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August 30, 2016

OBJECTION TO PROPOSED AMENDMENT OF TONGASS LAND MANAGEMENT PLAN

INTRODUCTION AND SUMMARY

This objection, filed by the Natural Resources Defense Council (NRDC), is to the Forest Service's Proposed Amendment (the "Amendment"), dated June 30, 2016, to the 2008 Land and Resource Management Plan for the Tongass National Forest (TLMP). The responsible official for the proposal is Earl Stewart, Forest Supervisor of the Tongass National Forest. NRDC objects to adoption of a plan amendment that does not meet the agency's purpose and need, pursuant to a process that did not comport with basic requirements of the National Environmental Policy Act (NEPA). This objection supplements one filed on behalf of NRDC and other groups today by Earthjustice.

Specifically, NRDC here objects that, as detailed below, the proposed amendment would not achieve a transition away from old growth logging in the timeframe directed by the Secretary of Agriculture. Instead, it would actually increase old growth logging above levels that obtained at the time of the Secretary's direction. It would perpetuate that logging well after the timeframe the Secretary stipulated. And it would fail to ensure any transition in any timeframe at all. In fact, in formulating its proposal, the agency, while it identified meeting the Secretary's direction as the need driving its review, considered no alternative that actually met that direction. It also failed to develop, as the Secretary had mandated, alternatives that would even more quickly transition away from the old growth logging that occasions such environmental harm and so much uncertainty for the agency, the industry, and the public.

In addition, NRDC objects to the Forest Service's rejection without substantial basis of a proposal for a rapid, 5-year transition alternative (the "Conservation Alternative") that enjoyed broad support and was guided by detailed supporting analysis from qualified experts. While this proposal directly responded to the Secretary's request for quicker transition scenarios and comes closer than any of the agency's alternatives to achieving the timeframe and results he directed the

agency to accomplish, the Forest Service wrongly refused to develop and study its impacts -- including costs and benefits -- as a full alternative in the Draft Environmental Impact Statement (DEIS) for the Amendment. NRDC, together with the Geos Institute, filed extensive detailed comments on the DEIS in support of the rejected Conservation Alternative. These comments reasonably challenged the agency's asserted rationale for not developing and considering the Conservation Alternative in the DEIS, and offered possible variations on the initial Conservation Alternative proposal in light of subsequently acquired information, to improve its feasibility. Most of NRDC's and Geos' comments are completely unaddressed in the FEIS and where they are addressed, the responses typically consist of generic assertions unsupported by citations or any identified evidentiary basis. NEPA, as well as basic good government and the Forest Service's frequent assertions about involving and collaborating with the public, demand far more of the agency. In addition, the failure to rebut meaningfully NRDC's and Geos' explanation for the feasibility of the Conservation Alternative necessarily means that the agency violated NEPA's mandate to include and study in environmental impact statements (EISs) all reasonable alternatives.

Because the agency's proposal does not meet its own purpose and need, and is not supported by the legally-sufficient NEPA review, adopting it would be unlawful. NRDC requests that it not be adopted at this time, that the agency prioritize rapid development of alternatives that better meet the Secretary's direction and of sufficient supporting data, include a version of the Conservation Alternative that reasonably reflects best current information among those it considers in revised NEPA documentation, and during that revision shift resources away from further old growth sales and into preparation of second growth sales, in keeping with the Secretary's unequivocal conclusion that old growth logging harms the public interest and offers but a poor and uncertain future to the industry, the region, and the forest.

EXPLANATION

I. No Alternative in the FEIS Meets the Agency's Identified Need.

NRDC objects to the proposal because neither it nor any alternative the Forest Service developed for the FEIS meets the need articulated for amending TLMP. The agency's identified need is "direction from USDA Secretary Tom Vilsack outlined in the Secretary's Memorandum 1044-009." FEIS, p. ES-9. That memorandum directed the agency in 2013, to "effectuate th[e] transition over the next 10 to 15 years, so that at the end of this period the vast majority of timber sold by the Tongass will be young growth." USDA Secretary's Memorandum 1044-009 at 1. The "next 10 to 15 years" from 2013 is the period from 2023 to 2028.

The agency's proposal, however, even if it goes as predicted in the FEIS, will overextend that window by five years. Assuming that it becomes effective in early 2017, the proposed plan is projected to transition to a largely second growth program 16 years later, in 2033, five years

after the end date established by Secretary Vilsack. Wholly inconsistently with the urgency evinced in the Secretary's memorandum, it proposes the slowest transition of all action alternatives in the FEIS, as well as the most old growth logging. However, even the other alternatives, which take between 12 and 16 years, would still all fail the Secretary's directive to finish by 2018 at the outside.

Equally fatally, the agency's proposal does not actually require that the transition be completed in any timeframe. The only actual hard limit on old growth logging is the sustained yield ceiling of 248 million board feet (mmbf) per year, a vast expansion over current levels. No element in the proposed forest plan puts any other limit on old growth logging in any time frame. As a result, the transition is simply a prediction in the FEIS; the plan does not "effectuate" it at all. This is true even though the Tongass Advisory Committee recommendations, which the proposed alternative, Alternative 5, is supposed to follow, require a hard stop on timber sale decisions within five years of adoption.

Importantly, the Secretary's direction did not endow the agency with flexibility to extend the transition beyond 2028. The only indications in his Memorandum about a different timeframe have to do with exercising greater speed, not less. He specifically directed the Forest Service that it should "[a]s soon as possible, allocate staff and financial resources to planning young growth projects, ramping down old growth sales." USDA Secretary's Memorandum 1044-009 at 3. He also called for the Forest Service to create the kind of management option presented in the Conservation Alternative, directing the agency to "[d]evelop ... scenarios that effectuate a more rapid transition." Notably, the agency did not develop any such scenarios. The paper it produced in response, instead, developed scenarios that would transition in 10-15 years or longer. See FEIS, p. I-22. In this regard, as well, then, the Forest Service failed to comply with secretarial direction.

II. The Agency Violated NEPA by Failing to Respond to Comment on the DEIS and Failing to Rationally Explain its Rejection of the Conservation Alternative.

A. Failure to Respond to Comments.

The agency's FEIS is legally deficient because it does not respond to reasonable and documented comments timely filed on the DEIS about the need to study the Conservation Alternative. NRDC, together with the Geos Institute, filed detailed comments with substantial expert and other documentary support about the DEIS. In addition to raising concerns about the climate change impacts of the agency's proposal, those comments (the "NRDC/Geos Comments" or simply "Comments") analyzed and substantively rebutted the rationale the Forest Service offered in the DEIS for its failure to develop and study the Conservation Alternative. Surprisingly, the discussion in Chapter 2 purporting to explain rejection of the Conservation Alternative is virtually unchanged from the DEIS. See Exhibit 1, Alternatives Eliminated

Redlines. It reads as though the agency had received none of the extensive documentation and explanation that NRDC and Geos provided it about the need to study the alternative. Moreover, the Response to Comments section in Appendix I of the FEIS that addresses the NRDC/Geos Comments offers almost no substantive rebuttal of those comments, and none at all that is supported by references to – or, as far as NRDC can determine, the content of – the administrative record for the FEIS. Instead of explaining why the DEIS was right or the comments critiquing it were wrong, it just points unresponsively back to the DEIS as though the comments somehow missed it: “In Chapter 2, the DEIS provided detailed rationale for not carrying forward alternatives that would complete the transition soon.” FEIS, p. I-22. In short, the agency’s response to comments on that rationale is principally just to reiterate its original position.

Below, NRDC details specific comments that the agency failed to respond to. However, the failure is so wholesale – without precedent in NRDC extensive experience with Forest Service NEPA processes – that simply comparing the relevant portions of the NRDC/Geos Comments, pp. 4-12, to the corresponding sections of the FEIS (Chapter 2, pp. 2-7 to 2-8, and Appendix I, pp. I-21 to I-23) makes the lack of responsiveness readily apparent. We request that the Reviewing Officer undertake that comparison by reading first the NRDC/Geos Comments and then the FEIS’s purported reply. Nothing more should be required to make plain the violation of the fundamental NEPA requirement that:

An agency preparing a final environmental impact statement shall assess and consider comments both individually and collectively, and shall respond by one or more of the means listed below, stating its response in the final statement.

Possible responses are to: (1) Modify alternatives including the proposed action; (2) Develop and evaluate alternatives not previously given serious consideration by the agency; (3) Supplement, improve, or modify its analyses; (4) Make factual corrections; (5) Explain why the comments do not warrant further agency response, *citing the sources, authorities, or reasons which support the agency's position* and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response.

40 C.F.R. § 1503.4 (emphasis added); *see also Oregon Natural Desert Ass'n v. Bureau of Land Management*, 625 F.3d 1092, 1122 (9th Cir. 2010) (final EIS legally inadequate, because it “did not provide the ‘full and fair discussion’ of the issue required by NEPA, and also did not properly respond to [plaintiff’s] comments”).

1. The FEIS is mistaken that five years is too rapid for retooling.

The FEIS does not respond to criticism of the DEIS’s assertion that five years is too fast for the industry to adapt to second growth. The NRDC/Geos Comments pointed out that this assertion was unsupported in the DEIS, and documented that the industry in other regions had retooled for second growth even faster. Comments, p. 6. They also documented the availability

of drop-in equipment that could be installed in far less time and noted that the Forest Service had committed to finding solutions to revitalize the region economically. *Id.*

The FEIS response is the irrelevant and mistaken claim that “the direction for the Tongass has been clear that the industry will have at least 10-15 years ... to transition.” FEIS, pp. I-21 to I-22. Whether someone has told the industry it can take extra time to transition, however, has no bearing on whether it is impossible to transition more quickly, which was the claim in the DEIS. Moreover, the FEIS is mistaken that Secretary Vilsack gave the industry “at least 10-15 years.” As noted above, his memorandum set 10-15 years as an outside timeframe, and asked for options to transition more quickly. He also directed the Forest Service to help accelerate retooling, telling it to “[d]evelop by December 31, 2013, in collaboration with Rural Development and other stakeholders, a plan for providing financial assistance to re-tool timber processing equipment in Southeast Alaska to assist the industry to efficiently handle young growth timber.” USDA Secretary’s Memorandum 1044-009 at 4.

2. The FEIS is mistaken that five years is too rapid to prepare timber sales.

The FEIS repeats the mistaken assertion in the DEIS that the Conservation Alternative “would not allow the Forest Service sufficient time to offer enough economic old-growth and young-growth volume during the next 10 or more years.” FEIS, p. 2-7. As to old growth timber, the assertion is incoherent, since the agency is planning to offer far more of it in the next ten years than called for in the Conservation Alternative. As to young growth, the NRDC/Geos Comments pointed out that the agency would be preparing sales either way, of young or old growth; the Comments also noted that the design of the Conservation Alternative eased sale preparation by focusing on stands where environmental analysis, unit design, and access were simplified in virtue of past logging, existing roads and log transfer facilities, and low controversy. Comments, p. 6. They also pointed out that restrictions on the age at which second growth could be logged could easily be waived by the Forest Service as part of amending TLMP.

The FEIS offers no response to the Comments’ explanation of why time required for second growth sales preparation was not an obstacle to the Conservation Alternative. Instead, it references concerns about the economic viability and volume of second growth at the age the Conservation Alternative prioritized, concerns that are the focus of other points made in the DEIS and are discussed below. In particular, it discusses at length a “Scenario Analysis” the agency prepared in August, 2013. FEIS, I-22. That analysis, however, does not respond to the NRDC/Geos Comments explanation of why the agency could move faster than 10-15 years in preparing second growth sales. Instead, it concluded, as the FEIS recites, that to bring second growth to market would require one of three strategies: (i) waiting ten years; (ii) securing additional funding; or (iii) opening up second growth currently off limits (the strategy ultimately adopted for the proposed plan). *Id.*

3. The FEIS does not support its assertion that insufficient second growth exists for a five year transition.

The NRDC/Geos Comments responded at length, and with detailed expert documentation, to the DEIS's assertion that the Conservation Alternative would not produce sufficient second growth volume for a transition in five years. Comments, pp. 7-10. Availability of sufficient volume is the crux of a transition predicated on volume-for-volume replacement of old growth with second. As a result, and in the absence of up-to-date cruise data from the Forest Service, NRDC and Geos commissioned two rounds of intensive fieldwork to determine how GIS data about second growth availability matched conditions on the ground. Data thus obtained allowed NRDC and Geos to refine the Conservation Alternative to ensure sufficient volume starting at the end of five years, by focusing on stands close to existing roads that would reach 55-years of age at that time.

The FEIS does not include a documented, effective rebuttal of these refined calculations. Rather than showing that that they were erroneous in some fundamental regard, the FEIS's primary response is reiteration of its prior, poorly-documented assertion that modeling showed insufficient second growth volume. And ignoring the extensive and intensive fieldwork done to determine actual conditions in a high percentage of the older second growth stands in low-controversy areas, the FEIS opines irrelevantly that "GIS analysis ... cannot reflect the great amount of variability in site productivity, growth rates, species composition and access to mill and/or market across the entire forest." FEIS, p. I-23.

The FEIS does critique one facet of the updated version of the Conservation Alternative, but does so ineffectively. An adjustment that the Comments proposed in light of the field data was to include the Sitka and Juneau Ranger Districts in the sourcing area for second growth. The FEIS criticizes this as unrealistic. *Id.* However, NRDC and Geos were following the agency's lead on this. The FEIS includes those districts in its volume calculations for both old and second growth in all its alternatives. The criticism is therefore irrelevant.

In addition to completely ignoring the fresh empirical data indicating that sufficient volume of 55-year old stands would exist after five years, the FEIS responded not at all or inadequately to other related and central points the NRDC/Geos Comments raised. The Comments pointed out that when the Forest Service changed the Conservation Alternative to log only older trees – reducing the acreage available in the near term – its model still projected 20 mmbf annually starting in five years. Comments, p. 8. Necessarily, lowering the age limit would increase that yield, strongly suggesting some error in the agency's assessment of the original Conservation Alternative. The Comments also pointed out that the agency's modeling did not appear to include Farr plot data with superior information about site productivity to the Taylor plots the agency was using as inputs. Comments, p. 10. While the FEIS appears to assert

that the Farr plot data were incorporated in the agency's volume modeling, it provides no documentation of that claim. *See* FEIS, p. I-23.

The FEIS criticizes part of the expert analysis supporting the revised volume numbers presented in the NRDC/Geos Comments, as mischaracterizing the years required for regenerating stands to reach breast height. *Id.* However, apart from simply asserting inconsistency with studies not in the FEIS record, and blandly stating that “we believe this statement is erroneous,” the FEIS does not support its criticism. Moreover, the point is irrelevant to the underlying analysis. The expert was suggesting an explanation for why field work last year showed that trees on sites logged 50-55 years earlier were smaller than expected, while stands logged 40-50 years ago were at or above expected size. For purposes of hastening a transition, however, it is immaterial what caused the reduced volume. What is determinative is whether additional volume is available – and the expert analysis showed it is – and whether the next age cohort down exhibits the same shortfall – which the fieldwork revealed it does not.

4. The FEIS does not support its assertion that 55-year old trees are not economic to log.

A recurring criticism of the Conservation Alternative made in the DEIS and repeated in the FEIS is that it relies on trees so young they have not been shown to be marketable; hence the alternative is repeatedly characterized as not economically viable. This critique ignores the NRDC/Geos Comments and lacks support.

Most centrally, as the Comments pointed out, to the extent that the Forest Service lacks data about the marketability of second growth the Conservation Alternative would prioritize, it also lacks it about the somewhat older second growth that DEIS and FEIS alternatives propose to harvest. *See* Comments, pp. 10-11. While better data about marketability of 55-year old trees would certainly improve analysis of the Conservation Alternative, its absence cannot excuse full consideration of that alternative, if lack of such data for trees 65 or 75 years old is no bar to considering the FEIS alternatives. In response to the Comments' challenge about data supporting its conclusions on marketability, the Forest Service provides no documentation for its assertion that 60 years “is considered to be on the low end of stands that may have economical value.” FEIS, p. I-22. While the Modeling and Analysis Appendix states that rotations were set so that at least 50% of stand volume would come from two-log trees, FEIS, p. B-9, it does not document whether or how that relates to economic viability. *See also* Comments, p. 11 (discussing industry practice of cutting and hauling short logs).

The FEIS also fails to respond to the Comments about the presumptive marketability of 55-year old trees, based on private sales into the export market of just such timber, and industry practices in the Lower 48 states. *See* Comments, p. 10. Notably, a study conducted for the Forest Service and the Juneau Economic Development Council, and in the FEIS record, suggested based on private industry experience with marketability a guideline of 12” quadratic

mean diameter at breast height and 25,000 board feet/acre, measures in line with the stand characteristics generally proposed by the Conservation Alternative. *See* Administrative Record No. 786, p. 22.

The NRDC/Geos Comments also pointed out features of the Conservation Alternative that should improve the relative marketability of the stands it identified. These include lower defect, ready access, and good operability, all field verified, and the increased predictability from focusing on low controversy sites. Comments, p. 10. Nowhere does the FEIS respond to these points.

Finally, the FEIS argues that sales of second growth may not be marketable for failure to meet legal requirements that they be appraised as non-deficit. FEIS, p. I-23. This is predicated on language in Pub.L. 113-291 mandating non-deficit appraisal for second growth sales offered under its terms. However, as NRDC and Geos pointed out in commenting on the DEIS, the Forest Service has independent authority to sell stands that have not reached culmination of mean annual increment. Comments, p. 7. While an annual rider has in recent years also imposed the appraisal criterion on all sales, its renewal is far from certain and the administration could oppose its passage in the future. Studying rapid transition alternatives that rely on its non-passage could inform administration policy moving forward and would be consistent with NEPA direction that an EIS may need to “include reasonable alternatives not within the jurisdiction of the lead agency.” 40 C.F.R. §1502.14(c).

5. The FEIS fails to explain how a high proportion of 1-log trees produces excess slash.

The NRDC/Geos Comments rebutted the assertion in the DEIS that cutting trees before they reached two-log height would generate large volumes of slash that might interfere with regeneration and wildlife habitat values. *Id.*, p. 11. The FEIS repeats this rationale for not examining the Conservation Alternative in detail. FEIS, p. 2-7. Nowhere, however, does the FEIS respond substantively to the Comments on this issue.

6. The FEIS’s definition of industry viability is supported by neither the facts nor the Secretary’s directive.

The Forest Service, without analysis, throughout the DEIS and FEIS uses a logging level of 46 million board feet as needed to sustain a viable timber industry and rejects the Conservation Alternative in part for failure to meet that threshold. *See, e.g.*, FEIS, p. 2-8. As NRDC and Geos pointed out, the industry has been viable for years well under that level. Comments, p. 12. In fact, when Secretary Vilsack issued his memorandum requesting that the industry be kept viable, it had in the previous year cut only 21 mmbf, and in the years on either side about 35 mmbf. Exhibit 2. The FEIS does not respond to NRDC’s comments on this point

and does not include documentation of its facially implausible assertion that below 46 mmbf the industry will not remain viable.

7. The Conservation Alternative is not close to Alternative 4.

Like the DEIS, the FEIS asserts that the Conservation Alternative, once modified by the agency, was too close to Alternative 4 to be worth modeling in its own right. The Conservation Alternative is sharply different from Alternative 4, which would result in continued old growth logging for three times as long and cutting of almost as much old growth as the preferred alternative, Alternative 5. That by modifying the Conservation Alternative the agency could make it resemble Alternative 4 is no reason to omit the actual Conservation Alternative, with or without the modifications that NRDC and Geos were able to propose consistent with its defining characteristics. And as their Comments on the DEIS pointed out, the Forest Service's modifications were made without consultation, despite the proponents' established record of responsiveness to agency requests for clarification. Comments, p. 8.

B. Failure to Include Reasonable Alternative.

The FEIS is also legally deficient because it fails to develop and study the impacts of the Conservation Alternative. As discussed immediately above, while the agency proffered reasons for not including the Conservation Alternative, they are non-rational, non-supported, or both. To the extent that the agency identified any problems modeling the Conservation Alternative, or expected that it would not be a viable option, it wrongly chose to amend the alternative without either consulting with its proponents or maximizing fidelity to the proposal. Then, having failed to seek constructive feedback, when it received it in the form of comments on the DEIS, it rejected the feedback and suggestions without, as discussed above, adequate basis or evidentiary foundation. It therefore had no sufficient basis for concluding that the Conservation Alternative was unreasonable. And its failure to include it in the FEIS thus violated NEPA. See 40 C.F.R. § 1502.14(a) (an EIS shall “[r]igorously explore and objectively evaluate all reasonable alternatives”); *see also Natural Resources Defense Council v. U.S. Forest Service*, 421 F.3d 797, 813 (9th Cir. 2005) (“The existence of a viable but unexamined alternative renders an environmental impact statement inadequate”) (internal quotes and citation omitted).

CONCLUSION

The failures of the FEIS to include alternatives that matched the acknowledged purpose and need for amending TLMP, to provide a reasoned and documented response to the NRDC/Geos Comments on the DEIS, and to include the reasonable Conservation Alternative as initially proposed or with modifications suggested in those comments, render the proposed decision deficient as a policy and legal matter. NRDC requests that the agency not adopt it and, instead, expeditiously cure those defects by developing alternatives that meet or better the Secretary's 2013 timetable for a transition, including an updated version of the Conservation

Alternative, circulate them in a revised FEIS, and adopt a plan that, in keeping with the clear intent of the Secretary, expedites as much as possible, and assures, the desired transition. We request that in the meantime any allocation of resources to timber sale preparation prioritize second growth from the low controversy areas identified in the Conservation Alternative.

Respectfully submitted,



Niel Lawrence
Alaska Director
Natural Resources Defense Council

EXHIBIT 1

Transition to Limited Young-Growth Logging in Five Years

Some comments requested a 5-year transition. In a detailed proposal, a constraint was added that the total initial volume would be 35 MMBF per year and the old-growth portion of that would steadily decrease over five years to a final volume of 3.5 MMBF or less per year. The goal is to increase young-growth volume during this 5-year period to maintain the total volume at 35 MMBF per year. Total volume is not to exceed 35 MMBF per year after the transition and is expected to be made up of 31.5 MMBF of young growth and 3.5 MMBF of old growth. This alternative was modeled using Woodstock ~~and extensively analyzed.~~[\(Walters 1993\), a forest management linear programming modeling system that accommodates binary search and Monte Carlo simulation, and extensively analyzed \(Appendix B\).](#)

To obtain this volume, the alternative would allow old-growth harvest only in Timber Sale Program Adaptive Management Strategy Phase I lands of the 2008 Forest Plan and outside of inventoried roadless areas. Similarly, young-growth harvest would also be allowed only in Phase I lands and only in Development LUDs outside of inventoried roadless areas; no harvest would be permitted in Beach and Estuary Fringe, RMAs, or in any lands identified as low, medium, or high vulnerability karst. This alternative would allow harvest of stands at ages younger than 95 percent of CMAI. In order to obtain sufficient young-growth volume to transition in [five](#) years, ~~this~~ [this](#) alternative harvests stands as young as 55 years of age. As a result, a large number of trees in these stands produce only one log per tree, resulting in higher logging costs and smaller wood producing less revenue. This alternative also prioritizes the young-growth stands that may be harvested to achieve sufficient volume to maintain 35 MMBF per year.

This alternative does not meet the purpose and need for these reasons:

- The phase-down of old growth would result in too rapid of a transition to allow the timber industry time to retool. The purpose and need for this amendment, which relies on the Secretary's July 2013 memo, identifies a 10- to 15-year period for industry to adapt.
- Further, this alternative would not allow the Forest Service sufficient time to offer enough economic old-growth and young-growth volume during the next 10 or more years to maintain the current timber industry (Table 2-1), even if it could adapt that rapidly.
- This alternative is the most restrictive of the alternatives considered in terms of which young-growth stands may be harvested, and even without these restrictions, there is insufficient economic young-growth volume available to produce 31.5 MMBF per year by the end of Year 5.
- Harvesting 55-year-old trees does not appear to be practical or economic in Southeast Alaska. The market for large volumes of young-growth logs has not yet been demonstrated and this is especially true for small logs from 55-year-old stands.
- Recent experience and modeling indicates that the majority of trees in 55-yearold stands will produce only one log per tree. This results in higher logging costs and substantially lower revenues per acre (smaller diameter logs and fewer logs per acre).

- Stands producing only one log per tree, would result in much higher levels of slash (due to the fact that there would be many logs left behind that are almost long enough, but not quite). These slash levels may produce dense slash on the forest floor with negative effects on regeneration, wildlife movement and forage, and/or recreation and scenery.
- Based on current demand projections, a total of 35 MMBF is insufficient to maintain the current industry (Table 2-1).

Therefore, this alternative was eliminated from detailed analysis because it does not meet the purpose and need.

In an attempt to modify this alternative so that it would be economic and meet the purpose and need, the ~~IDT~~interdisciplinary team changed its volume requirements to be the same as the alternatives analyzed in detail (i.e., 46 MMBF per year total volume, emphasizing young growth as much as possible, with old growth declining to a maximum of 5 MMBF per year). In addition, the minimum stand ages for harvest were changed to 65 years for high site and 75 years for lower site stands.

After modeling, it was observed that the volumes produced by this modified alternative were similar to the volumes produced by Alternative 4 (see ~~next~~Alternatives subsection).Considered in Detail section). Alternative 4 is very similar to this modified alternative in terms of its framework; the primary difference is that Alternative 4 allows commercial thinning in the Beach and Estuary Fringe. This small difference was judged to be insufficient to justify inclusion of an additional alternative so the alternative was eliminated from detailed evaluation.

EXHIBIT 2



Cut and Sold (New) - CUTS203F
 Cumulative FY 2010 Q1 to FY 2010 Q4

Report Type: Quarterly
 Filter: All Sales ,All Sales

Page: 3 of 9
 Run Date: 11/07/2013 10:37 AM

Region: R10, Alaska Region Forest: 05 Tongass National Forest

SIZE CLASS INFORMATION

Size Class	Size Class Description	Sold Number of Sales	Sold Volume (MBF)	Sold Volume (CCF)	Sold Value (\$)	Cut Volume (MBF)	Cut Volume (CCF)	Cut Value (\$)
0	Size Class = 0, in TSA backfeed	0	0.00	0.00	0.00	0.00	0.00	0.00
1	Non-convertible	3	0.00	0.00	26.80	0.00	0.00	36.80
3	< \$300	11	130.35	282.40	3,597.37	64.47	131.52	724.58
4	\$301 - \$10,000	15	1,800.31	4,070.01	87,650.91	1,832.90	3,939.12	46,978.83
5	\$10,001 - \$100,000	2	1,011.42	2,268.87	75,166.45	11,658.18	25,497.97	504,417.64
6	\$100,001 - \$1,000,000	0	0.00	0.00	0.00	4,440.64	10,129.27	147,835.11
7	\$1,000,001 - \$5,000,000	2	42,690.25	94,555.31	3,109,254.07	17,413.55	37,872.88	1,197,952.77
8	> \$5,000,000	0	0.00	0.00	0.00	0.00	0.00	0.00
A	**ADDVOL Default Size Class	0	0.00	0.00	0.00	0.00	0.00	0.00
N	**NONTIM Default Size Class	0	0.00	0.00	0.00	0.00	0.00	0.00
P	**PRETIM Default Size Class	0	0.00	0.00	0.00	0.00	0.00	0.00
R	**RPLCMT Default Size Class	0	0.00	0.00	0.00	0.00	0.00	0.00
Forest (1005) Total :		33	45,632.33	101,176.59	3,275,695.60	35,409.74	77,570.76	1,897,945.73



Cut and Sold (New) - CUTS203F
 Cumulative FY 2011 Q1 to FY 2011 Q4

Report Type: Quarterly
 Filter: All Sales ,All Sales

Page: 4 of 10
 Run Date: 11/10/2011 10:29 AM

Region: R10, Alaska Region Forest: 05 Tongass National Forest

SIZE CLASS INFORMATION

Size Class	Size Class Description	Sold Number of Sales	Sold Volume (MBF)	Sold Volume (CCF)	Sold Value (\$)	Cut Volume (MBF)	Cut Volume (CCF)	Cut Value (\$)
0	Size Class = 0, in TSA backfeed	0	0.00	0.00	0.00	0.00	0.00	0.00
1	Non-convertible	1	0.00	0.00	26.00	0.00	0.00	26.00
3	< \$300	21	213.82	458.74	2,280.22	131.44	261.36	3,872.49
4	\$301 - \$10,000	8	665.36	1,315.46	12,115.40	1,166.09	2,683.26	82,895.60
5	\$10,001 - \$100,000	5	2,944.34	6,035.07	221,224.04	2,549.08	5,791.69	120,568.26
6	\$100,001 - \$1,000,000	1	7,557.15	16,994.09	345,085.01	806.62	1,762.59	52,180.12
7	\$1,000,001 - \$5,000,000	1	25,903.85	60,405.24	1,045,874.21	27,984.63	62,742.08	3,070,978.71
8	> \$5,000,000	0	0.00	0.00	0.00	0.00	0.00	0.00
A	**ADDVOL Default Size Class	0	6,905.21	13,810.42	0.00	0.00	0.00	0.00
N	**NONTIM Default Size Class	0	0.00	0.00	0.00	0.00	0.00	0.00
P	**PRETIM Default Size Class	0	0.00	0.00	0.00	0.00	0.00	0.00
Forest (1005) Total :		37	44,189.73	99,019.02	1,626,604.87	32,637.86	73,240.98	3,330,521.18



Cut and Sold (New) - CUTS203F
 Cumulative FY 2012 Q1 to FY 2012 Q4

Report Type: Quarterly
 Filter: All Sales ,All Sales

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Region: R10, Alaska Region Forest: 05 Tongass National Forest

SIZE CLASS INFORMATION

Size Class	Size Class Description	Sold Number of Sales	Sold Volume (MBF)	Sold Volume (CCF)	Sold Value (\$)	Cut Volume (MBF)	Cut Volume (CCF)	Cut Value (\$)
0	Size Class = 0, in TSA backfeed	0	0.00	0.00	0.00	0.00	0.00	0.00
1	Non-convertible	3	0.00	0.00	26.80	0.00	0.00	26.80
3	< \$300	17	147.88	329.52	1,775.97	101.25	210.20	1,573.32
4	\$301 - \$10,000	12	474.61	1,029.01	36,077.48	1,935.78	4,538.58	59,647.17
5	\$10,001 - \$100,000	7	4,009.63	9,325.36	357,722.03	4,450.77	10,051.44	224,506.19
6	\$100,001 - \$1,000,000	1	36,400.75	75,092.36	1,111,204.12	0.00	0.00	5,794.09
7	\$1,000,001 - \$5,000,000	0	0.00	0.00	0.00	14,339.75	32,024.39	1,581,861.72
8	> \$5,000,000	0	0.00	0.00	0.00	0.00	0.00	0.00
A	**ADDVOL Default Size Class	0	11,449.74	22,898.76	0.00	0.00	0.00	0.00
N	**NONTIM Default Size Class	0	0.00	0.00	0.00	0.00	0.00	0.00
P	**PRETIM Default Size Class	0	0.00	0.00	0.00	0.00	0.00	0.00
R	**RPLCMT Default Size Class	0	0.00	0.00	0.00	0.00	0.00	0.00
Forest (1005) Total :		40	52,482.61	108,675.01	1,506,806.40	20,827.55	46,824.61	1,873,409.29



Cut and Sold (New) - CUTS203F
Cumulative FY 2013 Q1 to FY 2013 Q4

Report Type: Quarterly
Filter: All Sales ,All Sales

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Run Date: 11/21/2013 03:31 PM

Region: R10, Alaska Region Forest: 05 Tongass National Forest

SIZE CLASS INFORMATION

Size Class	Size Class Description	Sold Number of Sales	Sold Volume (MBF)	Sold Volume (CCF)	Sold Value (\$)	Cut Volume (MBF)	Cut Volume (CCF)	Cut Value (\$)
0	Size Class = 0, in TSA backfeed	0	0.00	0.00	0.00	0.00	0.00	0.00
1	Non-convertible	1	0.00	0.00	26.00	0.00	0.00	26.00
3	< \$300	20	94.27	209.94	2,993.00	112.91	260.38	3,142.59
4	\$301 - \$10,000	14	387.75	883.57	14,759.96	2,278.24	5,006.84	119,143.92
5	\$10,001 - \$100,000	3	11,232.68	23,418.29	85,132.91	4,748.83	10,057.40	218,690.69
6	\$100,001 - \$1,000,000	1	1,203.94	2,937.61	163,116.16	20,634.20	43,414.34	379,543.79
7	\$1,000,001 - \$5,000,000	0	0.00	0.00	0.00	8,591.49	20,210.38	294,852.18
8	> \$5,000,000	0	0.00	0.00	0.00	0.00	0.00	0.00
A	**ADDVOL Default Size Class	0	2,947.37	5,894.74	0.00	0.00	0.00	0.00
N	**NONTIM Default Size Class	0	0.00	0.00	0.00	0.00	0.00	0.00
P	**PRETIM Default Size Class	0	0.00	0.00	0.00	0.00	0.00	0.00
R	**RPLCMT Default Size Class	0	0.00	0.00	0.00	0.00	0.00	0.00
Forest (1005) Total :		39	15,866.01	33,344.15	266,028.02	36,365.67	78,949.34	1,015,399.17