

RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT
FOR JDSF MANAGEMENT PLAN ALTERNATIVE G

I. EXECUTIVE SUMMARY

1. INTRODUCTION

The California Board of Forestry and Fire Protection (Board) is in the process of considering approval of a comprehensive update to the Jackson Demonstration State Forest (JDSF) Management Plan. The Plan, prepared by the California Department of Forestry and Fire Protection (CAL FIRE), is required pursuant to Public Resources Code (PRC) § 4645 and Board policy 0351.10.

Adoption of the JDSF Management Plan by the Board is a project subject to the California Environmental Quality Act (CEQA)¹ as defined by statute and the CEQA Guidelines². The Board, as lead agency, prepared a Draft Environmental Impact Report (DEIR) pursuant to CEQA for consideration and certification prior to the Board's approval of a final version of a new Management Plan for JDSF. The proposed project in the DEIR was the Department's May 2002 Draft Forest Management Plan (DFMP). The DEIR was circulated for public review and comment, commencing on December 16, 2005 and ending on March 1, 2006.

Subsequent to the close of public review, and in response to the comments received, the Board directed the Department to develop a new alternative that would present a management plan approach that placed a greater emphasis on research. The new alternative would be based on Alternative C1 (May 2002 Draft Forest Management Plan), of the 2005 DEIR, but would incorporate changes to that alternative, as well as certain aspects of other alternatives described in the DEIR. Further Board direction was that the new alternative should address public concerns, and take advantage of the experiences on other research and demonstration forests. The Board discussed the development of these modifications on an ongoing basis during regular Board meetings during the last half of 2006 and into early 2007. These Board discussions were formally noticed as agenda items and opportunity for public comment was provided. During this period, the Board's JDSF Committee also met several times to discuss these changes. In February 2007, the Board directed staff to prepare this CEQA recirculation document for Alternative G.

Alternative G reflects the substantive management and process provisions that were directed by the Board. The Board's JDSF Committee has reported to the Board that the Committee believes Alternative G and its modifications of Alternative C1 merit consideration as management direction for the Forest.

Provisions of Alternative G are documented and analyzed for their potential environmental impacts in this recirculation document. In accordance with CCR §15088.5 the Board is recirculating the Draft EIR for additional public and agency review and comment. This recirculated draft EIR (RDEIR) reflects the Board's independent judgment as lead agency, pursuant to CCR §15084(e).

¹ Public Resources Code § 21000 et seq.

² Title 14, California Code of Regulations [CCR] § 15000 et seq.

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This Executive Summary section is intended to set forth the actions and their impacts that would occur under Alternative G and assist decision-makers and the public in understanding EIR conclusions with respect to the proposed action.³ In addition, this summary, and the RDEIR itself, will describe the changes in management that would occur with implementation of Alternative G as compared with management under Alternative C1 (Proposed Project).

Comments received during the public review period will be considered by the Board only where they address the new information pertaining to Alternative G found in the RDEIR (CCR § 15088.5(f)(3)). The final EIR, once certified by the Board, will respond to the RDEIR comments as well as the earlier comments submitted on the 2005 DEIR.

This RDEIR is not intended to stand alone but must be read in concert with the 2005 DEIR. The 2005 DEIR document is available in several ways:

- on line at: http://www.fire.ca.gov/rsrc-mgt_jackson_deir_2005.php;
- on CD upon request to the Board of Forestry and Fire Protection (916-653-8007 or board.public.comment@fire.ca.gov);
- during normal business hours at the following State offices:

Board of Forestry and Fire
Protection
1416 9th Street, Room 1506-14
Sacramento, CA 95814
(916) 653-8007

CAL FIRE JDSF Headquarters
802 North Main Street
Ft. Bragg, CA 95437
(707) 964-5674

CAL FIRE Mendocino Unit Headquarters
17501 N. Highway 101
Willits, CA 95490
(707) 459-7452

CAL FIRE Coast Region Office
135 Ridgway Avenue
Santa Rosa, CA 95401
(707) 576- 2275

- libraries in the North Coast region and major libraries elsewhere in the state;
- for purchase at the following commercial copying services:

³ Title 14 CCR § 15123.

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The May 2002 DFMP that forms the basis for Alternative C1 is available in several ways:

- on line at: http://www.fire.ca.gov/rsrc-mgt_jackson_mgtplan.php
- on CD upon request to the Department of Forestry and Fire Protection (916-653-5305 or sherry.habon@fire.ca.gov);
- the same State agency offices as listed above;
- libraries in the North Coast region and major libraries elsewhere in the state.

2. DESCRIPTION OF ALTERNATIVE G

Alternative G provides a change in the direction for the management of JDSF as compared with Alternative C1 in the earlier DFMP, and differs in certain ways from the other alternatives presented in the DEIR as well. The Board, in developing Alternative G, chose to rewrite and reprioritize the DFMP's goals as well as change certain management practices. The revised Goals, and the related Objectives, are detailed in Appendix A. These newly defined Goals, in part, serve as the basis for Alternative G in this RDEIR. Changes to the Goals made in Alternative G are highlighted below:

Goal #1 - RESEARCH AND DEMONSTRATION: Improve the amount and quality of information concerning economic forest ~~management~~ and timber management, forest ecosystem processes, watershed processes, performance of forest protection measures, that is available to the general public, ~~small~~ forest landowners, resource professionals, timber operators, ~~and~~ the timber industry, and researchers.

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Goal #2 – [Goal # 4 in Alternative C1 (2002 DFMP)] FOREST RESTORATION: Work towards achieving a balanced mix of forest structures and attributes in order to enhance active restoration by managing the Forest to promote and enhance forest health and productivity.

Goal #3 - WATERSHED AND ECOLOGICAL PROCESSES: Promote and maintain the health, sustainability, ecological processes, and biological diversity of the forest and watersheds during the conduct of all land management activities.

Goal #4 – [Goal #2 in Alternative C1 (2002 DFMP)] TIMBER MANAGEMENT: Manage the forest on the sustained yield principle, defined as management which will achieve continuous high yields of timber production that contribute to local employment and tax revenue, consistent with environmental constraints related to watershed, wildlife, fisheries, and aesthetic and recreational enjoyment and constraints related to providing a diverse, dynamic matrix of forest habitats and seral stages for researchers.

Goal #5 - RECREATION and AESTHETIC ENJOYMENT: Plan for and provide enhanced levels of low impact recreational opportunities that are compatible with forest management objectives and healthy ecological processes, ~~and~~ that are consistent with historic recreational use characteristics, and that allow for engagement of recreation user groups.

Goal #6 – INFORMATION, & PLANNING, AND STAFFING: Develop, maintain, and update management plans and other planning documents and processes ~~and keep them current.~~ Manage and support the information needs and staffing needs of all State Forest programs. Communicate with the public regarding management of the Forest.

Goal #7 - PROTECTION: Protect the forest from damage and preserve the peace within.

Goal #8 - MINOR FOREST PRODUCTS: Maintain a program that provides an opportunity for the public and small businesses to purchase minor forest products.

Goal #9 - PROPERTY CONFIGURATION: Improve the boundary layout of the State Forest to facilitate management logistics and increase ~~research~~ demonstration and ~~demonstration~~ research opportunities.

In addition to the changes to the DFMP's Goals the Board directed consideration of numerous specific changes to the forest management that could occur at JDSF, providing the basis for Alternative G. Alternative G is primarily based upon Alternative C1, with a melding of various provisions from Alternatives C2, D, E, and F of the 2005 DEIR, as noted below. Each modification of Alternative C1 reflects either the application of a higher level of environmental protection or an increase in the ability to conduct research on and demonstrate the various aspects of forest management consistent with the direction provided in the revised Goals and Objectives. Summarized below are the primary modifications to Alternative C1 that are reflected in Alternative G in this RDEIR:

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- Creation of a contiguous 6,803-acre corridor called the “Older Forest Structure Zone,” extending across JDSF from west to east and north to south, composed primarily of reserved Old Growth Groves (369 acres), Late Seral Development Areas (694 acres), and older forest development areas (5,719 acres). This area will produce structural characteristics of older forest, which include large trees, snags, down logs, and a high level of structural diversity. (Alts. D, E & F).
- The designation of 1,459 acres of additional area devoted to development of late-seral forest habitat primarily for the benefit of the marbled murrelet. (Alts. C2, D, E & F).
- Reductions in the potential extent of the Forest area available for forms of even-aged management (from 29% to less than 26%) and application of restrictions on the acres of even-aged management that may be conducted during each decade (Alts. D, E & F).
- Designation of long-term forest structure goals (Alts. D & F)
- Reduced average annual harvest from 31 million board feet of timber per year to approximately 20 million board feet per year during the term of the management plan.
- Further limitations on the use of herbicides to control competing native vegetation in harvest units and along roads (Alts. D, E & F)
- Increased buffering of roads or trails (Alts. D, E & F).
- Establishment of two major demonstration, experiment, and education areas (consistent with new Goals).
- Establishment of three riparian restoration demonstration areas.
- Provisions to utilize advisory entities to consider the management of JDSF and to advise the Department and the Board concerning the long-term management.
- Establishment of interim harvest limitations, expected to remain in place for a one- to three-year period, while advisory entities consider the JDSF management plan and make recommendations to the Department and the Board for possible modifications of the management plan, including forest structure goals and usage of silvicultural systems such as even-aged and uneven-aged management.
- Creation of a large tree overlay to guide future consideration of old forest development.

More detail on the changes that Alternative G makes to Alternative C1 are discussed in the Alternative G Description in the Alternatives (section II) and the Resource Analysis sections (sections III and IV) of this document.

This document identifies and addresses significant impacts which may result from adoption of Alternative G as the JDSF management plan, and considers whether mitigations might be necessary to reduce them to “less than significant” levels through changes (mitigations) recommended for incorporation into the Management Plan, or through other mitigations required as part of Plan approval and/or subsequent implementing actions such as individual timber harvesting plans (THPs).

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3. ALTERNATIVES CONSIDERED

The 2005 DEIR examined seven alternatives, including Alternative C1 (the May 2002 DFMP) which was the proposed project in that document. In this RDEIR the Board is considering an eighth alternative, Alternative G, and analyzing changes that it would make to Alternative C1 for potential environmental impacts. The purpose of this RDEIR, in conjunction with the 2005 DEIR and as required by CEQA, is full disclosure and analysis of the potential environmental impacts of Alternative G.

Following review of this RDEIR, further review of the 2005 DEIR, and review of the comments received on both documents, the Board will select the final management strategy for JDSF, which may be the proposed project, one of the other Alternatives, or a combination of elements of some or all of the Alternatives considered. Whichever choice the Board makes for management direction on JDSF, the Final EIR must adequately address all potential environmental impacts of the Final Management Plan approved by the Board.

Jointly, the DEIR and the RDEIR examine the following alternatives (see section II for more detail). Table I.1, found at the end of this chapter, summarizes, for all eight of the alternatives, the identified potentially significant impacts and the proposed mitigations. Table I.2 provides a similar summary for cumulative environmental impacts.

Alternative A No Direct Management Activity - No Project

Alternative "A" describes the effects of only minimal maintenance and protection of JDSF lands. There would be no harvest of timber. Road maintenance would be limited to that necessary to maintain public access. Stand structure would change more slowly than in an active management strategy. The demonstration value of this alternative is limited due to its passive nature. The primary land uses on JDSF would be public recreation and monitoring or study of natural environmental processes.

Alternative A is based on management direction that is not consistent with the current Public Resources Code or Board policy. Thus, absent changes to those legal mandates, it is not a feasible alternative.

Alternative B Management Consistent with 1983 Management Plan - No Project

Alternative B describes JDSF maintaining the level of forest management demonstration, timber production, recreational development, and environmental protection consistent with the 1983 Management Plan. It includes an annual timber harvest set close to growth and conservative harvesting practices that meet or exceed the requirements of the FPRs. This alternative includes protection of listed species and recruitment of recovery habitat for listed species as opportunities arise. A demonstration program is included that explores basic forest processes. This alternative provides a moderate level of wildlife protection emphasis, with a low level of recreation facility development.

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**Alternative C1 Management Consistent with the May 2002 Draft Management Plan
(Note: This is the Proposed Project alternative in the 2005 DEIR)**

Alternative C1 describes a timber management program based on determining and working towards a long-term desired future habitat, watershed, and growing stock condition. This alternative has a conservation-oriented approach to management of wildlife and aquatic resources on a watershed basis. With limited exception, clearcutting is permitted only for research purposes. Existing old growth stands and trees would be protected from harvest. Late seral forest would be recruited in riparian zones. Use of watershed information and evaluation techniques is applied in the development and management of projects. A road management plan is incorporated to reduce sedimentation. Demonstration capabilities will be enhanced. The alternative proposes a survey of recreation users, planning for a potential increase in recreation facilities, and recreational corridors adjacent to primary recreational sites. Management within the recreational corridors will emphasize demonstration values and aesthetics.

Alternative C2 Management Consistent with the November 2002 Management Plan

This alternative is similar to C1, with the addition of (1) greater emphasis on the development of late seral forest, including the designation of habitat for marbled murrelet primarily in the vicinity of upper Russian Gulch, lower Big River, and upper Thompson Gulch; (2) additional protection for snags, large woody debris retention, and large woody debris recruitment; (3) increased level of review, analysis, and mitigation provided in planning for individual timber harvest activities and even-aged timber harvest proposals.

Alternative D Management with an All-Age Emphasis (Citizen Advisory Committee)

This alternative is developed from recommendations of a former seventeen-member JDSF Citizen Advisory Committee. The primary goal for management of JDSF would be conversion of the entire forest into an all-aged forest. There would be no harvest of old-growth trees. There would be no clearcutting, and other even-age regeneration methods would be used only for limited demonstration purposes. No herbicides would be used. Recreation would be emphasized, including increasing the number of hiking trails and campsites. Timber harvesting would be compatible with the recreation uses. Demonstration and research would emphasize management alternatives for single-tree selection and other all-aged silvicultural methods for small landowners. Hardwood management and use would be another demonstration emphasis.

This alternative represents a low to moderate level of timber production with specific management constraints, a high level of watershed protection, and a moderate to high level of recreational development.

Alternative E Management with a Late Seral Emphasis

This alternative includes an emphasis on development of late seral forests across the landscape. Restoration of the natural forest ecosystem and the protection of water quality, fish, and wildlife habitats at JDSF would be the primary management goals. There would be no even-aged management or harvest of old-growth trees. Timber harvesting, when it occurred, would be designed to advance timber stand development to late seral

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characteristics. Low impact recreational opportunities such as trails and hike-in campsites would be expanded. Research would no longer address questions on intensive forest management. A research, demonstration, and monitoring program would be implemented to gain and distribute knowledge on the restoration of old-growth and late-seral forests, natural watersheds, and associated resources.

Alternative E is based on management direction that, in part, is not consistent with the current Public Resources Code or Board policy. Thus, absent changes to those legal mandates, it is not, taken in whole, a feasible alternative. However, elements of this alternative are useful for how they offer potential ways to mitigate forest management impacts.

Alternative F Management with an Older Forest Emphasis

This alternative was developed in response to a bill considered in the state legislature during the 2003-2004 session (SB 1648, Chesbro) and to detailed comments submitted by the Sierra Club. Alternative F would provide greater areas of late seral forest than most of the other alternatives. It would create a 3,498-acre Marbled Murrelet Recovery Demonstration Area and require the development of contiguous older forest habitat. Any tree alive since 1850 or earlier would be protected from harvest unless it posed a hazard. Preharvest and postharvest monitoring and publication of results would be required for any experiments involving even-aged management. A new advisory committee and an interagency technical committee would be formed.

Alternative F is based on management direction that, in part, is not consistent with the current Public Resources Code or Board policy. Thus, absent changes to those legal mandates, it is not, taken in whole, a feasible alternative. However, elements of this alternative are useful for how they offer potential ways to mitigate forest management impacts.

Alternative G Management with a Research-Driven Mission

This alternative, developed as a result of public and agency comment and reconsideration of the Board's goals and objectives for managing JDSF, places an increased emphasis on research and reflects to a substantial degree a modification of provisions from Alternative C1, through the melding of various features from Alternatives C2, D, E, and F. Consistent with the direction provided by the Board, these modifications to Alternative C1 reflect either an increase in the ability to demonstrate and study various aspects of forest management or the application of a higher level of environmental protection. In addition to the establishment of a 6,803-acre Older Forest Structure Zone and increased area dedicated to late seral development, this alternative incorporates important roles for advisory entities and establishes interim harvest limitations during up to the first three years of initial implementation of the management plan. During this initial implementation period, the department and the Board will seek further input on management direction from these advisory entities, including long-term forest structure goals for the Forest and silvicultural treatments to be applied (e.g., forms and amounts of even-aged and uneven-aged management).

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4. CONCLUSION

This RDEIR provides analysis of the potentially significant effects of reasonably foreseeable activities that are associated with Alternative G. This alternative is based in large measure upon Alternative C1 with numerous changes derived in part, from comments received during public scoping meetings and during the DEIR comment period, letters from interested citizens, as well as a reconsideration of management goals and objectives for the Forest by the Board.

The 2005 DEIR indicated that Alternative C1 (the Proposed Project in the 2005 DEIR), as mitigated, would not have the potential to result in significant adverse environmental impacts. The analysis here indicates that, for some resource areas, Alternative G would have a lesser potential for environmental impacts than Alternative C1, and in no case would greater impacts occur.

Following review of this RDEIR, further review of the 2005 DEIR, and review of the comments received on both documents, the Board will select the final management strategy for JDSF, which may be the proposed project, one of the other Alternatives, or a combination of elements of some or all of the Alternatives considered.

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AESTHETIC RESOURCES

Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	
*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant after Mitigation (5) Significant–Mitigation Not Feasible						
Impact 1. Even-aged timber harvests would have a substantial adverse effect on a scenic vista.						
Alt. A						With no timber harvesting, the quality of existing scenic vistas will increase over time (beneficial effect). However, there will be a reduction in the number of views over time as vegetation grows in foreground areas and blocks scenic vistas (less than significant adverse effect).
Alt. B						The long-term quantity of scenic vistas would increase but the quality of scenic vistas will degrade where even-aged management is seen. Measures proposed in the DFMP, including buffers around Special Concern Areas, plus the additional mitigation specified in this section, would reduce the impact to less than significant levels. Measures proposed in the DFMP would have to be added as mitigations to alternative B. Contains measures equivalent to alternative C1 plus the mitigation developed for C1. No new mitigation is needed to achieve less than significant impacts. With an emphasis on higher levels of aesthetic consideration, greater focus or sole reliance on uneven-aged management, and Recreation Corridors, these alternatives would have a less than significant impact on scenic vistas throughout the JDSF
Alt. C1 May 2002 DFMP						
Alt. C2 Nov. 2002 Plan						
Alt. D						
Alt. E						
Alt. F						
Alt. G						The establishment of the OFSZ, increased late-seral habitat and increased level of review, analysis, and mitigation for aesthetic concerns in planning for individual timber harvest plans will result in the impacts to scenic vistas being less than significant.
Impact 2. Timber harvests and related activities would substantially degrade the existing visual character or quality of Special Treatment Areas or buffer areas that are identified but not specifically defined in the DFMP.						
Alt. A						With no timber harvesting, the visual character of the Forest at the site level will improve steadily over time.
Alt. B						This alternative's relatively greater reliance on even-aged prescriptions and limited consideration for development of late seral conditions poses a higher potential for degradation of visual character or quality. These impacts could be mitigated using the Special Concern Area approach used in C1, plus Mitigation 2. Alternatively, mitigations would be developed and applied at the individual THP level following standard FPR considerations.
Alt. C1 May 2002 DFMP						Alternative provides many protections for visual quality at this scale, including Special Concern areas and other protections. Mitigation 2 provides additional analysis of aesthetic protection needs at the project level.
Alt. C2 Nov. 2002 Plan						These alternatives would result in some beneficial long-term effects associated with increased late seral, mixed-age, and hardwood management to varying degrees (with alternatives D, E, F, and G superior to alternative C2). All alternatives would also result in short-term visual impacts since all involve timber harvest to varying degrees, and all would require protections with buffers and corridor as specified for each of these alternatives. Alternative G specifically includes measures to protect visual quality in Special Treatment Areas and buffer areas.
Alt. D						
Alt. E						
Alt. F						
Alt. G						

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Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant after Mitigation (5) Significant–Mitigation Not Feasible
Impact 3. Facility development would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.						
Alt. A						No development would be included that would cause light or glare which would adversely affect day or nighttime views in the area.
Alt. B						No specific new facilities are proposed; however, a need for new facilities could be identified. No specific provisions provided for addressing potential impacts. Impacts could be addressed through application of Mitigation 3.
Alt. C1 May 2002 DFMP						Construction of the Forest Learning Center and Forest Interpretive Center or other new facilities could involve significant lighting and change the quality of the night skies if located near campgrounds or residences unless mitigated as specified in Mitigation 3.
Alt. C2 Nov. 2002 Plan						
Alt. D						
Alt. E						
Alt. F						
Alt. G						The direct incorporation of Measure 3 into Alternative G results in impacts from new facilities being less than significant.

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Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant after Mitigation (5) Significant–Mitigation Not Feasible
Cumulative Impact 1. Timber harvesting, timber sale road construction, and/or Road Management Plan implementation would substantially degrade scenic vistas in a cumulative manner.						
Alt. A						With no timber harvesting, the quality of existing scenic vistas will increase over time (beneficial effect). However, there will be a reduction in the number of views over time as vegetation grows in foreground areas and blocks scenic vistas (insignificant adverse effect).
Alt. B						This alternative's relatively greater reliance on even-aged prescriptions and limited consideration for development of late seral conditions poses a higher potential for degradation of visual character or quality. Mitigations would be developed and applied at the individual THP level following standard FPR considerations for cumulative impacts to aesthetic resources. Alternatively, Mitigation 4 could be applied to address potential cumulative impacts.
Alt. C1 May 2002 DFMP						These alternatives would result in some beneficial long-term effects associated with increased late seral, mixed-age, reduced use of evenaged management, and hardwood management to varying degrees (with Alternatives D, E, F, and G superior to Alternatives C1 and C2). All alternatives would also result in short-term visual impacts since all involve timber harvest to varying degrees and include the Road Management Plan. All would require mitigation as specified in this section.
Alt. C2 Nov. 2002 Plan						
Alt. D						
Alt. E						
Alt. F						
Alt. G						The direct incorporation of Measure 4 into Alternative G would result in cumulative impacts to scenic vistas being less than significant

AGRICULTURAL RESOURCES

(There are no significant impacts to agricultural resources from the proposed project.)

MINERAL RESOURCES

(There are no significant impacts to mineral resources from the proposed project.)

AIR QUALITY

(There are no significant impacts to air quality from the proposed project.)

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BIOLOGICAL RESOURCES

Aquatic Resources

(There are no significant impacts to aquatic resources from the proposed project.)

Botanical Resources

(There are no significant impacts to botanical resources from the proposed project.)

Timber Resources

(There are no significant impacts to timber resources from the proposed project.)

Protection

(There are no significant protection impacts from the proposed project.)

Wetland Resources

(There are no significant wetland resource impacts from the proposed project.)

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Wildlife and Wildlife Habitat Resources

Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant After Mitigation (5) Significant -Mitigation Not Feasible
Impact 1b: Snags and Down Wood						
Alt. A						Alternative A does not propose the removal or creation of snags and downed wood. Therefore, the number of snags and amount of downed wood is expected to naturally increase within the 10 year planning period under Alternative A.
Alt. B						Although snags and downed wood will be retained as directed by the FPRs, their removal is still likely to occur under Alternative B. Snags and downed wood are lacking on JDSF and without specific retention measures, the number of snags could be significantly reduced on JDSF under Alternative B. This impact could be mitigated to less than significant by applying snag protection measures similar to Mitigation 1.
Alt. C1 May 2002 DFMP						Refer to detailed project impacts in the 2005 DEIR. Apply Mitigation 1 to reduce impacts to less than significant.
Alt. C2 Nov. 2002 Plan						Similar to C1.
Alt. D						The potential impacts to snags under Alternative D are the same as under Alternative C1, except that the increase in recreation could increase the number of snags considered a safety hazard. Thus, the potential impacts of Alternative D on snags could be slightly greater than those of alternative C1. Application of Mitigation 1 would reduce impacts to less than significant.
Alt. E						The potential impacts to snags under Alternative E are similar to Alternative D. However, Alternative E has proposed harvest on only 25% of the Forest and will focus on the development of late-successional habitat. This will likely include the retention /recruitment of snags. The impacts of Alternative E are expected to be beneficial.
Alt. F						Expected increase in amount of late seral forest conditions under this alternative would likely increase the density of large snags over time. Retention of individual trees alive since 1850 or earlier would also increase density of snags. Maintenance of high stocking levels is expected to increase snag recruitment.
Alt. G						Alternative G provides for the establishment of an Older Forest Structure Zone and an additional late seral development area where snags will be recruited and maintained. In addition, measures have been adopted in Alternative G to establish goals, recruitment, and monitoring for snags and to ensure protection of snags in harvest areas where feasible.

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Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant After Mitigation (5) Significant -Mitigation Not Feasible
Impact 1e: Other Unique/Special Habitats and Features						
Alt. A						Alternative A does not propose management activities that will impact or degrade unique habitats or special features. Therefore, Alternative A is not expected to impact unique or special habitat features.
Alt. B						The protection and management of unique or special habitat features would be guided by the FPRs. Impacts would be less than significant with application of mitigations similar to C1.
Alt. C1 May 2002 DFMP						Refer to detailed project impacts in the 2005 DEIR. Impacts will be beneficial with application of Mitigation 1.
Alt. C2 Nov. 2002 Plan						Similar to C1.
Alt. D						In addition to protections of the FPRs, Alternative D seeks to emulate forest species mix found in late seral/old-growth forest. Enhanced riparian zone width and no or minimal harvest SCAs benefit overall habitat connectivity. FEMAT management for wetland areas.
Alt. E						Similar to Alt. D regarding forest stand species composition and wetland management. Emphasis on old-growth and late seral development will tend to enhance habitat connectivity for species utilizing this type of forest structure.
Alt. F						Alternative seeks to maintain and restore high quality habitat for native flora and fauna and forest stands of a particular age class considered scarce regionally. National Marine Fisheries Service and HCP guidelines for wetland management. Develops water based core areas that link key areas and old-growth groves to enhance habitat connectivity for species utilizing these forest conditions.
Alt. G						Alternative G adopted the protection measures for snags (above) that will ensure the protection of goose pens and old trees with cavities. These special habitat features will not be significantly affected by management under Alternative G.

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Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant After Mitigation (5) Significant -Mitigation Not Feasible
Impact 1u: Vaux's Swift and Purple Martin						
Alt. A						Alternative A does not propose management that will impact Purple Martin or Vaux's Swift habitat. Over time, the lack of timber management will allow trees to encroach on existing snags rendering them less suitable for Purple Martins. Likelihood of recruitment of additional snags is enhanced through retention of tree mortality. Vaux's Swift experience a slight increase in habitat capability in the current to 2030 period.
Alt. B						Alternative B does not provide specific protection of snags and old-growth remnants, other than meeting the requirements of the FPRs and retaining existing old-growth groves. The removal of large snags and old-growth remnants on JDSF represents the loss of potential habitat for these species and could preclude nesting on JDSF in the future. This impact could be mitigated by retaining these habitat features through measures similar to those in the DFMP and Mitigation 1.
Alt. C1 May 2002 DFMP						Refer to detailed project impacts in the 2005 DEIR. Apply Mitigation 1 to enhance nesting opportunity.
Alt. C2 Nov. 2002 Plan						Similar to alternative C1
Alt. D						Under Alternative D, JDSF would follow the same management practices as they pertain to snags as under Alternative C1. However, increased recreation could increase likelihood of disturbance to nesting Vaux's Swifts and/or Purple Martins although this is not expected to be significant. Increased recruitment of late seral forest conditions would enhance large tree cavity nesting opportunity for these species.
Alt. E						Greater emphasis on late seral forest development forest wide and snag retention is expected to benefit Vaux's Swifts or Purple Martins.
Alt. F						Similar to Alternative E.
Alt. G						Alternative G provides for the establishment of an Older Forest Structure Zone and additional late seral development areas where snags will be recruited and maintained. In addition, measures have been adopted in Alternative G to establish goals, recruitment, and monitoring for snags, and to protect snags in harvest areas where feasible. In combination, these measures will protect important habitat elements for these species.

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Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant After Mitigation (5) Significant -Mitigation Not Feasible
Impact 2: Reduce the number or restrict the range of a rare or endangered animal.						
Alt. A						Management activities that would impact the range or number of sensitive species would not occur. Conversely, forest stand management as a means of speeding the recruitment of potentially occupied habitat to the benefit of sensitive species would not occur.
Alt. B						Lack of protection for remnant old-growth patches and individual trees or proposed management to recruit late seral habitat conditions will negatively influence certain species of concern. Implementation of Additional Management Measures described in the 2005 DEIR (section VII.6.6.4) and watercourse and late seral forest protections as in Alternative C1 would likely reduce associated impacts to a less than significant level.
Alt. C1 May 2002 DFMP						Implementation of aquatic and terrestrial wildlife protection measures described, control of sediment as an influence on aquatic wildlife species and application of Mitigation 1 to provide snag habitat will likely markedly reduce associated impacts and result in a less than significant or beneficial effect.
Alt. C2 Nov. 2002 Plan						Similar to Alt. C1.
Alt. D						Increase in recreation infrastructure and expected level of public use may negatively affect certain sensitive species such as the Marbled Murrelet and other species potentially occupying JDSF. Change in habitat capability is generally stable to positive or beneficial for species of concern sans potential disturbance related species impacts.
Alt. E						Increase in late seral habitat conditions, road management, and WLPZ protections (aquatic wildlife species) will generally increase habitat availability and quality for sensitive wildlife species.
Alt. F						Similar to Alt. E
Alt. G						Changes in management proposed in Alternative G provide for the establishment of an Older Forest Structure Zone and an additional late seral development area where snags will be recruited and maintained. In addition, measures have been adopted in Alternative G to establish goals, recruitment, and monitoring for snags, and to ensure protection of snags within timber harvest areas. In combination, these measures will protect most snags for these species and have reduced this effect to less than significant.

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Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant After Mitigation (5) Significant -Mitigation Not Feasible
Impact 3: Interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery areas.						
Alt. A						Lack of any forest management activities would generally result in no further impact to terrestrial wildlife species movement or reproduction requirements for at least the short-term. Aquatic wildlife species (amphibians) would likely experience negative effects from increased levels of sedimentation from road erosion and crossing failures. Lack of active planning and management to reduce fire risk could result in marked habitat alteration depending on the location of fire start and attendant weather conditions. Lack of late seral forest development would slow recruitment rate and representation of this forest condition.
Alt. B						Similar to Alternative A for the short term relative to forest management. Converse to Alt A., movement and use of nursery areas for species associated with early stages of forest development would likely be enhanced over the longer term. Tree species diversity would be reduced.
Alt. C1 May 2002 DFMP						Increased extent of late seral forest conditions over the long-term and further development of riparian forest condition across the range of stream classes will enhance movement and corridor opportunities. Improvement in habitat conditions for certain late seral forest associated species of concern will also enhance movement and reproductive habitat for the more common species associated with these forest conditions. With application of Mitigation 1, overall effects will be beneficial.
Alt. C2 Nov. 2002 Plan						Similar to Alt. C1.
Alt. D						Increased levels of expected recreational use and associated level of disturbance would likely result in heightened levels of disturbance to certain areas used for reproduction and of high public interest. Species particularly sensitive to human disturbance or increase in potential predator populations as a result of recreational use (Marbled Murrelet) could be negatively affected. Emphasis on uneven aged management and strengthened riparian zone and hardwood management are compensating features of this alternative.
Alt. E						Similar to Alternative C1. Emphasis on late seral forest development and uneven aged management will enhance habitat quality for species utilizing resultant forest conditions over the longer term.
Alt. F						Similar to C1 and E, Alternative F includes specific direction to establish contiguous older forest habitat and a watercourse based linkage of key areas.

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Alt. G						Alternative C1 identified impacts to snag dependent species as a potentially significant effect requiring mitigation. Changes in management proposed in Alternative G provide for the establishment of an Older Forest Structure Zone and an additional late seral development area where snags will be recruited and maintained. In addition, measures have been adopted in Alternative G to ensure protection of snags within timber harvest areas. In addition, dispersal corridors and habitat connectivity will be increased through the establishment of the Older Forest Structure Zone that connects many of the old growth groves and late-seral development areas. In combination, these measures will protect most snags for these species and improve connectivity.

GEOLOGY AND SOILS

Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant after Mitigation (5) Significant–Mitigation Not Feasible
Impact 4. Exposure of people or structures to landslides.						
Alt. A						No timber-harvest-related landslides would occur under this scenario; however, landslides could result from failure of existing roads, particularly older legacy roads, without proper mitigation similar to the management strategies presented in the DFMP, including the Road Management Plan, and Mitigation 1, above.
Alt. B						This alternative includes substantial amounts of timber harvest and it does not address legacy road problems. Its protective measures related to landslides are largely those of the Forest Practice Rules. To avoid exposure of people or structures to landslides, apply mitigations similar to the management strategies presented in the DFMP, including the Road Management Plan, Hillslope Management guidelines, and Mitigation 1, above.
Alt. C1 May 2002 DFMP						Landsliding potential is less than significant with mitigation under management scenarios C1 through F, given measures proposed in the DFMP and Mitigation 1. These measures include avoidance or special treatment of unstable and potentially unstable areas. Identification of unstable and potentially unstable areas provided by licensed geologist per guidelines in Forest Practice Rules and Hillslope Management guidelines of the DFMP (Alts. C1, C2, D, E, and F). Apply Mitigation 1, requiring use of CGS landslide and relative landslide potential maps.
Alt. C2 Nov. 2002 Plan						
Alt. D						
Alt. E						
Alt. F						
Alt. G						Alternative G adds measures for use of the CGS landslide and relative landslide potential maps in addition to other measures detailed in Alternative C1 which renders this potential impact less than significant.

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Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant after Mitigation (5) Significant–Mitigation Not Feasible
Impact 6. Location on unstable geologic unit or soil.						
Alt. A						No timber-harvest-related landslides would occur under this scenario; however, landslides could result from failure of existing roads, particularly older legacy roads, without proper mitigation.
Alt. B						Geologic review of timber harvest areas and roads as per Forest Practice Rules provides minimal protection; Hillslope Management guidelines, additional measures similar to the management strategies presented in the DFMP, and application of Mitigation 2 would mitigate potential impacts to a less than significant level.
Alt. C1 May 2002 DFMP						Geologic review of timber harvest areas and roads as per Forest Practice Rules and Hillslope Management guidelines of DFMP, and through Mitigation 2 to use CGS maps of landslides and relative landslide potential to identify potentially unstable areas, will preclude operations on unstable features and soils. Alts. D, E, and F further preclude operations within inner gorges.
Alt. C2 Nov. 2002 Plan						
Alt. D						
Alt. E						
Alt. F						
Alt. G						Alternative G adds measures for use of the CGS landslide and relative landslide potential maps in addition to other measures detailed in Alternative C1 which renders this potential impact less than significant.

HAZARDS AND HAZARDOUS MATERIALS

(There are no significant hazards or hazardous material impacts from the proposed project.)

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HERITAGE RESOURCES

Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant after Mitigation (5) Significant -Mitigation Not Feasible
Timber Harvesting						
Impact 1. Potential for individual or cumulative impacts to significant heritage resources from timber harvesting.						
Alt. A						No timber harvest would occur under this alternative.
Alt. B						There is no substantial difference among the active management alternatives. Each alternative will involve timber harvests, though at varied intensities, resulting in potentially significant impacts and the need for identical mitigation measures as specified (see Management Goals 1-10; Mitigation Measures 1-4).
Alt. C1 May 2000 DFMP						
Alt. C2 Nov. 2002 Plan						
Alt. D						
Alt. E						
Alt. F						Measures have been included in Alternative G that reduce the impact to less than significant (see text above).
Alt. G						

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Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant after Mitigation (5) Significant -Mitigation Not Feasible
Fire Protection and Prescribed Burn Programs.						
Impact 2. Potential for impacts to significant heritage resources from establishment of pre-suppression facilities, and during emergency fire protection and post-fire mop-up and stabilization activities.						
Impact 3. Potential for impacts to significant prehistoric sites and historic structures, buildings and sites from prescribed burn program activities						
Impact 4. Potential for impacts to important Native American plant collecting areas from prescribed burn program activities (in some cases, potentially beneficial).						
Alt. A						This alternative would eliminate prescribed burns; however, natural fires would still occur and likely at greater intensities than on a managed Forest with prescribed burns and active fire suppression planning. Therefore, similar impacts would occur due to natural fires and measures to extinguish them. Mitigation measures would be needed as proposed for the alternatives below (see below).
Alt. B						There is no substantial difference among the active management alternatives. Each alternative will involve active prefire and fire suppression measures to some degree and the likelihood for naturally occurring fires. These activities will result in potentially significant impacts and the need for identical mitigation measures as specified (see Management Goals 1-10; Impact 2, Mitigation Measures 5-7; Impact 3, Mitigation Measure 8; Impact 4: Mitigation Measure 9).
Alt. C1						
May 2000 DFMP						
Alt. C2 Nov. 2002 Plan						
Alt. D						
Alt. E						
Alt. F						
Alt. G						Measures have been included in Alternative G that reduce the impact to less than significant (see text above).

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Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant after Mitigation (5) Significant -Mitigation Not Feasible
Transportation Systems: Road Maintenance, Construction and Abandonment.						
Impact 5. Potential for individual or cumulative impacts to significant heritage resources from regular maintenance of roads and related appurtenances (e.g., culverts, bridges), construction of new roads and related appurtenances, improvements to existing roads and related appurtenances, use of existing or establishment of new borrow pits, and road abandonment.						
Alt. A						No new roads would be constructed and no existing roads would be decommissioned; however, maintenance to existing roads would continue resulting in potentially significant impacts and the need for Mitigation Measures 10-12 as specified.
Alt. B						No road management plan is proposed and no road decommissioning would occur; however, new roads would continue to be constructed resulting in potentially significant impacts and the need for Mitigation Measures 10-12 as specified.
Alt. C1 May 2000 DFMP						There is no substantial difference among alternatives C1, C2, and D. Each alternative will involve construction of new roads (although fewer new roads under alternative D), and road decommissioning pursuant to the Road Management Plan. These activities will result in potentially significant impacts and the need for identical mitigation measures as specified (see Management Goals 1-10; Mitigation Measures 10-12).
Alt. C2 Nov. 2002 Plan						
Alt. D						
Alt. E						No new roads would be constructed; however, maintenance to existing roads and an aggressive road decommissioning program would occur resulting in potentially significant impacts and the need for Mitigation Measures 10-12 as specified.
Alt. F						Similar to C1, C2, and D, though more rapid implementation of Road Management Plan
Alt. G						Measures have been included in Alternative G that reduce the impact to less than significant (see text above).

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HYDROLOGY AND WATER QUALITY

(There are no significant hydrology and water quality impacts from the proposed project.)

LAND USE AND PLANNING

(There are no significant land uses or planning impacts from the proposed project.)

NOISE

Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant after Mitigation (5) Significant–Mitigation Not Feasible
Impact 4. A substantial temporary increase in ambient noise levels in the project vicinity above levels existing without the project.						
Alt. A						This alternative would result in no logging-related noise. It would result in no active management regarding shooting and OHVs.
Alt. B						These alternatives will have some logging activities to varying intensities and frequencies, which will result in noise impacts. The noise impacts in all cases are less than significant given the mitigation measures specified.
Alt. C1 May 2002 DFMP						
Alt. C2 Nov. 2002 Plan						
Alt. D						
Alt. E						
Alt. F						
Alt. G						Mitigation measures for Alternative C1 from the 2005 DEIR have been incorporated into Alternative G as management measures.

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Table I.1. Potentially Significant Impacts, Proposed Mitigation, and Project Alternatives.						
Alternatives					Discussion	
Impact*	1	2	3	4	5	*Impact Levels: (1) Beneficial (2) No Impact (3) Less than Significant (4) Less than Significant after Mitigation (5) Significant–Mitigation Not Feasible
Impact 6. A temporary or permanent accumulation of noise over space and time from two or more sources resulting in an impact on sensitive human receptors.						
Alt. A						The minimal level of management activity under this alternative does not have the potential to result in significant cumulative noise impacts.
Alt. B						These alternatives will have some logging activities to varying intensities and frequencies, which will result in noise impacts and have some potential to result in a significant cumulative impact across multiple sources, time, and space. The noise impacts in all cases will be less than significant given the mitigation measures specified.
Alt. C1 May 2002 DFMP						
Alt. C2 Nov. 2002 Plan						
Alt. D						
Alt. E						
Alt. F						
Alt. G						A mitigation measure for Alternative C1 from the 2005 DEIR has been incorporated into Alternative G as a management measure.

PUBLIC SERVICES, POPULATION AND HOUSING

(There are no public service, population or housing impacts from the proposed project.)

RECREATION RESOURCES

(There are no significant impacts to recreation resources from the proposed project.)

TRANSPORTATION AND TRAFFIC

(There are no significant public transportation or traffic impacts from the proposed project.)

CLIMATE CHANGE AND CARBON SEQUESTRATION

(There are no significant climate change and carbon sequestration impacts from the proposed project.)

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CUMULATIVE EFFECTS

Cumulative effects were summarized in a somewhat different fashion than were individual impacts, hence the summary table below (Table I.3) varies from those above. The letters in the table refers to the various alternatives. Only impacts for which the proposed project (alternative C1) has the potential to cause significant adverse cumulative effects are listed.

Table I.2. Summary of Potential Adverse and Beneficial Potential Cumulative Effects for the Proposed Project.						
	Cumulative Effects Potential for the Various EIR Alternatives*					
	Potential for Significant Adverse Cumulative Effects			Potential for Significant Beneficial Cumulative Effects		
Resource Area	Yes after mitigation	No after mitigation	No reasonably potential significant adverse effects	Yes without mitigation	Yes after mitigation	No reasonably potential significant beneficial effects
Biological Resources						
Wildlife and Wildlife Habitat						
Snags and Down Wood		B-D	A, E-G	E, F		A-D, G
Unique/Special Habitats and Features		B-C2	A, D-G	D-G	C1, C2	A, B
Vaux's Swift and Purple Martin		B-C2	A, D-G	D-F		A-C2, G
Reduction in the Number or Range of an Endangered Species		B-C2	A, D-G	E, F		A-D, G
Interfere with Movement, Migration, or Use of Nursery Areas		C1-C2	A, B, D-G	E-G	C1, C2	A, B, D
Heritage Resources See sections VIII.13 and VII.9.7 for details		A-F	G			A-G

*This table format is adapted from the Forest Practice Rules cumulative impact assessment table found at 14 CCR § 912.9.