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Date: October 31, 2006
File Code: 2670 Botany
Subject: Biological Evaluation for South Fork McKenzie River Enhancement Project Appendix D
To: Dave Bickford/Team Leader

I. Introduction

Purpose:
The purpose of this Biological Evaluation is to review the South Fork McKenzie River Enhancement Project in sufficient detail as to determine whether the proposed action will result in a trend toward Federal listing of any sensitive botanical species.

Botanical Species of Concern:
Current management direction mandates conservation of several categories of rare plants on the Willamette National Forest. Protection of Federally listed Threatened and Endangered species is mandated by the Endangered Species Act. No federally listed Threatened and Endangered, or Proposed plants, are known to occur in the project area. Sensitive species are protected by USDA Forest Service regulations and manual direction (FSM 2672.4).

Prefield reviews are conducted to determine which species from the Regional Foresters 2006 Sensitive Species List for the Willamette National Forest are known from the project area or have suitable habitat present and potentially occur in the project area. Results show no known occurrences of sensitive botanical species within the project area. There is potential habitat for sensitive species in the project area (see Table 1).

II. Description of the Proposed Project

Location:
This project is located on the McKenzie River Ranger District, Willamette National Forest. The project is located at: T.18S., R.5E., Sec. 25, 26, 36; T.18S, R.5 ½ E, Sec. 31, 32, 33; T.19S, R.5E, Sec. 1 and 2; Willamette Meridian.

Proposed Action and Purpose:
The District Ranger on the McKenzie River District proposes to supplement in-stream large woody material in the South Fork McKenzie River and lower Roaring River. Repositioning previously placed restoration wood with implementation of the project would occur. The proposed action includes closure of 12 non-system roads to protect water quality in the project area. Implementation of this proposal, listed within this document as Alternative A, would occur beginning summer 2007.

The purpose for action is to enhance habitat and water quality conditions for spring Chinook salmon and bull trout to meet direction in the Willamette National Forest Plan as amended, and move toward recovery of both Threatened species as directed by the Endangered Species Act.

The need for action was documented in findings of the South Fork McKenzie Watershed Analysis (USFS 1994) where loss of early life habitat for bull trout and spring Chinook salmon in the upper South Fork McKenzie River and lower Roaring River was found. Recommendations from the South Fork McKenzie Watershed Analysis place highest priority on recovery of aquatic habitat in the South

Fork McKenzie River. As a Tier 1 Key Watershed, the South Fork McKenzie River is highest priority under the Northwest Forest Plan for protecting and restoring aquatic habitat.

Alternative A – Proposed Action

The South Fork McKenzie River Enhancement Project (South Fork Project) proposes supplementation of existing woody material to act as flow deflection and develop off-channel habitat. The large woody material (LWM) would be placed in the South Fork McKenzie and Roaring River channel upstream of Homestead Campground. Existing large woody material would be supplemented with trees selected from the adjacent Riparian Reserve, and with imported woody material from nearby upland sources. The collection and staging of LWM from an upland source will be evaluated as part of this project.

Techniques to place the woody material would be used to minimize impacts to other resources. Cables would be used to pull over live trees from the Riparian Reserve. Equipment used to tip live trees would work from Rd 431, Rd 1964 and non-system roads. Following placement of key features, material would be imported using helicopter, or by hand-crews, to form accumulations. Helicopter or hand-crew placement provides full suspension to place imported material and presents minimal disturbance of the river bottom and adjacent riparian area. By importing approximately 280 pieces of LWM, the proposed final density of large woody material would be about 80 pieces in the 8.5 mile enhancement reach.

Forty trees would be utilized from the adjacent Riparian Reserve to serve as "key" features behind which imported material would stabilize. Key features are large diameter trees, with root mass attached, selected for their ability to remain stable during most high flow events. The live trees selected to serve as key features are located at distances from the channel from stream bank to 50 feet from the active channel. The size of tree selected for key features ranges from 22 to 52 inches in diameter at breast height, averaging 32 inches in diameter. The trees selected for restoration of in-stream wood are dispersed through the 8.5 mile enhancement reach on each bank. Twenty-six trees are located along the left bank, looking downstream (Rd 431 and Rd 1964 side), and fourteen along the right bank (Rd 19 side).

Tree tipping would occur during mid-summer and helicopter and/or hand-crew placement would occur following key wood placement, during late summer. All placement activity would occur during the ODFW in-stream work period and outside wildlife restriction periods for the project area, July 15 through August 15, to minimize impacts to wildlife and fisheries. Project implementation is planned to occur beginning in summer season 2007 and is dependent upon equipment and crew availability.

A helicopter landing for refueling and service would be located on Road 985 landing. Road 985 is ¼ mile long, located adjacent to Roaring River. A spill containment structure would be required of potential helicopter use of Rd 985 landing. Restoration material would be staged in landings on Rd 425, Rd 429, Rd 431, Rd 1964 and Rd 414. Restoration material destined for helicopter transport to the enhancement reach would be collected from road-side salvage and existing stockpiles and would consist of whole trees with root-mass intact and root-less tree boles. Enhancement material would be flown directly from the staging areas to the river reach. A Flight Safety Plan and Spill Plan will be required prior to flight operations. Timing requirements for implementation are estimated at 3-4 days for placement of stream adjacent trees and 1-2 days for aerial placement of staged material. Equipment cleaning precautions will be utilized to avoid potential introduction or spread of noxious plants from ground based equipment.

Treatment of 12 non-system roads through barrier placement or campsite delineation would result in alteration of access to 12 dispersed campsites. Road accesses that travel through the South Fork McKenzie and Roaring River floodplains would be modified to exclude vehicle entry into stream channels and wet areas. Treatment would involve delineation of vehicle access using boulders or berms. A seedbed on road surfaces would be prepared through scarification or ripping. Approximately 3,000 feet of road surfaces would be seeded and planted using native plants following

soil preparation. Several campsites require rehabilitation to address degraded site conditions, such as denuded stream banks, eroding soils and drainage problems. Proposed treatments include planting campsite perimeters, drainage improvement and water-barring, and importing organic material to stabilize soils. There would be no change in access to 14 dispersed campsites, with modification of access to 12 dispersed campsites. The 12 dispersed campsites would continue to exist and be accessible to foot traffic.

Alternative B – No Action

The No Action alternative would not implement actions to restore in-stream large woody material in the South Fork McKenzie project area. Aquatic habitat degradation and water quality impacts presented by continuing use of non-system roads in wet areas would continue. This alternative allows existing problems such as low in-stream wood density and simplified habitat to continue untreated and dependant upon natural rates of input to replenish existing condition. Under the No Action alternative, current management plans would continue to guide management of the project area. The No Action alternative provides a basis for describing the environmental effects of the proposed action.

III. Existing Environment

Survey Results:

A survey of the proposed project area for sensitive botanical species was conducted during the summer of 2006 (Table 1). No sensitive botanical species were observed during the survey. Within the entire watershed, there is habitat for Bridgeoporus nobilissimus. However, surveys for this project involved specific trees (to be used in the stream enhancement) and the area of influence around these identified trees; therefore habitat for Bridgeoporus was deemed not to be present in this project. Fungi species were not surveyed for as they require multiple site visits and are deemend impractical to survey for with single predisturbance surveys.

IV. Impacts of the Proposed Project

Direct and Indirect Impacts:

Implementation of this project will have no direct or inderect effect on sensitive botanical species for which surveys are practical or their occupied habitat because sensitive botanical species are not present in the project area. This project involves minimal habitat disturbance for the fungi species deemed impractical to survey for and in my professional oppinion any direct or indirect impacts of this project will not lead to a trend toward listing of those species.

Cumulative Effects:

The proposed action will have no cumulative effects on sensitive botanical species or their occupied habitat because no sensitive botanical species are present in the project area.

V. Determination

It is my determination that implementation of this project will have “no impact” on sensitive botanical species for which surveys are practical because they are not present in the project area. It is my determination that implementation of this project “may impact individuals or habitat, but will not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species”.

Prepared by: _/s/Burtchell Thomas_____ Date: _October 31, 2006____

Burtchell Thomas, Botanist

McKenzie River Ranger District

Table 1: Summary of Potential Habitat and Presence for Botanical Species

Species	**Prefield Review**	**Species Presence**
Agoseris elata	habitat not present	No
Arabis hastatula	habitat not present	No
Arnica viscosa	habitat not present	No
Asplenium septentrionale	habitat not present	No
Aster gormanii	habitat not present	No
Boletus pulcherrimus	habitat not present	No
Botrychium minganense	habitat present	No
Botrychium montanum	habitat present	No
Botrychium pumicola	habitat not present	No
Bridgeoporus nobillisimus	habitat not present	No
Calamagrostis breweri	habitat not present	No
Carex livida	habitat not present	No
Carex scirpoidea var. *stenochlaena*	habitat not present	No
Castilleja rupicola	habitat not present	No
Chaenotheca subroscida	habitat present	No
Cimicifuga elata	habitat present	No
Coptis trifolia	habitat present	No
Cordyceps capitata	habitat not present	No
Cortinarius barlowensis	habitat not present	No
Corydalis aqua-gelidae	habitat present	No
Cudonia monticola	habitat not present	No
Dermatocarpon luridum	habitat present	No
Eucephalis(Aster) vialis	habitat not present	No
Frasera umpquaensis	habitat not present	No
Gentiana newberryi	habitat not present	No
Gomphus kaufmanii	habitat not present	No
Gyromitra californica	habitat not present	No
Hypogymnia duplicata	habitat present	No
Iliamna latibracteata	habitat present	No
Leptogium burnetiae var. hirsutum	habitat present	No
Leptogium cyanescens	habitat present	No
Leucogaster citrinus	habitat not present	No
Lewisia columbiana var. *columbiana*	habitat not present	No
Lobaria linita	habitat present	No
Lycopodiella inundata	habitat not present	No
Montia howellii	habitat not present	No
Mycenia monticola	habitat not present	No
Nephroma occultum	habitat present	No
Ophioglossum pusillum	habitat not present	No
Pannaria rubiginosa	habitat present	No
Pellaea	habitat not present	No

andromedaefolia		
Peltigera neckeri	habitat present	No
Peltigera pacifica	habitat present	No
Phaecollybia attenuata	habitat not present	No
Phaeocollybia dissiliens	habitat not present	No
Phaeocollybia pseudofestiva	habitat not present	No
Phaeocollybia sipei	habitat not present	No
Pilophorus nigricaulis	habitat present	No
Polystichum californicum	habitat not present	No
Potentilla villosa	habitat not present	No
Pseudocyphellaria rainierensis	habitat present	No
Ramalina pollinaria	habitat not present	No
Ramaria amyloidea	habitat not present	No
Ramaria aurantiisiccescens	habitat not present	No
Ramaria largentii	habitat not present	No
Rhizomnium nudum	habitat present	No
Romanzoffia thompsonii	habitat present	No
Scheuchzeria palustris var. *americana*	habitat not present	No
Schistostega pennata	habitat present	No
Sisyrinchium sarmentosum	habitat not present	No
Sowerbyella rhenana	habitat not present	No
Tetraphis geniculata	habitat present	No
Thorluna disimilis	habitat present	No
Usnea longissima	habitat present	No
Utricularia minor	habitat not present	No
Wolffia borealis	habitat not present	No
Wolffia columbiana	habitat not present	No

ATTACHMENT 1: **Regional Forester's Sensitive Plant List for the Willamette National Forest (Revised 2001).** Species of federal, state and local importance are included on the R-6 list.

Species	Occurrence on WNF	ONHP Status	State Status	Federal Status	Habitat Types
Agoseris elata	S	2			MM,DM
Arabis hastatula	D	1		SofC	RO
Arnica viscosa	S	2			RS
Asplenium septentrionale	S	2			RO
Aster gormanii	D	1			RS
Boletus pulcherrimus	D	1			CF
Botrychium minganense	D	2			RZ,CF
Botrychium montanum	D	2			RZ,CF
Botrychium pumicola	S	1	LT		HV
Bridgeoporus nobilissimus	D	1			CF
Calamagrostis breweri	D	2			MM,RZ
Carex livida	S	2			WM
Carex scirpoidea var. stenochlaena	D	2			RO
Castilleja rupicola	D	2			RO
Chaenotheca subroscida	D	3			CF
Cimicifuga elata	D	1	C		CF
Coptis trifolia	S	2			WM,CF
Cordyceps capitata	D	unlisted			CF
Corydalis aqua-gelidae	D	1	C		RZ,CF
Cudonia monticola	D	not listed			CF
Dermatocarpon luridum	S	3			RZ on rock
Eucephalis (Aster) vialis	S	1	LT	SofC	CF
Frasera umpquaensis	D	1	C		MM
Gentiana newberryi	D	2			MM
Gomphus kaufmanii	D	3			CF
Gyromitra californica	D	2			CF
Hypogymnia duplicata	S	3			CF
Iliamna latibracteata	S	2			CF,RZ
Leptogium burnetiae var. hirsutum	S	3			CF
Leptogium cyanescens	D	3			CF
Leucogaster citrinus	D	3			CF
Lewisia columbiana var. *columbiana*	D	2			RS
Lobaria linita	D	2			RO
Lycopodiella inundata	D	2			WM
Lycopodium complanatum	D	2			CF
Montia howellii	D	4	C		RZ
Mycenia monticola	D	not listed			CF
Species	**Occurrence on WNF**	**ONHP Status**	**State Status**	**Federal Status**	**Habitat Types**
Nephroma occultum	D	4			CF
Ophioglossum pusillum	D	2			WM

Pannaria rubiginosa	D	2			CF
Pellaea andromedaefolia	S	2			RO
Peltigera neckeri	D	not listed			CF
Peltigers pacifica	D	not listed			CF
Phaeocollybia attenuata	D	4			CF
P. dissiliens	D	3			CF
P. pseudofestiva	D	3			CF
P. sipei	D	3			CF
Pilophorus nigricaulis	D	2			RO
Polystichum californicum	D	2			RO
Potentilla villosa	D	2			RS, RO
Pseudocyphellaria rainierensis	D	4			CF,RZ
Ramalina pollinaria	D	2			CF, RZ
Ramaria amyloidea	D	2			CF
R. aurantiisiccescens	D	4			CF
R. largentii	D	3			CF
Rhizomnium nudum	D	2			CF
Romanzoffia thompsonii	D	1			RS
Scheuchzeria palustris var. americana	D	2			WM
Schistostega pennata	D	2			CF
Sisyrinchium sarmentosum	S	1	C	SofC	MM,DM
Sowerbyella rhenana	D	3			CF
Tetraphis geniculata	S	2			CF
Thorluna disimilis	D	2			CF
Usnea longissima	D	3			CF,RZ
Utricularia minor	D	2			SW
Wolffia borealis	S	2			SW
Wolffia columbiana	S	2			SW

ATTACHMENT 2:

Conclusions Of Effects For Use In Biological Evaluations and Assessments
USDA Forest Service - Regions 1, 4, and 6
August, 1995

Listed Species:

1. No Effect

   Occurs when a project or activity will not have any "effect", on a listed species, or critical habitat.

2. May Affect - Likely to Adversely Affect (LAA)

   If the determination in the biological assessment is that the project May Affect - Likely to Adversely Affect a listed species or critical habitat, formal consultation must be initiated (50 CFR 402.12). Formal consultation must be requested in writing through the Forest Supervisor (FSM 2670.44) to the appropriate FWS Field Supervisor, or NOAA Fisheries office.

3. May Affect - Not Likely to Adversely Affect (NLAA)

   If it is determined in the biological assessment that there are "effects" to a listed species or critical habitat, but that those effects are not likely to adversely affect listed species or critical habitat, then written concurrence by the FWS or NOAA Fisheries is required to conclude informal consultation (50 CFR 402.13).

4. Beneficial Effect

   Written concurrence is also required from the FWS or NOAA Fisheries if a beneficial effect determination is made.
   Requests for written concurrence must be initiated in writing from the Forest Supervisor to the State Field Supervisor (FWS or NOAA).

Proposed Species:

Whenever serious adverse effects are predicted for a proposed species or proposed critical habitat, conferencing is required with the FWS or NOAA Fisheries.

1. No Effect

   When there are "no effects" to proposed species, conferencing is not required with FWS or NOAA.

2. Not Likely to Jeopardize the Continued Existence of the Species or Result in Destruction or Adverse Modification of Proposed Critical Habitat

   This conclusion is used where there are effects or cumulative effects, but where such effects would not have the consequence of losing key populations or adversely affecting "proposed critical habitat". No conferencing is required with FWS or NOAA if this conclusion is made. However, for any proposed activity that would receive a "Likely To Adversely Affect" conclusion if the species were to be listed, conferencing may be initiated.

3. Likely to Jeopardize the Continued Existence of the Species or Result in Destruction or Adverse Modification of Proposed Critical Habitat

   This conclusion must be determined if there are significant effects that could jeopardize the continued existence of the species, result in adverse modification or destruction of proposed critical habitat, and/or result in irreversible or

irretrievable commitments of resources that could foreclose options to avoid jeopardy, should the species be listed. If this is the conclusion, conferencing with FWS or NMFS is required.

Sensitive Species:

1. No Impact (NI)

A determination of "No Impact" for sensitive species occurs when a project or activity will have no environmental effects on habitat, individuals, a population or a species.

2. May Impact Individuals or Habitat, But Will Not Likely Contribute to a Trend Towards Federal Listing or Cause a Loss of Viability to the Population or Species (MIIH)

Activities or actions that have effects that are immeasurable, minor or are consistent with Conservation Strategies would receive this conclusion. For populations that are small - or vulnerable - each individual may be important for short and long-term viability.

3. Will Impact Individuals or Habitat With a Consequence That the Action May Contribute to a Trend Towards Federal Listing or Cause a Loss of Viability to the Population or Species (WIFV)

Loss of individuals or habitat can be considered significant when the potential effect may be:

1. Contributing to a trend toward Federal listing (C-1 or C-2 species);
2. Results in a significantly increased risk of loss of viability for a species; or,
3. Results in a significantly increased risk of loss of viability for a significant population (stock).

4. Beneficial Impact (BI)

Projects or activities that are designed to benefit, or that measurably benefit a sensitive species should receive this conclusion.