessments. Such an effort would be an invaluable addition.

The other concern is, as explained in the Tongass National Forest Sustainable Trails Strategy produced by Alaska Trails, there is a need for the agency "to evolve from the current cumbersome, slow moving approach on trails, to a partnership-building, lean and mean, trail building machine."⁶⁷ Even when there has been funding, such as through the Great American Outdoor Act and the Southeast Alaska Sustainability Strategy, the Forest Service made little or no progress on remote recreation infrastructure, in large part because the Forest Service failed to develop "shovel ready" projects. ⁶⁸ There is a five year process needed to develop a new trail that makes it difficult to plan, approve, build, and maintain trails. The environmental impact of trails is negligible compared to even the very smallest Tongass timber sales, yet the agency can develop a 12 million board foot timber sale that requires over six miles of road in just over two years (the recent Thomas Bay timber sale).

⁶³ Id.

⁶⁴ Id.

⁶⁵ Id.

⁶⁶ Id.

⁶⁷ Id.

⁶⁸ Id.

IV. Wildlife Biodiversity

The Boat Company provides, among other activities, wildlife viewing and education opportunities. Tongass old growth forests support biological diversity, including fish and wildlife species that "are of exceptionally high importance for … recreation and the economic well-being of the residents and visitors of Southeast Alaska.⁶⁹

The wildlife resource generates significant economic value, and improving Forest Plan protections will be critical to maintaining the wildlife resource and the numerous ecosystem services provided by regional wildlife. Alaska's wildlife has tremendous economic value for both passive and consumptive uses. In 2011, wildlife hunting and viewing in general generated 2,463 jobs in southeast Alaska, \$138 million in labor income and \$360 million in total economic output.⁷⁰

The Boat Company has long had a special interest in the region's iconic megafauna and contributes to Sitka's Fortress of the Bear, which rescues orphaned bears. There is not a lot of information about bears in the assessments. It was also a surprise that the Alexander Archipelago Wolf may not be deemed a species of concern. The Boat Company recommends reviewing the Fish and Wildlife Service's recent assessment, which shows serious concerns for wolves that inhabit the most heavily logged portions of the Tongass.

The Boat Company requests that the assessments devote special attention to Southeast Alaska's brown and black bears – in addition to being of considerable economic value for wildlife viewing, they are also ecosystem engineers and indicators. As the Draft Species of Conservation Concern Assessment notes, logging and timber road construction have changed ecological conditions for many old-growth dependent species, which are also facing additive threats from the changing climate.⁷¹ The Boat Company has participated in land management planning and commented on timber sale analyses for years and there are multiple scientific experts who have explained that the 1997 Tongass Old Growth Conservation Strategy and reserve system is inadequate to meet the needs of many wildlife species in heavily logged areas.

The Species of Concern Assessment, which evaluates current conditions for wildlife, recognizes that biodiversity can substantially influence local communities' social and economic sustainability.⁷² It notes that bird species generated approximately \$378 million in overall economic output in one year in Alaska and supported approximately 4,000 jobs.⁷³

Bears may be the top species for wildlife viewing visitors in Alaska and by themselves generate millions of dollars in regional economic impacts. Visitors to Alaska and coastal rainforests in British Columbia identify bear viewing opportunities as a primary reason for their visits – indeed, bears are the top attraction in the Great Bear rainforest.⁷⁴ Ecotour

⁶⁹ U.S. Dept. of Agriculture. Special Areas, Roadless Area Conservation; National Forest System Lands in Alaska. Notice of proposed rulemaking, request for comment. 86 Fed. Reg. No. 223 at 66499 (Tuesday, November 23, 2021).

⁷⁰ EcoNorthwest. 2014. This amount is equivalent to \$428 million today, and likely higher due to growth in wildlife viewing activity over the past decade.

⁷¹ Linero, W.F. 2024. Draft Species of Conservation Concern Assessment. Tongass National Forest Plan Revision. Forest Service, Alaska Region. December 2024.

⁷² Id. ⁷³ Id.

⁷⁴ Center for Responsible Travel. 2014. Economic impact of bear viewing and bear hunting in the Great Bear Rainforest of British Columbia at Figure 1.9. Washington, D.C.

businesses provide clients with an ecological education about southeast Alaska's black and brown bears and viewing opportunities throughout Tongass roadless areas.⁷⁵ Recent studies show that bear viewing generates massive economic impacts in similar forested areas in southcentral Alaska and British Columbia. Bear viewing in southcentral Alaska generates over \$17 million annually in labor income and has a total economic output exceeding \$36 million.⁷⁶ Bear viewing in British Columbia's Great Bear rainforest similarly generates over \$15 million in direct visitor spending, 500 jobs and \$17.7 million in tour company revenues.⁷⁷ These values are consistent with other research showing that opportunities to view unique or rare animals are a critical determinant of destination image.⁷⁸

Large, intact forested areas without roads provide important habitat to species that have diverse habitat needs and are sensitive to disturbance, such as black bears or other large mammals that avoid roads.⁷⁹ These areas are even more important now because of the cumulative degradation and loss of habitat in adjacent areas.⁸⁰ Inventoried roadless areas function as biological strongholds and places of refuge for wide ranging carnivores such as bears.⁸¹ Black bear populations respond negatively to high road density and need habitat that provides remoteness from human activity.⁸²

Analyses have identified adverse effects caused by logging and timber road construction because of broad reductions in old-growth forest habitat, reductions in denning habitat, reductions in foraging habitat and disturbances during summer, and increased vulnerability to human harvest.⁸³ Alaska biologists have identified a likely declining trend in black bear populations caused by carrying capacity reductions caused by clearcut logging and identify timber harvest as the most serious threat to black bear habitat over the long term particularly as recent clearcuts transition from a short-term food source to long-term, unsuitable habitat.⁸⁴

https://www.hd-research.ca/wp-content/uploads/Kyle-Hilsendager-PhD-Thesis-Final.pdf;

⁷⁵ <u>https://www.theboatcompany.org/resources-forms/frequently-asked-questions/;</u>

https://www.uncruise.com/destinations/alaska-cruises/wildlife; https://www.lindbladalaska.com/cruises/wild-alaska-escape/ ⁷⁶ Young, T.B. & J.M. Little. 2019. The economic contribution of bear viewing in south central Alaska at Table 8. University of Alaska Fairbanks.

⁷⁷ Center for Responsible Travel. 2014. Economic impact of bear viewing and bear hunting in the Great Bear Rainforest of British Columbia at Table 1.5. Washington, D.C.

⁷⁸ Hilsendager, K. 2014. Tourists' visual perceptions of forest management in Vancouver Island and Tasmania. *Available at:*

⁷⁹ Roadless Rule FEIS at 3-144.

⁸⁰ Id. at 3-142.

⁸¹ Id. at 3-125; 3-142.

⁸² *Id.* at 3-144, 148-149.

⁸³ Davis, H, A.N. Hamilton, A.S. Harestead & R.D. Weir. 2012. Longevity and Reuse of Black Bear Dens in Managed Forests of Coastal British Columbia. In: Journal of Wildlife Management 76(3):523-527 (identifying concerns about the loss of denning habitat as a potential cause of declining black bear populations); *see also* USDA Forest Service. 2012. Tonka Timber Sale Final Environmental Impact Statement at 3-70-3-72. R10-MB-705c. Tongass National Forest, Petersburg, Alaska. March 2012 & Wrangell Island Project Draft Environmental Impact Statement. 2016 at 98. U.S. Forest Service, Alaska Region. Tongass National Forest, Wrangell Ranger District. R10-MB-634. May 2016 (acknowledging that timber developments adversely impact black bear populations).

⁸⁴ Lowell, R. 2013. Unit 3 black bear management report. Chapter 6, Pages 6-1 through 6-26 in P. Harper and L.A. McCarthy, editors. Black bear management report of survey and inventory activities. 1 July 2010-30 June 2013. Alaska Department of Fish and Game. Juneau, Alaska.

IV. The Boat Company recommends a separate resource assessment for salmon

Bears, like the region's fisheries, depend on salmon - the Tongass forest fish. Road construction and logging can adversely impact ursine, commercial, sport and subsistence fisheries. Several assessments discuss Southeast Alaska's salmon but none of them comprehensively covers the species ecology, economy, habitats and factors that limit population productivity. Salmon are important not just to human fisheries, but also for other fish, wildlife and even plants and insects.⁸⁵ The Boat Company submits that this resource is so important that the Forest Service should discuss salmon and their habitats in one assessment.

The recreation resource assessment recognizes that fishing opportunities are highly important for residents and visitors and economic drivers.⁸⁶ Healthy fish populations are especially vital to Southeast Alaska freshwater and marine sport fishing businesses. Resident and non-resident anglers pursue all five species of salmon, steelhead and trout.⁸⁷ For many guests, the opportunity to catch Southeast Alaska salmon is a highlight of their Alaska experience. Also, increasing numbers of our guests are pescatarian. We proudly serve Southeast Alaska salmon delivered to our vessels that are harvested by local commercial fishermen in Sitka and processed by a local seafood company, the Seafood Producers Cooperative. This company provides people with salmon throughout the Pacific Northwest and beyond, further illustrating the importance of maintaining Tongass fish habitat.

It is well known that clearcutting and timber roads have caused salmon declines throughout their range.⁸⁸ The Forest Service has identified numerous adverse impacts: increased sediment loads, modified stream flows, habitat fragmentation and loss of connectivity, degraded water quality, increased stream temperatures, fish passage barriers, loss of genetic fitness, loss of spawning and rearing habitat and increased vulnerability to catastrophic events.⁸⁹ The science relevant to logging and road construction in salmon habitat is simple: low road densities = healthier populations and high road densities have negative effects on aquatic ecosystems and reduce fish populations.⁹⁰

Continuing the Tongass timber sale program presents unacceptable risks to fish at a time of significant vulnerability to habitat loss given the fluctuating and frequently lower population levels of many stocks. Logging and timber roads, along with climate change, pose the greatest risks to salmon habitat.⁹¹ One of the biggest concerns shared by all salmon fishermen is the changing marine environment, particularly periods of marine heat waves which can greatly reduce marine productivity. These events heighten the need to better protect public lands from logging and timber roads will be important to maintaining a salmon

⁸⁵ Armstrong, J.B., Schindler, D.E., Cunningham, C.J., Deacy, W. and Walsh, P., 2020. Watershed complexity increases the capacity for salmon–wildlife interactions in coastal ecosystems. *Conservation letters*, *13*(2), p.e12689.

⁸⁶ Johnston, J. 2024.

⁸⁷ Southwick Associates. 2009. Economic impacts and contributions of sportfishing in Alaska 2007 Summary Report. Alaska Department of Fish and Game, Sport Fish Division. January 2009. Anchorage, Alaska. Lew, D.K & C.K. Seung. 2019. Measuring contributions of the marine recreational charter fishing sector using a resampling approach. ICES Journal of Marine Science 77(6), 2285-2294.

⁸⁸ Roadless Rule FEIS at 1-1; 3-285.

⁸⁹ *Id.* at 3-164-166.

⁹⁰ Id. at 3-164-168.

⁹¹ Bryant, M.D. 2009. Global climate change and potential effects on Pacific salmonids in freshwater ecosystems of Alaska. *Climatic Change*, 95(1-2), pp.159-193.

population portfolio in a changing climate. More logging and more roads will only intensify climate change risks to Tongass watersheds.

The assessments in general identify most salmon populations as stable and healthy, with some fluctuations from year to year. The documents also suggest that damage done by logging occurred in the past over a small portion of the forest. The Boat Company disagrees – there are reasons to be concerned about salmon productivity, and while much of the damage done by past and ongoing clearcutting has gone undetected, there is significant loss of habitat throughout the region – particularly in the most historically productive areas – because of barrier culverts and other obstructions at stream crossings.

The Boat Company has provided guided saltwater and freshwater sport fishing opportunities for Southeast Alaska salmon for over four decades. We target Chinook, coho, pink salmon and Dolly Vardens in different areas that range from the mainland to the coasts and rivers of Baranof and Kuiu Islands. We have observed firsthand recent changes in salmon productivity from year to year. There have been multiple pink salmon run failures during even years, lower coho catch rates and smaller fish, and closures for Chinook fisheries. Climate change impacts were obvious during many of the lower productivity years guides observed numerous stream systems that had dried up as the region experienced a prolonged drought that affected salmon distribution, run timing and potentially abundance throughout the state. That drought coincided with a period of marine heat waves.

Preventing (or at least minimizing) further development in salmon habitats is the most cost-effective way to improve ecosystem productivity for salmon.⁹² Current Forest Plan provisions are not adequate to protect salmon habitat in light of the cumulative impacts of climate change and industrial logging. Southeast Alaska's salmon have opportunities for resilience to climate change, but will need more protective riparian buffers. The Boat Company recommends that the assessments describe and evaluate the 300 foot buffers for salmon streams and 150 foot buffers for smaller, non-fish bearing streams used on federal lands elsewhere in the Pacific Northwest. These buffers may provide heightened protection in areas that are vulnerable to higher stream temperatures (particularly smaller streams) and further distance streams from road-caused sedimentation and reduce risks of the ever more frequent landslides fragmenting habitat.

Two recent studies have shown that salmon spawning in smaller streams are more important to biodiversity and the salmon portfolio than previously thought.⁹³ One of the particular findings was they have disproportionately high values for foraging bears.⁹⁴

The other most significant concern is habitat fragmentation caused by the timber road system. The assessments make clear that existing budgets do not allow the agency to fully mitigate damage from logging and timber roads. ⁹⁵ Barrier culverts that impede fish passage

⁹² See, e.g. Walsh, J.C., Connors, K., Hertz, E., Kehoe, L., Martin, T.G., Connors, B., Bradford, M.J., Freshwater, C., Frid, A., Halverson, J., & Moore, J.W. 2020. Prioritizing conservation actions for Pacific salmon in Canada. *Journal of Applied Ecology*, *57*(9), pp.1688-1699.

⁹³ Armstrong, J.B., Schindler, D.E., Cunningham, C.J., Deacy, W. and Walsh, P., 2020. Watershed complexity increases the capacity for salmon-wildlife interactions in coastal ecosystems. *Conservation letters*, *13*(2), p.e12689; Service, C. N., Bateman, A. W., Adams, M. S., Artelle, K. A., Reimchen, T. E., Paquet, P. C.,&Darimont, C. T. (2019). Salmonid species diversity predicts salmon consumption by terrestrial wildlife. *Journal of Animal Ecology*, *88*(3), 392–404.

⁹⁴ Id.

⁹⁵Engelmann, D. 2024. Draft Forest Management and Timber Assessment; Escamilla, D. 2024. Draft Infrastructure Assessment.

are the most significant concern and are prevalent throughout the Tongass.⁹⁶ There are hundreds of them, as well as numerous stream crossings that partially or fully obstruct fish passage.⁹⁷ Although the assessments describe ongoing stream restoration work, the data show that the current remediation rate is negligible relative to the large number of fish passage barriers.98

There are numerous studies showing that removing barrier culverts is the best way to improve watershed productivity for salmon – particularly in a changing climate. 99 There are improvements in fish passage, immediate increases the amount of available habitat, increased juvenile fish abundance, improved stream flows and cooler temperatures.¹⁰⁰ There are significant uncertainties about the effectiveness of other stream restoration activities.¹⁰¹

The Forest Service currently is not allocating the funds necessary to maintain or decommission roads on the Tongass, and instead plans for adverse effects to fish and water quality to continue and worsen as older roads and stream crossings deteriorate.¹⁰² One of the assessments suggested that the Forest Service should lean on recreation service providers to fund some of this deferred maintenance. The Boat Company and other tour operators are researching avenues to fund or maintain valuable infrastructure such as remote trails or wildlife viewing infrastructure, but the suggestion to tax tourism to address the legacy left by timber companies is unfair. The assessments should consider ways to tax timber companies instead. At the very least, there should be no funds expended to add to this damage by constructing or repairing roads used to access timber stands until every culvert is cleared.

Finally, The Boat Company requests that the assessments seek out and describe scientific studies or other materials discussing the impacts of short-rotation forestry/secondgrowth logging on watersheds. A significant concern is that Forest Service second-growth timber targets for larget timber sale purchasers will negatively affect already damaged watersheds, and prevent them from recovering to the point of providing quality habitat or even permanently wreck them for fish production.

V. The assessments should re-evaluate timber industry impacts

The Boat Company submits that industrial logging and timber road construction in Southeast Alaska has been more damaging to regional resource values than suggested by the various draft resource assessments, which understated the impacts of industrial scale

⁹⁶ Noesser, E., R. Cross & G. Risdahl. 2024; Chestnut, T. 2024. Draft Aquatics Resource Assessment.

⁹⁷ Id.; Bousfield, G. 2024. Draft Watershed Condition and Water Resource Assessment.

⁹⁸ Id.; Escamilla, D. 2024. Draft Infrastructure Assessment.

⁹⁹ Davis, J.C. & Davis, G.A., 2011. The influence of stream-crossing structures on the distribution of rearing juvenile Pacific salmon. Journal of the North American Benthological Society, 30(4), pp.1117-1128; Clark, C., Roni, P., Keeton, J., & Pess, G. 2020. Evaluation of the removal of impassable barriers on anadromous salmon and steelhead in the Columbia River Basin. Fisheries Management and Ecology, 27(1), pp.102-110; Price, D.M., Quinn, T., & Barnard, R.J. 2010. Fish passage effectiveness of recently constructed road crossing culverts in the Puget Sound region of Washington State. North American Journal of Fisheries Management, 30(5), pp.1110-1125; Beechie, T., Imaki, H., Greene, J., Wade, A., Wu, H., Pess, G., Roni, P., Kimball, J., Stanford, J., Kiffney, P., & Mantua, N. 2013. Restoring salmon habitat for a changing climate. River Research and Applications, 29(8), pp.939-960; Anderson, J.H. et al. 2019. Coho salmon and habitat response to restoration in a small stream. Transactions of the American Fisheries Society, 148.5 (2019), pp.1024-1038.

¹⁰⁰ Id. ¹⁰¹ Id.

logging on island ecosystems. There are numerous independent scientific research articles critiquing the old-growth conservation strategy and describing how logging has impacted Tongass iconic megafauna such as wolves, deer and bears – as well as endemic small mammals.¹⁰³ The resource assessments that consider wildlife would benefit from incorporating more of this research and particularly the work of biologists who are familiar with the unique habitat concerns that apply to island ecosystems.

The Tongass National Forest is the only national forest where there has been substantial old-growth logging in recent decades.¹⁰⁴ Even though timber removals on federal lands have diminished in recent years, the 2016 Forest Plan amendment authorized continuing high levels of old-growth logging for the immediate future accompanied by intensifying logging of second-growth forests which would otherwise continue to mature, sequestering carbon, contributing to healthy aquatic ecosystem functioning and eventually would provide habitat values for wildlife.¹⁰⁵ Over the past several decades, private landowners have acquired additional lands from the Tongass, increasing the intensity of clearcutting in some areas. Ecotour operators don't just avoid recreating in these areas – we pass by them at night so our guests do not have to view the massive clearcuts. This recent logging heightens the importance of remaining unlogged public lands – or those with recovering second-growth forests.

Southeast Alaska's forests are highly vulnerable to forest degradation caused cumulatively by past, present and future industrial-scale clearcut logging. Between 1954 and 2004 industrial-scale logging on federal, State of Alaska and private land removed much of the large, contiguous old- growth forest, leaving fragmented forest habitats and degraded watersheds on a landscape scale.¹⁰⁶ Timber companies targeted the largest old-growth trees, removing roughly two-thirds of the highest volume forest by 2004 with disproportionate impacts on the most productive fish and wildlife habitat.¹⁰⁷ The most intensive clearcutting of larger-tree, old-growth forests occurred in federal and non-federal forestlands on southern islands which suffered disproportionate habitat loss compared to other portions of Southeast Alaska.¹⁰⁸ Prince of Wales Island has the highest density of clearcuts in Southeast Alaska.¹⁰⁹

The timber and socio-economic assessments did not fully discuss the problems with the timber industry in the region. It is not a significant economic driver in part because of competitive disadvantages in the national and global economy.¹¹⁰ The federal timber sale program operates at a massive taxpayer loss due to the amount of public funds spent on

¹⁰³ Among others, Dr. Winston Smith, Dr. David Person, Dr. Joseph Cook and Dr. Natalie Dawson are Tongass wildlife experts who have published multiple articles with other co-authors explaining the harms perpetrated by the Tongass timber industry.

¹⁰⁴ DellaSala, D.A. 2021. Protecting the Tongass rainforest, older forests, and large trees nationwide for the U.S. nationally determined contribution to the Paris Climate Agreement. Wild Heritage/Earth Island Institute, Berkeley, CA.

¹⁰⁵ USDA Forest Service. 2016. Tongass National Forest Land and Resource Management Plan. R10-MB-769j. USDA Forest Service, Alaska Region, Juneau; USDA Forest Service. 2016. Tongass National Forest Land and Resource Management Plan Final Environmental Impact Statement (hereinafter 2016 TLMP FEIS).

 ¹⁰⁶ Albert, D.M. & Schoen, J.W. 2013. Use of historical logging patterns to identify disproportionately logged ecosystems within temperate rainforests of southeastern Alaska. *Conservation Biology*, 27(4), pp.774-784.
¹⁰⁷ Id.

¹⁰⁸ Id.

¹⁰⁹ Hasbrouck, T.R. 2020. Sitka black-tailed deer management report and plan. Game Management Unit 2: Report period 1 July 2011-30 June 2016, and plan period 1 July 2016-30 June 2021. Alaska Department of Fish and Game, Species Management Report and Plan ADF&G.DWC.SMR&P-2020-30, Juneau, AK. ¹¹⁰ 86 Fed. Reg. at 66,498.

roads, timber sale preparation and other related costs in excess of timber sale revenues.¹¹¹ Over time, several independent reviews of the timber sale program have estimated that annual taxpayer losses range from \$20.5 million to \$33.8 million depending on the time frame analyzed.¹¹² Additional concerns exist over mismanagement of timber sales purchased by the two companies that purchase large timber sales. The Forest Service's own 2016 and 2020 investigative reports acknowledge ecological and financial costs from management problems in the Tongass timber sales program.¹¹³ The reports identify multiple issues with oversight, contracts and timber appraisals and discrepancies that increased the public cost of the sales.¹¹⁴ Forest Service policies allow these two companies to export half of the hemlock and spruce and most of the more valuable cedar as unprocessed logs, mostly for processing in Asia.¹¹⁵ The Forest Service projects that these companies would likely export roughly two-thirds of the timber as unprocessed logs.¹¹⁶

VI. Conclusion

Thank you for the opportunity to comment on the draft assessments. The Boat Company has reviewed the Chugach Forest Plan, recently revised under the 2012 planning rule. Some of the positive results include a commitment to manage that Forest for recreation, and the recognition that coastal forests that provide multiple ecosystem services such as salmon, wildlife and recreation are mostly unsuitable for timber production. The Boat Company hopes the assessment process here can help to inform the need for similar changes on the Tongass.

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¹¹¹ USDA Forest Service. 2000. Forest Service Roadless Area Conservation Final Environmental Impact Statement Vol. I. Washington, D.C. November 2000 (hereinafter 2000 Roadless Rule FEIS).

¹¹² Taxpayers for Common Sense. 2019. Cutting our losses: 20 years of money losing timber sales on the Tongass; Headwaters Economics. 2014. The Tongass National Forest and the Transition Framework: A new path forward?; Conservation Economics Institute. 2019. Tongass Roadless DEIS economic review.

¹¹³ USDA Forest Service, Financial Compliance & Oversight Branch. 2020. Final Report Alaska Region Timber Sales Program. August 18, 2020; USDA Forest Service Washington Office Activity Review of timber sale administration. sale preparation, stewardship contracting, NEPA, and timber theft prevention. Region 10. June 2020.

¹¹⁴ Id.

¹¹⁵ 2016 TLMP FEIS, Appx. H.

¹¹⁶ 2016 TLMP FEIS.