

CHAPTER 2

ALTERNATIVES CONSIDERED

Introduction

The Notice of Intent for the proposed rule identified two possible methods to conserve **inventoried roadless areas**.¹ These methods (prohibitions and procedures) were incorporated into the alternatives analyzed in the draft environmental impact statement (DEIS). Since publication of the DEIS, the *National Forest System Land and Resource Management Planning Regulations Final Rule (36 CFR 219)* has been issued. Those regulations include procedures that would require the evaluation of inventoried roadless and other **unroaded** areas, identification of areas that warrant further protection, and based upon the results determine the level of protection to be afforded. Therefore, all procedural alternatives described in the DEIS have been removed from this FEIS since a decision on procedures is no longer needed under this rulemaking.

The terms central to understanding the alternatives described in this chapter are defined below. These terms and others used in the analysis are also defined in the glossary.

- **Inventoried roadless areas** - Areas identified in the set of inventoried roadless area maps, contained in the Forest Service Roadless Area Conservation Final Environmental Impact Statement, Volume 2, dated November 2000, which are held at the National headquarters office of the Forest Service, or any subsequent update or revision of those maps.
- **Prohibitions** - Activities that would not be allowed in inventoried roadless areas.
- **Tongass Alternatives** - Alternative methods of applying prohibitions on the Tongass National Forest.

The Forest Service used prohibitions, procedures, and Tongass National Forest alternatives as the framework for the proposed rule in the DEIS. This FEIS incorporates the prohibition and Tongass alternatives described in this chapter to conserve inventoried roadless areas.

Public comments on the Notice of Intent identified a variety of suggestions for alternatives, including different types and combinations of prohibitions, procedures, and **exemptions** (Content Analysis Enterprise Team 2000a). In responding to the DEIS, the public suggested a variety of ways to modify the proposed alternatives (Content Analysis Enterprise Team 2000b). Summaries of the public comments on both the Notice of Intent and DEIS are in the project record, and at the Roadless Area Conservation website (**roadless.fs.fed.us**). The following examples are representative of the range of comments received:

¹ Words and phrases defined in the Glossary are shown in bold typeface the first time they appear in each chapter.

“A consideration of Alternatives that would include and permit new roads, based on forest plan reevaluations, or any other site-specific consideration, would make the proposal more NEPA compliant.” (Notice of Intent Response #39086, Individual, Delta, CO)

“I support the initiative to prohibit all activities that do not maintain or enhance the ecological values of inventoried roadless areas with no exceptions. Special scrutiny should also be given to off road-motorized vehicles, motorboats, airstrips, and other motorized equipment.” (Notice of Intent Response #32239, Individual, Idaho Falls, ID)

“The preferred alternative (#2 in the brochure) does not go far enough in protecting the forests as such. Timber harvest except for stewardship purposes must be eliminated. Thus alternative #3 is preferred (#4 is too extreme). Add to alternative #3 what will be and what won't be allowed. What low impact activities (such as hiking and cross-country skiing) will be allowed? The Tongass National Forest should be included in alternative #3 now.” (DEIS Response #1258, Individual, Sun River, OR)

“I support the Forest Service's roadless initiative and I would very much like to see the preferred alternatives (prohibition alternative #2, procedural alternative B, and Tongass National Forest alternative #T3) adopted into the final rule.” (DEIS Response #1301, Individual, Ewen, MI)

“Alternative 4 is the best alternative listed, but it should also prohibit all future activities which are detrimental to the environment, including all logging, mining, grazing, ORV usage, and commercial development. Absolutely no future road-building or reconstruction should be allowed for any reason.” (DEIS Response #1006, Individual, Richland, WA)

“There is no scientific basis to exclude roadless areas of the Tongass National Forest from the proposed protections. Excluding the Tongass would severely compromise the scientific legitimacy of any national policy on the protection of roadless areas in our national forest system.” (DEIS Response #114, Individual, Millersville, PA)

“I ask the Forest Service to develop and evaluate one or more “access for all” alternatives in the EIS which would allow roads access and the full range of multiple uses of some or all of the roadless areas. The EIS should include a range of alternatives that vary the amount of roadless acres, or the number of roadless areas, for which environmentally sensitive multiple use road construction is allowed.” (DEIS Response #13704, Individual, Hayden, ID)

“I support procedural alternative D because it provides the lowest risk of loss of roadless characteristics and values of all the alternatives.” (DEIS Response #8319, Individual, Bozeman, MT)

The Forest Service has considered all comments received on the Notice of Intent and the DEIS in developing and modifying the alternatives described in the FEIS, and in refining the analysis of their effects. Other alternatives considered but eliminated from detailed study are also addressed in this chapter. The alternatives considered in detail and those eliminated from the detailed study cover all issues relevant to the proposed action.

Alternatives Considered in Detail

The following section describes two sets of alternatives: 1) four alternatives, including a No Action Alternative, that cover the range of possible prohibited activities in inventoried roadless areas consistent with the stated purpose and need; and 2) four alternative ways to apply the prohibitions to the Tongass National Forest. All alternatives were developed in response to the issues identified in Chapter 1.

The Agency also developed a third set of alternatives (procedural Alternatives A through D) in the DEIS. Analysis of comments on the DEIS for the Roadless Rule showed that there was confusion about how the procedural alternatives would be implemented. Public comments on the proposed Planning Regulations and Agency comments on the DEIS for the Roadless Rule also suggested that the procedures for roadless area protection were best suited for the Planning Regulations. Upon review, most of the **roadless characteristics**² identified in the DEIS and proposed Roadless Rule were similarly required by the Planning Regulations. Therefore, the Forest Service determined that the procedures contemplated in the Roadless Rule should be an explicit part of the plan revision process, and addressed them at 36 CFR 219.9(b)(8) of the final Planning Regulations. By making small changes to the Planning Regulations, the procedural alternatives discussed in the DEIS were not needed as a part of the Roadless Rule and were removed from the FEIS.

In the Record of Decision and final rule, the **responsible official** will select one prohibition alternative and one Tongass alternative. If the responsible official chooses to treat the Tongass the same as every other national forest, the official would select the alternative that does not exempt the Tongass (Tongass Not Exempt). If the decision is to treat the Tongass differently than other national forests, one of the other Tongass alternatives would be chosen. Mitigation measures have also been identified that could be used to reduce economic and social impacts of the various alternatives. Any of these mitigation measures could be chosen to mitigate the effects of the selected alternative.

The following provisions would apply to any alternative selected in the Record of Decision and documented in the final rule:

- The rule would not suspend or modify any existing permit, contract, or other legal instrument authorizing the occupancy and use of National Forest System land;
- The rule would not compel the amendment or revision of any land and resource management plan; and
- The rule would not suspend or modify any project or activity decision made before the effective date of the final rule.

² These characteristics are described starting on page 3-3.

These provisions are essential to avoid disruption and confusion among Forest Service officials and the public. First, **road construction** or **reconstruction** associated with ongoing implementation of long-term special use authorizations would not be prohibited. Second, land and resource management plan amendments or revisions would not be required when the final rule becomes effective. Just as development and approval of plans must conform to existing laws and regulations, they can also be superseded by new laws or regulations without going through a redundant “conforming amendment” process. Finally, any project or activity decision signed prior to the effective date of the final rule would be allowed, but not required to proceed.

Local responsible officials’ discretion to initiate land and resource management plan amendments, as deemed necessary, would not be limited by this provision. There may be instances where local officials elect to initiate amendment or revision of forest and grassland plans following final promulgation of this rule. Forest Service officials have several mechanisms that allow for evaluation of forest and grassland plan implementation, including plan-specific monitoring requirements, the amendment and revision process, and, of course, project-level decisionmaking. A determination to amend or revise a land and resource management plan is based on a variety of factors. Forest Supervisors and Regional Foresters have substantial discretion in determining whether or not to initiate plan amendments or revisions.

Exceptions Common to All Action Alternatives

The following **exceptions** were developed in part from public comments received on the Notice of Intent and were used in Alternatives 2 through 4 in the DEIS. These exceptions have been incorporated into the FEIS without substantive change. Based on comments from the U.S. Fish and Wildlife Service and National Marine Fisheries Service, an additional exception has been added to Alternative 4 that would apply if that prohibition alternative is selected.

In all action alternatives, including the Tongass alternatives, the responsible official may authorize road construction or reconstruction in any inventoried roadless area when:

- A road is needed to protect public health and safety in cases of an imminent threat of flood, fire, or other catastrophic event that, without intervention, would cause the loss of life or property;
- A road is needed to conduct a response action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to conduct a natural resource restoration action under CERCLA, Section 311 of the Clean Water Act, or the Oil Pollution Act;
- A road is needed pursuant to reserved or outstanding rights, or as provided for by statute or treaty; or
- Realignment is needed to prevent irreparable resource damage by a **classified road**. The road must be deemed essential for public or private access, natural resource management, or public health and safety, and the resource damage associated with the road cannot be corrected by **maintenance**.

The effects of the prohibition and Tongass alternatives, their combined effects, and potential mitigation measures, are described in Chapter 3. In that analysis and in the comparison tables in this chapter, the above exceptions common to all action alternatives are included in Alternatives 2 through 4. Other exceptions that were developed as social and economic mitigation measures are evaluated as separate components that can be added to each alternative.

Prohibition Alternatives

The following alternatives describe the activities that would not be allowed on approximately 58.5 million acres of inventoried roadless areas (fewer acres, if the Tongass National Forest is not included in the final rule), identified in the Volume 2 maps. As described in Chapter 1, the Agency determined the scope of this analysis should consider national prohibitions against road construction, road reconstruction, and **timber harvest**.

Depending on which alternative is selected, the prohibitions would apply to the entire area within the boundaries of inventoried roadless areas, including portions that contain existing roads.³ Some projects or activities may be allowed within those boundaries, if they qualify under one of the exceptions described previously.

Alternative 1

No Action; No Prohibitions

Alternative 2

*Prohibit Road Construction and
Reconstruction Within Inventoried Roadless Areas*

Alternative 3

*Prohibit Road Construction, Reconstruction,
and Timber Harvest Except for Stewardship
Purposes Within Inventoried Roadless Areas*

Alternative 4

*Prohibit Road Construction, Reconstruction and
All Timber Cutting Within Inventoried Roadless Areas*

Effects of the prohibition alternatives, including their application to the Tongass National Forest, are discussed in the environmental, social, and economic analysis of Chapter 3. Alternatives that include modified circumstances for the Tongass National Forest are described later in this chapter, and their effects are also described in Chapter 3.

³ As described in the DEIS, the prohibition alternatives would have applied to the “unroaded portion of an inventoried roadless area.” Public comments indicated that this concept was confusing and would be difficult to apply and administer consistently. The effects analysis in the DEIS was actually based on application of the prohibitions to entire inventoried roadless areas, since data was not specific to roaded or unroaded portions. Therefore, both the concept and the definition of “unroaded portion” were deleted from the alternatives and analysis in this FEIS.

Alternative 1

No Action; No Prohibitions

No rule prohibiting activities in inventoried roadless areas would be issued. Road construction and reconstruction would continue to be restricted only where land management plan **prescriptions** prohibit such action (approximately 24.2 million acres).⁴ Future proposals for road construction and reconstruction, where allowed by current land management plans, would be considered on a case-by-case basis at the project level with public comment and following the requirements of the National Environmental Policy Act (NEPA). There would be no restrictions on timber harvest under this alternative.

Both **even-aged** and **uneven-aged silviculture** management could be used if needed and allowed by the existing land management plans. **Precommercial thinning, commercial thinning, and regeneration harvest**, as well as the harvest of trees damaged by fire, insects, disease, or other natural **disturbance**, could be used to achieve both even- and uneven-aged forest **stands** when consistent with other resource needs. Logging is likely to include the use of ground-based equipment (for example, tractors and **forwarders**), cable systems, and helicopter.

In addition to meeting NEPA requirements for considering the effects of no action, this alternative also establishes a benchmark against which the effects of the other alternatives are compared.

Alternative 2

Prohibit Road Construction and Reconstruction Within Inventoried Roadless Areas

Road construction and reconstruction, including **temporary road** construction, would be prohibited in inventoried roadless areas upon implementation of the final rule. There would be no restrictions on timber harvest under this alternative. Road reconstruction activities are those that result in **realignment** or **improvement** of an existing road. Examples of prohibited reconstruction activities include, but are not limited to:

- Improving a road to increase its capacity (for example, number of lanes, higher speeds, number of vehicles);
- Improving a road to change the original design function (for example, from fire access to **developed recreation** site access);
- Increasing the traffic-service level (for example, from use by high clearance pickups to low clearance passenger cars); and
- Realigning an existing road to a new location.

⁴ The **land allocations** and **management prescriptions** for these areas could be reconsidered during plan revision.

Both even-aged and uneven-aged silviculture management could be used if needed and allowed by the existing land management plans. Precommercial and commercial thinning, and regeneration harvest, as well as the harvest of trees damaged by fire, insects, disease, or other natural disturbance, could be used to achieve both even- and uneven-aged forest stands when consistent with other resource needs. Logging is likely to include the use of ground-based equipment (for example, tractors and forwarders), cable systems, and helicopter. Road construction and reconstruction in support of these activities would be prohibited in inventoried roadless areas.

Alternative 3

Prohibit Road Construction, Reconstruction, and Timber Harvest Except for Stewardship Purposes Within Inventoried Roadless Areas

Road construction and reconstruction, including temporary road construction, would be prohibited in inventoried roadless areas upon implementation of the final rule. Road reconstruction activities are those that result in realignment or improvement of an existing road. Examples of prohibited reconstruction activities include, but are not limited to:

- Improving a road to increase its capacity (for example, number of lanes, higher speeds, number of vehicles);
- Improving a road to change the original design function (for example, from fire access to developed recreation site access);
- Increasing the traffic-service level (for example, from use by high clearance pickups to low clearance passenger cars); and
- Realigning an existing road to a new location.

Timber harvest would be prohibited except for **stewardship** purposes. Stewardship purpose timber harvest can only be used where it maintains or improves roadless characteristics⁵ and:

- Improves **threatened, endangered, proposed** or **sensitive** species habitat;
- Reduces the risk of uncharacteristically intense fire; or
- Restores ecological structure, function, processes, or composition.

Logging for stewardship purposes is likely to include the use of ground-based equipment (for example, tractors and forwarders), cable systems, and helicopter. Road construction and reconstruction in support of these activities would be prohibited in inventoried roadless areas.

Personal-use harvest, including firewood and Christmas trees, would be permitted. Tree cutting could occur incidental to other management activities, such as **trail** construction or maintenance, removal of hazard trees adjacent to classified roads for public health and safety reasons, fire line construction for **wildland fire suppression** or control of prescribed fire, or survey and maintenance of property boundaries. Mechanical fuel treatments, such as crushing, piling, or limbing, would be permitted.

⁵ These characteristics are described starting on page 3-3.

Alternative 4

Prohibit Road Construction, Reconstruction and All Timber Cutting Within Inventoried Roadless Areas

Road construction and reconstruction, including temporary road construction, would be prohibited in inventoried roadless areas upon implementation of the final rule. Road reconstruction activities are those that result in realignment or improvement of an existing road. Examples of prohibited reconstruction activities include, but are not limited to:

- Improving a road to increase its capacity (for example, number of lanes, higher speeds, number of vehicles);
- Improving a road to change the original design function (for example, from fire access to developed recreation site access);
- Increasing the traffic-service level (for example, from use by high clearance pickups to low clearance passenger cars); and
- Realigning an existing road to a new location.

Timber cutting would be prohibited for both commodity and stewardship purposes. Personal-use harvest, including firewood and Christmas trees, would be permitted. Limited tree cutting could occur incidental to other management activities, such as trail construction or maintenance, hazard tree removal adjacent to classified roads for public health and safety reasons, fire line construction for wildland fire suppression or control of prescribed fire, or survey and maintenance of property boundaries. Mechanical fuel treatments, such as crushing, piling, or limbing, would be permitted, but under this alternative, area-wide tree cutting for fuel reduction purposes would be prohibited. Road construction and reconstruction in support of these activities would be prohibited in inventoried roadless areas.

The responsible official may authorize an exception to the prohibition on timber harvest if it is determined that such harvest is necessary: 1) to prevent degradation or loss of habitat, to the extent that such loss or degradation would increase the risk of extinction for a threatened or endangered species, or for a species that has been proposed for listing as threatened or endangered under the Endangered Species Act; or 2) to promote recovery of a threatened or endangered species. In all cases, agreement that the proposed action is warranted must be obtained from the National Marine Fisheries Service or United States Fish and Wildlife Service, as applicable.

Social and Economic Mitigation Measures

Several new exceptions were developed as the result of public comment on the DEIS. While similar to the exceptions proposed in the DEIS (see p. 2-4 in this chapter), their purpose is to mitigate some potential social and economic impacts the various alternatives may cause. The final rule may or may not include some or all of these mitigation measures. An analysis of their effects is included in Chapter 3.

These exceptions could be applied to any of the action alternatives. The responsible official may authorize road construction or reconstruction in any inventoried roadless area when:

- Reconstruction is needed to implement road safety improvement projects on roads determined to be hazardous on the basis of accident experience or accident potential;
- The Secretary of Agriculture determines that a Federal Aid Highway project authorized pursuant to Title 23 of the United States Code is in the public interest or is consistent with the purposes for which the land was reserved or acquired, and no other feasible alternative exists; or
- A road is needed for prospective mineral leasing activities in inventoried roadless areas.

The first exception was added to allow for the realignment or improvement of roads in situations where the current location or design is unsafe. For example, if there is an unsafe hairpin turn on a road which connects two communities, the road can be realigned to eliminate the unsafe hairpin turn. The second exception was added in response comments regarding the effects this rule could have on State highway projects proposed as part of the National Highway System. Under current regulations, State highway projects on NFS lands have to be approved by the Secretary of Agriculture. This exception maintains the Secretary's discretion as it already exists. The third exception was added in response to comments regarding the impacts the prohibition on road construction may have on future mineral leasing.

In conjunction with, but independent of this rule, the Chief of the Forest Service intends to work with affected States and communities and to pursue funds to help them respond to economic changes that may result from implementation of the final Roadless Rule.

In all action alternatives the Chief of the Forest Service may implement one or more of the following provisions of an economic transition program for communities most affected by changes in management of inventoried roadless areas:

- Provide financial assistance to stimulate **community**-led transition programs and projects in communities most affected by changes in roadless area management;
- Through financial support and action plans, attract public and private interest, both financial and technical, to aid in successfully implementing local transition projects and plans by coordinating with other Federal and State agencies; and
- Assist local, State, Tribal and Federal partners to work with those communities most affected by the final roadless area decision.

Tongass National Forest Alternatives

The following alternatives describe four alternative ways to apply the prohibition alternatives to the Tongass National Forest:

Tongass Not Exempt

Alternative Selected for the Rest of National Forest System Lands Would Apply to the Tongass National Forest

Tongass Exempt

Alternative Selected for the Rest of National Forest System Lands Would Not Apply to the Tongass National Forest

Tongass Deferred

No Alternative Selected at This Time; Determine Whether Road Construction Should be Prohibited in Inventoried Roadless Areas on the Tongass as Part of the 5-Year Plan Review

Tongass Selected Areas

Prohibit Road Construction and Reconstruction in Old Growth, Semi-Remote Recreation, Remote Recreation Land Use Designations, and LUD IIs within Inventoried Roadless Areas on the Tongass

Alternatives T1 and T4 in the DEIS have been renamed (Tongass Exempt and Tongass Selected Areas, respectively), and incorporated without any substantive change into this FEIS. Because of the decision to include the procedures in the final Planning Regulations, the other Tongass alternatives (T2 and T3) have been modified from their original form in the DEIS, combined and redescribed as Tongass Deferred. In addition, an alternative named Tongass Not Exempt has been added to describe the decision maker's option of applying the selected prohibition alternative to the Tongass without any modification. This alternative (Tongass Not Exempt) includes an optional economic mitigation measure that would delay implementation of the prohibition alternatives on the Tongass until 2004.

Tongass Not Exempt

Alternative Selected for the Rest of National Forest System Lands Would Apply to the Tongass National Forest

This alternative is intended to clarify that under prohibition Alternatives 2 through 4, the Tongass would be treated the same as all other forests in the National Forest System. It is not a new alternative, but a clarified and reformatted description of an action that was implied on page 2-10 of the DEIS. Public comment showed some confusion about the intended incremental effects of applying the prohibitions to the Tongass. Under this alternative, the inventoried roadless areas on the Tongass would not be exempt from the prohibitions selected in the final rule.

Also as the result of public comment on the DEIS, the following optional mitigation measure was developed for this alternative. This delay in implementation would allow communities most affected by the final roadless area decision to adjust to changes in management of inventoried roadless areas.

In Tongass Not Exempt, the final rule may include the following social and economic mitigation measure to provide a transition period for communities most affected by changes in management of inventoried roadless areas:

- If this mitigation is included in the final rule, the prohibition alternative selected for inventoried roadless areas on all other NFS lands would be applied to inventoried roadless areas on the Tongass in April 2004.

Tongass Exempt

Alternative Selected for the Rest of National Forest System Lands Would Not Apply to the Tongass National Forest

This alternative was labeled Alternative T1 in the DEIS. Under this alternative, the Tongass National Forest would be exempt from the prohibitions in the final Roadless Rule. Future proposals for road construction and reconstruction would be considered on a case-by-case basis where allowed by the current land management plan, with roadless characteristics and values analyzed at the project level and raised as an issue. Under this alternative, land management would continue as outlined in the April 1999 Record of Decision for the Tongass Land and Resource Management Plan (TLMP).⁶

Tongass Deferred

No Alternative Selected at This Time; Determine Whether Road Construction Should be Prohibited in Inventoried Roadless Areas on the Tongass as Part of the 5-Year Plan Review

This alternative is a modification and combination of Alternatives T2 and T3 in the DEIS. When the decision was made to include procedures for the evaluation of roadless characteristics in the final Planning Regulations, all procedural alternatives were removed from this FEIS. Since the prohibitions included in Tongass Alternatives T2 and T3 were the same, once the procedures were removed, there was no need to maintain them both.

No alternative would be applied on the Tongass National Forest at this time. Rather, the responsible official for the Tongass would determine whether the prohibition against road construction and reconstruction should apply to any or all of the inventoried roadless areas on the Tongass. The responsible official's evaluation would be conducted in association with the 5-year review of the 1999 TLMP (beginning in April 2004).

⁶ The land allocations and management prescriptions for these areas could be reconsidered during plan revision.

In making that determination, the responsible official must consider, among other things, the provisions of Section 101 of the Tongass Timber Reform Act. This section, amending Section 705 of the Alaska National Interest Lands Conservation Act, requires the Agency to seek to provide a supply of timber from the Tongass National Forest that meets market demand, consistent with providing for the multiple use and sustained yield of all renewable resources, subject to appropriations, other applicable laws, and requirements of the National Forest Management Act of 1976.

Roading and timber harvest within inventoried roadless areas would continue as outlined in the 1999 Record of Decision for the TLMP until a determination is made on whether or not to apply the prohibitions as part of the 5-year plan review in 2004.

Tongass Selected Areas

Prohibit Road Construction and Reconstruction in Old Growth, Semi-Remote Recreation, Remote Recreation Land Use Designations, and LUD IIs within Inventoried Roadless Areas on the Tongass

This alternative was labeled Alternative T4 in the DEIS. Under this alternative, road construction and reconstruction activities, including temporary road construction, would be prohibited within inventoried roadless areas in the Old Growth, Semi-Remote Recreation, Remote Recreation, and LUD II⁷ land use designations. Rooding and timber harvest within other inventoried roadless areas would continue as outlined in the 1999 Record of Decision for the TLMP.

This alternative is a modification of Alternative 2, Prohibit Road Construction and Reconstruction Within Inventoried Roadless Areas. A complete description of the goals, objectives, and desired future condition for these four specific land use prescriptions is found in Appendix E of this volume.

⁷ The LUD II designation is assigned to 12 areas that were allocated for special management by the Tongass Timber Reform Act. The desired condition in these areas is that of an extensive and generally unmodified natural environment that retains its original wildland character.

The Preferred Alternative

Based on responses received during the public comment period, the preferred alternative described in the DEIS has been modified, and it now includes:

Alternative 3 with Selected Social and Economic Mitigations

*Prohibit Road Construction, Reconstruction,
and Timber Harvest Except for Stewardship
Purposes Within Inventoried Roadless Areas, While
Excepting Road Reconstruction Needed for Road
Safety Improvements and Federal Aid Highway Projects*

Tongass Not Exempt with Selected Social and Economic Mitigation

*Alternative Selected for the Rest
of National Forest System Lands Would Apply to
the Tongass National Forest Beginning in 2004*

Alternative 3, with Selected Social and Economic Mitigations - Road construction and reconstruction (including temporary road construction) and timber harvest except for stewardship purposes would be prohibited on 49.2 million acres of inventoried roadless area upon implementation of the final rule. This would increase to 58.5 million acres in April 2004 as the alternative is implemented on the Tongass. Stewardship purpose timber harvest could only be used where it maintains or improves roadless characteristics⁸ and:

- Improves threatened, endangered, proposed or sensitive species habitat;
- Reduces the risk of uncharacteristic wildfire effects; or
- Restores ecological structure, function, processes, and composition.

Exceptions to the prohibitions would be allowed in the following circumstances:

The responsible official may authorize road construction or reconstruction in any inventoried roadless area when:

- A road is needed to protect public health and safety in cases of an imminent threat of flood, fire, or other catastrophic event that, without intervention, would cause the loss of life or property;
- A road is needed to conduct a response action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to conduct a natural resource restoration action under CERCLA, section 311 of the Clean Water Act, or the Oil Pollution Act;
- A road is needed pursuant to reserved or outstanding rights, or as provided for by statute or treaty; or
- Realignment is needed to prevent irreparable resource damage by a classified road. The road must be deemed essential for public or private access, natural resource management, or public health and safety, and the resource damage associated with the road cannot be corrected by maintenance.

The following social and economic mitigation measures, in the form of additional exceptions, have also been incorporated.

The responsible official may authorize road construction or reconstruction in any inventoried roadless area when:

- Reconstruction is needed to implement road safety improvement projects on roads determined to be hazardous on the basis of accident experience or accident potential; or
- The Secretary of Agriculture determines that a Federal Aid Highway project authorized pursuant to Title 23 of the United States Code is in the public interest or is consistent with the purposes for which the land was reserved or acquired, and no other feasible alternative exists.

In conjunction with, but independent of this rule, the Chief of the Forest Service intends to work with States and communities and to pursue funds to help them respond to economic changes that may result from implementation of the final Roadless Rule. The Agency's success in securing appropriations for these purposes would have a direct bearing on its ability to actually implement the following programs.

The Chief of the Forest Service may implement one or more of the following provisions of an economic transition program for communities most affected by changes in management of inventoried roadless areas:

- Provide financial assistance to stimulate community-led transition programs and projects in communities most affected by changes in roadless area management;
- Through financial support and action plans, attract public and private interest, both financial and technical, to aid in successfully implementing local transition projects and plans by coordinating with other Federal and State agencies; and
- Assist local, State, Tribal and Federal partners to work with those communities most affected by the final roadless area decision.

Tongass Not Exempt, With Social and Economic Mitigations - The Tongass would be treated the same as all other forests in the National Forest System. Inventoried roadless areas on the Tongass would not be exempt from the final rule. However, as the result of public comment on the DEIS, implementation of the prohibitions would begin in April 2004, as provided below:

In Tongass Not Exempt, the final rule would include the following social and economic mitigation measure to provide a transition period for communities most affected by changes in management of inventoried roadless areas:

- The prohibition alternative selected for inventoried roadless areas on all other NFS lands would be applied to inventoried roadless areas on the Tongass in April 2004.

⁸ These characteristics are listed on pages 3-5 through 3-6 in this EIS.

Following publication of this FEIS, the final Roadless Rule could be the same as this preferred alternative, or it could be a different combination of the alternatives and social and economic mitigation measures. The final decision will be documented in a Record of Decision and final rule, published no sooner than 30 days after the Notice of Availability of the FEIS.

Alternatives Considered but Eliminated from Detailed Study

Federal agencies are required by NEPA to rigorously explore and objectively evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). Public comments received in response to the Notice of Intent did not explicitly describe alternatives based on the issue categories upon which the DEIS was organized (see Chapter 1). The development of alternatives proposed during the scoping process was not a simple task given the wide variety of factors that were considered in detail (prohibitions, procedures, and Tongass National Forest alternatives).

Since the DEIS was released, many additional suggestions have been offered and explored in arriving at the set of alternatives considered in detail. Various components of alternatives, such as mitigation, geographical scope, and exemptions for specific inventoried roadless areas were suggested. Addressing each of these factors individually would create an unmanageably large number of alternatives. Also, some issues raised were outside the scope of conserving and protecting inventoried roadless areas, already represented by one or more of the alternatives considered in detail, or it was determined that they would cause unnecessary environmental harm.

The individual alternatives considered but eliminated have been organized into the following categories: 1) processes other than rulemaking for attaining the purpose of this action, 2) land use designations, 3) prohibitions, 4) geographical definitions, 5) durations for prohibitions and procedures, and 6) exemptions and exceptions.

Alternative Processes Other Than Rulemaking

Alternative methods were suggested for accomplishing the purpose of this proposal other than through the rulemaking process, such as an executive order, the existing land management planning process, the existing project planning process, and legislation.

Executive Order

The President did not elect to establish direction for the conservation of inventoried roadless areas with an executive order. Instead, the President's memorandum to the Secretary of Agriculture (White House 1999) directed development of a rule in a manner

that required full public notice and comment on this policy. In addition, the potential environmental consequences of establishing the use of prohibitions that make up the proposed action are not affected by the particular legal mechanism used. Therefore, an alternative where conservation of inventoried roadless areas would be established by Presidential action is not considered in detail.

Enactment of Legislation

Some comments suggested that the Forest Service develop a legislative proposal alternative. The President did not direct the Agency to prepare such a legislative proposal. On June 18, 1999, 166 Members of Congress requested that the President “take decisive action to protect the remaining roadless areas in our national forests.” The Agency has adequate statutory authority to undertake this initiative without additional legislation. Therefore, a legislative proposal alternative is not considered in detail.

Provide More Local Flexibility

Alternatives were suggested that would allow more flexibility and discretion to local land managers than permitted by a national prohibition. These alternatives are essentially the selection of Prohibition Alternative 1 (No Action), along with the procedures incorporated into the final Planning Regulations. Since these local flexibility alternatives fall within the existing range of alternatives, they were not further developed.

Alternative Land Use Designations

A number of alternatives were considered that would designate inventoried roadless areas to prescriptions such as **Primitive**, and **Semi-primitive** classes of recreation, limited roading, fire access only, fully available for development, Research Natural Areas, National Monuments, and **Wilderness**. The Agency decided not to apply such prescriptions by national rule because such land use designations are best addressed through established land management planning. The purpose of the proposed action is to prevent the alteration and **fragmentation** of natural landscapes by limiting roading and possibly timber harvesting.

Designate Inventoried Roadless Areas As Primitive, Semi-Primitive, Limited Roding, Fire Access Only, Or Research Natural Areas

Designation of inventoried roadless areas as Primitive, back country recreation, or similar designation does not meet the purpose and need of the proposed action and would restrict uses beyond those necessary to meet the purpose and need. The designation of an area does not, in and of itself, limit or address uses that affect alteration and fragmentation of natural landscapes or other goals stated in the need for this proposal.

Designate All Inventoried Roadless Areas as National Monuments

The President has the authority under the Antiquities Act to designate National Monuments. However, the President did not elect to establish direction for conservation of inventoried roadless areas through the designation of National Monuments. The President's memorandum to the Secretary of Agriculture directed the development of roadless area conservation with authorities available to the Secretary. Therefore, designating inventoried roadless areas as National Monuments was dismissed from detailed study.

Recommend All Inventoried Roadless Areas for Wilderness or Other Special Designations

This alternative would recommend to Congress additions of approximately 58.5 million acres to the National Wilderness Preservation System. Prohibited activities would include those specified in the Wilderness Act of 1964 and others as determined by Congress in final legislation.

This alternative was eliminated from detailed consideration because: 1) most of the inventoried roadless areas in question have already been evaluated for Wilderness designation, and 2) the Agency uses the National Forest Management Act planning process as the mechanism for making future recommendations to Congress for Wilderness consideration.

Make All Inventoried Roadless Areas Fully Available for Development

This alternative would allow and encourage development activities, including road construction, in all inventoried roadless areas. It goes beyond the No Action Alternative by allowing full consideration of road construction in project- and forest-level planning, including inventoried roadless areas with land use prescriptions that currently prohibit road construction.

This alternative was eliminated from detailed study because it does not meet the intent of Presidential direction or the stated purpose and need of the proposed action. Additionally, the No Action Alternative would permit consideration of this expanded development alternative during the land management planning process where more site-specific implications of development could be most appropriately addressed.

No Net Loss and Rotation of Roadless Areas

These alternatives would provide that the current amount of roadless acres be maintained. Existing roadless areas could be roaded provided new roadless areas are created through **decommissioning** or **obliteration** of temporary and classified roads. One approach would involve rotating the roaded and unroaded areas on different parts of each national forest in a one-for-one exchange to maintain the same amount of roadless areas. As an example, after timber harvest activities are completed and the area planted with trees, the roads in the area would be closed or decommissioned returning it to a roadless status. Roads would then be allowed for access to timber in other areas. In this manner, roadless areas would be restored, timber harvest from current roadless areas would continue at the current level, and overall road miles on NFS lands would neither increase or decrease.

These various alternatives were eliminated from detailed study, as they could have the same effects as the No Action Alternative. These options do not meet the purpose and need of the proposed action. The use of temporary roads may have the same long lasting and significant ecological effects as permanent roads, such as the introduction of non-native vegetation and degradation of stream channels. Vegetation recovery after timber harvest can take decades to restore **structure** and **composition**. These alternatives would postpone roaded entry to harvest unroaded areas until the vegetation in the neighboring harvested areas was sufficiently recovered to mitigate anticipated effects caused by the new entry. Additionally, no-net-loss programs can lead to complicated systems of monitoring, excessive procedural requirements, and complex definitions and criteria.

Return Treaty-Ceded Lands

There was a request for alternatives to return treaty-ceded lands back to American Indian Tribes to be held in perpetuity as natural ecological and wildlife reserves. This is a legal matter that is outside the scope of this proposal.

Alternative Sets of Prohibitions Applicable To Inventoried Roadless Areas

A list of possible prohibitions could include off-highway vehicles (OHVs), rights-of-way, grazing, special uses, developed recreation, trails, mineral withdrawal, and other uses in addition to road construction, reconstruction, and timber harvesting. Another possibility is the closure or decommissioning of all roads in inventoried roadless areas.

Prohibit More Activities than Road Construction, Reconstruction, and Timber Harvesting

The scope of prohibition actions considered in detail has been limited to road construction, road reconstruction, and timber harvesting because these activities pose disproportionately greater risk of alteration and fragmentation of natural landscapes than other activities as discussed in Chapter 1 and Chapter 3. In addition, these activities are more widespread on the landscape, and information exists for this level of national decision-making.

A suggested alternative to those analyzed in the DEIS would confine OHV use only to roads and trails that have been specifically designated for that purpose. This alternative was considered but not further developed because the limited data on OHV uses in inventoried roadless areas have not demonstrated that this activity poses widespread or disproportionate risks of altering natural landscapes to the same extent as roads and timber harvesting. If there are local problems with current OHV, local managers have existing authorities to regulate this use by orders under 36 CFR 261.50 and 261.53.

Mineral Withdrawal

Withdrawal of inventoried roadless areas from mining was considered but was dismissed from detailed study. The potential impacts to roadless values from mining activities can be severe in localized areas, but are not believed to be significant and widespread on a national level. Furthermore, specific requirements must be followed for mineral withdrawals, which would be difficult to accomplish in a proposal of national scope. However, mineral withdrawals for specific inventoried roadless areas could be proposed in compliance with Department of the Interior rules and procedures.

Restore Roaded Portions of Inventoried Roadless Areas

In addition to alternative sets of prohibitions, an alternative was considered that would go beyond prohibitions and require removal of any existing roads from inventoried roadless areas through closure or decommissioning. Under this alternative, future road construction and reconstruction would be prohibited in all portions of inventoried roadless areas. In addition, all existing roads would be scheduled for closure and removal in a timely manner.

The Agency determined that it would not consider closure and decommissioning of any roads as part of this national proposal. The need to decommission roads will be examined at the local level as part of the roads analysis process described in the proposed Roads Policy. A decision to close all roads would preclude activities that have already been approved, and activities that the Agency has determined are more appropriately addressed at the local level.

Provide Road Construction for Stewardship Harvesting

This alternative would allow road construction and reconstruction, temporary or permanent, for stewardship treatment of vegetation including commercial removal of trees. Except for the Tongass National Forest, the resulting outcome and environmental effects could approach those discussed for the No Action Alternative. The outcomes of the No Action Alternative do not satisfy the stated purpose and need. Therefore, this alternative to permit road construction and reconstruction for stewardship harvesting would also not satisfy the purpose and need and was not considered in detail.

Alternative Geographical Definitions of Unroaded Areas

Public comments suggested applying the rule to other areas in addition to inventoried roadless areas. For example, many people suggested applying the prohibitions to all unroaded areas 1,000 acres or greater in size.

As discussed in Chapter 1, data are unavailable on the extent or location of unroaded areas other than those roadless areas inventoried through current public planning processes. It is not the intent nor is it appropriate that management of areas currently uninventoried be subject to a national prohibition.

Land management planning and other assessments of roadless areas were subject to public comment before inventoried roadless boundaries were established. There is no need to undertake an inventory at the national level, nor to make decisions on delineation of such areas until they have first been subjected to local consideration.

Alternative Durations for Applying Prohibitions

Suggestions were offered during the scoping period and the comment period for the DEIS regarding alternative durations for applying prohibitions. The prohibitions in Alternatives 2 through 4 would remain in effect unless the rule is revised. Other options suggested were a 1-year or 18-month period similar to the Interim Roads Rule. Another suggestion was to issue temporary prohibitions until land management plans are revised or amended to address the management of roadless areas consistent with the purpose and need stated in Chapter 1.

Alternative duration options were not considered as fulfilling the purpose and need for the long-term protection of roadless areas. The No Action Alternative, with the reasonably foreseeable completion of the Roads Policy, would provide a temporary level of protection for roadless areas, and constitutes an optional duration alternative.

The proposed Roads Policy would require a science-based roads analysis for any road construction proposals, thus requiring a closer look at the environmental, social, and economic factors than might have occurred without the Roads Policy. As such, it would provide a level of protection, but not with the same level of certainty as the alternatives described in this FEIS. At best, this assumes completion of the final Roads Policy. Any temporary prohibition, however, would not meet the stated purpose and need.

Alternative Exemptions and Exceptions

There exists an infinite number of potential exemptions and exceptions, including consideration of many specific roadless areas (see Content Analysis Enterprise Team 2000a and 200b). Examples include exempting the Tongass National Forest, other national forests where land management plan revisions are complete, and national forests exempted under the Interim Roads Rule (64 FR 7289). In addition, certain activities could be excepted.

Geographic Area Exemptions

Land management planning, including the Pacific Northwest Forest Plan, the Tongass Forest Plan and other recently revised land management plans, has not specifically addressed the need to protect roadless areas nor responded to the purpose and need described in Chapter 1. Therefore, exempting specific forests, other than the Tongass, or specific areas was not considered justified.

The Tongass National Forest is unique among national forests as discussed in Chapter 1. Because of the economic and social situation on the Tongass National Forest, specific roadless area alternatives are considered in this FEIS.

An alternative was considered that would limit application of the prohibitions to those inventoried roadless areas identified in current land management plans as having an allocation that prohibits road construction and reconstruction, or recommends the area for Wilderness. Under this alternative, the prohibitions would add permanence to what is currently taking place on approximately 24.2 million acres. The Agency determined that this alternative is a subset of Alternative 2 which essentially would have the same effects as the No Action Alternative therefore, it was not developed in detail.

An alternative was considered that would limit application of the prohibitions only to municipal watersheds that supply drinking water. Although this alternative would respond to an important criteria for protecting inventoried roadless areas, limiting the prohibitions to that portion of inventoried roadless areas that provide water to facilities that treat and distribute drinking water would protect only a small number of roadless areas and does not satisfy the purpose and need of the proposed action.

Activity Exceptions

Exceptions to permit road construction or reconstruction for activities not specified by law were considered but dismissed from detailed study. Specifically, considerations were given for hazardous fuel reduction treatments, insect and disease treatments, and **forest health** management. An exception for these activities could lead to widespread road construction in many roadless areas that would be incompatible with the stated purpose and need. Therefore, only exceptions for activities that are limited in scope and could have local significant environmental benefits, respond to legal requirements, or mitigate certain social and economic impacts were considered in detail. Specifically, these are exceptions for road construction and reconstruction in inventoried roadless areas needed to protect public health and safety, respond to CERCLA, comply with treaty, statutory, reserved or outstanding rights, prevent irreparable resource damage, correct unsafe road conditions, accommodate Federal Aid Highway projects, allow mineral leasing activities, and protect or restore Threatened, Endangered, and Proposed species and habitat.

Alternative Exemption for the Tongass

Commenting on the DEIS, an alternative was suggested that would lead to a revision of the 1997 Land Management Plan for the Tongass National Forest (TLMP) and its 1999 Record of Decision. This suggestion was made, in part, on the premise that some of the younger stands removed from the suitable timber base in the 1999 decision could be put back into the suitable timber base and the 200-year rotation plan could be lowered. The Agency believes that it is not feasible to single out a revision of the TLMP through this national rule. These types of alternatives are best left to the Agency's land management planning procedures where specific land capabilities and suitability can be accurately evaluated at the local level.

Comparison of Alternatives

The following tables in this section provide a summary of the environmental consequences described in Chapter 3. They are not intended to be all inclusive. Information in the tables is focused on activities or resources where measurable effects are most likely to occur and where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives. For ease of comparison and greater consistency, outputs and effects in the following tables are displayed as annual averages whenever possible.

Table 2-1 compares the key characteristics of Alternatives 2 through 4 against No Action (Alternative 1) and the Preferred Alternative (Alternative 3 with Selected Mitigation Measures and Tongass Not Exempt with Delayed Implementation). Table 2-2 compares the key characteristics of Tongass Not Exempt (with and without the Delayed Implementation), Tongass Exempt, Tongass Deferred, and Tongass Selected Areas.

The maps and acreage information in this FEIS were revised after publication of the DEIS. These revisions have resulted from: 1) separate identification of all inventoried roadless areas that were previously included within special designated areas, 2) inclusion of updated and approved roadless area inventories associated with land management planning, and 3) cartographic adjustments and corrections to inventoried roadless areas to match NFS lands planning record information. Mainly as a result of items 1 and 2, the total inventoried roadless area acreage increased from 54.3 million acres in the DEIS to 58.5 million acres in the FEIS (Appendix A)⁹.

An additional change was made to end the confusion about the “roaded portions of inventoried roadless areas.” The DEIS estimated that 2.8 million acres of inventoried roadless areas had been roaded during the previous 20 years, and proposed to treat them differently than the “unroaded portions.” Because the Agency believes it would be difficult to identify the “roaded portions” in a manner that would be ecologically meaningful and administratively consistent, the term and concept have been deleted in this FEIS. The selected prohibitions would now apply to the entire area within the boundaries of an inventoried roadless area.

The alternatives described in this FEIS have been retained in comparable form to those displayed in the DEIS. However, because of the acreage changes described above and clarification that the area of applicability for prohibitions includes roaded and unroaded portions of inventoried roadless areas, the estimates of road mileage, timber harvest, and other measures in the following comparison tables also changed.

⁹ This information is found in the project record and is hereby incorporated by reference.

Table 2-1. Comparison of Key Characteristics and Effects by Prohibition Alternative. The effects summarized in this table^A would occur in inventoried roadless areas throughout the entire National Forest System, including the Tongass National Forest.

Issue, Objective, or Measure	Alternative 1 No Action; No Prohibitions	<u>Preferred Alternative</u> Alternative 3 – with Selected Social and Economic Mitigations ^{And} Tongass Not Exempt Beginning in 2004	Alternative 2 Prohibit Road Construction and Reconstruction Within Inventoried Roadless Areas	Alternative 3 Prohibit Road Construction, Reconstruction, and Timber Harvest Except for Stewardship Purposes ^B Within Inventoried Roadless Areas	Alternative 4 Prohibit Road Construction, and All Timber Cutting Within Inventoried Roadless Areas
Inventoried Roadless Areas with Permanent Prohibition on Road Construction and Reconstruction	0 acres	49,178,000 acres until 2004 58,518,000 acres after 2004 ^C , when prohibitions would be implemented on the 9,340,000 acres of inventoried roadless area on the Tongass National Forest.		58,518,000 acres	
Inventoried Roadless Areas with Permanent Prohibition on Commodity-Purpose Timber Harvest	0 acres	49,178,000 acres until 2004 58,518,000 acres after 2004, when prohibitions would be implemented on the 9,340,000 acres of inventoried roadless area on the Tongass National Forest; Stewardship timber harvest not requiring road construction or reconstruction would continue.	0 acres	58,518,000 acres; Stewardship timber harvest not requiring road construction or reconstruction would continue.	58,518,000 acres

^A For ease of comparison and greater consistency, outputs and effects in these tables are displayed as annual averages whenever possible. In Chapter 3 the analysis of effects are often shown as 5 year totals for the period 2000 to 2004. Any discrepancies between these figures and those cited in the text, other tables, or in the database are due to rounding.

^B Stewardship-purpose timber harvest includes timber sales made primarily to help achieve desired ecological conditions or to attain some non-timber resource objective requiring manipulation of the existing vegetation (for example, reducing forest fuels by constructing a fuel break). Refer to the Glossary for a complete definition.

^C When used in reference to the Tongass, 2004 means April 2004, the date of the scheduled plan revision.

Table 2-1. Comparison of Key Characteristics and Effects by Prohibition Alternative. (cont.) The effects summarized in this table would occur in inventoried roadless areas throughout the entire National Forest System, including the Tongass National Forest.

Issue, Objective, or Measure	Alternative 1	<u>Preferred Alternative</u> Alternative 3 – with Selected Social and Economic Mitigations <i>And</i> Tongass Not Exempt Beginning in 2004	Alternative 2	Alternative 3	Alternative 4
Short Term Average Annual Timber Related Road Construction and Reconstruction Planned in Inventoried Roadless Areas From 2000 to 2004	125 miles/year	58 miles/year until 2004 0 miles/year after 2004, when road construction would also be prohibited in inventoried roadless areas on the Tongass National Forest.		0 miles/year	
Short Term Average Annual Non-Timber Related Road Construction and Reconstruction Planned In Inventoried Roadless Areas From 2000 to 2004	107 miles/year	63 miles/year until 2004 60 miles/year after 2004 when road construction would also be prohibited in inventoried roadless areas on the Tongass National Forest; this includes those roads associated with Federal Aid Highway Projects		59 miles/year	
Short Term Average Annual Acreage Planned for Timber Harvest in Inventoried Roadless Areas From 2000 to 2004	18,000 – 19,000 acres/year	7,200 acres/year until 2004 4,400 acres/year after 2004	8,000 acres/year	4,400 acres/year	0 acres/year

Table 2-1. Comparison of Key Characteristics and Effects by Prohibition Alternative. (cont.) The effects summarized in this table would occur in inventoried roadless areas throughout the entire National Forest System, including the Tongass National Forest.

Issue, Objective, or Measure	Alternative 1	<u>Preferred Alternative</u> Alternative 3 – with Selected Social and Economic Mitigations And Tongass Not Exempt Beginning in 2004	Alternative 2	Alternative 3	Alternative 4
Short Term Average Annual Timber Volume Offered ^A on All NFS Lands From 2000 to 2004 (MMBF = million board feet)	3,300 MMBF/year	3,214 MMBF/year until 2004 3,112 MMBF/year after 2004	3,140 MMBF/year	3,112 MMBF/year	3,080 MMBF/year
Short Term Average Annual Timber Volume Offered in Inventoried Roadless Areas From 2000 to 2004 (MMBF = million board feet)	220 MMBF/year	140 MMBF/year until 2004 32 MMBF/year after 2004	60 MMBF/year	32 MMBF/year	0 MMBF/year
Short Term Average Annual Timber Volume Harvested ^B in Inventoried Roadless Areas From 2000 to 2004 (MMBF = million board feet)	147 MMBF/year	98 MMBF/year until 2004 21 MMBF/year after 2004	39 MMBF/year	21 MMBF/year	0 MMBF/year

^A Volume Offered is an estimate of timber volume that will be advertised for sale. Refer to the Glossary for a complete definition.

^B Volume Harvested is an estimate of timber volume that will actually be cut, and is usually less than the volume offered. Refer to the Glossary for a complete definition.

Table 2-1. Comparison of Key Characteristics and Effects by Prohibition Alternative. (cont.) The effects summarized in this table would occur in inventoried roadless areas throughout the entire National Forest System, including the Tongass National Forest.

Issue, Objective, or Measure	Alternative 1	<u>Preferred Alternative</u> Alternative 3 – with Selected Social and Economic Mitigations <i>And</i> Tongass Not Exempt Beginning in 2004	Alternative 2	Alternative 3	Alternative 4
Short Term Average Annual Timber Related Employment From All NFS Timber Harvest From 2000 to 2004 (direct timber-related jobs)	26,957 jobs/year	26,610 jobs/year until 2004 26,227 jobs/year after 2004	26,350 jobs/year	26,227 jobs/year	26,071 jobs/year
Short Term Average Annual Income From All NFS Timber Harvest Related Employment From 2000 to 2004 (direct timber-related job income)	\$1053.2 million/year	\$1037.7 million/year until 2004 \$1020.1 million/year after 2004	\$1025.4 million/year	\$1020.1 million/year	\$1013.7 million/year
Short Term Average Annual Payments to States From All NFS Timber Receipts From 2000 to 2004	\$135.0 million/year	\$133.0 million/year until 2004 \$131.3 million/year after 2004	\$132.0 million/year	\$131.3 million/year	\$130.5 million/year

Table 2-1. Comparison of Key Characteristics and Effects by Prohibition Alternative. (cont.) The effects summarized in this table would occur on inventoried roadless areas throughout the entire National Forest System, including the Tongass National Forest.

Issue, Objective, or Measure	Alternative 1	<u>Preferred Alternative</u> Alternative 3 – with Selected Social and Economic Mitigations <i>And</i> Tongass Not Exempt Beginning in 2004	Alternative 2	Alternative 3	Alternative 4
Agency Costs	Overall agency costs would continue at current levels.	Prohibiting road construction would reduce future maintenance costs for roads that might have been built. Forest health treatments may be more costly in inventoried roadless areas. No additional planning costs would be incurred, although savings in appeals and litigation costs related to inventoried roadless area management are anticipated. Overall agency costs are expected to remain the same.			
Inventoried Roadless Areas At Risk From Uncharacteristic Wildfire Effects	In inventoried roadless areas, 7 million acres are at moderate risk and 4 million acres are at high risk from wildfires that could potentially cause uncharacteristic wildfire effects. A majority of NFS lands with the highest priority for fuel treatment are located outside inventoried roadless areas. Little fuel treatment work is anticipated in inventoried roadless areas unless there is a threat to the wildland urban interface, threatened and endangered species habitat, and readily accessible municipal watersheds. Fire risk, either from wildfires or hazardous fuels, is not a concern on the Tongass National Forest.				Acreage burned by large wildland fires in inventoried roadless areas, as on other NFS lands, is expected to increase slightly in the next 20 years; potential exists for a few more large fires than in Alternatives 1 – 3.
Locatable and Leasable Minerals in Inventoried Roadless Areas	No change from current management policies.	Prohibiting road construction would preclude future leasable mineral exploration and development when reliant on road construction in inventoried roadless areas. Total economic impacts associated with current operations seeking to expand into inventoried roadless areas could directly affect 546 jobs and \$35.8 million per year in associated income beginning sometime after 2003. No change from current management policies for locatable minerals.			

Table 2-1. Comparison of Key Characteristics and Effects by Prohibition Alternative. (cont.) The effects summarized in this table would occur on inventoried roadless areas throughout the entire National Forest System, including the Tongass National Forest.

Issue, Objective, or Measure	Alternative 1	<u>Preferred Alternative</u> Alternative 3 – with Selected Social and Economic Mitigations <i>And</i> Tongass Not Exempt Beginning in 2004	Alternative 2	Alternative 3	Alternative 4
Developed Recreation Opportunities	Development would continue consistent with existing policies and management direction.	Similar to Alternatives 2 – 4, with some new opportunities for developed and road-based recreation in inventoried roadless areas on the Tongass National Forest until 2004 based on existing policies and management direction, and in areas where social and economic mitigation measures are applied	Opportunities for future developed recreation would decline in inventoried roadless areas, which may cause additional impacts on existing developed and road based recreation as overall demand increases.		
Dispersed Recreation Opportunities	Land base for dispersed recreation would be maintained on 24.2 million acres of inventoried roadless areas where land management plan prescriptions prohibit road construction. The remaining 34.3 million acres (59%) would be available for road based and developed recreation based on project and forest level planning.	Similar to Alternatives 2 – 4, with potential for some loss of dispersed recreation opportunities in inventoried roadless areas on the Tongass National Forest until 2004, and in areas where social and economic mitigation measures are applied.	Land base for dispersed recreation would be maintained on all 58.5 million acres of inventoried roadless areas.		

Table 2-1. Comparison of Key Characteristics and Effects by Prohibition Alternative. (cont.) The effects summarized in this table would occur on inventoried roadless areas throughout the entire National Forest System, including the Tongass National Forest.

Issue, Objective, or Measure	Alternative 1	<u>Preferred Alternative</u> Alternative 3 – with Selected Social and Economic Mitigations <i>And</i> Tongass Not Exempt Beginning in 2004	Alternative 2	Alternative 3	Alternative 4
<p>Hunting And Fishing Opportunity In Inventoried Roadless Areas</p>	<p>Quality of opportunities potentially reduced by degradation of habitat for fish and some game species.</p>	<p>Similar to Alternatives 2 – 4, with potential for some reduction in quality of hunting and fishing opportunities in inventoried roadless areas on the Tongass National Forest until 2004, and in areas where social and economic mitigation measures are applied</p>			<p>Maintains current quality of roadless hunting and fishing opportunities. Protects habitat important for some fish and wildlife species, particularly for those sensitive to human disturbance, or those with large home ranges, with associated benefits to hunting and fishing.</p>
<p>Impacts to Designated or Potential Wilderness Near or Adjacent to Inventoried Roadless Areas</p>	<p>Roading in inventoried roadless areas may increase potential risk to adjacent or nearby wilderness values.</p>	<p>Similar to Alternatives 2 – 4; with potential for increased risk to wilderness values in adjacent or nearby Wilderness areas or potential wilderness areas on the Tongass until 2004, and in areas where social and economic mitigation measures are applied</p>			<p>Prohibiting road building in inventoried roadless areas would reduce potential risk to wilderness values in adjacent or nearby designated Wilderness or potential Wilderness areas.</p>

Table 2-1. Comparison of Key Characteristics and Effects by Prohibition Alternative. (cont.) The effects summarized in this table would occur on inventoried roadless areas throughout the entire National Forest System, including the Tongass National Forest.

	Alternative 1	<u>Preferred Alternative</u> Alternative 3 – with Selected Social and Economic Mitigations <i>And</i> Tongass Not Exempt Beginning in 2004	Alternative 2	Alternative 3	Alternative 4
Watershed Resources in Inventoried Roadless Areas	Localized, short-term effects to water quantity and quality where high levels of roading and timber harvest are planned; increased risk of mass wasting and erosion in localized areas.	Similar to Alternative 2; with potential for some increased risk in inventoried roadless areas on the Tongass until 2004 of limited local short-term changes to water quantity and quality, small risk of mass wasting and erosion.	Beneficial effects to those forests where high levels of roading would have occurred; limited benefits elsewhere; limited local short-term changes to water quantity and quality, reduced risk of mass wasting and erosion.	Beneficial effects to those forests where high levels of roading and commodity timber harvest would have occurred; limited benefits elsewhere; limited local short-term changes to water quantity and quality, reduced risk of mass wasting and erosion.	Substantial benefits to those forests where high levels of roading and timber harvest would have occurred; limited benefits elsewhere; water quantity generally near undisturbed levels; water quality, mass wasting, erosion same as Alternative 3 except in areas burned by wildfire.
Air Resources in and Adjacent to Inventoried Roadless Areas	Small risk of gradual air quality deterioration from dust, smoke and emissions associated with road construction, reconstruction, and use.	Lower risk of air quality deterioration from dust, smoke and emissions.			Lower risk of gradual air quality deterioration from dust, smoke and emissions. Increased risk relative to Alternatives 1, 2, and 3 from wildfire smoke due to inability to cut trees to reduce fuels.

Table 2-1. Comparison of Key Characteristics and Effects by Prohibition Alternative. (cont.) The effects summarized in this table would occur on inventoried roadless areas throughout the entire National Forest System, including the Tongass National Forest.

Issue, Objective, or Measure	Alternative 1	<u>Preferred Alternative</u> Alternative 3 – with Selected Social and Economic Mitigations And Tongass Not Exempt Beginning in 2004	Alternative 2	Alternative 3	Alternative 4
Biological Diversity in and Adjacent to Inventoried Roadless Areas	Greatest risk from roading and ground disturbance; highest potential for increased fragmentation, loss of connectivity, introduction of non-native invasive species, habitat degradation and disruption; least acres protected.	Similar to Alternative 3; with potential for some increased risk of human disturbance activities in important fish, wildlife, and plant habitats in inventoried roadless areas on the Tongass until 2004.	Beneficial effects due to reduced level of human disturbance activities and increased conservation of important fish, wildlife, and plant habitats.	Somewhat lower potential for ground disturbance relative to Alternative 2, but effects not substantially different given relatively small difference in projected timber offer volume.	Lowest levels of ground disturbance and habitat disruption, but effects essentially the same as Alternative 3. Limited potential for localized adverse effects from restriction on stewardship harvest, but not detectable at national scale.
Threatened, Endangered, And Proposed (TEP) Plant and Animal Species Protected	Greatest potential loss of habitat and adverse effects to TEP species from highest level of road construction and ground disturbance.	Important benefits to over 220 TEP species with habitat in or affected by inventoried roadless areas. Substantially reduced risk relative to Alternative 1; Slightly reduced risk relative to Alternative 2.	Important benefits to over 220 TEP species with habitat in or affected by inventoried roadless areas. Substantially reduced risk relative to Alternative 1.	Slightly reduced risk relative to Alternative 2, with less ground disturbance and habitat disruption.	Least amount of ground disturbance, but effects essentially the same as Alternatives 2 and 3.
Non-native Invasive Species (NIS)	Greatest risk for increased introduction and establishment of NIS from road construction and use, and other associated ground disturbance.	Slightly less ground disturbance than Alternative 2, but effects not substantially different given relatively small difference in projected timber offer volume.	Substantially reduced relative risk locally with prohibition on road construction.	Slightly less ground disturbance than Alternative 2, but effects not substantially different given relatively small difference in projected timber offer volume.	Slightly less ground disturbance than Alternative 2 and 3; greatest relative degree of protection against future introduction and establishment of NIS.

Table 2-2. Comparison of Key Characteristics and Effects by Tongass National Forest Alternative^A. The effects summarized in this table would occur on inventoried roadless areas throughout the Tongass National Forest.

Issue, Objective, or Measure	Tongass Not Exempt Alternative Selected for Other NFS Lands Applies to the Tongass National Forest Upon Implementation of the Final Rule	Tongass Not Exempt Beginning in 2004 Alternative Selected for Other NFS Lands Applies to the Tongass National Forest in April 2004	Tongass Exempt Alternative Selected for Other NFS Lands Does Not Apply to the Tongass National Forest	Tongass Deferred Alternative Not Selected at This Time; Determine Whether Road Construction Should be Prohibited in Inventoried Roadless Areas as Part of 5 Year Plan Review in 2004	Tongass Selected Areas Prohibit Road Construction and Reconstruction in the Old Growth, Semi-Remote Recreation, Remote Recreation Land Use Designations, and LUD IIs Within Inventoried Roadless Areas on the Tongass National Forest
Inventoried Roadless Areas with Prohibitions	9,340,000 acres	0 acres until 2004 9,340,000 acres after 2004	0 acres	No permanent prohibitions unless and until decided upon during the 5-year plan review	6,989,000 acres
Average Annual Timber Related Road Construction & Reconstruction Planned in Inventoried Roadless Areas From 2000 to 2040	0 miles/year	58 miles/year until 2004; 0 miles/year after 2004	58 miles/year	58 miles/year until 2004; Depending on the decision made during the 5-year plan review in 2004; fewer roads may be constructed or reconstructed after that date.	There would be a short term reduction in road construction due to 13 cases where road segments were planned to cross these 4 LUDs to access timber sales; in the long term, road construction is expected to return to an average annual 58 miles/year

^A For purposes of comparing Tongass alternatives, the effects of applying prohibition Alternative 3 with Selected Mitigations are displayed. The outcomes are nearly identical to those resulting from applying Alternatives 2 and 4.

Table 2-2. Comparison of Key Characteristics and Effects by Tongass National Forest Alternative^A. (cont.) The effects summarized in this table would occur on inventoried roadless areas throughout the Tongass National Forest.

Issue, Objective, or Measure	Tongass Not Exempt	Tongass Not Exempt Beginning in 2004	Tongass Exempt	Tongass Deferred	Tongass Selected Areas
Average Annual Non-Timber Related Road Construction and Reconstruction Planned In Inventoried Roadless Areas From 2000 to 2040	0 miles/year	3 miles/year until 2004 0 miles/year after 2004	3 miles/year	3 miles/year until 2004; Depending on the decision made during the 5-year plan review in 2004; fewer roads may be constructed or reconstructed after that date.	3 miles/year
Average Annual Acreage Planned for Timber Harvest in Inventoried Roadless Areas From 2000 to 2040	0 acres/year	2,800 acres/year until 2004 0 acres/year after 2004	2,800 acres/year	2,800 acres/year until 2004 Depending on the decision made during the 5-year plan review in 2004; fewer acres may be planned for timber harvest after that date.	2,000 acres/year until 2004 2,700 acres/year after 2004
Average Annual Timber Volume Offered by the Tongass From 2000 to 2040 (MMBF = million board feet)	68 MMBF/year	176 MMBF/year until 2004 68 MMBF/year after 2004	176 MMBF/year	176 MMBF/year Depending on the decision made during the 5-year plan review in 2004; fewer acres may be planned for timber harvest after that date.	128 MMBF/year until 2004 166 MMBF/year after 2004
Average Annual Timber Volume Offered by the Tongass in Inventoried Roadless Areas From 2000 to 2040 (MMBF = million board feet)	0 MMBF/year	108 MMBF/year until 2004 0 MMBF/year after 2004	108 MMBF/year	108 MMBF/year Depending on the decision made during the 5-year plan review in 2004; fewer acres may be planned for timber harvest after that date.	60 MMBF/year until 2004 98 MMBF/year after 2004

^A For purposes of comparing Tongass alternatives, the effects of applying prohibition Alternative 3 with Selected Mitigations are displayed. The outcomes are nearly identical to those resulting from applying Alternatives 2 and 4.

Table 2-2. Comparison of Key Characteristics and Effects by Tongass National Forest Alternative^A (cont.) The effects summarized in this table would occur on inventoried roadless areas throughout the Tongass National Forest.

Issue, Objective, or Measure	Tongass Not Exempt	Tongass Not Exempt Beginning in 2004	Tongass Exempt	Tongass Deferred	Tongass Selected Areas
Average Annual Timber Volume Harvested by the Tongass in Inventoried Roadless Areas From 2000 to 2040 (MMBF = million board feet)	0 MMBF/year	77 MMBF/year until 2004 0 MMBF/year after 2004	77 MMBF/year	77 MMBF/year Depending on the decision made during the 5-year plan review in 2004; fewer acres may be planned for timber harvest after that date.	43 MMBF/year until 2004 70 MMBF/year after 2004
Average Annual Tongass Timber Harvest Related Employment (timber-related jobs per year)	242 jobs/year	625 jobs/year until 2004 242 jobs/year after 2004	625 jobs/year	625 jobs/year until 2004 Depending on the decision made during the 5-year plan review in 2004; the timber program may support fewer jobs after that date.	455 jobs/year
Average Annual Income From Tongass Timber Harvest Related Employment (direct timber-related job income)	\$11.0 million/year	\$28.6 million/year until 2004 \$11.0 million/year after 2004	\$28.6 million/year	\$28.6 million/year until 2004 Depending on the decision made during the 5-year plan review in 2004; there may be less annual income from timber harvest related jobs after that date.	\$20.8 million/year
Annual Payments to State (Alaska) from Timber Receipts	\$1.0 million/year	\$2.7 million/year until 2004 \$1.0 million/year after 2004	\$2.7 million/year	\$2.7 million/year until 2004 Depending on the decision made during the 5-year plan review in 2004; there may be a reduction in Payments to State from timber harvest related jobs after that date.	\$2.0 million/year

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Table 2-2. Comparison of Key Characteristics and Effects by Tongass National Forest Alternative^A. (cont.) *The effects summarized in this table would occur on inventoried roadless areas throughout the Tongass National Forest.*

Issue, Objective, or Measure	Tongass Not Exempt	Tongass Not Exempt Beginning in 2004	Tongass Exempt	Tongass Deferred	Tongass Selected Areas
Agency Costs	Greatest reduction of future costs for roads that would have been built, planning costs, and overall timber program costs. Greatest savings in appeals and litigation costs related to inventoried roadless area management are anticipated.	Overall agency costs would continue at current levels until 2004. After 2004, costs would decline in a similar fashion to Tongass Not Exempt.	Overall agency costs would continue at current levels.	Depending on local decisions made during the 5-year plan review in 2004, there may be reduced road maintenance, planning, and appeal/litigation costs after that date.	Will reduce future maintenance costs for roads that would have been built in the 4 LUDs. As a result, reduced planning costs would be incurred; some savings in appeals and litigation costs related to inventoried roadless area management are anticipated.
Dispersed Recreation Opportunities and Scenic Quality	Greatest amount of land conserved for dispersed recreation and high scenic quality.	Some loss of dispersed recreation opportunities and scenic quality in inventoried roadless areas until 2004. After that date, remaining opportunities are likely to be conserved.	Land base available for dispersed recreation activities and maintaining high scenic quality would continue to decline incrementally.	Some loss of dispersed recreation opportunities and scenic quality in inventoried roadless areas until 2004. Depending on local decisions made during the 5-year plan review, remaining opportunities could be conserved.	Dispersed recreation opportunities and high scenic quality in the 4 land use designations would be maintained at current levels.
Developed Recreation Opportunities	Reduced opportunity for some types of recreational development in inventoried roadless areas in all land use designations.	Continued opportunities for developed recreation in inventoried roadless areas consistent with current TLMP until 2004. Reduced opportunities after that date.	Development could continue consistent with current TLMP.	Continued recreation development consistent with current TLMP until 2004. Depending on local decisions made during the 5-year plan review, opportunities for new recreation sites in inventoried roadless areas could be reduced after 2004.	Reduced opportunity for some types of recreational development in the 4 land use designations.

^A For purposes of comparing Tongass alternatives, the effects of applying prohibition Alternative 3 with Selected Mitigations are displayed. The outcomes are nearly identical to those resulting from applying Alternatives 2 and 4.

Table 2-2. Comparison of Key Characteristics and Effects by Tongass National Forest Alternative^A. (cont.) *The effects summarized in this table would occur on inventoried roadless areas throughout the Tongass National Forest.*

Issue, Objective, or Measure	Tongass Not Exempt	Tongass Not Exempt Beginning in 2004	Tongass Exempt	Tongass Deferred	Tongass Selected Areas
<p>Hunting And Fishing Opportunity in Inventoried Roadless Areas</p>	<p>Maintains current level of quality for hunting, fishing, and subsistence opportunities in all land use designations.</p>	<p>Some reduction in quality of hunting, fishing, and subsistence opportunities until 2004. Opportunities that exist in inventoried roadless areas in 2004 are likely to be maintained.</p>	<p>Quality of opportunities are potentially reduced by loss or degradation of habitat that could affect commercial, recreational and subsistence species; among the alternatives, has the greatest potential to increase human competition for subsistence species.</p>	<p>Current levels of quality may be incrementally reduced until 2004. Depending on local decisions made during the 5-year plan review, future reductions in quality may be minimized.</p>	<p>Maintains quality of hunting, fishing, and subsistence opportunities in the 4 LUDs. Opportunities in other land use designations would likely decline incrementally over time.</p>
<p>Locatable and Leasable Minerals in Inventoried Roadless Areas</p>	<p>Prohibiting road construction may reduce exploration and development activity in response to higher access costs. No effect on future mineral leasing reliant on road access.</p>	<p>No effect to current programs until 2004. Prohibition of roading at that time may reduce exploration and development activity. No effect on future mineral leasing reliant on road access.</p>	<p>No effect to current programs. No effect on future mineral leasing reliant on road access.</p>	<p>No effect to current programs until 2004. Depending on local decisions made during the 5-year plan review, there may be reduced exploration and development activity in response to higher access costs. No effect on future mineral leasing reliant on road access.</p>	<p>May be some reduced exploration and development activity in response to higher access costs in the 4 LUDs. No effect on future mineral leasing reliant on road access.</p>
<p>Watershed Resources in Inventoried Roadless Areas</p>	<p>Provides less risk in all land use designations. Provides greatest opportunity to reduce impacts among the alternatives.</p>	<p>Current level of risks exist until 2004. After that date, lower level of risk in all LUDs.</p>	<p>Greatest level of risk relative to all other alternatives from roading and ground disturbance; highest level of risk to water quality, soil loss, mass wasting, soil productivity, and sedimentation.</p>	<p>Current level of risk until 2004. Depending on local decisions made during the 5-year plan review, there could be fewer impacts to water quality, soil loss, mass wasting, sedimentation, and soil productivity after that date.</p>	<p>Provides less risk to watershed resources in 4 LUDs</p>

^A For purposes of comparing Tongass alternatives, the effects of applying prohibition Alternative 3 with Selected Mitigations are displayed. The outcomes are nearly identical to those resulting from applying Alternatives 2 and 4.

Table 2-2. Comparison of Key Characteristics and Effects by Tongass National Forest Alternative^A. (cont.) *The effects summarized in this table would occur on inventoried roadless areas throughout the Tongass National Forest.*

Issue, Objective, or Measure	Tongass Not Exempt	Tongass Not Exempt Beginning in 2004	Tongass Exempt	Tongass Deferred	Tongass Selected Areas
<p>Biological Diversity; Threatened, Endangered, And Proposed (TEP) Plant and Animal Species Protected</p>	<p>Provides less risk in all land use designations. Provides greatest opportunity to reduce impacts among the alternatives.</p>	<p>Current level of risks exist until 2004. After that date, lower level of risk in all LUDs.</p>	<p>Greatest risk relative to all other alternatives from roading and ground disturbance; highest potential for increased fragmentation, loss of connectivity, habitat degradation and disruption; least acres protected.</p>	<p>Current level of risk until 2004. Depending on local decisions made during the 5-year plan review, impacts could be reduced after that date.</p>	<p>Provides less risk to biological diversity in 4 LUDs.</p>
<p>Impacts to Wilderness from Management Decisions on Adjacent Inventoried Roadless Areas</p>	<p>No future threats to wilderness values from potential roading in adjacent or nearby inventoried roadless areas.</p>	<p>Similar to Tongass Exempt until 2004. After that date, no future threats to wilderness values from roading in inventoried roadless areas.</p>	<p>Potential for road building and associated activities in inventoried roadless areas would continue at current level of risk, and could increase threats to wilderness values in adjacent or nearby Wilderness areas and potential wilderness areas.</p>	<p>Similar to Tongass Exempt until 2004. Depending on local decisions made during the 5-year plan review, has a higher likelihood of reducing threats from roading in inventoried roadless areas after that date.</p>	<p>May slightly reduce threat to wilderness values since the 4 LUDs where prohibitions would apply are frequently adjacent to wilderness areas. Reduction is expected to be minimal as road building in portions of these 4 LUDs that are adjacent to wilderness is highly unlikely.</p>

^A For purposes of comparing Tongass alternatives, the effects of applying prohibition Alternative 3 with Selected Mitigations are displayed. The outcomes are nearly identical to those resulting from applying Alternatives 2 and 4.