



United States
Department of
Agriculture

Forest
Service

Deschutes
National
Forest

Bend-Ft. Rock Ranger District
63095 Deschutes Market Road
Bend, OR 97701

Date: 29 August 2012

To: Alicia Underhill, NEPA Planner, Project Writer/Editor
Re: Survey and Manage Plant Species within Kapka Project
From: Charmane Powers

Summary of Findings

There are no expected direct, indirect, or cumulative effects from implementation of any alternative, because:

- **There are no known Survey and Manage sites located within the project;**
- **There is no habitat present for those species which would require a pre-disturbance survey, and**
- **There is no old-growth habitat present within the area of disturbance, which would trigger survey for some species.**

This report documents the survey findings, project effects, and project recommendations regarding the Northwest Forest Plan (NWFP) "Survey and Manage" plant species as they relate to the Kapka Project

Considered in this document are those species from the vascular, bryophyte, lichen, and fungi plant groups identified in the Final Supplemental Environmental Impact Statement (FEIS): *For Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures* released in November 2000, as amended by the Record of Decision signed in January 2001. This SEIS modifies the Survey and Manage and related mitigation measures outlined in the 1994 Northwest Forest Plan Final SEIS.

In July 2011, a new direction was issued for Survey and Manage species (the 2011 Settlement Agreement). Part of that direction is that for those projects whose decision document is signed between December 17, 2009 and September 30, 2012, the agencies can use either the list of Survey and Manage species in the 2001 ROD (Table 1-1, Standards and Guidelines, pages 41-51) or the

list of Survey and Manage species and associated species mitigation from the 2011 Settlement Agreement. For the purposes of this document, the 2001 ROD species list is followed.

See Appendix A for the Survey and Manage categories into which species are grouped; see Appendix B for a list of the potential Deschutes National Forest species for which pre-disturbance surveys are required and for which any known sites are required to be managed; see Appendix C for Definitions of “Equivalent Effort Surveys in Old Growth” and “Habitat Disturbing”, see Appendix D for exemptions to Survey and Manage rules (i.e. the “Pechman exemptions”), see Appendix E for a list of seven new exemptions created by the 2011 Settlement Agreement, and see Appendix F for a list of brief habitat descriptions.

Regarding the new seven exemptions in the 2011 Settlement Agreement, there is an exemption for recreation projects. The Kapka project does not fall into that category because, although it is for recreation purposes, the project must be of less than five acres of disturbance, and it must be modifying an existing recreation site; neither of those situations apply to Kapka.

One way the NWFP requires the Forest Service to address late-successional forest ecosystem function is through consideration of “Survey and Manage” species associated with this ecosystem. These are selected species of fungi, lichens, bryophytes, vascular plants, and invertebrate animals whose viability are of concern within this broad ecosystem type.

The November 2000 FEIS identifies six categories into which species are grouped. In order to fall into one of these categories, the species must meet three basic criteria:

1. The species must occur within the Northwest Forest Plan area, or occur close to the NFP area and have potentially suitable habitat within the NFP area.
2. The species must be closely associated with late-successional or old-growth forest.
3. The reserve system and other Standards and Guidelines of the NFP do not appear to provide for a reasonable assurance of species persistence.

All six categories contain a requirement to conduct “strategic surveys”, which is something separate from project-level surveys and is not required to be addressed in this document.

Specific habitat information on Survey and Manage species is becoming better understood as species-specific surveys are conducted and data is compiled and compared. However, many habitat descriptions are based on relatively few records and will continue to be scrutinized and refined as new sites are discovered. The following discussion is an effort to assess and apply existing information as it relates to the Kapka project.

PROJECT DESCRIPTION

The project is located about 15 miles west of Bend and on the south side of the Cascade Lakes Highway in Township 18 South, Range 9 East, Section 26.

Snowmobilers have been asking for a sno-park located at a higher elevation than those found at Wanoga and Edison.

Alternative 1 No Action

Under the No Action alternative, no specific management actions would be authorized as a result of the analysis. There would be no change in current management direction or in the level of ongoing management activities within the project area.

No sno-park would be built and current parking conditions would continue. There would be no additional parking for winter recreationists, motorized or non-motorized. Winter trails and recreation opportunities would remain at the current locations and conditions.

Alternative 2, Proposed Action

Alternative 2 is the proposed action, which is to build a new snopark near Kapka Butte to provide more high-elevation parking for winter recreationists along an established snowplowing route. The proposed facility would provide for a mix of vehicle parking, including vehicles towing trailers and some slots designed for smaller vehicles. In addition, new trails would be built for a variety of users to safely access other areas or provide more recreation activities at Kapka Snopark itself.

The new snopark would be located between Kapka Butte and the junction of Forest Roads 46 (Cascade Lakes Highway) and 45 (Sunriver Cutoff) .

The intent of the proposed action is to give winter recreationists another option for parking at a suitable elevation and proximity to the Dutchman trails hub or others.

Alternative 2 management activities for providing high elevation parking that will enhance a variety of winter recreation opportunities near the Cascade Lakes Highway corridor and providing safe access to over-the-snow trail systems would include:

Parking lot and associated facilities: To provide more high elevation winter parking:

- 70 parking slots designed for larger vehicles and vehicles towing trailers
- 40 parking slots for passenger vehicles
- 7.5 acres disturbed area not including trail connectors; vegetation clearing
- Entrance road 40 x 350 feet =.32 acres
- Vegetation is mostly non-merchantable other than for biomass. Excess material may be hauled off or burned on site.
- 3 single vault toilets: 2 in the trailer parking area, and 1 in the passenger vehicle parking area.

Trails: To connect to existing Nordic and motorized system and to provide new opportunities:

- 0.2 mile snowmobile trail link to trail #45,
- 0.6 mile Nordic trail connecting the Nordic system and Vista Butte Snopark north of the Cascade Lakes Highway
- 0.8 mile un-groomed snowshoe trail to the top of Kapka Butte
- 7.2 miles of groomed trails for dogs off-leash (6.2 miles non-motorized and 1 mile shared with snowmobile Trail #40)

The 0.2 mile snowmobile trail would link the proposed snopark to the existing trail #45 which links to the Edison system to the southwest, the Wanoga system to the southeast, and the Dutchman and Moon Mtn. area to the north. The typical snowmobile trail would be 20 feet wide.

The 0.6 Nordic trail links Kapka Snopark to the Nordic system to the north of the Cascade Lakes Highway. Visitors may access Swampy Lakes, Meissner, Tumalo, and other back-country destinations. The typical Nordic trail is 10-15 feet wide.

The 0.8 mile snowshoe trail would be an un-groomed, marked trail, with brush and lower limbs removed. Snowshoe trails generally require no tree cutting, just bucking logs and removing brush and limbs.

The 6.2 miles groomed non-motorized trail would target users that prefer to have dogs off leash but prefer a groomed trail experience. The loops of the trail would be tied together with one mile of the existing snowmobile Trail #40. Approximately 90 % of the route is on existing, old roads. These trails would be cleared to 20 feet wide for full width grooming.

Winter trails would be constructed with material left on the ground, since snow will fall and cover the material to create a groomable surface. Material would lie within 1-2 feet off the ground.

All trail vegetation would be left on site, lopped and scattered within and adjacent to the new trails. Parking lot vegetation removal would be utilized or hauled off or burned on site.

Alternative 3

Though the Proposed Action provides additional parking for winter recreationists, extensive public comments concerning Dutchman Snopark demonstrate that it does not go far enough in alleviating the parking congestion at Dutchman Snopark. Dutchman Snopark would continue to reach capacity on holidays and weekends as winter recreationists continue to compete over the snopark's limited parking.

Alternative 3 differs from the management activities proposed in Alternative 2 in that the parking area would be smaller; and the snowshoe and the dog-friendly trails would not be constructed. Additionally, to reduce social conflict between motorized and non-motorized users on Dutchman Flat, Trail #7 would be relocated to the west edge of the flat; the snowmobile play-area would be relocated to the north end of the flat. The northern section of Dutchman Loop Nordic trail would be re-routed around the play-area, and a small Nordic connector trail from Mt. Bachelor's Dutchman Loop to USFS Dutchman Loop would be created.

To address congestion and increase parking capacity, Alternative 3 would also include a seasonal parking restriction to vehicles and vehicle-trailer combinations over 24 feet long within Dutchman Snopark during the core winter season (generally expected between January 1 and March 1). The seasonal restriction would be based on snow conditions at Kapka Snopark and would be managed year to year with signing and media. When snow accumulation at Kapka reached a level determined to be sufficient for motorized use, vehicles and vehicle-trailer combinations over than 24 feet long would not be permitted to park at Dutchman Snopark. When snow accumulation at Kapka falls below the threshold (generally expected before January 1 and after March 1) parking at Dutchman Snopark would be open to all vehicles.

Alternative 3 management activities would include the following:

Parking lot and associated facilities: To provide more high elevation winter parking:

- 50 parking slots designed for larger vehicles and those towing trailers
- Parking lot construction; 5.5 acres disturbed area not including trail connectors.
- Entrance road 40 x 350 feet ; or approximately 0.32 acres;
- 5,300 cubic yards of soil moved.
- Vegetation would be mostly non- merchantable other than for biomass. Excess material would be hauled off or burned on site.
- 2 single vault toilets; located within the island of the parking area

Trails: To connect to existing Nordic and motorized system and to provide new recreational opportunities:

- A 0.2 mile snowmobile trail link to trail #45
- A 0.6 Nordic trail connecting the Nordic system and Vista Butte Snopark to the north of the Cascade Lakes Highway
- 0.5 miles of Trail #7 relocated to the west edge of Dutchman Flat
- Relocation of the 16.6 acre snowmobile play-area from its current location (at the southern end of Dutchman Flat) to the northern edge of Dutchman Flat. The new location would be about 0.4 miles farther from Dutchman Snopark via Snowmobile Trail #7.

The 0.2 mile snowmobile trail links the proposed Kapka Snopark to the existing snowmobile trail #45 which links to the Edison system to the southwest, the Wanoga system to the southeast, and the Dutchman and Moon Mtn. area to the north.

The 0.6 mile Nordic trail links Kapka Snopark to the Nordic system north of the Cascade Lakes Highway. Visitors may access Swampy Lakes, Meissner, Tumalo, and other back-country destinations. The typical Nordic trail is 10-15 feet wide.

The 0.5 mile relocation of snowmobile Trail #7 to the west edge of Dutchman Flat would maintain the existing connection from snowmobile Trail #5 to the snowmobile play-area and the snowmobile trail system north of Dutchman. The snowmobile trails would be 20 feet wide.

The 16.6 acre snowmobile play-area would be relocated to the northern edge of Dutchman Flat. Relocation of the snowmobile trail and play-area would take advantage of openings and be outside of the tree lines.

Winter trails are constructed with material left on the ground, so snow can fall and cover it, creating a groomable surface, where necessary. Material lies within 1-2 feet off the ground. All trail vegetation would be left on site, lopped, and scattered within and adjacent to the new trails. Parking lot vegetation removal would be utilized or hauled off or burned on site.

Alternative 4

Though the Proposed Action provides additional parking for winter recreationists, it does not go far enough in alleviating the parking congestion at and Dutchman Snopark. Dutchman Snopark would continue to reach capacity on holidays and weekends as winter recreationists continue to compete over the snopark's limited parking.

Alternative 4 includes all of the Kapka Butte Snopark management activities proposed in Alternative 2. Additionally, to reduce social conflict between motorized and non-motorized users on Dutchman Flat, Trail #7 would be relocated to the west edge of the flat and the snowmobile play area would be relocated to the north end of the flat.

Alternative 4 management activities would include the following:

Parking lot and associated facilities: To provide more high elevation winter parking:

- 70 parking slots designed for larger vehicles and vehicles towing trailers
- 40 slots designed for passenger vehicles
- Parking lot construction: 7.5 acres disturbed area not including trail connectors: vegetation clearing
- Entrance road 40 x 350 feet or approximately 0.32 acres;
- Vegetation would be mostly non-merchantable other than for biomass. Excess material would be hauled off or burned on site.
- 3 single vault toilets: 2 in the trailer parking area and 1 in the passenger vehicle area.

Trails: To connect to existing Nordic and motorized systems and to provide new recreational opportunities:

- A 0.2 mile snowmobile trail link to trail #45
- A 0.6 Nordic trail connecting the Nordic system and Vista Butte Snopark to the north of the Cascade Lakes Highway
- A 0.8 mile un-groomed snowshoe trail to the top of Kapka Butte
- 7.2 miles of groomed trails for dogs off-leash (6.2 miles new, non-motorized and 1 mile shared with snowmobile Trail #40)
- Relocation of 0.5 miles of Trail #7 to the western edge of Dutchman Flat
- Relocation of the 16.6 acre snowmobile play-area from its current location to the northern edge of Dutchman Flat. The new location would be 0.4 miles farther from Dutchman Snopark via Trail #7.

The 0.2 mile snowmobile trail would link the proposed Kapka Snopark to the existing snowmobile trail #45 which links to the Edison system to the southwest, the Wanoga system to the southeast, and the Dutchman and Moon Mountain areas to the north.

The 0.6 mile Nordic trail would link Kapka Snopark to the Nordic system north of the Cascade Lakes Highway. Visitors may access Swampy Lakes, Meissner, Tumalo, and other back-country destinations. The typical Nordic trail is 10-15 feet wide.

The 0.8 mile snowshoe trail would be an un-groomed, marked trail, with brush and lower limbs removed. Snowshoe trails are generally about 6 to 8 feet wide.

The 0.5 mile relocation of snowmobile Trail #7 to the west edge of Dutchman Flat would maintain the existing connection from snowmobile Trail #5 to the snowmobile play-area and the snowmobile

trail system north of Dutchman. The snowmobile trails would be 20 feet wide.

The 16.6 acre snowmobile play-area would be relocated to the northern edge of Dutchman Flat. Relocation of the snowmobile trail and play-area would take advantage of openings and be outside of the tree lines.

Winter trails are constructed with material left on the ground, so snow can fall and cover it, creating a groomable surface, where necessary. Material lies within 1-2 feet off the ground. All trail vegetation would be left on site, lopped, and scattered within and adjacent to the new trails. Parking lot vegetation removal would be utilized or hauled off or burned on site.

The two parking lots would provide 70 parking slots designed for larger vehicles and vehicles towing trailers and 40 parking slots for passenger vehicles. Approximately 8.5 acres would be cleared of vegetation and paved. The vegetation removed from the site would be mostly non-merchantable other than for biomass. Excess material may be hauled off or burned on site. Visitors would access the two sites via entrance roads off of road 45. Improvements to road 45 will be needed within the county's right-of-way for deceleration lanes accessing the Nordic sno-park (deceleration lanes accessing the proposed Kapka Sno-park were constructed when road 45 was improved several years ago).

Prefield Review

The area is dominated by a lodgepole pine/sedge-lupine plant association. The area proposed for the sno-park was hand-thinned in 1995, and the slash was treated in 1997. Soils are characterized by sandy volcanic ash and pumice over buried soils on glacial till, as well as sandy, pumiceous volcanic ash over sandy to loamy buried soils. The elevation is 5900'. The average annual precipitation measures about 35".

Adjacent to the proposed sno-park, the areas proposed for dog-friendly trails, a nordic trail under the highway, and a snowmobile trail, all occur within habitat similar to the description in the previous paragraph.

The snowshoe trail up Kapka Butte lies within a mixed conifer plant association. The trails at Dutchman Flat occur in a dry meadow.

Attached as Appendix F is the 2001 ROD species list with habitat descriptions. The following sections use those habitats to evaluate the project.

VASCULAR PLANTS

There is no habitat present within the project area for *Cypripedium montanum*; this species would require pre-disturbance surveys if habitat is present. Additionally, there are no known sites present within the project area for this species that would, according to FEIS direction, require management of those sites.

BRYOPHYTES

Of the bryophytes requiring pre-disturbance survey if habitat is present, there is no habitat present within the project area for *Schistostega pennata*.

There are no sites present for *Tritomaria exsectiformis*, *Buxbaumia viridis*, or *Rhizomnium nudum*, which would require protection if sites were present.

LICHENS

There is no habitat or known sites present within the project area for the lichen *Leptogium cyanescens*, which would require a pre-disturbance survey if habitat is present. Additionally, there are no known sites present within the project area for *Dermatocarpon luridum* and *Cladonia norvegica*, which would, according to FEIS direction, require management of those sites.

There are no known sites present for *Bryoria tortuosa* and *Leptogium teretiusculum*, which would require protection if present.

FUNGI

Category B fungi are now required (as of Fiscal Year 2011) to have “equivalent effort” surveys conducted if the project proposes to enter old-growth habitat (see Appendix C) and if the activity is deemed habitat-disturbing (see Appendix C), and if the project does not meet the Judge Pechman exemptions (see Appendix D).

Surveys for Category B fungi are not warranted in the Kapka project, because there is no old growth habitat present within proposed habitat-disturbing areas. This determination was made using the 1993 Region 6 Interim Old Growth definitions referenced in Appendix C, and using the Gradient Nearest Neighbor (GNN) dataset in the GIS layer of the Deschutes National Forest.

Additionally, there are no known sites present within the project area for fungi species that would, according to FEIS direction, require management of those sites (see listed fungi within Category B and D species in Appendix B).

PROJECT EFFECTS

All Action Alternatives:

Direct, Indirect and Cumulative Effects: There are no expected direct, indirect, or cumulative effects to Survey and Manage species in the proposed project because there are no known S&M sites present, nor is there habitat for those species which would require survey, nor is there old-growth habitat present within disturbance areas, which would trigger a survey for certain species.

Past actions that have influenced the ability of the area to support Survey and Manage species primarily involves the thinning that occurred in 1995 for the Kanoga Resale project. However, because the plant association is dominated by lodgepole pine, the likelihood of S&M plant

species being present (other than potential for fungi) would have been low. The current proposal to place a parking area on the site will remove any chance of S&M plant species occurring there (again, the likelihood was low in the first place). Construction of trails with the Kapka project will have minimal impact upon S&M species, because of the small amount of area being impacted and the low probability of their presence.

Summary of Findings

There are no expected direct, indirect, or cumulative effects from implementation of any alternative, because:

- **There are no known Survey and Manage sites located within the project;**
- **There is no habitat present for those species which would require a pre-disturbance survey, and**
- **There is no old-growth habitat present, which would trigger survey for some species.**

REFERENCES AND COMMUNICATIONS

Tinderholt, Amy, Recreation, Heritage, Lands and Wilderness Team Leader, Bend/Fort Rock Ranger District.

Underhill, Alicia, Bend/Ft. Rock Ranger District NEPA Planner, writer/editor.
Bend/Ft. Rock Ranger District Survey and Manage species GIS layer.

USDA Forest Service, USDI Bureau of Land Management. 2000. Final Supplemental Environmental Impact Statement: *For Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures, Standards and Guidelines*, Volumes I and II.

USDA Forest Service, USDI Bureau of Land Management. January 2001. Record of Decision and Standards and Guidelines: *For Amendment to the Survey and Manage, Protection Buffer, and other Mitigation Measures, Standards and Guidelines*

APPENDIX A

SURVEY AND MANAGE CATEGORIES

Category A – Rare species. Pre-disturbance surveys are practical. The objective of this category is to manage all known sites and minimize inadvertent loss of undiscovered sites. *Management direction includes manage all known sites, survey prior to habitat-disturbing activities, and conduct strategic surveys.*

Category B – Rare species. Pre-disturbance surveys are not practical. The objective of this category is to manage all known sites and minimize inadvertent loss of undiscovered sites. *Management direction includes manage all known sites and conduct strategic surveys.*

Category C – Uncommon species. Pre-disturbance surveys are practical. The objective of this category is to identify and manage high-priority sites. Until high-priority sites can be determined, all known sites are managed. *Management direction includes manage high-priority sites, survey prior to habitat-disturbing activities, and conduct strategic surveys.*

Category D – Uncommon species. Pre-disturbance surveys are not practical or not necessary. The objective of this category is to identify and manage high-priority sites. Until high-priority sites can be determined, all known sites are managed. *Management direction includes manage high-priority sites and conduct strategic surveys.*

Category E – Rare species for which status is undetermined. The objective is to manage all known sites while determining if the species meets the basic criteria for Survey and Manage. *Management direction includes manage all known sites and conduct strategic surveys.*

Category F – Uncommon species for which status is undetermined. The objective is to determine if the species meets the basic criteria for Survey and Manage. *Management direction includes conduct strategic surveys.*

APPENDIX B – this appendix is new

Deschutes NF Survey and Manage Species

2001 Record of Decision

** Regional Strategic Surveys are completed for Category B bryophyte, *Rhizomnium nudum*; therefore, we are not required to do Equivalent Effort surveys.

*** *Cantharellus subalbidus* (white chanterelle) occurs but is not mapped

Category	Survey Direction	Group	Species
A	Surveys will be conducted at the project level prior to habitat-disturbing activities, and in accordance with Survey Protocols. Manage all known sites.	Lichen	Leptogium cyanescens
		Bryophyte	Schistostega pennata
B	Equivalent Effort Surveys <u>in old growth habitat</u> (definition, p. 79 in 2001 ROD) that would be disturbed Draft Equivalent Effort Surveys are available for fungi. Manage all known sites.	Bryophyte	Rhizomnium nudum**
		Bryophyte	Tritomaria exsectiformis
		Lichen	Cladonia norvegica
			Dermatocarpon luridum
		Fungus	Albatrellus caeruleoporus
		Fungus	Albatrellus flettii
		Fungus	Alpova alexsmithii
		Fungus	Arcangeliella lactarioides
		Fungus	Arcangeliella crassa
		Fungus	Cantharellus subalbidus***
		Fungus	Choiromyces alveolatus
		Fungus	Clavariadelphus ligula
		Fungus	Clavariadelphus truncatus
		Fungus	Cortinarius wiebeae
		Fungus	Elaphomyces anthracinus
Fungus	Elaphomyces subviscidus		
Fungus	Fevansia aurantiaca (= Alpova aurantiaca)		

Category	Survey Direction	Group	Species
		Fungus	Gastroboletus ruber
		Fungus	Gastroboletus subalpinus
		Fungus	Gastroboletus turbinatus
		Fungus	Gautieria magnicellaris
		Fungus	Gymnomyces abietis
		Fungus	Helvella crassitunicata
		Fungus	Hydnotrya inordinata
		Fungus	Hygrophorus caeruleus
		Fungus	Leucogaster citrinus
		Fungus	Mycena monticola
		Fungus	Mycena overholtsii
		Fungus	Nivatogastrium nubigenum
		Fungus	Polyozellus multiplex
		Fungus	Ramaria amyloidea
		Fungus	Ramaria coulterae
		Fungus	Ramaria maculatipes
		Fungus	Ramaria rubrievanescens
		Fungus	Ramaria rubripermanens
		Fungus	Rhizopogon atroviolaceus
		Fungus	Rhizopogon evadens var. subalpinus
		Fungus	Rhizopogon flavofibrillosus
		Fungus	Sarcondon imbricatus
		Fungus	Sarcosphaera coronaria (S. exima)
C	Survey projects prior to habitat-disturbing activities in accordance with Survey Protocols. Manage high priority sites.	Vascular	Cypripedium montanum
D	Surveys NOT practical or necessary.	Bryophyte	Buxbaumia viridis
		Lichen	Bryoria tortuosa
		Fungus	Chalciporus piperatus

Category	Survey Direction	Group	Species
	Manage high priority sites.	Fungus	Phaeocollybia attenuata
		Fungus	Rhizopogon truncates
E	No surveys required. Manage all known sites.	Lichen	Leptogium teretiusculum
F	No requirements to survey or manage known sites.	N/A	No suspected taxa

APPENDIX C

Definitions of Equivalent Effort Surveys in “Old Growth” and “Habitat Disturbing”, per the *Record of Decision for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines in Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl, January 2001*

Equivalent Effort Surveys

For Category B species, the S&Gs (p. 9) state that “To reduce the inadvertent loss of undiscovered sites, the Agencies will not sign NEPA [National Environmental Policy Act] decisions or decision documents for habitat-disturbing activities in old-growth forest [see indented paragraph below for definition]...in fiscal year 2006 (fiscal year 2011 for fungi) and beyond, unless either: strategic surveys have been completed for the province that encompasses the project area, or equivalent-effort surveys have been conducted in the old-growth habitat to be disturbed.”

Old-growth forest (S&G, pp. 79-80): “An ecosystem distinguished by old trees and related structural attributes. Old growth encompasses the later stages of stand development that typically differ from earlier stages in a variety of characteristics which may include tree size, accumulations of large dead woody material, number of canopy layers, species, composition, and ecosystem function. More specific parameters applicable to various species are available in the USFS, Region 6, 1993 Interim Old Growth Definitions (USDA FS Region 6, 1993). The Northwest Forest Plan SEIS [Supplemental Environmental Impact Statement] and FEMAT [Forest Ecosystem Management Assessment Team] describe old-growth forest as a forest stand usually at least 180 to 200 years old with moderate-to-high-canopy closure; a multilayered, multi-species canopy dominated by large overstory trees; high incidence of large trees, some with broken tops and other indications of old and decaying wood (decadence); numerous large snags; and heavy accumulation of wood, including large logs on the ground. (USDA, USDI 1994a).”

Habitat-Disturbing Activities

To be in compliance with the 2001 ROD, projects must have appropriate pre-disturbance surveys conducted if the activity is potentially considered to be “habitat-disturbing.” “Habitat-disturbing activities are defined as those disturbances likely to have a significant negative impact on the species’ habitat, its life cycle, microclimate, or life support requirements” (Standards and Guidelines (S&G), p. 22). There are 63 (Category A and C species) that require pre-project surveys for “habitat-disturbing” activities. “The line officer should seek specialists’ recommendations to help determine the need for a survey based on site-specific information. In making such determination, the line officer should consider the probability of the species being present on the project site, as well as the probability that the project would cause a significant negative effect on the species habitat or the persistence of the species at the site.” (S&G, p. 22).

APPENDIX D

Judge Pechman's four exemptions listed in the October 11, 2006 modified injunction NEA v. Rey

- (a) Thinning projects in stands younger than 80 years old;
- (b) Replacing culverts on roads that are in use and part of the road system, and removing culverts if the road is temporary or to be decommissioned;
- (c) Riparian and stream improvement projects where the riparian work is riparian planting, obtaining material for placing in-stream, and road or trail decommissioning; and where the stream improvement work is the placement large wood [sic], channel and floodplain reconstruction, or removal of channel diversions; and
- (d) The portions of projects involving hazardous fuel treatments where prescribed fire is applied. Any portions of hazardous fuel treatment project involving commercial logging will remain subject to the survey and manage requirements except for thinning of stands younger than 80 years old under subparagraph (a) of this paragraph.

APPENDIX E

2011 Settlement Agreement Exemptions

In addition to the four Pechman exemptions, the 2011 Settlement Agreement establishes seven categories of new exemptions. Projects that meet the criteria articulated in the Settlement Agreement for these new exemptions are exempt from pre-disturbance surveys, but known site management may apply. The new 2011 Exemption categories are:

1. Recreation Projects
2. Fish and Wildlife Habitat Restoration Projects
3. Weeds and Sudden Oak Death
4. Wildland Urban Interface (WUI)
5. Bridges
6. Non-Commercial Fuel Treatments
7. Restoration Projects that May Involve Commercial Logging

APPENDIX F

Deschutes National Forest Survey and Manage Species List from 2001 ROD					
Note 1: Asterisk following taxon name indicates dual status as R6 sensitive and S&M taxon.					
Note 2: In Habitat field, elevations in parentheses = mean elevation for data set.					
Category A S&M taxa included in 2001 ROD and documented (D) or suspected (S) on DES NF					
Survey	Taxon	D or S	Group	Subgroup	Habitat
	<i>Schistostega pennata</i> *	D	bryo	moss	On damp, mineral soil, primarily on root masses of fallen trees in humid, heavily shaded microsites, commonly within <i>Abies amabilis</i> series but also in <i>Tsuga heterophylla</i> and <i>T. mertensiana</i> series.
	<i>Leptogium cyanescens</i> *	S	lichen	foliose	Known in Oregon from two coastal sites and in WA, one low elevation site in west Cascades. Substrates include <i>Pyrus fusca</i> , <i>Acer circinatum</i> and <i>Picea sitchensis</i> .
Category B S&M taxa included in 2001 ROD and documented (D) or suspected (S) on DES NF					
Survey	Taxon	D or S	Group	Subgroup	Habitat
	<i>Rhizomnium nudum</i> *	D	bryo	moss	Often associated with <i>Pinus contorta</i> , <i>Picea engelmannii</i> , <i>Tsuga mertensiana</i> , <i>Pinus monticola</i> on moist soil in seepages, vernal wet depressions or intermittently wet, low-gradient channels.
	<i>Tritomaria exsectiformis</i> *	D	bryo	liverwort	On wet or damp, very rotten wood or peaty/organic soil at sites with persistent, low-volume groundwater discharge.
	<i>Cladonia norvegica</i>	D	lichen	squamulose	On rotten wood, tree bases and tree trunks in mature to old conifer forests at low to middle elevations.
	<i>Dermatocarpon meiophyllizum</i> *	D	lichen	foliose	On sunny or partly sunny bedrock or on larger, relatively immobile rocks within channels of perennial, or nearly perennial streams; often found above water line and dry in summer months.
	<i>Albatrellus caeruleoporus</i>	D	fungus	polypore	Associated with <i>Tsuga</i> .

	<i>Albatrellus ellisii</i>	S	fungus	polypore	Associated with spp. of <i>Abies</i> , <i>Picea</i> , <i>Pinus</i> , <i>Pseudotsuga</i> , <i>Tsuga</i> or <i>Castanopsis</i> . On mineral soil, litter and humus. Occurs principally in White Fir series (52%).
	<i>Albatrellus flettii</i>	D	fungus	polypore	Associated with spp. of <i>Abies</i> , <i>Picea</i> , <i>Pinus</i> , <i>Pseudotsuga</i> , <i>Thuja</i> , <i>Tsuga</i> .
	<i>Alpova alexsmithii</i> *	D	fungus	sequestrate	Occurs principally on soil in Pacific Silver Fir (44%) and Mountain Hemlock (44%) series at elevations of 2740-5760 feet. A mycorrhizal associate of <i>Tsuga</i> . Associated species include <i>Abies amabilis</i> , <i>Pinus contorta</i> , <i>Picea engelmannii</i> and <i>Tsuga mertensiana</i> .
	<i>Arcangeliella lactarioides</i>	D	fungus	sequestrate	Associated with various Pinaceae spp., particularly <i>Abies magnifica</i> and <i>Pinus ponderosa</i> .
	<i>Boletus pulcherrimus</i>	S	fungus	bolete	In humus, associated with the roots of mixed conifers (e.g., <i>Abies grandis</i> , <i>Pseudotsuga menziesii</i>). Occurs principally on mineral soil and humus in White Fir series (36%) at elevations of 62-5735 (4231) feet.
	<i>Bondarzewia mesenterica</i> (<i>Bondarzewia montana</i>)	S	fungus	polypore	Sporocarps occur in late successional conifer forests, often associated with stumps or snags, sometimes hardwoods present.
	<i>Choiromyces alveolatus</i>	D	fungus	sequestrate	Associated with various Pinaceae spp., particularly <i>Abies procera</i> , <i>Abies spp.</i> , <i>Pinus contorta</i> , <i>P. ponderosa</i> , <i>Pseudotsuga menziesii</i> , <i>Tsuga heterophylla</i> and <i>T. mertensiana</i> above 4200 ft. elevation.
	<i>Chroogomphus loculatus</i>	S	fungus	sequestrate	Associated with various Pinaceae spp., especially <i>Tsuga mertensiana</i> at 4600 feet elevation.
	<i>Clavariadelphus ligula</i>	D	fungus	club	Under coniferous or mixed coniferous forests associated with <i>Abies</i> , <i>Calocedrus</i> , <i>Pinus</i> , <i>Pseudotsuga</i> , <i>Thuja</i> , <i>Tsuga</i> , <i>Umbellularia</i> , and <i>Castanopsis</i> .

	<i>Clavariadelphus occidentalis</i> (<i>Clavariadelphus pistillaris</i>)	S	fungus	club	On litter, humus, mineral soil, principally in Western Hemlock series (47%) at elevations of 332-4497 (2073) ft. Associated species include Pacific silver fir, white fir, grand fir, incense cedar, sugar pine, western white pine, ponderosa pine, Douglas fir.
	<i>Clavariadelphus sachalinensis</i>	S	fungus	club	Principally in Douglas fir (42%) and Western Hemlock (30%) series, at elevations of 152-5352 (2706) feet. Associated species include white fir, subalpine fir, incense cedar, Engelmann spruce, sugar pine, ponderosa pine, Douglas fir.
	<i>Clavariadelphus truncatus</i>	D	fungus	club	On soil or duff under mixed deciduous-coniferous forests or deciduous forests with <i>Abies</i> , <i>Calocedrus</i> , <i>Picea</i> , <i>Pinus</i> , <i>Pseudotsuga</i> , <i>Thuja</i> , <i>Tsuga</i> .
	<i>Collybia bakerensis</i>	S	fungus	mushroom	On downed conifer logs (<i>Abies</i> , <i>Tsuga</i>) soon after melting snow about 8200 feet elevation.
	<i>Cortinarius magnivelatus</i>	S	fungus	mushroom	Associated with roots of <i>Abies concolor</i> , <i>A. magnifica</i> , <i>Picea engelmannii</i> , <i>Pinus lambertiana</i> , <i>P. ponderosa</i> .
	<i>Cortinarius olympianus</i>	S	fungus	mushroom	Associated with roots of Pinaceae.
	<i>Cortinarius verrucisporus</i>	S	fungus	sequestrate	Associated with roots of <i>Abies</i> spp.
	<i>Cortinarius wiebeae</i>	D	fungus	sequestrate	Associated with roots of <i>Pseudotsuga menziesii</i> and <i>Pinus ponderosa</i> . Oregon endemic (2 sites).
	<i>Cudonia monticola</i>	S	fungus	Earth tongue	On litter and rotten wood, principally Western Hemlock series (58%) at elevations of 523-5994 (2556) feet. Associated species include Pacific silver fir, white fir, grand fir, subalpine fir, red fir, noble fir, Engelmann spruce, Douglas fir, mountain hemlock.
	<i>Elaphomyces anthracinus</i>	D	fungus	sequestrate	Associated with roots of assorted Fagaceae in Europe and <i>Pinus ponderosa</i> in Oregon (DES NF is only known site in NWFP area).

	<i>Elaphomyces subviscidus</i>	D	fungus	sequestrate	Associated with roots of <i>Pinus contorta</i> and <i>Tsuga mertensiana</i> at high elevation (7150 feet).
	<i>Fayodia bishpaerigera</i> (<i>Fayodia gracilipes</i>)	S	fungus	mushroom	In litter debris under hardwoods and conifers.
	<i>Fevansia aurantiaca</i> (= <i>Alpova aurantiaca</i>)	D	fungus	sequestrate	Associated with various Pinaceae spp., particularly <i>Abies lasiocarpa</i> and <i>Pseudotsuga menziesii</i> .
	<i>Gastroboletus ruber</i>	D	fungus	sequestrate	Associated with roots of assorted Pinaceae above 4350 feet elevation, particularly <i>Abies amabilis</i> , <i>A. procera</i> , <i>A. magnifica</i> var. <i>shastensis</i> , <i>Pinus monticola</i> or <i>Tsuga mertensiana</i> .
	<i>Gastroboletus subalpinus</i>	D	fungus	sequestrate	Associated with roots of various Pinaceae above 5000 feet elevation, particularly <i>Abies magnifica</i> , <i>Pinus albicaulis</i> , <i>P. contorta</i> and <i>Tsuga mertensiana</i> .
	<i>Gastroboletus turbinatus</i>	D	fungus	sequestrate	In lowland forests of <i>Picea sitchensis</i> - <i>Tsuga heterophylla</i> to montane and subalpine <i>Abies</i> , <i>Picea</i> and <i>Pinus</i> spp.
	<i>Gastroboletus vividus</i> *	S	fungus	sequestrate	With roots of various Pinaceae, particularly <i>Abies lasiocarpa</i> , <i>A. x shastensis</i> and <i>Tsuga mertensiana</i> .
	<i>Gautieria magnicellaris</i>	D	fungus	sequestrate	Associated with roots of <i>Pinus</i> spp. in Mexico and <i>Abies concolor</i> in western United States above 5300 feet elevation.
	<i>Gomphus clavatus</i>	S	fungus	chantrelle	In deep humus in coniferous forests.
	<i>Gymnomyces abietis</i>	D	fungus	sequestrate	Associated with roots of <i>Abies</i> spp. and possibly other Pinaceae above 3200 feet elevation.
	<i>Gymnomyces nondistincta</i>	S	fungus	sequestrate	Endemic to Oregon. Associated with roots of Pacific silver fir and mountain hemlock in Mountain Hemlock (50%) and Parkland (50%) series at elevations of 5962-7126 (6544) feet.

	<i>Gyromitra californica</i>	S	fungus	cup fungi	On or adjacent to well-rotted stumps or logs of coniferous trees, on litter or soil rich in brown rotted wood. In Pacific Silver Fir (19%), Western Hemlock (17%) or White Fir (17%) series at elevations of 158-6026 (4047) feet. Primarily in <i>Abies amabilis</i> , <i>A. concolor</i> , <i>A. magnifica</i> , <i>Pinus contorta</i> , <i>P. lambertiana</i> , <i>P. ponderosa</i> , <i>Pseudotsuga menziesii</i> , <i>Picea engelmannii</i> , <i>Tsuga mertensiana</i> , and <i>Populus tremuloides</i> .
	<i>Helvella crassitunicata*</i>	D	fungus	elfin saddle	On soil, especially along trails, in montane regions with <i>Abies</i> spp.
	<i>Hydnotrya inordinata</i>	D	fungus	sequestrate	Associated with roots of <i>Abies amabilis</i> , <i>Pinus contorta</i> , <i>Pseudotsuga menziesii</i> , and <i>Tsuga heterophylla</i> from 3500 - 6500 feet elevation.
	<i>Hygrophorus caeruleus*</i>	D	fungus	mushroom	Associated with roots of Pinaceae spp., near melting snowbanks.
	<i>Leucogaster citrinus*</i>	D	fungus	sequestrate	Associated with roots of <i>Abies concolor</i> , <i>A. lasiocarpa</i> , <i>Pinus contorta</i> , <i>P. monticola</i> , <i>Pseudotsuga menziesii</i> and <i>Tsuga heterophylla</i> from 900 - 6500 feet elevation.
	<i>Mycena monticola</i>	D	fungus	mushroom	Restricted to conifer forests (particularly those with <i>Pinus</i> spp.) above 3200 feet elevation in duff.
	<i>Mycena overholtsii</i>	D	fungus	mushroom	Restricted to conifer forests (particularly those with <i>Abies</i> spp.) above 3200 feet elevation on decayed wood near snow banks or just after snow melt.
	<i>Nivatogastrium nubigenum</i>	D	fungus	sequestrate	On rotten <i>Abies</i> logs at elevations above 4200 feet elevation.
	<i>Phaecollybia attenuata</i>	D	fungus	mushroom	In litter, humus or soil under mixed coniferous or coniferous forests. Occurs primarily in Western Hemlock (66%), Sitka Spruce (11%), and Tan Oak (11%) series at elevation of 0-5215 feet. Associated species include <i>Pseudotsuga menziesii</i> , <i>Tsuga heterophylla</i> , <i>Picea sitchensis</i> , <i>Abies amabilis</i> and <i>Pinus</i> spp.

	<i>Polyozellus multiplex</i>	D	fungus	chantrelle	Associated with roots of <i>Abies</i> spp. in mid-elevation conifer forests.
	<i>Ramaria amyloidea</i> *	D	fungus	coral	On humus or soil in association with <i>Abies</i> spp., <i>Pseudotsuga menziesii</i> and <i>Tsuga heterophylla</i> . Occurs primarily in Pacific Silver Fir (46%), White Fir (27%) and Western Hemlock (15%) series at elevations of 1800-5500 feet. Other associated species include <i>Abies amabilis</i> , <i>A. concolor</i> , <i>A. magnifica</i> , <i>A. x shastensis</i> , <i>A. procera</i> , <i>Pinus contorta</i> , <i>P. monticola</i> , <i>Thuja plicata</i> and <i>Tsuga mertensiana</i> .
	<i>Ramaria aurantiisiccescens</i>	S	fungus	coral	Occurs in humus, litter and soil, associated with <i>Abies</i> spp., <i>Pseudotsuga mehnziesii</i> and <i>Tsuga heterophylla</i> . Occurs primarily in Western Hemlock (47%) and Pacific Silver Fir (27%) series at elevations of 560-6934 feet. Other associated species include <i>Abies concolor</i> , <i>A. lasiocarpa</i> , <i>A. procera</i> , <i>Chamaecyparis lawsoniana</i> , <i>Pinus contorta</i> , <i>P. ponderosa</i> , <i>Picea engelmannii</i> , <i>Thuja plicata</i> , <i>Tsuga mertensiana</i> and <i>Acer macrophyllum</i> .
	<i>Ramaria botryis</i> var. <i>aurantiiramosa</i>	S	fungus	coral	On humus or soil in association with <i>Pseudotsuga menziesii</i> and <i>Tsuga heterophylla</i> .
	<i>Ramaria coulterae</i>	D	fungus	coral	On coniferous debris, rare but scattered through coniferous forests.
	<i>Ramaria largentii</i>	S	fungus		Occurs on soil, litter and humus in association with Pinaceae. In Oregon and Washington, occurs primarily in Western Hemlock (48%), White Fir (19%), Douglas Fir (14%) and Pacific Silver Fir (14%) series at elevation of 1330-5100 feet. Associated species include <i>Tsuga heterophylla</i> , <i>Pseudotsuga menziesii</i> , <i>Abies amabilis</i> , <i>A. concolor</i> , <i>A. grandis</i> , <i>Pinus lambertiana</i> , <i>P. monticola</i> , <i>Calocedrus decurrens</i> , <i>Taxus brevifolia</i> and <i>Thuja plicata</i> .

	<i>Ramaria maculatipes</i>	D	fungus	coral	On humus or soil in association with <i>Abies</i> spp., <i>Pseudotsuga menziesii</i> and <i>Tsuga heterophylla</i> .
	<i>Ramaria rubrievanescens</i>	D	fungus	coral	On humus or soil with Pinaceae spp. Occurs primarily in Mountain Hemlock (25%), White Fir (22%), Western Hemlock (17%) and Pacific Silver Fir (15%) series at elevation of 720-7120 feet. Associated species include <i>Abies amabilis</i> , <i>A. concolor</i> , <i>A. grandis</i> , <i>A. lasiocarpa</i> , <i>A. magnifica</i> , <i>A. x shastensis</i> , <i>A. procera</i> , <i>Calocedrus decurrens</i> , <i>Pinus contorta</i> , <i>P. lambertiana</i> , <i>P. monticola</i> , <i>P. ponderosa</i> , <i>Picea engelmannii</i> , <i>Pseudotsuga menziesii</i> , <i>Tsuga mertensiana</i> , <i>T. heterophylla</i> , <i>Thuja plicata</i> and <i>Acer macrophyllum</i> .
	<i>Ramaria rubripermanens</i>	D	fungus	coral	Occurs on soil, litter, humus and charred wood in association with Pinaceae spp. Occurs principally in Douglas Fir (25%), Western Hemlock (18%), White Fir (18%), Tan Oak (12%) and Pacific Silver Fir (10%) series at elevations of 920-6470 feet. Other associated species include <i>Abies grandis</i> , <i>A. lasiocarpa</i> , <i>A. magnifica</i> , <i>A. procera</i> , <i>Calocedrus decurrens</i> , <i>Pinus contorta</i> , <i>P. lambertiana</i> , <i>P. monticola</i> , <i>P. ponderosa</i> , <i>Thuja plicata</i> and <i>Tsuga mertensiana</i> .
	<i>Ramaria thiersii</i>	S	fungus	coral	On humus or soil in association with Pinaceae spp.
	<i>Rhizopogon abietis</i>	S	fungus	sequestrate	Associated with <i>Abies</i> , <i>Tsuga</i> , <i>Picea</i> and <i>Pinus</i> spp.
	<i>Rhizopogon atroviolaceus</i>	D	fungus	sequestrate	Associated with species of <i>Abies</i> , <i>Picea</i> , <i>Pinus</i> , <i>Pseudotsuga</i> and <i>Tsuga</i> .
	<i>Rhizopogon evadens</i> var. <i>subalpinus</i>	D	fungus	sequestrate	Usually in association with roots of <i>Tsuga mertensiana</i> or <i>Abies</i> spp. from 4000 - 7600 feet elevation.
	<i>Rhizopogon exiguus</i>	S	fungus	sequestrate	Associated with roots of <i>Pseudotsuga menziesii</i> and <i>Tsuga heterophylla</i> in Western Hemlock (80%) and Douglas Fir (20%) series at elevations of 80-3980 feet.

	<i>Rhizopogon flavofibrillosus</i>	D	fungus	sequestrate	Associated with roots of various Pinaceae, including <i>Abies concolor</i> , <i>A. lasiocarpa</i> , <i>Picea engelmannii</i> , <i>Pinus attenuata</i> , <i>P. contorta</i> , <i>P. lambertiana</i> , <i>P. muricata</i> or <i>Pseudotsuga menziesii</i> from 3000 - 7600 feet elevation.
	<i>Sarcodon fuscoindicus</i>	S	fungus	tooth fungus	Occurs on soil, litter and humus. Occurs primarily in Western Hemlock (43%) and Pacific Silver Fir (20%) series at elevation of 35-6500 feet. Associated species include <i>Abies amabilis</i> , <i>Pinus lambertiana</i> , <i>Pseudotsuga menziesii</i> , <i>Tsuga heterophylla</i> and <i>Thuja plicata</i> .
	<i>Sarcodon imbricatus</i>	D	fungus	tooth fungus	On ground in woods.
	<i>Sarcosphaera coronaria</i> (<i>S. eximia</i>)	D	fungus	cup	On ground in duff or beneath the surface of the ground in soil under coniferous forests.
	<i>Spathularia flavida</i>	S	fungus	club	On litter, woody debris and soil in conifer and hardwood forests. Occurs primarily in Western Hemlock (40%), Douglas Fir (12%), Pacific Silver Fir (12%) and White Fir (10%) series at elevations of 30-5480 feet. Associated species include <i>Abies concolor</i> , <i>A. grandis</i> , <i>Pinus contorta</i> , <i>P. monticola</i> , <i>P. ponderosa</i> , <i>Pseudotsuga menziesii</i> , <i>Thuja plicata</i> and <i>Tsuga heterophylla</i> .
	<i>Tremiscus helvelloides</i> (<i>syn. Phlogiotis helvelloides</i>)	S	fungus	polypore	In duff, soil and rotten wood under conifers.
Category C S&M taxa included in 2001 ROD and documented (D) or suspected (S) on DES NF					
Survey	Taxon	D or S	Group	Subgroup	Habitat

	<i>Cypripedium montanum</i>	D	Vasc	orchid	In <i>Pinus ponderosa</i> , <i>P. contorta</i> and <i>Pseudotsuga</i> forests but also with <i>Calocedrus decurrens</i> , <i>Abies grandis</i> , <i>Pinus lambertiana</i> and <i>Taxus brevifolia</i> . Not yet detected south of the Metolius Basin on Deschutes NF.
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