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Title:

Comments: TongassComment

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Attn: Tongass National Forest

Federal Building

Ketchikan, AK 99901-6591

Re: Proposed Exemption of the Tongass National Forest from the 2001 Roadless Area Conservation Rule

To whom it may concern,

This comment respectfully argues against the adoption of Alternative 6 as the preferred

alternative in the Draft Environmental Impact Statement (DEIS). As a team of students enrolled at the University of Colorado at Boulder in the Masters of the Environment Program, we have a professional interest in the future of America's public lands. More importantly, perhaps, we have both visited the Tongass National Forest and have a vested interest in the future of this unique place.

Nat Paterson is a graduate student in the Masters of the Environment Program at the University of Colorado in Boulder, Colorado. He has visited the Tongass National Forest on two separate occasions, originally in 2000 and again in 2013. On these trips, he spent his time fishing, kayaking and hiking the vast landscape and waters of the Tongass National Forest. Originally from suburban New Jersey this was his first immersion into an unspoiled environment which instilled a passion for the conservation of wild places.

Caroline Fabricius is a graduate student in the Masters of the Environment Program at the University of Colorado in Boulder, Colorado. She visited the Tongass National Forest in August of 2018, specifically the areas of Chichagof Island and Revillagigedo Island. During this visit, she spent her time hiking and viewing wildlife. Despite having traveled to many places across North and Central America, of all these places, the Tongass National Forest is the most "wild."

Throughout this comment we will be critically evaluating the proposed alternative (alternative 6). We specifically request that the Forest Service:

Inquire the United States Fish and Wildlife Service (USFWS) about any species existing within the Tongass that may be listed under the Endangered Species Act (ESA);

Refrain from any action until this, and any other requirements associated with this, are completed;

Refrain from adopting Alternative 6 as the Tongass is only viable if it is to remain completely intact;

Adopt the 'No Action' alternative to ensure the connectivity of the landscape and long-term protections;

Reduce burden on American taxpayers by not engaging in below cost timber sales and increased road construction;

Ensure protections for Salmon species and their habitat

Removal of the Tongass NF Roadless Rule would negatively impact habitat of the Queen Charlotte Goshawk and would be inconsistent with the decision to deny the ESA listing petition

The Tongass National Forest supports a plethora of bird species, one of which is the Queen Charlotte Goshawk. This hawk thrives in old growth forest where it can find preferred nesting sites and hunt successfully. Under the proposed alternative there would be a dramatic increase in vehicle traffic and noise. It has been well documented that these disturbances have an adverse impact on the quality of the habitat and breeding potential.

In 1994, a petition was brought to the United States Fish and Wildlife Service (USFWS) to list this species as endangered. This bird was determined to not need federal protection, but the USFWS did express concern for the future viability of the population in the Tongass National Forest under the management plan at the time. Part of the reason this decision was made was because the USFWS knew a new management plan (2001 Roadless Rule) was soon to be enacted. In 2012, the Queen Charlotte Goshawk was listed as threatened in British Columbia, Canada, but remained unlisted in the United States as the Tongass Roadless Rule provided enough protection for the bird to not warrant listing. Because the main reason for not listing the species initially was the Tongass Forest Plan, we request that the USFWS review the non-listing decision with regards to the impacts of the proposed alternative.

The adoption of Alternative 6 will reduce protections for the Marbled Murrelet and the Fish and Wildlife Service will need to revisit its decision to deny ESA listing

The Marbled Murrelet is an avian inhabitant of the Tongass that is listed as a threatened species under the ESA in the northwest portion of the contiguous United States. The main reasons for ESA listing was habitat loss due to increased old growth logging and population decline due to entrapment in fishing gear and oil pollution. This distinct population segment (DPS) in the Tongass, however, is not listed as the current Roadless Rule provides adequate protections. The Marbled Murrelet is an interesting bird that depends on old growth forest for nesting and breeding, but also feeds in the near shore environment. Increased logging of old growth forests as included in Alternative 6 will have negative impacts on the nesting and breeding habitat of the bird. Furthermore, increased vessel traffic and potential for oil spills will negatively affect the birds feeding habitat. Similar to the Queen Charlotte Goshawk, if the agency is to move forward with the proposed alternative, we ask that the FWS revisit the decision to not list the DPS of the

bird. Also, we request that the Environmental Protection Agency (EPA) address this issue as part of the agency's DEIS review.

The Forest Service has not reasonably considered potential negative effects to the Eskimo Curlew

The Eskimo Curlew is a shore bird that historically ranges in the Tongass National Forest. It is a migratory bird that spends the winter in South America and ventures north to Alaska and Canada to breed. The Eskimo Curlew is listed as Endangered under the ESA and according to the Draft Environmental Impact Statement (DEIS), the Tongass NF is considered outside of the species range (p.3-73). According to the USFWS, however, this species is known to occupy areas within the Tongass NF. Under 1536(c)(1) of the Endangered Species Act, the United States Forest Service (USFS) must ask the USFWS and National Marine Fisheries Service (NMFS) if there are any endangered or threatened species in the area of concern. Given the discrepancy between the two parties, it appears this inquiry was not completed.

The ESA states, under Section 7(a)(2) that agencies must ensure that their actions are not, "likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species..." (16 U.S.C. Statute 1536(a) (2)). Furthermore, we ask that the public comment period remain open until the three-step process described in the ESA is met. This process is outlined below.

An agency proposing an action must inquire of the FWS whether any threatened or endangered species "may be present" in the area of the proposed action

If the answer is yes, the agency must prepare a "biological assessment" to determine whether such species "is likely to be affected" by the action.

If this assessment determines that the threatened or endangered species is "likely to be affected," the agency must formally consult with the FWS, which will result in a "biological opinion" from the FWS. If this determines that the action would jeopardize the species or destroy or adversely modify critical habitat, then the action may not proceed unless the FWS can suggest an alternative that avoids such jeopardization, destruction, or adverse modification.

This process includes the completion of a biological assessment (biological evaluation) by the Forest Service and, if adverse impacts to the species are found a biological opinion will be issued by the FWS and NMFS.

The ESA also states that the agency has an affirmative duty to conserve. Specifically the ESA states, "Agencies have an affirmative duty not only to protect the listed species, but to help these species to recover to a point where they no longer require listing under the ESA." It is clear that an increase in logging activity and road construction could have adverse impacts on the endangered Eskimo Curlew and this would be a violation of the ESA.

The Forest Service must complete a new Biological Assessment for the Short Tailed Albatross

The Short-Tailed Albatross is a migratory shore bird that uses the waters of the Tongass National Forest and is federally listed as endangered under the ESA. In the DEIS, the Forest Service states that, "it (the bird) could be exposed to water quality effects associated with land management activities on the Tongass." We realize the agency has stated the effects would be similar to the current plan for the Tongass, but cites the BA from 2016 amendment to the Tongass Roadless Rule. This assessment, while only a few years old, is inadequate and we request that a new BA be completed before moving forward with any of the alternatives. With the increase in road building and logging operations within the forest and in the nearshore environment comes further disturbance. As cited on page 3-106 of the DEIS, increased vessel traffic and increased potential for oil spills are likely. Because of this, we ask that the agency complete a new BA for this endangered species.

The Salmon of the Tongass are a vital resource to the region and decreased protections will directly violate the agency's commitment to protecting cultural values and ecological resources as presented in Key issues 2 and 3 of the DEIS

The Tongass National Forest is a haven for many species of fish, including various species of Salmon. These fish are anadromous, so the vitality of the sea and the waterways in the forest is of the utmost importance to them. We strongly recommend that the waterways, especially those within the "Tongass 77 (T77)" be spared from any harm that may come through road construction and timber harvest. The area of the Tongass 77 are of the utmost ecological value to the region and have been recommended by a number of conservation groups, including The Nature Conservancy and Trout Unlimited, to remain ecologically intact. Furthermore, these watersheds encompassing the T77 were given protections in the amended 2016 Forest Plan for the Tongass NF.

With the current review of the 2001 Roadless Rule, the Forest Service needs to explain why it is now planning to remove protections for the T77 watersheds. We argue that removing these protections is arbitrary and capricious under the Administrative Procedure Act. In *Motor Vehicles Association v. State Farm Insurance* the Supreme Court held that an agency must show a "rational connection between the facts found and the choice made." In addition, the agency has not set forth clearly the grounds on which it has acted. We believe that the Forest Service has failed to do so in this case. In addition, in all but the proposed alternative, the agency includes varying protections for the T77 Watersheds. This exclusion demonstrates a failure on the part of the agency to entirely "consider an important aspect of the problem." Given this failure, adoption of the proposed alternative would be arbitrary and capricious.

The Salmon of the Tongass NF are incredibly important to the culture of the region. Wild salmon has been a mainstay in the diet of the native people of the region for centuries and are a part of

their way of life. Approximately 90% of households in Southeast Alaska use Salmon at an average rate that is five times higher than residents in the lower forty eight states.

Wild Alaskan Salmon is one of the greatest drivers of the economy of the region as well. The waterways of the Tongass NF account for 80% of the commercially harvested salmon in the region and 28% of the annual catch throughout the entire state. The value of these fish amounts to about \$60 million per year. In total, the salmon fishery accounts for about 10% of jobs in Southeast Alaska and the combined economic impact of wild salmon from is about \$1 billion annually. We argue that timber harvest and road construction will not be the economic driver that the salmon fishery currently is and has been for decades. Indeed, the timber industry only accounts for about 1% of employment in Southeast Alaska and is highly subsidized by the American taxpayer.

Erosion in a forest ecosystem can have some beneficial impacts to aquatic habitat, but too much erosion can decrease the viability of these streams. Accelerated erosion from timber harvest and road construction will lead to an increase in sediment deposition in streams that salmon use to spawn. This activity can lead to salmon eggs and juvenile fish being smothered by sediment. The DEIS states that impacts to fish and fish habitat would be similar under all alternatives. We must challenge this statement given that the agency acknowledges that roads pose the greatest risk to fish, as stated in the DEIS. Alternatives 3,4,5 and 6 (proposed alternative) allow for more road construction and thus the potential for habitat impact. Furthermore under these alternatives, the agency states that the location of future timber harvest and associated road building is unknown. It would be arbitrary and capricious for the Forest Service to approve harvest in areas that are unknown as the environmental impacts are impossible to quantify.

The salmon can be considered the biological lifeblood of the Tongass National Forest. Salmon die after they

spawn and nitrogen from decaying salmon has been found more than 500 yards from the streams they inhabit. Furthermore, much of the regions wildlife depends on these fish, from bears to eagles.

These public lands are some of the greatest accumulation of undistributed wealth in the world and should be protected as such. The waters of the Tongass National Forest are highly productive fisheries and are invaluable to sportsmen and women in the region and from out of state. We recommend that the Forest Service should take into account the long term viability of the wildlife and wild spaces of the region. One cannot put a price on the value of intact land especially in a time of unfettered development.

The Proposed Alternative violates the affirmative duty of the Forest Service to conserve the Humpback Whale

The Humpback whale is an inhabitant of the coastal waterways of the Tongass NF and has been listed as endangered under the ESA since 1965. This whale is of particular concern because unlike other whales in the region, it uses shallow waters close to shore and could be impacted by

increased boat traffic and habitat pollution from timber harvest. It has been shown that humpback whales are very likely to alter their behavior in response to approaching vessels. In fact, one study has shown that 80% of Humpback whales significantly changed behavior patterns when in the vicinity of a ship. Furthermore, it has been shown that these encounters may have population level effects due to increased energy expenditure and reduced lactation of females. As stated for other species, the agency not only has a duty to protect a listed species, but also to aid in its recovery so that ESA listing is no longer necessary. Indeed, increased logging and vessel traffic will violate the agency's affirmative duty to conserve.

Given historic economic losses, further timber harvesting in the Tongass is not viable and removing important roadless area protections for the sake of logging would be arbitrary and capricious

Over the past twenty years, the Forest Service has lost about \$30 million dollars annually from logging in the Tongass NF. In total, this amounts to roughly \$600 million. These below cost sales do not help the nation as a whole and provide little benefit to communities in the region. Timber harvest is not the booming industry it has been in the past. Accounting for only 1% of employment in the region, this industry is much smaller than salmon harvest, which accounts for 8% of jobs in the region and tourism, which supports 17%, respectively.

An added expense to road construction will be maintenance of the roads and, consequently, bridges or culverts where the road crosses a stream. Of the 3,687 stream crossings in the Tongass NF, about 33% did not meet Alaska's fish passage standards. Between 1998 and 2017, the Forest Service removed or provided maintenance on about 604 stream crossings that did not meet fish passage standards. In total, the cost associated with this, passed on to American taxpayers, was over \$18 million.

The proposed alternative will lead to increased roadbuilding that penetrate deeper into the forest. This will undoubtedly increase the expense to the Forest Service to achieve increased timber harvest, which will be passed down to the taxpayer. In fact, from 1999 to 2018 fully 40% of the total expense of the agency in the Tongass was attributed to road construction. These significant financial costs coupled with ecological costs make it impossible for the USFS to explain a rational connection between the facts found and the proposed alternative. Furthermore, we believe the agency's rationale for adopting Alternative 6 "is so implausible that it could not be ascribed to a difference in view or the product of agency expertise" and is, therefore, arbitrary and capricious under Motor Vehicle Manufacturers Ass'n v. State Farm Insurance Co.

The Forest Service has not reasonably considered the negative effects of the inevitable habitat fragmentation and loss of land connectivity

Destruction and degradation of natural ecosystems is one of the primary drivers for global biodiversity loss. Fragmentation, the division of habitat into smaller and more isolated fragments separated by a matrix of human-transformed land cover, results in long-term degrading effect on

biodiversity and ecosystem function. Many of the effects of fragmentation transpire over the long term, including the extinction of species and the introduction of new invasive species, but ultimately can be difficult to predict. Fragmentation experiments—some of the largest and longest-running experiments in ecology—provide clear evidence of strong and typically degrading impacts of habitat fragmentation on biodiversity and ecological processes. This empirical data showing environmental degradation, in combination with the uncertainty in predicting the long-term effects of fragmentation in a particular ecosystem, should encourage us to err on the side of caution when making policy decisions that concern some of our last remaining wilderness. The Tongass National Forest is the largest intact temperate rainforest in the world, and fortunately has been largely protected under the 2001 Roadless rule. Removing this protection for no good reason will destroy the extensive land connectivity that is already in place.

Increased timber harvest and entry into key watersheds puts the ecological resources of the region at risk

All alternatives presented in the draft environmental impact statement ("DEIS") will result in an increase in fragmentation and loss of land connectivity in the Tongass National Forest, with the exception of Alternative 1 - No Action. Exempting the Tongass NF from the 2001 Roadless Area Conservation Rule would open up the forest to road construction, and thereby logging and timber harvest. Alternatives 2, 3, 4, and 5 would all modify the roadless rule language and affect roadless designations to varying degrees, but Alternative 6 would entirely remove all roadless designations. The DEIS acknowledges that Alternative 6 would result in the development of roads that penetrate deeper into currently roadless areas than the other alternatives and would result in the largest degree of fragmentation. Despite this and the inevitable increase in timber harvest on both Tongass NF lands managed by the USFS and those lands managed by other agencies, the DEIS claims that the impacts would not be greater than what is projected in the current forest plan (p. 3-105). It seems fairly straightforward that increased road construction and timber harvest would increase impact on the environment accordingly. By moving forward with Alternative 6, the USFS fails to 'articulate a rational connection between the facts found and the choice made,' and as such would be acting in a manner that is arbitrary and capricious.

Alternatives 4, 5, and 6 would result in the most fragmentation due to entry into more remote watersheds and roadless areas. Studies have consistently shown that deforestation and timber harvest in watersheds leads to erosion and sedimentation over long periods of time. Further, the best quality of water comes from forested watersheds. For these reasons, along with those discussed earlier regarding salmon populations, protecting the waterways of the Tongass NF from further fragmentation and development is essential to preserve the ecological resources of the region.

Loss of land connectivity poses a great risk to the wildlife and biodiversity in the region

Connectivity between areas of similar habitats and between high and low elevation habitats is important to maintaining well-distributed, viable wildlife populations. Many of the species of concern have been detailed in our analysis above. Both natural and human-caused fragmentation (timber harvest, road building, powerline and facility development) reduces larger contiguous blocks of habitat into smaller patches, which may cause some species populations to become isolated, and therefore may pose a greater risk of local extirpation.

Endemic species occur in isolated populations and can have limited mobility or specific habitat requirements. The Queen Charlotte goshawk (see above) would be most affected by 4, 5, and 6 in terms of fragmentation. Roadless areas are of great value to many species, but particularly the wide-ranging species that require large, undisturbed areas of land. These species are mainly predators, and include the Alexander archipelago wolf, brown bear, and American marten. These species are of particular concern because their numbers are relatively low, they are under harvest pressure, they are sensitive to disturbance, and they range widely. Although each of the alternatives would be similar in terms of overall harvest levels, Alternatives 4, 5, and 6 would result in the largest adverse effects on these species due to greater road lengths, penetration into remote roadless areas, and extensive habitat fragmentation.

As a result of fragmentation, there is an increase in the amount of forest edge habitat and a decrease in the amount of interior old-growth forest habitat, with which many wildlife species are associated. This makes way for an increase in invasive species (see following section for detailed analysis).

The Forest Service is misguided in claiming that the region's geography makes it immune to the effects of further fragmentation

The DEIS claims that the Tongass NF is inherently fragmented due to its island geography, patchy distribution of old growth forest, and mosaic of landscape conditions (p.3-56). The scientific community generally defines fragmentation as a process during which a large expanse of habitat is transformed into a number of patches of a smaller total area, isolated from each other by a matrix of habitats unlike the original. While fragmentation can be a result of natural causes, this generally only includes changes that can be seen on a human time scale, such as lava flows and wildfires. The geography of an area would generally not be considered a natural cause of habitat fragmentation, as the development of islands, as in this case, takes place over a much longer time scale in which species have time to evolve. Most commonly, the term 'fragmentation' refers to anthropogenic fragmentation of pristine habitats, largely as a result of land-use change. The misguided claim that the Tongass NF is inherently fragmented due to its island geography is not a sufficient basis to entirely dismiss the negative impacts that increased fragmentation would have on the ecosystem.

Protecting the Tongass from fragmentation was a primary purpose of the original adoption of the 2001 Roadless Area Conservation Rule

When the 2001 Roadless Area Conservation Rule was originally adopted, the primary reason listed for prohibiting road construction, reconstruction, and timber harvest in inventoried roadless areas was the "likelihood of altering and fragmenting landscapes, resulting in immediate, long-term loss of roadless area values and characteristics." Further, the environmental impact statement prepared in accordance with the development of the 2001 Rule, acknowledged "the heightened sensitivity of the Tongass to further fragmentation." The DEIS does not seem to acknowledge these two points, which were central to the development of the rule in the first place. What changes have there been to the Tongass NF, such that the ecosystem no longer has a heightened sensitivity to further fragmentation? By not taking into consideration the heightened sensitivity of the ecosystem to further fragmentation, the USFS "entirely failed to consider an important aspect of the problem" and as such is acting in a manner that is arbitrary and capricious.

After implementation of the Tongass Roadless Area Conservation Rule in 2001, the United States Department of Agriculture (USDA) adopted a temporary exemption for the Tongass NF in 2003. The Record of Decision (ROD) in 2001 stated, "the long-term ecological benefits to the nation of conserving these inventoried roadless areas outweigh the potential economic loss to [southeast Alaska] communities" related to the 2001 Roadless Rule. The ROD in 2003, however, stated that the agency had serious concerns about how the TRR would adversely impact the economic viability of the region.

The USFS has significantly changed its position on the effects and significance of fragmentation on the Tongass NF, from emphasizing the sensitivity of the Tongass NF to fragmentation in the 2001 rule and EIS to essentially dismissing entirely the impact of fragmentation on the ecosystem in the 2019 DEIS. This change in position by the USFS needs to be explained in order to show a "rational connection between the facts found and the choice made." In 2011, the Alaska District Court overturned the 2003 exemption of the Tongass NF from the 2001 Roadless Rule, primarily on the basis that the USFS failed to provide a reasoned explanation for the change in position and the reversal of the original decision. The court held that the decision to exempt the Tongass NF from the Roadless rule was arbitrary, capricious, and not in accordance with the law under the APA. Without a reasoned explanation and analysis, the same holds true in this effort to reverse the original rule. When an agency's "new policy rests upon factual findings that contradict those which underlay its prior policy ... a reasoned explanation is needed for disregarding facts and circumstances that underlay or were engendered by the prior policy." Further, "an agency changing its course by rescinding a rule is obligated to supply a reasoned analysis for the change beyond that which may be required when an agency does not act in the first instance." The USFS is obligated to provide a reasoned explanation and analysis of this change in position, beyond what is usually required, as the proposed rule serves the purpose of rescinding an existing rule rather than implementing a new one. The USFS has not sufficiently provided an explanation within the DEIS, as illustrated below.

Alternate 6 of the DEIS admits that it will lead to more fragmentation compared to the conditions under the existing Forest Plan: "Under this alternative, roads and timber harvest are likely to

penetrate much farther into currently roadless areas than under Alternatives 1, 2, or 3, resulting in a greater degree of fragmentation" (p.3-66). Nonetheless, the DEIS claims that "the effects due to fragmentation and on the Old-growth Habitat Conservation Strategy are expected to be relatively low and slightly greater than projected under Alternative 1 (existing Forest Plan)." How did the USFS come to this conclusion? How are 'relatively low' and 'slightly greater' defined? These are vague terms that do not provide significant insight into the environmental impacts of Alternative 6, but they seem to fly in the face of what would appear to be significant adverse impacts from fragmentation, erosion, habitat loss that will inevitably result from the road penetration authorized under all of the action alternatives. Even if the difference between Alternatives 1 and 6 is only 'slightly greater,' even slight differences can be of great significance in an ecosystem as sensitive and important as the Tongass NF - the largest temperate rainforest in the world. Was the heightened value of this type of ecosystem, in terms of biodiversity and ecosystem services, taken into account when determining that the difference between Alternative 6 and Alternative 1 is only 'slightly greater'?

The Forest Service has failed to show any new evidence or good reasons to exempt the Tongass NF from the current Roadless Rule in 2019. We also argue that the decision to remove protections violates the arbitrary and capricious standard of the APA as the agency has not shown any "rational connection between the facts found and the choice made" as set forth by *Motor Vehicles Association v. State Farm Insurance*.

The ability of the Tongass NF to sustain its biodiversity and ecosystem services will depend largely upon the total amount and quality of habitat left intact, the degree of connectivity of fragmented areas, and anthropogenic activities (i.e. timber harvest) and perturbations (i.e. climate change). By keeping the Tongass NF under the authority of the 2001 Roadless Area Conservation Rule, we have an opportunity to ensure that the world's largest temperate rainforest remains able to support the species that depend on it. The state of the Tongass NF does not seem to have significantly changed since the adoption of the 2001 Rule, so without further explanation and analysis from the USFS, the issues of fragmentation and landscape connectivity alone are enough to justify that the Tongass NF to remain roadless.

The Forest Service has not reasonably considered the effects of fragmentation on the introduction of invasive



species

As a result of disrupting land connectivity, fragmentation leads to an increase in the amount of forest edge habitat and a decrease in the amount of interior old-growth forest habitat. Many species favor the conditions of interior old-growth forest habitat, and these species tend to be more sensitive or at risk. Fragmentation leads to a decline in the number of these species. On the other hand, the forest edge habitat is generally favored by invasive species, and fragmentation results in a growth in the number of these species along the forest edge. The change in the types of habitat, in combination with the current and predicted milder winter temperatures and longer growing season in Southeast Alaska, are the optimal conditions for the spread and establishment

of invasive plant species in the region. At the time of publication of 2016 FEIS associated with the Forest Plan, there were 23,386 documented observations of 124 different invasive plant species in the Tongass NF. Currently, there are 24,257 known occurrences of 125 invasive plant species known on the Tongass NF. The proposed exemption of the Tongass NF from the 2001 Roadless Area Conservation Rule would increase fragmentation within the forest, and inevitably open up the area to invasive species. Invasive species are harmful to the health of an ecosystem, as they disrupt natural communities and ecological processes. As such, the Forest Service should evaluate how the inevitable increase in invasive species will affect the health of the Tongass NF ecosystem.

#### Executive Order 13112

Executive Order 13112 requires a Federal agency whose actions affect the status of invasive species to identify the action and act accordingly. The proposed rule and exemption of the Tongass NF from the 2001 Roadless Area Conservation Rule would increase the amount of forest edge habitat, and therefore the amount of invasive species. As such, the proposed rule does affect the status of invasive species and the USFS is obligated to do the following:

1. prevent the introduction of invasive species;
2. detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner;
3. monitor invasive species populations accurately and reliably;
4. provide for restoration of native species and habitat conditions in ecosystems that have been invaded;
5. conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species; and
6. promote public education on invasive species and the means to address them.

Further, the agency must not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States, unless the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions.

The DEIS claims that the proposed rule does not include any specific actions that would introduce invasive species and therefore would only address the issue of invasive species if it were relevant in a site-specific environmental analysis in the future (p. 3-135). None of the alternatives presented in the DEIS authorize any site-specific projects or other ground-disturbing activities. The DEIS further claims that each of the alternatives are not expected to differ significantly in regard to their contributions to the introduction and spread of invasive species within the Tongass NF. However, if all of the alternatives other than Alternative 1 (No Action) lead to increased fragmentation, and fragmentation leads to more forest edge habitat and therefore more invasive species, then it would seem that each of the alternatives will affect the

status of invasive species. As Alternative 6 results in the most fragmentation and the greatest increase in forest edge habitat, it should be considered 'likely to promote the spread of invasive species' under Executive Order 13112.

The uSFS should evaluate the potential harm that the increase of invasive species in the Tongass NF would cause, in order to be able to properly weigh the harm against the cost of mitigating that harm, as directed by the Executive Order. At a minimum, the USFS should ensure that all feasible and prudent measures to minimize the risk of harm will be taken in conjunction with the adoption of Alternative 6. The DEIS is silent on what these measures would be. What are the feasible and prudent measures the USFS will take in order to minimize the risk of increase and introduction of invasive species in the Tongass NF? When invasive species inevitably increase, what will the USFS do to respond to this increase and maintain the integrity of the ecosystem? In order to minimize risk of introduction of invasive species, as well as reduce the administrative burden of compliance with Executive Order 13112, we recommend that the USFS refrain from adopting Alternative 6 and instead consider Alternative 1 - No Action.

## Conclusion

The management of our federal public lands is a constant balance between development and conservation. Many lands are suited for natural resource extraction and others are worth more for their intrinsic value. As the population of the world grows, places that are naturally intact are becoming more and more scarce. The Tongass National Forest is our largest National Forest and provides for various species within the forest, communities in close proximity to the forest and to countless visitors. The Forest Service should heed the words of its founder, Theodore Roosevelt, who stated that we need to conserve our wild spaces for our current generation and for those still "within the womb of time."

Thank you,

Nat Paterson

Caroline Fabricius

[Position]