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Idaho Panhandle  
National Forests

St. Joe Ranger  
District

May 2008



# Busse 484

## Record of Decision

# **Bussel 484**

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**Idaho Panhandle National Forests, St. Joe Ranger District  
Shoshone County, Idaho**

**May 2008**

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# **Bussel 484 Record of Decision**

## **I. Introduction**

The Bussel 484 Project Area is located within the Bussel Creek Watershed which is a tributary of Marble Creek and is eight miles northeast of Clarkia, Idaho in Shoshone County. It includes portions of Township 43 and 44 North; Range 2 and 3 East, Boise Meridian. The entire project area falls within Compartment 484 and covers 14,646 acres. Of this, approximately 2,454 acres are privately owned, so approximately 12,192 acres or 83% of the analysis area is National Forest System land. There are no inventoried roadless areas within or adjacent to the project area (see Map ROD-1; project file (PF) IRA-1).

## **II. Purpose and Need**

The purpose and need for the Bussel 484 project was developed as a result of an ecosystem analysis at the watershed scale (EAWS), public involvement, and a roads analysis process which evaluated the resource risk roads pose and their present and future need in management of the National Forest System lands within the project area. The goals, objectives, and standards of the Idaho Panhandle National Forests Forest Plan (Forest Plan), as well as information in the “Integration of Forest Planning into Ecosystem Management Toward a Forest Ecosystem Approach”, the Upper Columbia River Basin Integrated Scientific Assessment, and the National Fire Plan also guided development of the purpose and need (FEIS p. 4). The purpose and need included the following elements (FEIS pp. 4-5):

### **Maintain or improve resilience of the vegetative resources to disturbances such as insects, disease, and fire:**

- Promote and accelerate the development of long-lived, early-seral, shade-intolerant species (western white pine and western larch): With the substantial increase in mid-to late-seral species dominance and decrease in early-seral species, forest resiliency following disturbance is decreasing; and the risk of stand loss to insects, disease and fire has increased dramatically compared to historic conditions.
- Promote or maintain large-diameter trees, snags, coarse woody debris, and stands dominated by large-diameter trees: The substantially higher contribution of pole/small/medium size classes coupled with a similar reduction in the mature/large size class increases the susceptibility to substantial loss to disturbance from insects, disease, and fire.
- Reduce stand densities to enhance and encourage resilience to insects, disease, and other disturbances: Existing stands conditions consist of elevated representation of the pole/small/medium size classes with higher tree densities and there is a reduction in the representation of mature/large size classes from historical conditions.

### **Provide wood products for local communities:**

- Contribute to local employment, income and lifestyles (Forest Plan II-11) through long-term growth and production of commercially valuable wood products and cost-effective timber production (Forest Plan III-2, III-16).
- Provide biomass for the St. Maries Fuels to School Project. The Forest Service will initially supply biomass to get the Heyburn Elementary School biomass heating system going.

### **Work toward full support of designated beneficial uses in the Bussel Creek Watershed:**

- Reduce sediment production and increase stream shading in Bussel Creek and its tributaries. Bussel Creek and its tributaries are identified on Idaho’s current 303(d) list (2002) of water quality limited segments (WQLS) due to the pollutants of concern: sediment and temperature. Sediment and temperature Total Maximum Daily Loads (TMDLs) have been identified to increase stream shade and reduce sediment for Bear Creek and Little Bear Creek which are tributaries of Bussel Creek.

Stream temperatures currently exceed federal and state bull trout temperature standards in Bussel Creek.

- Replace or remove culverts that do not allow fish passage. Some culverts do not allow fish to pass through them. This limits the amount of available habitat in the corresponding stream.
- Increase the number of long pieces of large woody debris in stream channels. Based on objectives of the Inland Native Fish Strategy (INFS p. A-4 Table A-1), some streams within the project area do not have the recommended amounts of long pieces of large woody debris.
- Create more natural stream channel conditions where road crossings are removed. Crossing structure removal and channel form rehabilitation would enhance lateral (floodplain) and longitudinal (upstream and downstream) connectivity.

**Manage access to provide for multiple uses:**

- Decommission roads that are not needed for multiple-use management of National Forest System (NFS) lands.
- Moves towards the implementation of the National Off-Highway Vehicle Rule (36 CFR 212.51) by designating roads, trails, and areas open to motorized vehicle use. Motorized users are expanding their activities and are creating their own cross-country trails. Resource damage is occurring in meadows, along creeks, and in other sensitive areas within the project area.
- Access is needed for vegetation management activities.
- Provide a variety of recreation opportunities (motorized and non-motorized).
- Increase amount of and improve distribution of wildlife security areas in the project area to contribute to meeting forest plan goals and objectives for big game habitat. The Bussel 484 Project Area provides little to no security acres. This condition is a result of a combination of open gates, breached barriers, and ATV use of roads and trails. ATVs were not included in the road restrictions currently in effect because ATVs were not common and were not a concern when these restrictions were put in place in the 1970s and 1980s. Preliminary data shows the existing amount and distribution of security areas are not adequate for achieving Forest Plan objectives and the desired condition for the project area.
- Reduce resource damage caused by roads and vehicles.
- Reduce the amount of road maintenance required.

**III. Description of the Decision**

I have decided to implement final EIS Alternative B with modifications (**Alternative B Modified**) as described below. The selected alternative activities are displayed on Maps ROD-2, ROD-3, ROD-4, ROD-5, and ROD-6. Alternative B Modified is the environmentally preferred alternative because it prevents adverse effects to cultural resources, best meets the purpose and need to improve vegetation and watershed conditions, and it addresses the transportation system relative to protection of fish, water, soil, and wildlife resources (see Purpose and Need, Section II of the ROD).

- 1) Road 3570A will not be reconstructed and used as a haul route. Alternative B would have reconstructed this road into a haul route to be used for timber sale purposes, and then converted it to a designated ATV route. Like Alternative C, the selected alternative will forego using this road as a haul route, but will designate the road as an ATV route. As a result of this change, the logging system for Unit 176 will be changed from skyline to helicopter. I am implementing this change because reconstruction of the wagon road into a haul route would be an adverse effect to the historic integrity of the road. This road is narrow and envelops the character of a historic wagon road. In order to be used as a haul route, the road would need some widening and grading which would diminish its

integrity (FEIS p. 58). Designation as an ATV route will not have an adverse effect on the wagon road, since the road is currently used by ATVs and is in a relatively stable condition (FEIS p. 58).

- 2) Alternative B would have repaired and restored the entire length of the Norton Creek Railroad Grade and designate it open to motorized vehicles less than 50 inches wide (4.3 miles). The selected alternative will incorporate the Alternative C prescription for this trail and open the Norton Creek Grade and designate it as an ATV route up to its intersection with Road 3951 only (2.9 miles). To protect cultural resources, I will not open or designate for ATV use the remainder of the Norton Creek Grade that connects to the Lines Creek Trail. During our analysis it became apparent that there would be unacceptable impacts to cultural resources from providing ATV access to the remaining 1.4 miles of the Norton Creek Railroad Grade (FEIS p. 57). Therefore, ATV access will not be allowed on this 1.4 mile portion of the grade and motorized access to it will be blocked with physical barriers.
- 3) I am deferring a decision to construct Road NR22 to allow for additional review and field verification. This will reduce selected NFS system road construction activities authorized in this decision to 4.5 miles. Alternative B of this project would have an effect on allocated old growth. This alternative includes the construction of 473 feet or 0.09 miles of system road construction that would affect an estimated 0.4 of an acre or 0.7% of the allocated old growth stand (OG-17). Based on the location and length of the road construction, the affect on Old Growth Patch 11 is approximately 0.07% and the effect on the allocated old growth within OGMU 8 would be approximately 0.02% (OG-17). After the construction and use of this road, it would have been placed into Road Prescription C.

If, after further field review, I decide that Road NR22 should be constructed I will seek public comment on this proposal; and the harvest treatments in Units 254 (50 acres) and 283 (61 acres) will follow prescriptions and yarding methods specified in Alternative B. If I decide to not construct Road NR22, harvest treatments in Units 254 and 283 will follow the prescriptions and yarding methods specified in Alternative C (helicopter yarding).

Approximately four miles of roads in Prescriptions A, B and C will be decommissioned (Prescription D) in my decision as proposed in Alternatives B and C. The decommissioning of these roads will reduce the amount of road going through and adjacent to allocated old growth. Old growth standard 10g states, "Roads should be planned to avoid old-growth management stands to maintain unit size criteria." Deferring a decision to construct Road NR22 ensures compliance with Forest Plan old growth standard 10g. In the selected alternative no new system road or temporary road will be constructed within allocated old growth stands.

- 4) I am deferring a decision on 246 acres of precommercial thinning/white pine pruning to allow for additional review and further public comment. The following table displays the proposed pre-commercial thinning/pruning stands in lynx habitat. The thinning/pruning prescription for these stands would be limited to daylight thinning around individual planted rust-resistant white pine where 80 percent of the winter snowshoe hare habitat is retained. This treatment would be consistent with the standard for pre-commercial thinning in the *Northern Rockies Lynx Management Direction FEIS/ROD* (NRLMD).

**Deferred TSI Work in Lynx Habitat**

Stand	Acres	Stand	Acres
48401035	48	48402052	46
48402002	7	48402057	35
48402012	33	48402115	19
48402040	17	48403045	41

The *Canada Lynx Conservation Assessment and Strategy* (LCAS) (Ruediger and others 2000) provides an approach for management of lynx on federal lands and the NRLMD incorporates goals, objectives, standards, and guidelines for management of lynx into the IPNF Forest Plan. As part of the programmatic planning standards, Lynx Analysis Units (LAUs) were delineated (ca. 2000) in collaboration with the USFWS to facilitate project planning. Based on potential vegetation in portions of the area and our understanding of lynx habitat at that time, the Bussel 484 area was included in the Bussel Creek LAU (WL-15).

An effort to remap lynx habitat was initiated in 2006 because of the increased understanding of lynx habitat and better information concerning existing primary vegetation/habitat since the initial mapping effort. The re-mapping process, a better understanding of lynx habitat, and the assessment of lynx habitat quickly revealed that some LAUs are no longer consistent with direction in the LCAS and that adjustments should be made. For example, the Bussel Creek LAU contains approximately 1,680 acres of primary vegetation (subalpine fir) (WL-16). This is not consistent with the LCAS guideline which states that 6,400 acres of primary vegetation should be present within each LAU to support lynx survival and reproduction.

Based on this information the IPNF met with the USFWS (WL-27). To facilitate a scientifically sound analysis at that time both agencies agreed to a change in LAU boundaries in the Bussel 484 area. The change involved dropping the old Bussel Creek LAU and re-delineating the existing Grandmother Mountain LAU (WL-17) to incorporate the lynx habitat in the Bussel 484 area (FEIS p. 269 Figure 3-12). This change in LAUs is consistent with direction in the LCAS.

The ongoing remapping of lynx habitat has been completed and reviewed by the Lynx Biology Team and the U.S. Fish & Wildlife Service. The staff in the Northern Regional Office have reviewed the more refined mapping process and found the remapping consistent with the NRLMD. I will propose the precommercial thinning/pruning of these deferred stands at a later time and accept public comment on this proposal given the change in mapped lynx habitat, which no longer places the Bussel 484 Project Area in an LAU.

**Table 1: Decision Modifications**

	<b>FEIS Alternative B</b>	<b>Selected Alternative (Alternative B Modified)</b>	<b>Difference between EIS and ROD</b>
Miles of road construction on NFS land	5.1	<b>4.5</b>	Decrease of 0.6 miles
Miles of temporary road on NFS land	0.3	<b>0.5</b>	Increase of 0.2 miles
Miles of road reconstruction	6.7	<b>5.4</b>	Decrease of 1.3 miles
Miles of trail open to motorized use (less 50 inches)	6.8	<b>5.4</b>	Decrease of 1.4 miles
Acres of precommercial thinning and white pine pruning	821/555	<b>575/309</b>	Decrease of 246 acres

These modifications resulted from further analysis and consideration of public and agency comments. After discussing this modification with the interdisciplinary team, I have determined that this alternative is still within the range of action and effects analyzed and disclosed in the final EIS. See the ROD Section IV discussion on my rationale for decision for additional information.

The analysis and decision process for this project are based on the consideration of the best available science. Specifically, I find that the analysis identifies the methods used; references scientific sources relied upon; discusses responsible opposing views; and discloses incomplete or unavailable information.

**Features of the Selected Alternative**

**Timber Harvest:** Approximately 2,137 acres will be treated with commercial timber harvest (see Maps ROD-2 and ROD-3). See *Activities Common to the Action Alternatives* section in the final EIS for more information about silvicultural prescriptions. The commercial timber harvest activities will consist of the following activities:

**Table 2: Selected Alternative Timber Harvest Summary**

Silvicultural Prescription				Yarding Method			
Commercial Thin	Group Shelterwood	Seedtree	Clearcut w/ Res.	Cable (not skyline)	Skyline	Ground-based	Helicopter
1,486 acres	521 acres	53 acres	78 acres	79 acres	739 acres	552 acres	768 acres

**Table 3: Alternative B Modified Timber Harvest Unit Details**

H = helicopter; S = skyline; C = cable; GB = ground-based;  
 FL = hand fireline construction; Yard Tops (200 feet) = 200 feet from top of unit

Unit	Silvicultural Rx	Acres	Yarding Method	Fuel Treatment
5	Commercial Thin	15	H	Lop / Yard Tops (200 feet)
6	Commercial Thin	22	H	Lop / Yard Tops (200 feet)
11	Commercial Thin	14	GB	Yard Tops
		11	H	Lop
		32	S	Lop / Yard Tops (200 feet)
14	Commercial Thin	7	GB	Yard Tops / FL* / Jackpot Burn
		32	S	
15	Commercial Thin	8	GB	Lop / Grapple Pile
		15	S	Lop / Yard Top (200 feet)
17	Commercial Thin	10	GB	Lop / Slash
		43	S	Lop / Slash / Yard Tops (200 feet)
18	Seedtree	17	S	Lop / Yard Tops (200 feet) / FL / Broadcast Burn
30	Commercial Thin	23	H	Lop / Slash / Jackpot Burn
32	Commercial Thin	36	S	Lop / Slash
41	Group Shelterwood	41	H	Lop/Yard Tops, Slash, FL, Broadcast Burn Openings
70	Commercial Thin	22	GB	Lop / Grapple Pile
		16	S	Lop
84	Commercial Thin	34	GB	Lop / Grapple Pile
		10	S	Lop
95	Commercial Thin	16	H	Lop / Jackpot Burn
99	Commercial Thin	41	H	Lop
100	Clearcut w/ Reserves	3	GB	Lop / Broadcast Burn
		5	S	
104	Commercial Thin	27	H	Lop
107	Commercial Thin	3	C	Lop / Jackpot Burn
		26	GB	
110	Commercial Thin	11	GB	Lop / Slash / Jackpot Burn
		15	H	Lop / Jackpot Burn / FL / Slash

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Unit	Silvicultural Rx	Acres	Yarding Method	Fuel Treatment
		11	S	Lop / Jackpot Burn / Slash
114	Group Shelterwood	37	GB	Lop/Yard Tops, Slash, FL, Broadcast Burn Openings
134	Group Shelterwood	49	H	Lop/Yard Tops, Slash, FL, Broadcast Burn Openings
141	Commercial Thin	9	H	Lop
143	Group Shelterwood	6	GB	Lop/Yard Tops, Slash, FL, Broadcast Burn Openings
		18	S	
148	Commercial Thin	19	H	Lop
		25	S	
153	Clearcut w/ Reserves	3	GB	Lop / Broadcast Burn
		8	S	
156	Commercial Thin	31	H	Lop
170	Commercial Thin	34	GB	Jackpot Burn
		7	S	Lop
175	Commercial Thin	22	H	Lop
176	Commercial Thin	62	H	Lop / Jackpot Burn
181	Commercial Thin	14	GB	Slash / Jackpot Burn
		7	S	Lop
182	Commercial Thin	6	GB	Jackpot Burn / Slash
		12	S	Lop / Slash
183	Seedtree	36	H	Lop / FL / Broadcast Burn
197	Commercial Thin	18	H	Lop
198	Commercial Thin	46	GB	Lop / Grapple Pile
200	Commercial Thin	14	S	Yard Tops
209	Group Shelterwood	29	S	Lop/Yard Tops, Slash, FL, Broadcast Burn Openings
215	Commercial Thin	24	GB	Lop / Grapple Pile
		4	H	Lop
224	Commercial Thin	17	C	Lop
		8	GB	Lop / Grapple Pile
225	Commercial Thin	20	GB	Lop / Yard Tops
		30	H	
		6	S	
226	Commercial Thin	19	GB	Lop / Grapple Pile
232	Group Shelterwood	23	GB	Lop/Yard Tops, Slash, FL, Broadcast Burn Openings
		31	S	
233	Group Shelterwood	14	GB	Lop/Yard Tops, Slash, FL, Broadcast Burn Openings
235	Commercial Thin	10	H	Lop
248	Commercial Thin	69	GB	Lop / Grapple Pile
251	Group Shelterwood	20	C	Lop/Yard Tops, Slash, FL, Broadcast Burn Openings
		5	GB	
254	Group Shelterwood	5	GB	Lop/Yard Tops, Slash, FL, Broadcast Burn Openings
		45	S	
264	Group Shelterwood	6	GB	Lop/Yard Tops, Slash, FL, Broadcast Burn Openings
		50	S	
268	Group Shelterwood	17	GB	Lop/Yard Tops, Slash, FL, Broadcast Burn Openings
		10	S	
271	Commercial Thin	13	GB	Yard Tops
		14	S	Lop
273	Commercial Thin	22	H	Lop
275	Commercial Thin	43	H	Lop
283	Commercial Thin	39	C	Lop
		22	S	

Unit	Silvicultural Rx	Acres	Yarding Method	Fuel Treatment
296	Commercial Thin	17	GB	Lop
		36	S	
299	Group Shelterwood	5	GB	Lop/Yard Tops, Slash, FL, Broadcast Burn Openings
		46	S	
301	Group Shelterwood	50	H	Lop/Yard Tops, Slash, FL, Broadcast Burn Openings
		12	S	
302	Clearcut w/ Reserves	18	H	Lop / Broadcast Burn
303	Commercial Thin	57	H	Lop
307	Commercial Thin	10	GB	Yard Tops
		16	S	Lop
310	Commercial Thin	27	H	Lop / Jackpot Burn
311	Commercial Thin	10	GB	Yard Tops
		6	S	Lop
314	Commercial Thin	19	H	Lop
321	Commercial Thin	12	H	Lop
		16	S	Yard Tops
322	Clearcut w/ Reserves	7	GB	Yard Tops / Broadcast Burn
		33	S	Broadcast Burn
323	Commercial Thin	41	S	Lop
		11	H	
325	Commercial Thin	15	S	Lop
336	Commercial Thin	8	H	Yard tops / FL / Jackpot Burn

**Fuel Treatment:** Fuels resulting from timber harvest will be treated. This will include approximately 316 acres of yarding tops, 1,742 acres of lopping, 181 acres of slashing, 230 acres of grapple piling followed by pile burning, 20.2 miles of hand fireline construction, 307 acres of broadcast burning, and 289 acres of jackpot burning. Biomass removal for the St. Maries School District Fuels to Schools Project will be a by-product of the proposed fuel treatment. Piled material may be used for the Fuels to Schools Project.

**Reforestation:** Conifer seedlings will be planted on approximately 367 acres in areas selected for regeneration harvest. Planting will supplement the expected natural regeneration. Planted conifer seedlings will enhance diversity, assure timely reforestation, and contribute to long-term desired habitat conditions. All planting will be a mix of species, but will predominantly be early-seral western white pine, western larch, and ponderosa pine.

**Pocket Gopher Control:** Baiting will be done to control pocket gophers on approximately 367 acres in areas selected for regeneration harvests, if needed, to protect regeneration. Baiting will include placing either 0.5% strychnine treated oats or 2.0% zinc phosphide oats into pocket gopher tunnels by hand. An initial treatment will be followed by additional treatments, if needed, to minimize losses in the regeneration and meet stocking objectives.

**Timber Stand Improvement:** Approximately 575 acres of precommercial thinning will be implemented to improve the growing conditions of the selected trees by eliminating competition for light and nutrients (see Map ROD-6). This includes 309 acres of white pine pruning that will be done in areas that are also thinned. Precommercial thinning will occur in previously harvested immature stands to improve or accelerate diameter increment growth and to improve the average form of the trees retained in the stand. Existing roads will be used for getting to stands for precommercial thinning. Stands will remain fully stocked following thinning.

**Road Construction and Reconstruction:** Approximately 4.5 miles of system road and 0.5 miles of temporary road will be constructed on National Forest System lands to facilitate timber harvest (see Map ROD-3). An additional 0.2 miles of road will be constructed across lands owned by Potlatch Corporation (see *Cost Share Roads* below). When harvest-associated work is completed all 4.5 miles of the new system road will be placed into storage (Road Management Prescription C) for future use and will not be designated for motorized vehicle use. Temporary road will be fully recontoured to the natural slope when yarding operations served by that road are complete. A total of 5.4 miles of road will be reconstructed as displayed in the following table (see FEIS p. 23 for a description of selected activities). Twelve undersized culverts on Roads 1900, 1904, 758, 3590, 1254 will be replaced with culverts large enough to accommodate a 100-year flood event (FEIS p. 23)

**Table 4: Selected Alternative Road Reconstruction**

Road #	1902B	1900F	1498C	1498C	1902C	1902C	1902	Total
Miles	1.0	1.0	1.4	1.0	0.2	0.1	0.7	5.4

**Cost Share Roads:** Approximately 0.2 miles of road will be constructed on Potlatch Corporation lands under the Merry Creek Cost Share Supplement to facilitate timber harvest on National Forest System lands (see Map ROD-3 for Roads NR9C and NR9A). The agreement will be supplemented to add construction across Potlatch Corporation lands. The new construction may be shared and the Forest Service would buy into Roads 226J and 226M or the new construction may be done with an easement under the Merry Creek Cost Share Supplement.

**Access Management:** Approximately 20.3 miles of roads will be open to all licensed vehicles, 18.5 miles of roads and trails will be open to vehicles less than 50 inches wide, 31.9 miles of roads and trails will be available for non-motorized use only, and 10.7 miles of road will no longer provide access (see Maps ROD-4 and ROD-5). The selected alternative will result in higher quality ATV routes with more loops and it will provide three areas of wildlife security to improve the amount and distribution of wildlife security in the area. For additional information see Table 5 below. The selected alternative will:

- Install effective restriction devices throughout the project area.
- Remove the gate on Road 1498. The road is currently open and the proposed action is to leave the road open, so there is no need for the gate.
- Construct 0.2 miles of new trail for motorized vehicles less than 50 inches wide between Roads 1901C and 3590A.
- Convert Bussel Creek Trail 258 (6.5 miles in and outside of the project area) to non-motorized use, remove culverts, harden stream crossings, and install an effective restrictive device.
- Designate Lines Creek Historical Trail as open to motorized vehicles less than 50 inches wide (3.0 miles).
- Repair 2.9 miles of the Norton Creek Railroad Grade and designate that part open to motorized vehicles less than 50 inches wide. During the analysis it became apparent that there would be unacceptable impacts to cultural resources from providing ATV access to the remaining 1.4 miles of the Norton Creek Railroad Grade. Therefore, ATV access will not be allowed on this portion of the grade and motorized access will be blocked with physical barriers.

**Table 5: Existing and Selected Road and Trail Access on NFS lands in the Project Area**

Roads	Existing Access	Selected Alternative Access	Net Change
Open	31.8 miles	20.3 miles	-11.5 miles
Motorized < 50"	28.4 miles	13.1 miles	-15.3 miles
Non-motorized	6.4 miles	26.1 miles*	+19.7 miles
<b>Trails</b>			
Motorized <50"	6.6 miles	5.4 miles	-1.2 miles
Non-Motorized	4.2 miles	5.6 miles	+1.4 miles

\*Includes 4.5 miles of new road construction

**Road Management Prescriptions:** The selected alternative decommissions as many high-risk, lower-value roads as possible (see Map ROD-5). Approximately 32.3 miles of existing roads will be put into Road Management Prescription C or D, and 57 culverts will be removed. See *Activities Common to the Action Alternatives* section in the final EIS for a description of the road management prescriptions.

**Table 6: Existing and Selected Road Management Prescriptions for NFS Lands**

Roads	Existing Condition	Selected Alternative Rx	Net Change	Selected Rx for newly constructed system roads	Selected Alternative Net Change
Open	24.3 miles	20.3 miles	-4.0 miles	0	-4.0 miles
Rx A	17.7 miles	5.2 miles	-12.5 miles	0	-12.5 miles
Rx B	23.2 miles	7.9 miles	-15.3 miles	0	-15.3 miles
Rx C	1.4 miles	21.6 miles	+ 20.2 miles	4.5 miles	+24.7 miles
Rx D	0.0 miles	10.7 miles	+ 10.7 miles		+10.7 miles

FEIS Tables 2-13, 2-14, and 2-15 detail the roads that will be put into Road Management Prescriptions C or D before, concurrent with, or independent of the selected timber harvest activities. The following table displays the selected access for roads within the project area.

**Table 7: Existing and Selected Access for Existing Roads in the Bussel 484 Project Area**

Road #	Existing Access (miles)			Selected Alternative (miles)			
	Open	Vehicles < 50"	Impassable	Open	Vehicles < 50"	Road Rx C	Road Rx D
1254	3.65			2.56	1.09		
1254D		1.00				1.00	
1254UC	0.41			0.41			
1441		0.75			0.75		
1441A		0.02			0.02		
1470	0.42			0.42			
1471	0.42			0.42			
1476		0.66				0.66	
1498	1.85			1.85			
1498A			0.39			0.39	
1498B		0.04			0.04		
1498C		1.02				1.02	
1498CA		0.11					0.11
1498FA	0.33			0.33			
1498FB	0.19					0.19	
1498FC	0.11	1.01		0.11		1.01	
1498FD		0.15				0.15	
1498FG		0.12					0.12
1498FI		0.32					0.32
1498G		0.63				0.63	
1900	3.47	1.44		2.55	2.36		
1900A		1.18				1.18	
1900B		1.30					1.30
1900C		2.15				2.15	
1900CA		0.31					0.31
1900CB		0.39					0.39
1900CC		0.44					0.44
1900D			0.48				0.48
1900E		1.10			1.10		
1900EA			0.95			0.95	
1900F		1.13	0.44			1.57	
1900FA		0.55					0.55
1900G		0.12					0.12
1900H		0.55					0.55
190I	0.36		0.85	0.36	0.85		
1901A	0.53			0.53			
1901C			0.47			0.47	
1902	2.10	0.98				3.08	
1902A		0.57					0.57
1902B		0.97					0.97
1902C		0.32				0.32	
1902D		0.20					0.20
1904	1.73			1.73			
1904A		0.18					0.18
226	1.87			1.87			
3332	1.86			1.86			
3332UA	0.29			0.29			
3332UB	0.29			0.29			
3570A		0.82			0.82		
3590	2.46				1.82	0.64	
3590A		1.52			1.52		
3590B		0.20					0.20
3591	3.52				2.75	0.77	
3591A	1.25					1.25	
3658		3.93				3.93	

Road #	Existing Access (miles)			Selected Alternative (miles)			
	Open	Vehicles < 50"	Impassable	Open	Vehicles < 50"	Road Rx C	Road Rx D
3658A		1.29					1.29
3660		0.25				0.25	
758	4.39			4.39			
758A	0.05			0.05			
758DA			0.80				0.80
758DB			0.31				0.31
758DC			0.69				0.69
758E**			0.85		0.85		
758F			0.13				0.13
758G		0.54					0.54
758GA		0.15					0.15
758J	0.07			0.07			
758K	0.17			0.17			
<b>Total Miles</b>	<b>31.79</b>	<b>28.41</b>	<b>6.36</b>	<b>20.26</b>	<b>13.97</b>	<b>21.61</b>	<b>10.72</b>

**Aquatic Habitat Improvement:**

Riparian Planting: Native conifers and shrubs will be planted in some riparian areas up to a total of approximately 1.8 miles along Bear and Little Bear Creeks and in other parts of the Bussel Creek Drainage. This will be accomplished over a period of 10 to 15 years.

Large Woody Debris Placement: A helicopter and hand crews will be used to place 100-200 cover logs in the stream channel of Bear Creek and mechanical equipment will be used to place 100-200 cover logs in upper Bussel Creek to increase stream cover, improve fish habitat and large woody debris to increase stream cover, improve fish habitat and large woody debris. This will take place over 2.5 to 3 miles of stream channels within the Bussel and Bear Creek drainages.

Fish Migration Barrier Removal: To eliminate two human-created fish passage barriers two culverts on Road 1900 will be replaced with culverts specifically designed for fish passage.

Stream Crossing Rehabilitation: Approximately fifty-seven stream crossings will be removed throughout the project area as part of the road management prescription changes discussed above.

**Forest Plan Management Area Changes:**

During analysis of this project, the following stands (units) proposed for treatment were tentatively identified as allocated to Management Area 9 (MA 9), which indicates constraints related to vegetation management and specifically timber management. The applicable portion of Management Area 9 description in the forest plan describes these areas as consisting "...of areas of non-forest lands, lands not capable of producing industrial products, lands physically unsuited for timber production, and lands capable of timber production but isolated by the above type lands or nonpublic ownership. ...".

**Stand 484-04-022 (Unit 99):** This stand is approximately 42 acres in size with about 6.5 acres currently mapped as MA-9 and about 35.5 acres mapped as MA 1 in the GIS management area layer.

**Stand 484-03-023 (Unit 336):** Forty-nine acres in size (the majority is currently mapped as MA-9), of which about 8 acres are selected for treatment.

**Stands 484-04-91 (Unit 70) and 484-04-106 (Unit 95):** These stands have only 0.27 acres and 0.18 acres currently delineated as MA 9 on the GIS management area layer, with the remainder of these stands being MA 1. This appears to be a minor mapping difference, probably due to adjustment in scale from 1:200,000 to 1:24,000.

**Stand 484-03-030 (Unit 141) and Stand 484-03-054 (Unit 97):** Twenty-six and 37 acres in size, respectively currently mapped as MA-9. Nine acres and 23 acres are selected for treatment with this project, respectively. Due to ownership patterns and geographic features at the time of the forest plan, this stand was generally isolated from other NFS lands. Due to acquisition of the private holdings, this stand is no longer isolated from other NFS lands. A review of recent stand examination data reflected a productive timbered site, with no indication of any particular harsh conditions.

Analysis indicated that these stand are suitable for timber management (FEIS p. 144 and V-5, V-12, PD-68). Therefore, following the forest plan timberland suitability adjustment procedure (see IPNF Forest Plan, Appendix M), these stands are being reallocated from MA 9 to MA 1 (suitable lands designated for timber production) and it is appropriate to change the mapping of the MA 9 boundary to better reflect that condition. These adjustments will be monitored in accordance with the forest plan.

### **Required Design Features and Mitigation**

In addition to the previously displayed activities, all design elements, mitigation requirements and monitoring activities discussed on pages 29 through 38 of the FEIS, Appendix B (Best Management Practices) and Appendix C (Biological Evaluations and Assessments) will be implemented in full as written, unless otherwise noted, or as explicitly modified by my decision. I believe these measures represent all practical means to avoid or minimize environmental effects in the context of taking action to achieve the project's purpose and need.

The following discussion identifies the principal design, mitigation and monitoring measures.

#### **1. Air Quality**

- A. Proposed burning activities follow procedures outlined by the North Idaho Smoke Management Memorandum of Agreement. Currently, the period of air quality monitoring and restriction is March 1 to November 30.
  - i. During this period, all burning by the Forest Service is regulated to prohibit or restrict burning where stagnant weather conditions result in poor smoke dispersion and by conducting prescribed burns when ventilation and air quality conditions are good.
  - ii. The project is within Airsheds 12a and 12b, which contain no EPA designated non-attainment areas for pollutants. The project area does not contain any Class I Airsheds as designated by the Clean Air Act.
  - iii. Burning during any time of the year is regulated by the Idaho State Department of Environmental Quality, which issues burning closures when necessary to protect air quality. The Forest Service cooperates with the State by requesting approval to burn through the Montana/Idaho Airshed Management System in compliance with the Idaho State Implementation Plan.
  - iv. Particulate matter projections will be sent to the North Idaho Smoke Management Group one day prior to ignition.
- B. Measures used to mitigate effects of prescribed burning on air quality will include:
  - i. The discretion to terminate burns when air quality is threatened.
  - ii. Slash piles will be constructed as clean as practical and be burned as dry as practical to enhance efficient combustion.

#### **2. Cultural Resources**

- A. All known cultural resource sites, eligible or potentially eligible to the National Register of Historic Places, will be protected or mitigated as directed by the National Historic Preservation Act. Any

future discovery of cultural resources sites or caves will be inventoried and protected if found to be of cultural significance. A provision will be included in contracts to ensure protection of the sites.

- B. Directional felling will be used in timber harvest units along historic railroad and near eligible cultural resources, a buffer will be established near eligible cultural resources, and no logs will be dragged or skidded over the grade or eligible cultural resources. The appropriate Zone or Forest level archaeologist will accompany the layout personnel to ensure that a sufficient buffer is implemented.

**3. Fish**

- A. In-channel activity will only occur during base flows, July 15 through September 1.
- B. Inland Native Fish Strategy (INFS) Standards and Guidelines are specific based upon the proposed activity, i.e. timber harvest, road management, pre-commercial thinning, etc. Standard buffer widths (Table 7) apply to activities within this project area unless otherwise designated by the district fisheries biologist or district hydrologist. During the layout of units the widths may be greater based on ground conditions.

**Table 8: Summary of Inland Native Fish Strategy RHCA Widths**

INFS Category	Description	RHCA Width
1	Fish-bearing streams	300 feet from either side of channel
2	Permanent, flowing, non-fish-bearing stream	150 feet from either side of channel
4	Seasonal, flowing or intermittent streams; Wetlands < 1 acres; Landslide prone areas	50 feet (non-priority watersheds)

- C. Straw bales would be used to mitigate effects of culvert removals where culverts that are fish migration barriers are replaced on Road 1900. Two straw bales placed in the stream at culvert removal sites caused a significant reduction in fine sediment yield (Foltz and others 2007).
- D. Areas of exposed soil will be mulched and seeded as needed where large woody debris is placed in RHCAs.

**4. Gopher Baiting**

The following criteria will be followed during gopher baiting project implementation:

- A. Manufacturer’s recommendations for use will be followed.
- B. Treated bait will only be applied outside of INFS designated buffers on Category 1, 2, 3, and 4 water bodies.
- C. Treated bait will not be stored or transferred within 300 feet of any stream or live water.
- D. Treated bait will not be applied to saturated soils.
- E. Treated bait will not be applied during any forecasted or actual precipitation event.
- F. Treated bait will not be directly applied to or discarded in open water bodies such as lakes, streams, ponds, and wetlands.
- G. Treated bait will be applied by a licensed applicator in accordance with Idaho State law.
- H. Setting of bait will occur after July 1.
- I. A mandatory provision for bait spill cleanup and disposal will be included in contracts.
- J. The application of bait will be monitored by a Forest Service employee who has been trained in animal damage control.
- K. Follow-up gopher control effectiveness surveys will be completed. Any evidence of non-target wildlife/fish mortality will be collected and be reported to the District Fisheries Biologist or Wildlife Biologist.
- L. Existing closed gates used to access units will be locked after each entry and exit.

- M. Activity behind closed gates and earth barriers will be scheduled for completion prior to August 30th. An extension may be allowed based on extenuating circumstances (fire, weather, etc.) after interdisciplinary review.
- N. Earthen barriers removed to allow access for project activities will be replaced upon completion of the unit and before August 30th.
- O. Roads that have naturally revegetated will not be cleared to improve access.

**5. Noxious Weeds**

The following preventative measures will be taken to reduce the risk of noxious weed introduction and spread in accordance with the St. Joe Weed Control EIS (ROD 10/12/99).

- A. A provision will be included in all contracts that will require all off-road logging and construction equipment (including machinery used in restoration projects) to be cleaned prior to entering the project area to remove dirt, plant parts, and material that may carry weed seeds.
- B. Mulching agents, such as hay or straw, will be certified weed-free prior to use.
- C. All seed used for revegetation and erosion-control purposes will be certified weed-free.
- D. After implementation, project areas will be reviewed for new populations of noxious weeds. If new populations are found more intensive surveys will be conducted, sites will be mapped, and treatment will be scheduled.
- E. If new populations of noxious weeds are found, treatment will be implemented in accordance with priorities set by the noxious weed program. New invader species will be slated for eradication immediately upon discovery. Other weed infestations will be treated according to the direction in the St. Joe Noxious Weed Project EIS and district priorities.
- F. All weed treatments will be monitored for effectiveness.
- G. To the degree practicable gravel used for road maintenance will be certified from weed free-sources. Gravel sources will be inspected for the presence/absence of noxious weeds prior to utilization of gravel in the project area as appropriate.

**6. Old Growth**

No timber harvest or road construction will occur in allocated old growth stands.

**7. Plants (Threatened, Endangered, and Sensitive)**

If Threatened, Endangered, and Sensitive (TES) species are discovered during project implementation, an agency Botanist will be notified so that measures could be taken to maintain population viability. Measures to protect population viability and habitat for all known and newly discovered occurrences will include altering or dropping proposed units from activity, modifying the proposed activity, or implementing buffers around plant occurrences. Provisions for protection of Endangered Species, and settlement for environmental cancellation will be included in contracts.

**Table 9: Site-Specific Design Features for Protection of Known Populations of Plant Species at Risk**

Unit #	Green bug-on-a-stick moss ( <i>Buxbaumia viridis</i> )	Naked mniium moss ( <i>Rhizomnium nudum</i> )	Comments	Site-tree height buffer
41	One occurrence on the edge of the unit.	None in unit.	Formerly <i>Units 14 and 17.</i>	One
84	Two occurrences in unit.	One occurrence in unit.		Three
114	Two occurrences in unit.	None in unit.		Two
134	One occurrence in unit.	None in unit.		One
148	Two occurrences in	None in unit.		Two

Unit #	Green bug-on-a-stick moss ( <i>Buxbaumia viridis</i> )	Naked mniium moss ( <i>Rhizomnium nudum</i> )	Comments	Site-tree height buffer
	unit.			
170	One occurrence in unit.	None in unit.		One
175	One occurrence just outside of unit.	None in unit.	Just outside of the edge of the unit, need to be careful during implementation to not affect shading.	None
176	None in unit.	One in riparian buffer.		None
198	Two occurrences, one in the unit and one on the edge of the unit.	One occurrence on the edge of the unit.	Just outside of the edge of the unit, need to be careful during implementation to not affect shading.	One
200	One occurrence on edge of unit.	None in unit.		One
215	One occurrence in unit.	None in unit		One
224	Two occurrences in unit.	None in unit.		Two
248	None in unit.	Two occurrences in unit.		Two
254	None in unit.	One occurrence just outside of unit.	Just outside of the edge of the unit, need to be careful implementation to not affect shading.	None
296	None in unit.	One occurrence in unit.		One
311	One occurrence on boundary of unit 321	One occurrence on boundary of unit 321 in same location as <i>Buxbaumia</i> .	On border of Unit 321.	One
321	One occurrence in unit.	One occurrence in unit in same location as <i>Buxbaumia</i> .	This is another location than the occurrences on the border of Unit 311.	One

**8. Precommercial Thinning**

- A. The maximum diameter of felled trees will be seven inches. Cull trees that exceed the diameter limit will be girdled in lieu of felling to provide additional cavity-nesting habitat.
- B. Snags or dead trees will not be cut unless they pose a safety hazard. Snags cut for safety reasons will preferably be left where they fall.
- C. Directional felling will be used to minimize slash depths. Trees that cannot be directionally felled will be bucked in lengths not to exceed six feet.
- D. Slash will be pulled back a minimum of four feet away from all system road cut banks to prevent slash from falling into ditches and culverts.
- E. Established game trails will be kept clear of slash by directional felling and slash pullbacks to maintain travel linkages.
- F. A 50-foot no-activity buffer will be maintained along all wetted defined channels, springs, and seeps within and adjacent to thinning units.
- G. Existing closed gates will be locked after each entry and exit.
- H. Activity behind closed gates will be scheduled for completion prior to the opening of the elk any-weapon hunting season (commonly referred to as “rifle season”). An extension may be allowed based on extenuating circumstances (fire, weather, etc.) after interdisciplinary review.

- I. Earthen barriers or other restrictive devices that are removed to allow access for project activities will be replaced upon completion of the unit (within one week) and before October 10<sup>th</sup> each year.
- J. Activity will be conducted using existing access – i.e. no brush will be cleared or other improvements made to roads/trails for pre-commercial thinning activities.

## 9. Recreation

- A. Existing dispersed recreation sites used for harvest operations activities will be restored or rehabilitated if motorized access to the sites would remain available after project implementation.
- B. Contractors will follow permit provisions required for camping on National Forest System lands.
- C. Where skid trails approach or intersect open roads or designated ATV routes, restrictive devices or debris such as logs, brush and rocks will be placed to effectively stop vehicle use.
- D. Warning signs will be placed to inform visitors of logging activities in areas where logging traffic may interfere with recreational traffic.
- E. Before trails are officially designated for ATV use they will be reconstructed to standards for ATV use (REC-9).

## 10. Soil and Water

- A. All activities will comply with:
  - i. Standards identified in the Inland Native Fish Strategy (INFS) EA Decision Notice and Finding of No Significant Impact, signed in July 1995. All alternatives will implement standard riparian habitat conservation area (RHCA) widths specified by INFS (see Table 8). These buffer zones are no-entry for harvest and equipment. Exceptions are described in the Standards and Guidelines, General Riparian Area Management (RA-2) that states: Trees may be felled in riparian habitat conservation areas when they pose a safety risk. Keep felled trees on site when needed to meet woody debris objectives. When necessary to fall trees (for skyline/cable units); the sale administrator may approve the minimum number required and ensure that they remain where dropped.
  - ii. Objectives of Appendix O of the IPNF Forest Plan, Stream Protection.
  - iii. Protection of water quality. Best Management Practices (BMPs) will be used to achieve water quality standards (SSW-2). The Forest Service Handbook 2509.22 (Soil and Water Conservation Handbook) outlines BMPs that meet the intent of the water quality protection elements of the Idaho Forest Practices Act, Forest Plan Standards and replaces the Forest Plan Appendix S – Best Management Practices. Other site-specific BMPs may be identified and developed during layout, design or implementation of proposed activities.
  - iv. Requirements and erosion control guidelines of the Rules and Regulations pertaining to the Idaho Forest Practices Act, Title 38, Chapter 13, Idaho Code.
- B. Areas of recent or historic landslides and slumping are considered landslide-prone areas. Although none were identified, if any are located during implementation INFS buffers for Category 4 RHCAs will be applied.
- C. Tractor Yarding:
  - i. Ground-based yarding will be limited to slopes less than 35%.
  - ii. Only approved skid trail locations will be allowed.
  - iii. Trails will be spaced at least 100 feet apart, except where converging at intersections.
  - iv. Skid trail spacing closer than that listed above may be planned when winter logging occurs on at least two feet of settled snow or frozen ground or where adequate slash matting exists.
  - v. No excavated skid trails will be constructed.

- vi. Skid trails in tractor-yarded units will be limited to less than 15% of the unit acreage to comply with IPNF Forest Plan soil quality standards and Region 1 soil quality recommendations.
  - vii. To minimize disturbance (soil compaction or displacement), practices such as skidding, grapple-piling and mechanical harvesters will occur over slash or on existing skid trails (Forest Plan Monitoring Reports). Units will be designed to utilize non-excavated skid trails and directional falling.
- D. Skyline Yarding: The leading end of logs will be suspended during yarding.
- E. Temporary Road: All temporary roads will be fully recontoured to the natural slope upon completion of activities. Temporary roads that will remain on the landscape more than one dry season will be waterbarred according to specific interval direction and at specific angles to prevent erosion. After recontouring they will then be covered with a natural, weed-free material to prevent runoff and erosion during spring and/or winter runoff events. This could be on-site slash, straw, or other suitable material.
- F. For roads that will be managed as Road Management Prescriptions C and D at a minimum:
- i. All culverts will be removed;
  - ii. All fill within the stream crossing sites will be removed;
  - iii. Stream gradient and valley side-slopes will be returned to as near natural conditions as possible for 200 feet on both sides of stream;
  - iv. Road surfaces will be decompacted to a minimum of 18 inches to facilitate and augment infiltration; and
  - v. The beginning of the treatment area will be fully recontoured for 300 feet or a sight-distance (which ever is less) to eliminate motorized access.
- G. Prescribed burning will be done when soil moistures exceed 25% to maintain soil productivity (IPNF Updated Soil Guidelines 1998).
- H. The Intermountain Forest Tree Nutrition Cooperative assembled data suggesting that soil potassium levels may be conserved in treatment units by allowing logging slash to over-winter. By leaving sufficient levels of wood on site, long-term soil productivity will be protected.
- i. Potassium sources such as needles and limbs will be maintained on site by allowing slash to over-winter prior to all slash disposal treatments except where tops will be yarded (Intermountain Forest Tree Nutrition Cooperative - Garrison and Moore 1998).
  - ii. Tops of trees will be left in most harvest units.
  - iii. Silvicultural and burning prescriptions will retain sufficient levels of coarse woody debris on site after slash disposal (Graham and others 1994). The following recommendations will be used in prescriptions:
    - a. Douglas-fir, larch, and pine types: minimum coarse woody residues of 4-6 inches diameters well distributed through a treatment area at 10-15 tons/acre (Harvey and others 1987).
    - b. Grand fir / beargrass types at 7-14 tons/acre of coarse woody residues (greater than three inches diameter), western hemlock/bead lily types at 17-33 tons/acre coarse woody residues (greater than three inches diameter).
    - c. Subalpine fir / beargrass types at 12-23 tons/acre coarse woody residues (greater than three inches diameter) Graham and others (1994).
- J. Wetlands identified during field review or harvest preparation will be protected by INFS buffers (50 feet for those less than one acre and 150 feet for those greater than one acre). A resource protection provision in contracts will be used to protect wetlands that may be discovered during operations.
- K. Where new road NR8B (see map ROD-3) is constructed through the draw it may be necessary to provide subsurface drainage to avoid moisture saturation and subsequent slope failure. Where it is

necessary, horizontal drains, drainage trenches, or drainage blankets may be used to lower the subsurface water levels and to prevent groundwater from entering embankments.

- L. Rodent control treatment will not occur within INFISH buffers; in areas where the soil is saturated; or during periods of or forecasted periods of heavy precipitation.
- M. In Unit 224 skid trails will be decompacted after use and soils will be monitored to determine effectiveness of decompaction and amount of detrimental disturbance.
- N. Culverts identified as not meeting the 100-year peakflow criteria will be upgraded to meet the required size for passing this flow. Roads proposed for storage and recontouring will not be upgraded because the culverts are planned for removal.

## **11. Transmission Lines**

- A. Timber harvest roads near the large transmission lines will be kept reasonably free of equipment, products, and debris. The Bonneville Power Administration (BPA) may need to have road access for emergencies. In this case "reasonably free" means that the road could be cleared within an hour of notice and roads will be left clear and passable when contractors leave the area for more than an hour at a time. Logging trucks and equipment may be parked on the right-of-way only during emergencies. When this occurs, the truck/equipment should be grounded with a flexible wire connecting the chassis to a ground rod driven into the ground, or by making the connection to ground with a drag chain attached to the truck/equipment chassis.
- B. Where units are adjacent to the transmission line right-of-way, timber will be harvested to reduce the risk of blowdown into the transmission line. Trees immediately adjacent to or under the transmission line will be harvested. If this is not possible, enough timber will be left to maintain wind firmness and reduce the risk of wind-throw into the transmission line.
- C. Haul roads will remain a minimum of 50 feet from the point where steel lattice tower legs enter the earth. If this clearance cannot be met, use of road may be permitted if adequate protection for BPA structures from vehicles were provided by the use of guard devices (guard rails, posts, Jersey-type barriers, etc.) If guard devices were used, their location and design must be approved by the BPA.
- D. Yarders used near the transmission line will be grounded with copper wire attached to a copper rod pounded six to eight feet in the ground. Skyline cables will be grounded as described above at the tailhold.
- E. Chokers will be allowed to hit the ground before they are touched. Track mounted equipment is recommended near transmission lines to drain off induced voltage. If rubber mounted machines are used, a chain should be dragged behind on the ground to drain off voltage. A minimum separation of 20 feet between equipment and transmission line conductors will be maintained.
- F. High-lead or skyline yarding across the right-of-way will not be done.
- G. Transmission lines sag on warm days or when they are weighed down by snow or heavy frost. Lines that span long distances have greater potential to sag. The distance between equipment and transmission line cables in the same place can be different with different conditions. The timber harvest prospectus will describe this to potential timber sale bidders.
- H. Concentrated columns of smoke under transmission lines will be avoided in order to prevent electrical arc. Burning proposed within the right-of-way will be discussed with the BPA prior to writing the burn plan.
- I. No loading of logging trucks, fueling of vehicles or equipment, log decking or storage of logs or flammable materials will be allowed on the transmission line right-of-way.
- J. Logging trucks will not be loaded to a height greater than 14 feet above the roadbed. If a tree comes in contact with the transmission line, no attempt will be made to remove it. The BPA Dispatcher will be contacted immediately, 24 hours per day, seven days per week: 360-693-4703 or 800-392-0816.

- K. For extreme safety-hazard trees near the transmission line, BPA may be able to provide personnel at the work site with advance notification.
- L. The right-of-way width for the Dworshak-Taft No. 1 500-kV transmission line is 150 feet, measured 75 feet on each side of transmission line centerline.

**12. Visual Quality**

Forest Plan Visual Quality Objectives would be met through implementation of the following:

- A. Harvest unit preparation and silvicultural personnel will work closely with the District or Forest visual staff to determine that design criteria are adequate for each application.
- B. **Foreground Partial Retention (Fg/PR) (Unit 336):** Activities will remain visually subordinate to the characteristic landscape, repeating the form, line, color and texture common to the surrounding area with differences in qualities of size, amount, intensity, direction and pattern.
- C. **Background Partial Retention (Bg/PR) (Units 11, 14, 15, 17, 18, 30, and 32):** Form, line color and textures not frequently found in the characteristic landscape might be introduced in these units. Changes will remain subordinate to the visual strength of the characteristic landscape.

**13. White Pine Leave Tree Guidelines (Schwandt and Zack 1996)**

These guidelines will be utilized in all silvicultural prescriptions for timber harvest. The objective of these guidelines is to retain and protect genetic resources which may contribute to long-term white pine restoration.

**14. Wildlife**

- A. Slash depths next to new and reconstructed roads will not exceed 1.5 feet or if that is not practical, openings that are at least 16 feet wide will be created every 200 feet - especially on ridges and across game trails (IPNF Forest Plan Appendix Y [Leege 1984]).
- B. To provide elk security, timber harvest in adjacent areas will have a ridgeline between the disturbance and security area (IPNF Forest Plan Appendix Y [Leege 1984]). This will be done by subdividing harvest areas or contract scheduling.
- C. The following snag management recommendations from the Northern Region Snag Management Protocol (January 2000) will be met (where these or higher levels exist). The retention of snags and snag replacements will be applied at the scale of every 5 to 25 acres (Bull and others 1997). Replacement snags will be retained at five times the number of snags per acre.

**Table 10: Snag Guidelines**

Habitat	Snags / Acre Retention Prescriptions
Warm dry ponderosa pine and Douglas-fir	1-2 greater than 20" dbh
Cool Douglas-fir, warm grand fir, slope <30%	4 greater than 20" dbh
Cool Douglas-fir, warm grand fir, slope >30%	6-12 total, with 2-4 greater than 20" dbh
Cool, wet, and dry spruce, grand fir, hemlock, and alpine fir	6-12 total with 2 greater than 20" dbh
Low elevation cedar and hemlock	12 total with 4 greater than 20" dbh
High elevation spruce/fir/lodgepole pine	5-10 greater than 10" dbh
Whitebark pine/limber pine	All available

- D. To meet the objectives listed above in the Snag Guidelines table:
  - i. Silvicultural and burning prescriptions will be prepared with the goal of protecting snag and green tree replacement snags, and retaining recommended levels and distribution of coarse woody material during site preparation and fuels treatment.
  - ii. Snags that show signs of decay, loose bark, or broken tops will not be designated for harvest (Bull et al. 1997). Exceptions will be made for road construction and log landings.

- iii. The Reserve Tree Guide (IPNF 1995) will be followed to reach objectives of the Snag and Woody Debris Guidelines (IPNF Forest Plan, Appendix X) and worker safety.
  - iv. Tree-marking guidelines for wildlife reserve trees will favor the retention of large diameter trees, particularly hollow and broomed trees (Bull and others 1997) except when they pose a safety concern. Western larch, ponderosa pine, and western redcedar greater than 20 inches d.b.h. will be marked as first choices for snags and reserve trees.
  - v. Snags cut for safety reasons will be left in the unit - preferably where they fall.
- E. In most cases travel cover will be maintained and vegetation management will avoid making openings (i.e. areas with <30% canopy cover) within 200 feet of the ridge top or 400 feet if the other side of the ridge does not provide cover. Where openings will be created on ridges designated as potential travel areas they will meet the following criteria:
- i. Less than 300 feet wide (Heinemeyer and Jones 1994)
  - ii. Limited to one side of the ridge top
  - iii. Minimum of 800 feet of cover between openings (IPNF Forest Plan Appendix Y [Leege 1984])
  - iv. None to be situated in a saddle (IPNF Forest Plan Appendix Y [Leege 1984]; Heinemeyer and Jones 1994)
- F. Excavator-piled slash will be left unburned at a rate of one slash pile per five acres and will be constructed to provide wildlife habitat (Heinemeyer and Jones 1994).
- G. Goshawk nests found before and during implementation will be protected by a 40-acre, no-activity buffer (Brewer and others 2007). Project activity will be suspended within the post fledgling areas of any active goshawk nests between April 15 and August 15 (ibid). Activity restrictions could be removed after June 30 if the nest sites are determined by the district biologist to be inactive or unsuccessful. Activity within an approximately 420-acre area surrounding each active goshawk nest will comply with the following management recommendations (Reynolds and others 1992):
- a. 20% or less in shrub/seed/sapling size class
  - b. 60% or more canopy closure in immature and older size classes
  - c. Created openings are less than two acres with a minimum of 300 feet between existing or other created openings and snag retention guidelines are applied on each acre of created opening
  - d. Non-regeneration treatment in immature and older stands is thinning from below using irregular spacing of leave trees
- H. Provisions for protection of Threatened, Endangered, and Sensitive (TES) Species, and settlement for environmental cancellation will be included in contracts. If TES species and/or significant habitat are discovered during project implementation the district wildlife biologist will be notified so that if needed, measures could be taken to avoid impacts and meet Forest Plan standards. Measures could include altering or dropping proposed units, modifying the proposed activity, or implementing buffers.
- I. All activity on lynx habitat in the LAU will be consistent with standards and guidelines from the Northern Rockies Lynx Management Direction (USDA 2007).

### **Implementation**

Timber harvest contracts resulting from this decision will be offered for sale in 2008 and 2009. Timber harvest is expected to be completed by 2013, with slash disposal and reforestation completed by 2015. Activities not associated with the selected timber harvest could occur at any time after the disposition of any administrative appeal to my decision. These dates are tentative based upon anticipated budgets, workforce, weather and other considerations. Actual dates of implementation and accomplishment will vary.

In order to have road access, putting some roads into Road Management Prescriptions C and D will need to be completed prior to the road work done under timber harvest contracts. This is a timing coordination and logistical issue. It is not required for resource protection (FEIS p. 37).

**Monitoring**

Monitoring is a fundamental component of ecosystem management. Managers must constantly and objectively evaluate the assumptions and effectiveness of policies and actions to maintain ecological integrity. Continual monitoring and evaluation provides new information leading to new management directions. Such adaptive management is critical to the success of ecosystem management. For this project, monitoring and evaluation will be conducted as described in the following table and as required by the forest plan.

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**Table 11: Monitoring Plan**

Resource	Objective	Timing	Methodology	Responsible
Soils	Verify whether ground-based units with existing detrimental disturbance meet soil quality standards as expected	After all potential ground-disturbing activities (yarding, fuel treatment, ripping, re-contouring) are complete	Units 14, 70, 100, 170, 215, 224, 225, 226, 232, 233, 248, 251, 254, 271, and 322: Field surveys using the IPNF "Onsite Assessment Method"	District Hydrologist or Forest Soil Scientist
	Determine effectiveness of decompacting skid trails	After grapple piles are burned	Unit 224: Measure bulk density in skid trails	District Hydrologist or Forest Soil Scientist
Watershed	Implementation & effectiveness of applicable BMPs	Ongoing, during and a post harvest visit	Complete BMP inspection reports for the timber sale(s) and associated road work	Hydrologist/Sale Administration/Engineering
Fisheries/ Watershed	Implementation of RHCAs	Prior to advertisement of timber sale(s)	Monitor application of RHCAs, as noted in Chapter 2	Fisheries Biologist / Hydrologist
	Determine status of riparian plantings	1 <sup>st</sup> , 2 <sup>nd</sup> , & 3 <sup>rd</sup> year after initial planting	Walk-thru survey, ocular to determine survival of plants	Hydrologist
Silviculture /Fire	Determine whether silv. objectives were accomplished & assess site preparation and planting needs	Post harvest and prior to any site preparation or fuels treatment	Review treatment areas; evaluate silvicultural objectives compared with results; check for special fuels treatment needs and special planting needs	Fuels Mgmt Specialist / District Silviculturist
Silviculture	Determine status of regeneration harvest units and effectiveness of gopher control	1st, 3 <sup>rd</sup> and, if needed, 5th year, following initial planting	Monitor stocking & status of regeneration using walk-through & standard plot exams following R1 procedures	District Reforestation Specialist
Wildlife / Fish	Detect poisoning of off-target species	After pocket gopher control baiting	Any evidence of non-target wildlife/fish mortality will be collected and reported to the District Fisheries Biologist or Wildlife Biologist.	District Reforestation Specialist
Noxious Weeds	Review of project area for new populations of noxious weeds	Following project implementation	Project areas will be reviewed for new populations of noxious weeds. If new populations are found more intensive surveys will be conducted, sites will be mapped, and treatment will be scheduled.	District Noxious Weed Specialist

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## IV. Rationale for the Decision

My decision to select Alternative B Modified is based upon the following factors

- A. Responsiveness to the stated purpose and need.
- B. Responsiveness to public comment and issues - including compatibility with the goals of Tribes and other agencies.

These factors are discussed in the following decision criteria.

### A. Achievement of Purpose and Need

This decision affirmatively addresses the purpose and need for action as presented in the final EIS (pp. 4-5). The need for action for the Bussel 484 Project Area was described previously in Section II of this document. I determined it was not appropriate to select Alternative A for implementation since it does not respond to the need for action, would not move towards achieving Forest Plan desired conditions, and would not meet Management Area goals. I evaluated alternatives B and C to determine how well they respond to the Purpose and Need for Action. The following table can be used as a reference for the discussion that follows.

### **Maintain or improve resilience of the vegetative resources to disturbances such as insects, disease, and fire:**

Alternative A does not respond to this element of the purpose and need. Under this alternative, stand compositions are expected to change over time, but the change would be a continued reduction in the existing component of long-lived, early seral species and a continued increase in more shade tolerant mid- and late-seral species. This is expected to increase the risk of insect and disease losses and increase the risk and extent of loss from fire within the stands selected for treatment under my selected alternative (FEIS pp. 138-139).

I selected a modified Alternative B because it best meets (along with EIS Alternatives B and C) the need to improve vegetative conditions through reducing stand density, changing species composition, and promoting larger trees in the future. Reducing stand density decreases the competition for water, nutrients, and sunlight in stands and promotes increased growth and yield (FEIS p. 141). Western white pine and western larch are well-adapted to the cedar/hemlock habitat types and they show resilience to fire, drought, and root disease, which the shade-tolerant trees do not (FEIS p. 133). The exotic white pine blister rust has decimated western white pine where it was once a major tree species in North Idaho forest ecosystems. The accidental introduction of white pine blister rust and the low degree of natural resistance to this disease had reduced the potential white pine seed source by 90% or more (FEIS p. 135). Because of this loss in a natural seed source, there is a critical need to restore western white pine through the planting of rust-resistant white pine in areas identified for regeneration (FEIS p. 135). The selected alternative will regenerate about 131 acres currently occupied by grand fir and Douglas-fir with potentially long-lived seral species, primarily western larch and western white pine (FEIS p. 140).

There is also a lack of large tree forest structure in the analysis area and on the St. Joe Ranger District (FEIS p. 135). Many of the stands selected for treatment are at the right age and developmental structure for commercial thinning (FEIS pp 136 and 140). The selected alternative will treat approximately 1,783 acres of timber with a silvicultural thinning prescription (commercial thinning (1,486 acres) and thinning portion of the group shelterwood cuts (297 acres)) designed to address density and species diversity. While such thinning will not directly change stand size class, because these stands currently have few large/mature trees present, such thinning will encourage larger trees sooner and larger trees composed of long-lived, early seral species, like western larch, ponderosa pine, and white pine, enhancing resiliency to disturbance within the treated stands (FEIS pp. 134-135 and 140).

The selected alternative will implement timber stand improvement work (precommercial thinning and white pine pruning) on about 575 acres of overstocked sapling/pole stands for the purposes of improving growing

conditions and providing for better retention of existing western larch and western white pine. These treatments will promote the maintenance of western larch and western white pine as strong components on the treated acres (FEIS p. 141). Alternative A does not implement these treatments; with the result that species composition in these stands would change over time to more shade tolerant mid- and late-seral species; thereby increasing the risk of future insect and disease losses (FEIS pp. 139-140).

Comments received on the draft EIS suggested I should consider how native forest has been altered by fire suppression, logging, and road building before proceeding further with vegetation treatments. That is what the interdisciplinary team has done in the Bussel 484 analysis. Vegetation conditions were put into perspective with historical conditions to determine where we wanted these forests to go in the future (FEIS pp. 132-137). I agree that the forests have changed too much since the early 20<sup>th</sup> century to try and recreate forest communities that existed at that point in time. Within the context of these changes, we have identified the need for reduced stand densities, for the purposes of removing the smaller trees and favoring retention of and focusing growth on the larger diameter more vigorous trees. Less vegetative competition and a more diverse species composition tending towards the early-seral, more resilient tree species should promote forests that can withstand and adjust to ecological disturbance better (FEIS pp. 140-142). Adjusting forest structures in the Bussel 484 project area will not prevent forest disturbances, but allow these forest ecosystems to adjust and react better to insects, disease, and fire (FEIS pp. 140-141).

I was encouraged to consider a range of silvicultural options, which included large-scale moderate and high severity prescribed fire. I considered such fire treatments, but the investments in past silvicultural treatments, proximity of major values-at-risk (Potlatch ownership, Bonneville Power Administration transmission lines) preclude the implementation of landscape-scale prescribed fire or the option of wildland fire-use (FEIS pp. 11-12). A varied and extensive suite of prescriptions is part of the selected alternative and Alternatives B and C (FEIS pp. 14-16, 18-21, ROD p. 4-5). There are other places on the St. Joe Ranger District, such as the Upper St. Joe River drainage, where wildland fire-use is already an option and landscape-scale prescribed fire is proposed (Heller-Cascade Landscape Burning project proposal 2008).

Additionally, private land comprises approximately 15% of the Bussel 484 project area while corporate forest and State of Idaho lands also compose the northern, western and southern boundaries of the project area, which are managed for different missions than NFS lands. The overriding influence on vegetation pattern is no longer driven by elements in the biophysical environment (soils, topography, and elevation). Vegetation composition, structure, and processes are now heavily influenced by timber harvest and management patterns which resulted from this intermixed ownership pattern (St. Joe Geographic Assessment, 1997). Also, a transmission line corridor owned by the Bonneville Power Administration is intentionally managed differently from natural conditions. The vegetation treatments in the selected alternative will not replace wildland fire as a process, because we will get fires in this area. These treatments are designed to make the forest more resilient to disturbance, when that inevitable wildland fire occurs (FEIS pp. 120-121, 122-130, 140-143). Therefore, it would be impossible to manage for or return to some historical point in time given the mixed ownerships and differing management regimes within the project area; however, this project will move the National Forest System lands towards more resilient forest conditions.

**Provide wood products for local communities:**

The selected alternative responds to this need. The selected alternative as well as alternatives B and C offer an equal amount of wood products for local communities. The selected timber harvest activities will provide jobs and cycle dollars through local economies, through both direct (loggers, truck drivers, mill workers, etc.) and indirect (merchants, etc...) means (FEIS pp. 59-62). Alternative A would not offer wood products for utilization by local economies.

The selected alternative and Alternatives B and C will provide wood fiber for the St. Maries Fuels to School Project, a biomass heating system at Heyburn Elementary School. The intent of the program is to save

money for communities by installing a wood-based heating system and putting low-quality wood residues to practical use. The ability to utilize unmerchantable woody residues would provide a significant savings in fuel costs to the local school district; reduce air pollution and decrease the risk of escaped prescribed fire through less slash burning; increase long-term economic use for small diameter unmerchantable wood and/or waste wood; stimulate new businesses and local job creation; and inspire other organizations, businesses, and school districts in timber dependent communities to convert to woody biomass heating systems. Due to the higher amounts of helicopter logging featured in Alternative C, this alternative would not provide as much wood fiber as the selected alternative and Alternative B for use in the fuels to schools project (see Table 12 below).

**Work toward full support of designated beneficial uses in the Bussel Creek Watershed:**

Bussel Creek is on Idaho's 2002 303(d) list of Water Quality Limited Water Bodies for pollutants of sediment and temperature. Implementation of either of the action alternatives will positively respond to the need for working toward support of beneficial uses in the Bussel Creek watershed (see Table 12). Sediment reduction activities, actions to increase stream shading in Bussel Creek and its tributaries, replacement/removal of fish barriers, increasing existing amounts of large woody debris in stream channels and creating more natural stream channel conditions by removing road crossings would all be achieved equally well. Based on the analysis, there will be substantial reductions in sediment from the road recontourings and stream crossing removals I have selected for implementation (FEIS p. 234). The effect of implementing these actions will be a long-term improvement in the water resource productivity of Bussel Creek and ultimately an improvement in fish populations within the project area (FEIS pp. 108 and 240).

In the FEIS 103 fewer acres are proposed for treatment in Alternatives B & C than in the DEIS. For Alternative B 0.15 fewer miles of road construction are proposed and new construction would not cross any streams, and there is a net change of 16 increased acres of ground based logging system. Twelve culverts that currently do not meet the criteria to accommodate a 100-year flood event would be upgraded. These changes are also included in my decision.

Less road construction, less timber harvest and eliminating the originally proposed stream crossing would reduce potential sediment generation. The estimated net change in sediment from these changes would be a reduction of sediment (SW-56) compared to the values identified for Bussel Creek (FEIS pp. 234 Table 3-68). This same reduction in proposed road construction and timber harvest would slightly lessen predicted water yield in the Bussel Creek watershed.

Alternative C would provide for a somewhat greater improvement in water quality than either the selected alternative or Alternative B, because it proposes no road construction. However, road construction associated with the selected alternative (and Alternative B) would not involve any new stream crossings, which have the potential for sediment delivery until the stream crossing is restored and recontoured (FEIS p. 234). Because the selected alternative will not include road construction within RHCAs, any difference in the amount of sediment delivery between the action alternatives is expected to be small and not measurable (0.5% increase) when background sediment levels are considered (FEIS p. 234).

The roads that I am authorizing for construction are necessary to provide access for long-term management needs, including the selected timber harvest activities. To minimize the potential for sediment generation related to roads, BMPs have been included in the project design (FEIS Appendix B). Past monitoring has indicated that BMP effectiveness is generally high (FEIS p. 231). Additionally, when harvest-associated work is completed, all new system road will be outsloped and have the drainage structures removed, water courses and any problem areas will be stabilized, vegetative cover will be reestablished, and motorized access will be prevented by placing a permanent barrier or by recontouring the beginning portion of the road. All temporary roads will be fully recontoured to the natural slope when yarding operations served by that road are complete (ROD p.36).

Under Alternative A, water quality improvement actions would not be implemented, the effect of which would be little to no expected change in existing watershed conditions within the project area, which would not positively address this element of the purpose and need for action (FEIS p. 229).

**Manage access to provide for multiple uses:**

Roads are a controversial issue on the national forests. Roads can be good because they make possible the production of commodities that society needs (e.g. timber, cattle, minerals) and roads can also provide access for a wide range of recreational activities. But roads can also harm streams and wildlife habitat. Roads are a necessary requirement in managed landscapes to provide for human uses and silvicultural treatments. Roads, however, can bring negative impacts to both aquatic and terrestrial species. One of the major findings of the Integrated Scientific Assessment<sup>1</sup> (1996) relates to the fact that where open road densities are high, both aquatic and terrestrial integrity have suffered.

Three things can be done to reduce open road density on managed landscapes. First, the transportation plan can stress minimization of road density and can limit new road construction to those roads absolutely necessary to meet silvicultural objectives. Second, existing roads no longer necessary for the long-term management of the area can be obliterated. Third, access management restrictions can be put into place that help to mitigate and reduce the impacts of open roads.

The existing transportation system has been reviewed to determine if there are any unnecessary roads or roads that are causing unacceptable resource damage (FEIS p. 202, 207). The selected alternative will decommission 10.7 miles of unneeded road (see Table 12). This amount of decommissioning is similar to that proposed for Alternatives B and C. The restorative treatments (Road Prescription D) associated with the decommissioning (FEIS p. 25) will provide for an overall reduction in road densities within the project area and contribute both to a reduction in road maintenance costs and over the longer-term provide for improvements in water quality and fish populations within the project area (FEIS pp. 107, 234, 240).

The selected alternative will provide access for initiating treatments in priority timber stands (FEIS pp. 137-140). Access is needed to these stands for their long-term management (FEIS p. 207). Alternative C would not construct any road and, therefore, would not meet this project objective. The system road identified for construction with my decision is needed for access now and in the future. The selected alternative and Alternative B would meet this objective by minimizing the amount of road construction to only that necessary management related access (FEIS p. 202; PF: PD-4).

The selected road storage activities (Road Prescription C) will reduce the amount of road maintenance required within the project area. For instance, 21.6 miles of existing road and all new system road authorized by my decision will be put into the long-term storage prescription (Road Prescription C), the intent of which is to “put the road to bed” in such a condition that it will not require any maintenance until it is needed again (FEIS p. 203). These treatments will minimize open road density within the project area.

The selected alternative will implement road closures in the northern portion of the project area to help to mitigate and reduce the impacts of open roads, thereby providing for non-motorized recreation opportunities and protection of resource values including wildlife, watershed, and fisheries (FEIS p. 172). The southwest portion of the project area will continue to provide for motorized access with loop riding opportunities for ATVs and new ATV trail construction will connect roads 1901 and 3590a, creating a five-mile loop. The selected alternative will not provide as much ATV access as Alternative B. Similar to Alternative C, the selected alternative will repair 2.9 miles of the Norton Creek Railroad Grade, up to its intersection with Road 3951, and designate that part open to motorized vehicles less than 50 inches wide. The remainder of

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<sup>1</sup> Quigley, Thomas M.; Haynes, Richard w.; Graham, Russell T., tech. eds. 1996. Integrated scientific assessment for ecosystem management in the interior Columbia basin and portions of the Klamath and Great Basins. Gen. Tech. Rep. PNW-GTR-382. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 303 pages.

the railroad grade that connects to the Lines Creek Trail would not be opened for use by ATVs, because of potentially unacceptable impacts to cultural resources (FEIS p. 57).

Designating roads and trails available for motorized uses within the project area will make a positive contribution in moving the St. Joe District forward with implementation of the National Off-Highway Vehicle Rule (36 CFR 212.51). The purpose of the rule is to, among other things, enhance management of NFS lands; sustain natural resource values through more effective management of motor vehicle use, and enhance opportunities for motorized recreation experiences on NFS lands. Designation of these areas will provide for enhancement of motorized recreation experiences and resource values by achievement of other aspects of this purpose and need element, including:

- The selected alternative will provide about 20 miles of road open to all licensed vehicles and about 13 miles of road open only to vehicles less than 50 inches wide. While this is a reduction in available mileage from the existing condition (see Table 12), the selected alternative, similar to alternatives B and C is expected to provide an overall higher quality ATV experience by developing routes with more loops (FEIS p. 172);
- The selected alternative will increase the availability of roads and trails for non-motorized use only from about 10.5 miles to 31.9 miles, providing for a greater variety of recreation opportunities (see Table 5);
- The selected alternative increases the amount of secure habitat within the project area for wildlife by over 1,000 acres, resulting in an improvement in elk habitat potential in Elk Habitat Unit 8, and 32% improvement (FEIS p. 266); and
- The selected alternative reduces resource damage caused by motorized vehicles, including conversion of Bussel Creek Trail #258 from motorized to non-motorized, where unacceptable resource damage has been occurring to meadow and stream from riders leaving the trail and driving cross country through the riparian area of Bear Creek meadows and Little Bear Creek (FEIS pp. 169, 173).

Alternative A does not respond to this need because it would not implement actions to more effectively manage motorized access within the project area, provide for a greater variety of recreation opportunities, decommission unneeded roads, provide access for the needed vegetation treatments, improve wildlife security, or reduce resource damage caused by roads and vehicles.

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**Table 12: How the Alternatives Address the Purpose and Need**

Measurement Parameters	Alternative A		Alternative B		Alternative B Modified		Alternative C	
<b>Maintain or improve resilience of the vegetative resources to disturbances such as insects, disease, and fire</b>								
<b>Composition:</b>	<b>Acres</b>	<b>%</b>	<b>Acres</b>	<b>%</b>	<b>Acres</b>	<b>%</b>	<b>Acres</b>	<b>%</b>
Long-lived, early-seral tree species: WL/WP Forest Types	983	8	1,614	13%	1,614	13%	1,614	13
<b>Stand Structure:</b>								
Brush-seedling sapling	1,284	10	1,699	13	Same as Alt. B		Same as Alt. B	
Pole-small-medium	9,442	75	9,033	70				
Mature-large	1,937	15	1,828	14				
Old Growth = allocated w/in project area: 2,528 acres								
<b>Stand Density:</b>								
Reduction in stand density	0		1,827 acres		Same as Alt B		Same as Alt B	
Improve conditions for overstocked seedling/sapling stands	0		821 acres		575 acres			
Acres of long-term fire hazard reduction from combined harvesting and prescribed burning or grapple piling. Also includes acres of harvesting where fuels reduction treatment is limited to yarding tops only.	0		931		Same as Alt B		856	
Acres with short-term increase in fire hazard where post-harvest activity fuel loads are lopped but not reduced.	0		1,170		Same as Alt B		1,245	
Acres with short-term increase in fire hazard where pre-commercial thinning activity fuel loads are accumulated and not reduced.	0		821		575		821	
<b>Provide wood products for local communities</b>								
Volume of timber produced (CCF)	0		49,353		Same as Alt B		Same as Alt B	
Acres of yarding tops that may be used for the Fuels to Schools Project	0		316		Same as Alt B		273	

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Measurement Parameters	Alternative A		Alternative B		Alternative B Modified		Alternative C	
<b>Work toward full support of designated beneficial uses in the Bussel Creek Watershed</b>								
<b>Sediment reduction (tons/year):</b>								
Bussel Creek	0		26 to 66		Same as Alt. B		Same as Alt. B	
Bear Creek / Little Bear Creek	0		7 to 46		Same as Alt B		Same as Alt B	
Change in stream temperatures in Bussel Creek and Bear Creek / Little Bear Creek	Slow improvement over time		Improvement more quickly compared to Alt A due to riparian planting		Same as Alt B		Same as Alt B	
# of culverts removed to allow fish passage	0		2		Same as Alt B		Same as Alt B	
Increase large woody debris in stream channels	0		yes		Same as Alt B		Same as Alt B	
# of stream crossings removed	0		57		Same as Alt B		Same as Alt B	
<b>Manage access to provide for multiple uses</b>								
Miles of road decommissioned	0		10.7		Same as Alt B		Same as Alt B	
Moves towards implementation of the National Off-Highway Vehicle Rule by designating routes for motorized vehicles	No		Yes		Same as Alt B		Same as Alt B	
Provides additional access for vegetation management activities	No		Yes		Same as Alt B		No	
Motorized and non-motorized recreation opportunities (miles)	Roads	Trails	Roads	Trails	Roads	Trails	Roads	Trails
Open	31.8		20.3		20.3		20.3	
Motorized < 50"	28.4	6.6	13.1	6.8	13.1	5.4	13.1	5.4
Non-motorized	6.4	4.2	31.0	4.3	26.1	5.6	21.6	5.6
Acres of wildlife security	0		1,027 acres		Same as Alt B		Same as Alt B	
Improves distribution of wildlife security areas	No		Yes		Same as Alt B		Same as Alt B	
Reduces resource damage caused by roads and vehicles	No		Yes		Same as Alt B		Same as Alt B	
Reduces the amount of road maintenance required	No		Yes		Same as Alt B		Same as Alt B	
Reduces site suitable for weeds	No		Yes		Same as Alt B		Same as Alt B	

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## B. Responsiveness to Public Comment and Issues

### 1. Public Involvement

Planning team members involved interested groups, individuals, tribal entities, and agencies in this project. There have been many opportunities to comment and provide input during the development of this project. The following highlights the public involvement efforts that have been conducted (FEIS p. 7).

In August 2003 posters were placed at twelve locations in and around the project area asking the public for input on conditions and uses in the area (PI-1, PI-2). Prior to development of a proposed action, the St. Joe Ranger District sent a letter and comment form to potentially interested people in December 2003 (PI-3) asking them to provide input on conditions and uses in the area. In the fall of 2004 comment forms were handed out to individuals in the Bussel 484 Project Area during routine road checks during hunting season (PI-26). In January 2005 Bussel 484 was listed on the Quarterly Schedule of Proposed Actions (PI-26a). District Ranger, Chuck Mark, discussed this project with the Coeur d'Alene Tribe during a meeting with them in March of 2005 (PI-27). Sixteen individuals or groups submitted written comments before a description of the proposed action was sent to the public.

Once the proposed action was developed a scoping notice was sent to people on the district NEPA mailing list in April 2005 (PI-31, PI-32). A notice of intent to prepare an environmental impact statement was published in the federal register on April 25, 2005 (PI-36). In September 2005 a public field trip to the project area was attended by five members of the public. Fourteen individuals or groups submitted written comments as a result of this scoping effort (*Public Involvement* section of project file).

District Ranger, Chuck Mark, discussed this project with the Coeur d'Alene Tribe again during meetings with them in March 2006 and February 2007.

The St. Joe Ranger District contacted the Idaho Department of Environmental Quality to arrange a meeting. The interdisciplinary team leader and project hydrologist met with the Idaho Department of Environmental Quality in October 2007 to discuss Bussel 484 and the water analysis.

We reviewed all public comments received during the public scoping phase of this project and identified a series of issues that lead to the development of the alternative actions. The following alternative driving issues were identified prior to release of the draft EIS:

- The potential effects of new road construction on water, fish, and wildlife security in the project area
- Controversy over proposed changes in motorized access
- The potential effect of proposed activities on historic sites within the project area

The draft EIS was made available for comment in February 2008 and the Notice of Availability appeared in the Federal Register on March 7, 2008. District Ranger, Chuck Mark, discussed the Bussel 484 Project with representatives of the Coeur d'Alene Tribe on March 18, 2008 after they were provided a copy of the Draft EIS. No specific concerns were raised. Ten comment letters were received on the draft EIS. I have considered the comments received in arriving at my decision. The interdisciplinary team has responded to the comments received and used them to supplement and improve our analysis and make factual corrections (FEIS Appendix I).

## 2. Compatibility of My Decision with the Goals of Tribes and Other Agencies

### a. Coeur d'Alene Tribe

The Coeur d'Alene Tribe concurred with our objectives and agreed that management activities are necessary to restore and maintain ecological resiliency within the area (PI-91). Tribal concerns related to:

#### **Improving the extent and effectiveness of wildlife habitat, particularly big game winter range:**

A portion of the wildlife analysis area was identified in the forest plan as big game winter range. While the analysis area is used by big game throughout the year, it is not used extensively as winter range and does not provide winter range of any importance (FEIS p. 265). The areas where the selected alternative has emphasized motorized use do not coincide with the low elevation southerly facing aspect winter range (low priority) identified in the Forest Plan (PF: WL-30).

While development of loop trails within the analysis area will provide for continued motorized use, there are no differences between the action alternatives with regard to long-term protection of winter range. The selected alternative provides for a substantial improvement in big game security over the existing condition. Following completion of project related activities there will be over 1,000 acres of security created in the analysis area (FEIS p. 266).

As part of the development of our proposed action a roads analysis was conducted for the larger surrounding landscape and project area (PF: PD-4). This analysis identified the road/transportation needs for the area and there was a reoccurring continuing need identified for Forest Road 1254. The purposed and need for managing access to provide for multiple uses is addressed in my decision by decommissioning unneeded roads and managing access in other areas to provide for desired wildlife security and elk habitat potential.

#### **Restoring high quality aquatic habitat, particularly cutthroat trout spawning and rearing areas:**

Stream crossing removals and road recontouring will occur over the same time-frame as the selected timber harvest operations. The stream crossing removals and road recontourings will remove 57 streamcrossings, reduce the total existing road length encroaching on streams by 1.1 miles and within riparian areas by 4.8 miles (FEIS p. 321). These actions will reduce long-term sediment delivery to streams and overall reduce road density within the project area and substantially improve beneficial use support and fish populations (FEIS p. 97). Large woody debris placement will be done to enhance cutthroat spawning and rearing habitat (FEIS pp. 62, 97-104, 107).

The time-frame identified in the EIS for proposed riparian planting is only an estimate and was conservatively developed to prevent unrealistic expectations of when the planting might occur. It is likely that some plantings could occur in 2008, because the district watershed program has 5,000 spruce trees available for planting this year.

It is not possible to speculate on a time-frame when proposed tree plantings in riparian areas may begin to shade the stream channel, because of seedling mortality, distance planted from the stream channel, growth rates, date of initial planting, disease, canopy growth, etc. Predicting all of these conditions is not possible, but once the trees reach sufficient height they may begin shading the stream and this could be from 10 to 20 years after planting.

#### **Potential impacts on traditional food and medicinal plants**

Traditional Cultural Species (TCS) include native plants that inhabit a wide variety of habitats through out the Idaho Panhandle National Forest. Nearly every habitat type contains TCS. Native plant habitat types within the Bussel 484 Project Area are discussed regarding direct, indirect, and cumulative effects of each alternative in Chapter 3 of the *Forest Vegetation and Plant Species at Risk* sections of the final EIS. It

should be noted that those TCS that occur in high-potential dry forest, sub-alpine, deciduous riparian, aquatic, and peatland habitats (see project file B-2) will not be affected as these habitat types do not occur within the project area (FEIS p. 158). As part of a healthy forest the Forest Service is dedicated to maintaining viable native plant communities and a mixture of habitats capable of supporting the full range of naturally occurring plants including TCS. All alternatives of the Bussel 484 project maintain habitat types across the forest. While some seral species will be retained and/or returned to an earlier stage others will be treated to improve the health of the current stage and encourage progression to later seral stages.

As part of all action alternatives, rodent control activities would be done if necessary. In the event that young trees are not being affected by rodents no treatment will take place. Little research has been done in regards to native plant up take of rodenticides, zinc phosphide, and strychnine. The research that is available suggests that there are no significant residues in crop plants (FEIS p. 160).

Without identification of specific habitats or species, and/or locations of resources used by the Coeur d'Alene Tribe, I cannot analyze additional effects to Traditional Cultural Plants or consider additional mitigation measures for the selected alternative. Numerous meetings have occurred between the Forest and the Coeur d'Alene Tribe and the Tribe did not respond after these meetings or during project scoping with more specific information (PI-28, PI-57, PI-63, & PI-83A). My staff provided GIS information to help determine whether traditional cultural properties and/or species would be affected (PI-57). My staff will continue to work with Tribal staff at a Forest Plan level to identify programmatic management of Traditional Cultural Species; and as specific information is provided for project level analysis, we will consider appropriate measures for sustained management of Traditional Cultural Species for their use by Tribal members.

#### **Protecting of the Coeur d'Alene Tribe's cultural resources**

The project area has been systematically surveyed for cultural resources (FEIS p. 56) and all known and newly discovered sites will be protected with this decision. These surveys have identified a number of cultural or historic properties in the project area. No sites of cultural or religious significance to federally recognized affected American Indian tribes have been identified in the project area (FEIS p. 56). Any future discovery of cultural resources sites or caves will be inventoried and protected if found to be of cultural significance. A provision will be included in contracts to ensure protection of any such sites (ROD, p. 35).

Cultural resource consultation with the Coeur d'Alene tribe regarding the Bussel 484 project was one of the topics of discussion at a recent meeting between the cultural resource staffs of the Coeur d'Alene Tribe, and the Idaho Panhandle National Forests on April 30, 2008. A map of the project area has been provided to the tribe's cultural resource staff for their comments on potential effects to areas of significance to the Coeur d'Alene Tribe. Again, I refer to project scoping and at least four meetings since 2005 where the St. Joe District Ranger discussed this specific project and offered opportunities for the Tribe to provide the Forest with feedback (PI-28, PI-57, PI-63, & PI-83A). I will continue to reach out to the Coeur d'Alene tribe to address and mitigate effects to traditional cultural properties.

#### **b. U.S. Environmental Protection Agency (EPA)**

EPA has responsibilities to review and comment on environmental impacts under section 309 of the Clean Air Act. In their comment letter on the draft EIS, the EPA commended the Forest Service for the inclusive process used in crafting a proposal that addresses multiple goals at the landscape scale (PI-95). In their comments, the EPA requested additional information and/or clarification on several issues.

During the road analysis process, roads needed for long-term management were identified as well as roads no longer necessary for management. It was also identified where there was a need for long-term system road construction in order to meet future and recurrent management needs. Temporary roads will be constructed in lieu of system roads in areas where recurring access for long-term resource management is

not needed. The amount of road construction included in my selected alternative is only that which is necessary to provide access for the selected vegetation management activities.

My decision to close Trail #258 to motorized use includes installation of an effective restrictive device on the ground to deter motorized access (ROD p. 8). I recognize the need to provide for adequate and appropriate enforcement of road and trail restrictions. Currently, the District has several Forest Protection Officers and/or Law Enforcement Officers available for patrol. We are also currently in the process of travel management planning and intend to have a plan completed for the St. Joe District by 2009. Through travel management planning, routes would be designated and signed and maps would be created to better inform the public of legal routes for motorized travel. This plan should assist Law Enforcement personnel in enforcement of road closures and educate the public in where it is legal to operate motorized vehicles.

The time-frame identified in the EIS for proposed riparian planting is only an estimate and was conservatively developed to prevent unrealistic expectations of when the planting might occur. It is likely that some plantings could occur earlier. In fact, the St. Joe District watershed program has 5,000 spruce trees available for planting this year.

**c. U.S. Fish and Wildlife Service (USFWS)**

The USFWS (along with the National Oceanic and Atmospheric Administration—Fisheries) is charged with the administration and implementation of the Endangered Species Act (1973). The goal of the Endangered Species Act is the recovery of listed species to levels where protection under the Act is no longer necessary.

The USFWS lists bull trout as a fish species that occur, potentially occur, and/or habitat exists within the St Joe River (Biannual Species List for the Idaho Panhandle National Forests; FWS Reference No. 1-9-07-SP-0054 (105.0100), January 22, 2007). Bussel Creek is a tributary of Marble Creek, which is considered to have occasional usage by bull trout (St. Joe River/NF Clearwater River BA, 1998).

Project implementation is not expected to result in any significant long term or short term degradation of analysis area streams. The actions I have selected for implementation were determined to **May Affect** but are **Not Likely to Adversely Affect** bull trout or its habitat (FEIS Appendix C Biological Assessment p. 57). Some aspects of this project are likely to result in long term and short term improvement and benefits to fish habitat and water quality of analysis area streams. Specifically, through the implementation of BMPs and rules pertaining to the Idaho Forest Practices Act, Title 38, Chapter 13, Idaho Code (FEIS Appendix B) the reduction in watershed roads (especially riparian), planting of riparian trees and shrubs and the placement of LWD within the Bussel Creek Watershed and project area would increase the water quality in the entire analysis area (including Marble Creek) (FEIS Appendix C Biological Assessment p. 60). Consistent with USFWS goals these actions will provide a long-term benefit to native fish species. USFWS has concurred with these findings (FEIS Appendix C).

**d. Idaho Department of Environmental Quality (DEQ)**

The Idaho Department of Environmental Quality was created to ensure clean air, water, and land in the state and protect Idaho citizens from the adverse health impacts of pollution. As a regulatory agency, DEQ enforces various state environmental regulations and administers a number of federal environmental protection laws including the Clean Air Act and Clean Water Act.

I have included design features to address air quality concerns related to prescribed burning activities implemented with this decision. Project related burning activities will follow procedures outlined by the North Idaho Smoke Management Memorandum of Agreement (ROD p. 12). This will allow the DEQ to place restrictions on or prevent burning if it determines that air quality standards can not be met, which meets the Clean Air Act requirements (FEIS p. 55).

DEQ identifies that for waterbodies with a TMDL (Bear and Little Bear Creeks), that sediment loading from a timber harvest project should have sediment reductions prior to or occurring in the same time frame as the project (PF: SW-46). The timing of road restoration activities (FEIS p. 37) and the sediment analysis, as present within the final EIS (FEIS p. 232-235), show that sediment reductions will occur over the same time frame as the selected timber harvest operations, which is consistent with DEQ policy. Overall, the project will meet state water quality and Clean Water Act requirements and provide for a long-term improvement of the water resource through the selected sediment reduction and riparian improvement actions (FEIS p. 109-111, 240-241).

**e. Idaho Department of Parks and Recreation (IDPR)**

The mission of the Idaho Department of Parks and Recreation is to improve the quality of life in Idaho through outdoor recreation and resource stewardship. In comment on the draft EIS, IDPR expressed concerns regarding our proposal to close the Bussel Creek Trail (#258) to motorized use. IDPR is concerned because the trail provides motorcyclists with the opportunity to connect into the Marble Creek Trail system without having to travel on a large amount of roads open to full-sized motor vehicles and if motorcycle use is eliminated from this trail, the trail itself may eventually disappear.

My decision balances motorized access with resource protection by closing this trail to motorized use and providing increased wildlife security in the eastern part of the project area, while improving motorized access in the western part of the project area (FEIS p. 12). Past motorized use of the Bussel Creek Trail has resulted in use of motorized vehicles off the trail in the meadows (FEIS pp. 96, 169). While placing seasonal restrictions for motorized use, as IDPR suggests, on the trail may address wildlife security concerns, they do not address water quality concerns. Erosion control devices could be installed; however the lack of use that Bussel Creek Trail is receiving does not warrant this level of investment. Similarly, relocating the trail is not desirable given the lack of existing use.

The State of Idaho has set total maximum daily loads (TMDLs) for sediment in Bear Creek and Little Bear Creek that require a reduction in sediment. The majority of motorized use is along the first mile of trail and resource damage in Bear Creek and Little Bear Creek riparian areas is associated with this use (FEIS p.12, 160, 169, 173). Use of the trail beyond the first mile is low and users are not currently using the trail to connect the Marble Creek Trail system. Lack of use, resource damage, wildlife security, and water quality are all factors that contributed to my decision to closing the trail to motorized use. Discontinuing motorized use of the trail will help reduce sediment production at the crossings at Bear Creek and Little Bear Creek and help protect the adjacent meadows (FEIS p. 96).

Alternative B would have repaired and restored the entire length of the Norton Creek Railroad Grade and designate it open to motorized vehicles less than 50 inches wide (4.3 miles). The selected alternative will incorporate the Alternative C prescription for this trail and open the Norton Creek Grade and designate it as an ATV route up to its intersection with Road 3951 only (2.9 miles). I will not open or designate for ATV use the remainder of the Norton Creek Grade that connects to the Lines Creek Trail, in order to protect the railroad and logging related artifacts along the grade (FEIS p. 57). During our analysis it became apparent that there would be unacceptable impacts to cultural resources from providing ATV access to the remaining 1.4 miles of the Norton Creek Railroad Grade (FEIS p. 57). Therefore, ATV access will not be allowed on this 1.4 mile portion of the grade and motorized access to it will be blocked with physical barriers.

My decision will reduce the amount of trail available within the project area for motorized use by about 1.2 miles (ROD Tables 5 and 12). This is a small change when compared with the enhanced loop riding opportunities featured in the selected alternative and the over 400 miles of motorized trail currently available for use on the St. Joe District (FEIS Appendix I 4-10). Consistent with the goals of IDPR considerable trail riding opportunities will continue to exist on the St. Joe District.

### **3. Responsiveness to the Issues**

#### **a. Cultural Resources**

My selected alternative will protect all known cultural resource sites. Because there is potential for finding additional site during project implementation, any additional sites discovered will be recorded and then protected if found to be of historic significance (ROD pp. 12-13). A provision will be included in contracts to ensure protection of any such sites.

Alternatives A and B did not respond as well to this issue as did the selected alternative or Alternative C. Under Alternative A, there would continue to be an adverse effect to the Incline Railroad Grade segment of the historic Norton Creek Railroad Grade. This portion of the grade is currently being used as an unauthorized ATV route and has experienced significant damage from such use (FEIS p. 56).

Alternative B would provide for utilization of the entire length (4.3 miles) of the historic Norton Creek Railroad Grade by ATVs. The Norton Creek Grade is eligible to the National Register of Historic Places and would have been adversely affected under Alternative B (FEIS p. 57). The selected alternative will not cause an adverse effect to the Norton Creek Railroad Grade as the areas with a high concentration of artifacts will not be part of the designated ATV route and access will be blocked with physical barriers as part of my decision (FEIS p. 57 and ROD p. 3).

Alternative B would also have reconstructed Road 3570A, which is an historic wagon road (FEIS p. 58). Reconstruction of this road into a haul route would include widening and grading, which would have diminished the historic integrity of the road. The selected alternative, like Alternative C, will not reconstruct this road for timber haul purposes (see Table 4). My decision though, will designate this road for use as an ATV route, which will not have an adverse effect on its historic integrity because it is currently used by ATVs and is in stable condition (FEIS p. 58).

The selected alternative complies with the National Historic Preservation Act and the Idaho Panhandle National Forests Forest Plan (FEIS p. 59).

#### **b. Fire and Fuels**

A comment on the draft EIS encouraged us to utilize much greater use of landscape burning in the project area. Approximately 307 acres of broadcast burning will be implemented in the regeneration harvest units while 289 acres of grapple piling and burning will be implemented in the thinning units. The reason more broadcast burning is not prescribed is to minimize the mortality of the residual stand left after thinning. Current forest plan management area (MA 1) direction for about 85% of the national forest lands within the project area emphasize timber production, with prescribed fire being used as needed to meet silvicultural objectives.

The majority of the stands proposed for harvesting in the Bussel analysis area lie within the perimeters of two past fires (FEIS, Appendix A, Map M 12). One fire occurred in 1922 and the other in 1931. Most of the overstory conifers within these stands were established no earlier than the year after the fires. Therefore, the oldest trees, with the exception of the few remaining survivors of the fires, are 84 or 76 years old within the 1922 and 1931 burns, respectively. The area between the two burns in the Norton Creek vicinity is a patchwork of past harvesting activity with some unharvested areas. The Norton Creek drainage contains many of the young early seral regenerating stands within the analysis area. Except for the riparian areas, this land is Management Area 1 which is designated for timber production. Much investment has been made in these stands through site preparation and reforestation activities. These stands are stocked with young trees that, regardless of species, have thin bark because of their age and are therefore highly susceptible to fire induced mortality. Fire would pose unacceptable risks to these actively managed timber stands.

While there are places in the upper St. Joe River Valley where we are allowing fires caused by lightning to burn under prescribed conditions (Wildland Fire-Use for Resource Benefit), the mixed ownership pattern in the Bussel Project Area currently precludes the use of other fire management strategies other than full suppression. Timber harvest and prescribed fire are not substitutes for wildland fire effects, but in many instances can mimic parts of this ecosystem process while maintaining sustainable and productive soils and watersheds (Graham and others 2004 pp. 29-30).

**c. Water Quality / Fish Habitat**

**i. Sediment**

Currently, Bussel Creek and its tributaries are listed on Idaho's 2002 303(d) list of Water Quality Limited Water Bodies for sediment and temperature. The project plan included specific watershed improvement objectives and my selected actions will make substantial improvement in existing problem areas for sediment. For instance, the estimated sediment reduction for Alternative B, after completion of all activities is estimated to be 24% less than the existing condition (FEIS p. 235). The selected alternative is expected to have effects on water quality similar to those disclosed for Alternative B because it will construct the same amount of road (FEIS pp. 232-258). Alternative C would provide for the greatest amount of sediment reduction and overall the greatest improvement in water quality because it would not construct any roads (FEIS pp. 238-240). While the watershed analysis indicates that the reasonably foreseeable timber harvest actions on private land in the headwaters of Bussel Creek could generate some sediment, cumulatively the sediment reductions resulting from the selected road restoration actions are expected to provide for improvements in water quality thereby benefiting native fish species (FEIS p. 240 and FEIS Appendix C Biological Assessment p. 59).

About 5.2 miles of road will be constructed and either recontoured or put into long-term storage upon completion of use. This includes system road on NFS land, temporary road on NFS land, and road on land owned by Potlatch Corporation. Streamside roads are likely to be the most impactful road segments. Under the selected alternative no road will be constructed within RHCAs. Sediment may be generated as a result of this construction activity, but will be minimized to the extent possible by implementation of project design features and BMPs (FEIS Appendix B). For instance, with implementation of RHCA buffers, it is not likely sediment will reach any stream channels (FEIS p. 96). Road construction plans, standards and specifications for new system roads will provide for minimum needed road width, drainage and safe operation while incorporating measures for mitigating for resource disturbances (FEIS p. 16). New roads will be single-lane facilities, suitable for log truck or lowboy use. Following use, new system road will be outslopped, have culverts removed, and effectively closed to motor vehicle use (FEIS pp. 16, 25).

All temporary road will be fully recontoured to the natural slope when yarding operations served by that road are complete. Recontouring will reduce compaction of the soil, improve precipitation infiltration and remove road surface runoff and sediment generation (FEIS p. 234). Temporary roads that remain on the landscape more than one dry season will be waterbarred to minimize erosion. After recontouring they will then be covered with a natural, weed-free material to prevent runoff and erosion during spring and/or winter runoff events.

Road decommissioning (10.7 miles) and storage will create areas of disturbed ground that may erode until the recontoured areas are revegetated. Movement of the sediment into streams may occur near the reshaped stream crossings. These effects will be minimized by application of BMPs, including seeding, mulching, and placement of woody debris on top of the disturbed soil (FEIS Appendix B). Although in the short-term, a small increase in sediment is expected (FEIS p. 234), in the long term the sediment reductions from the restorations are expected to greatly exceed any short-term sediment increases and will therefore, improve water quality (FEIS p. 235). The stream crossing removals associated with these restoration actions will reduce the total existing encroaching road length by 1.1 miles and the total existing RHCA road miles by 1.8

miles, which should substantially improve beneficial use support and specifically benefit fish populations (FEIS pp. 97, 101).

I am authorizing reconstruction on about 5.4 miles of existing road, which is similar to the amount of reconstruction proposed under Alternative C. Reconstruction will include such actions as improving road drainage (including installation of drain dips), culvert replacements/reinstallation (including removal of two fish barriers), and placement of gravel surfacing. Sediment produced from culvert reinstallation on previously closed roads is off-set by the reduction of sediment realized from the past stream crossing removals, with a net reduction of 24 tons expected (FEIS p. 230). Short-term stream bank disturbances will occur at location where culverts are replaced, but design features/BMPs will be implemented to reduce the potential for sediment delivery to streams (FEIS Appendix B). The reconstruction will provide for improved road drainage and reduced erosion (FEIS p. 102). The replacement of two culverts on Road 1900 that are currently barriers to fish passage will allow for improved migration access to approximately three miles of fish habitat, thereby improving overall fish population seeding and viability throughout the watershed (FEIS pp. 98, 102).

Timber harvest may cause increases in sedimentation (FEIS, p. 233). Although modeling estimates increased sediment from the selected harvest activities, all harvest units have low surface erosion hazard ratings and with implementation of the selected design features (such as INFS riparian buffers) and BMPs, soil erosion is not expected from within harvest units (FEIS p. 234). Past monitoring has indicated that BMP effectiveness is generally high (FEIS p. 231) and riparian buffers are generally effective in preventing sediment in non-channelized flow from reaching stream channels (FEIS p. 234).

Currently, ATV use causes risk to riparian zones within the analysis area because use is unmanaged. The access management actions I am implementing with this decision will address much of this unmanaged use (ROD, p. 8). The conversion of the Bussel Creek Trail to non-motorized use will improve on the current situation that has caused riparian damage and sedimentation to streams by ATVs (FEIS pp. 96, 98, 102). Before trails are designated for ATV use they will be reconstructed to standards for ATV use (ROD p. 16). This will improve conditions along the trail/riparian interface and decrease the potential for sedimentation relative to the existing condition thereby, improving the condition of fish habitat and likely having positive effects on fish populations (FEIS pp. 96, 102).

Total Maximum Daily Loads (TMDLs) have been developed for Bear and Little Bear Creeks within the Bussel Creek watershed. The Bear and Little Bear sediment TMDL calls for reducing sediment by 14 tons per year from NFS land. The selected alternative will provide for sediment reductions from NFS land of about 7.1 tons per year as estimated by the TMDL model (FEIS p. 233) and contribute to an improvement in water quality (FEIS p. 240). Forest plan water quality standards, state water quality standards and Clean Water Act requirements will be met (FEIS pp. 240-241).

## **ii. Temperature**

INFS buffers virtually eliminate any concern for effects of proposed timber harvest on stream temperature (FEIS p. 101). Currently, stream temperatures in the Bussel watershed exceed standards (FEIS p. 214). All action alternatives, including the selected, provide for default INFS buffers for timber harvest (FEIS p. 33 and ROD pp. 13, 16). There will be no timber harvest within RHCAs in any subwatersheds within the Bussel project area (FEIS p. 100). Therefore, there are no expected effects to fish population characteristics or stream temperature from timber harvest (FEIS pp. 95-96, 101).

Degradation to stream channels and riparian vegetation due to ATVs is occurring within the project area. My decision to convert the Bussel Creek Trail to non-motorized use will provide for an improvement over the existing condition, resulting in improved stream channel and riparian vegetation conditions (FEIS p. 102).

The selected alternative will implement riparian plantings on up to 1.8 miles of stream along Bear and Little Bear Creeks and in other parts of the Bussel Creek Drainage. The plantings will enhance and restore riparian areas by increasing shade, stabilizing streambanks and ensuring long-term large woody debris recruitment, which is expected to counteract some of the past impacts from high road densities and roads within riparian areas (FEIS p. 103). These actions will provide for a long-term improvement in stream temperatures and a reduction in sedimentation resulting from stabilized streambanks, thereby benefiting fish populations (FEIS pp. 99, 103).

The temperature TMDL for Bear and Little Bear Creeks calls for increasing shade canopy over the stream channels by 20 to 80%. While I have identified these plantings as occurring over the next 10 to 15 years, it is likely that some planting will occur in 2008 because the district watershed program has 5,000 spruce trees available for planting this year. Such plantings will contribute to the long-term achievement of this TMDL and meeting state water quality standards (FEIS pp. 240-241).

### **iii. Channel Morphology**

Typically sediment originating from roads in is the sand, silt and clay particle sizes (McDonald and Coe, 2007) and any sediment generated from road construction or road recontouring/stream crossing removal are expected to be these finer-sized particles (FEIS p. 234). New road construction authorized under the selected alternative, will not involve any new stream crossings. Sediment from culvert installation and replacement during reconstruction will be minimized by implementation of design features and BMPs (FEIS Appendix B). Road recontouring and associated stream crossing removal/restoration may increase sediment over one to two years as stream flow returns to the reconstructed channel and winnows away fine particle sized material (FEIS p. 234). Potential for sediment delivery will be minimized by recontouring the road for 200 feet on either side of the stream crossing and seeding/mulching exposed soil (FEIS p. 234 and Appendix B). As the streambanks become stabilized, a long-term sediment reduction will occur (FEIS p. 99).

Overall, there is an estimated reduction in sediment yield for the finer particle size classes that are typically carried as suspended solids in the water column. The estimated sediment reduction after all activities are completed is a 24% reduction from the existing condition (FEIS p. 235). As a result, channel form is not expected to substantially change as a result of implementing the selected alternative (FEIS p. 235) and an overall long-term improvement in floodplain connectedness in areas (1.1 miles) where encroaching road are recontoured will result, which should improve beneficial use support and fish populations (FEIS pp. 97, 99).

The selected access management changes will provide more protection for riparian areas, providing an improvement for the fisheries resource, because less impact to riparian areas and streams banks is likely to occur. Specifically conversion of the Bussel Creek Trail to non-motorized use will be a major improvement to the current situation (FEIS p. 96).

### **iv. Water yield**

Water yield increases from the selected road construction actions, harvest treatments, and fuel treatments are expected to increase water yield in Bussel Creek for the first year by 3% and for the second and third years by 2%, for the next three years by 1% and return to the estimated existing condition of 5% over natural in the seventh year. Because of the estimated small size and short duration of the increase, no substantial change in channel form, channel pattern, or channel process is expected (FEIS p. 235).

### **v. Chemical Contaminants**

Gopher control will occur on about 367 acres of previously regenerated stands, if needed, to protect regeneration. Design features have been incorporated in my decision to address potential unwanted effects from these treatments. Manufacturer's recommendations will be followed; no baiting treatment will occur within riparian buffers or in areas with saturated soils; or during periods of or forecasted periods of heavy

precipitation (ROD p. 13). As a result, no effect to the water resource or fish populations is expected from these treatments (FEIS pp. 97, 230).

#### **d. Soils**

Within units selected for harvest, 60% of soils have a low mass failure potential, 40% have a moderate mass failure potential, and zero acres have a high mass failure potential. There is no timber harvest unit located on areas with high mass failure potential (FEIS pp. 178). Within the proposed harvest activity areas in Alternatives B and C and the selected alternative, 99 percent of soils have a low surface erosion potential, one percent has a moderate surface erosion potential, and 0 acres have a high surface erosion potential (FEIS pp. 178-179; FEIS Table 3-48; S-18). Subsurface erosion potential is a rating of potential soil erosion from exposed subsurface mineral soil. This rating is related to activities which expose subsurface mineral soil such as in road cut slopes. Typically, road design features (such as mulching, seeding and 1:1.5 or 1:2 cut slopes) minimize subsurface erosion. Harvest and fuels activities do not expose subsurface mineral soil. Proposed road construction crosses 0.9 miles of high subsurface erosion potential landtypes, 3.1 miles of low subsurface erosion potential, and 1.9 miles of moderate subsurface erosion potential (S-18).

Sediment delivery potential is a probability rating of eroded soil reaching a stream channel. Within the proposed harvest activity areas in Alternatives B and C and the selected alternative, 47 percent of soils have a low sediment delivery potential, 51 percent have a moderate sediment delivery potential, and two percent have a high sediment delivery potential (FEIS pp. 179; Table 3-48; S-18). The landtypes that exhibit moderate sediment potential are situated at low- to mid elevation on mid- to lower side slopes and adjacent to incised drainages. The landtypes in the project area that rated as having a high sediment delivery potential to stream channels vary in their topographic setting from wide, low elevation stream bottoms to mid-elevation lower slopes/breaklands on deeply incised drainages and stream headlands. Small portions of Units 84, 110, 137, 143, 170, 182, 197, 254, and 268 are located on high sediment delivery potential landtypes, which total 45 acres (S-19). Because drainage courses and riparian zones would be buffered and would not be entered or logged, the potential for increased sediment delivery from the moderately and highly rated landtype units is minimal (INFS p. A-5).

My decision includes post-harvest monitoring of 14 proposed units that have existing detrimental disturbance where ground-based equipment is proposed to be used for skidding on all or part of the unit. Soils would be monitored after completion of harvest and fuel treatment activities. We estimate that proposed activities on these units would meet Forest and Regional soil quality standards, but monitoring is included to verify expected results and would be done in Units 14, 70, 100, 170, 215, 225, 226, 232, 233, 248, 251, 254, 271, and 322.

Unit 224 currently has 14% detrimental disturbance, presumably from compaction from adjacent old logging activity. Approximately eight of the 25 harvest acres are proposed for ground-based skidding in Unit 224, the other 17 acres would be cable logged. Skid trails would be decompacted after use and soils would be monitored to determine effectiveness of decompaction and to verify amount of detrimental disturbance (ROD Table 10 p.19). Decompaction may result in approximately one half acre of recovery.

Approximately 0.23 miles of temporary road (NR21) would be constructed on an existing skid trail to provide access for Unit 215, which equates to approximately 2.25 acres of detrimental disturbance outside of harvest units. This road would be fully recontoured, mulched, and seeded after use. Temporary road construction would result in approximately 0.6 acres of detrimental disturbance in Unit 232 and approximately 0.7 acres of detrimental disturbance in Unit 251. Roads temporarily needed for project work that would be decommissioned would have initial detrimental effects. All temporary roads would be fully recontoured to the natural slope upon completion of activities. Temporary roads that would remain on the landscape more than one dry season would be waterbarred according to specific interval direction and at specific angles to promote acceptable results. They would then be mulched with a natural, weed-free material to prevent runoff and erosion during spring and/or winter runoff events.

Obliteration begins to reduce compaction of the soil, helps restore soil productivity, and decreases hydrologic effects from road surface runoff (Switalski and others 2004). Design features are expected to be effective at minimizing effects from temporary roads. The IPNF Soil Scientist monitored two recontoured temporary roads in the Rye on Ham Timber Sale on the St. Joe District in 2006 (FEIS p. 185). The roads were nicely decompacted, showed little resistance to shovel penetration, and had plenty of organic matter and debris incorporated. Revegetation is starting to occur, mainly from surrounding vegetation and natural reseedling. Tree seedlings were also planted on the roadbeds and appear to be doing well. Some soil mixing occurred, but enough ash is present to provide a favorable growing environment. Few to no weeds were found.

Approximately 23 acres would be removed from the productive land base for the proposed new construction of 5.1 miles of system road and 0.2 acre would be removed for the proposed 0.2 miles of ATV trail construction in Lines Creek (FEIS pp. 191, S-37). Approximately 10.7 miles of system road would be decommissioned (Road Management Rx D). This would include decompaction and some recontouring (Table 6) with the goal of restoring site productivity. Assuming 4.5 acres per mile of road, approximately 48 acres of National Forest System land would be on the path to recovery towards a productive land base.

Harvest activities are not expected to reduce soil organic matter within the proposed units because no organic matter would be removed from the soil. Harvest activities may actually increase material that would contribute to the organic surface layer through limbs and tops left on-site. Existing organic matter would not be diminished by harvest activities, but organic matter recruitment would likely be less in those portions of units identified for yarding tops (FEIS pp. 187-188).

No reduction in the existing CWD level would occur from harvest activities because there is no removal of material from the forest floor. Design features recommend CWD levels based on Graham et al. (1994). CWD levels may increase from limbs, tree tops, cull logs and broken boles left on-site. Design features recommend leaving amounts of CWD as a function of habitat type (ROD p. 17). In addition, the proposed harvest treatments retain from 10% to 70% of the existing canopy (or basal area) (S-30) for future CWD recruitment.

#### **e. Recreation**

Driving for pleasure is one of the primary recreation activities in the Bussel 484 Project Area. The majority of motorized use is via full-size vehicles, but there is a rapidly increasing use of ATVs. There are numerous spur roads in the project area open for vehicles less than 50" wide that can accommodate ATV/motorcycle use. However, these roads are fragmented and do not provide many loop opportunities, especially for non-licensed drivers. Some illegal motorized use occurs in the project area. In some instances, roads with legal restriction orders and restriction devices have been breached. Some of the illegal use is caused by confusion about where it is legal to drive due to inadequate signs, maps, or restrictive devices. The forest visitor map does not show all forest roads. This can confuse visitors (FEIS p. 167).

Currently there are 31.8 miles of open road, 28.4 miles of roads accessible to vehicles < 50" in width (ATVs) and 6.4 miles of roads that are impassible to vehicle traffic. Undesirable ATV use is occurring in several areas, including the Bussel Creek Trail, the Lines Creek Trail, and the Norton Creek Railroad Grade (FEIS p. 169).

The access management actions that I have selected for implementation will change the road system and travel management from the existing condition. Overall there will be a reduction in motorized access across the project area. Roads open to all vehicles will be reduced by 11.5 miles and roads open to ATV use will be reduced by 15.3 miles (see Table 12). Roads that will either be placed into storage (Prescription C) or decommissioned (Prescription D) will have an appropriate restrictive device installed to close the road to all motorized use (FEIS p. 25). As a result of road closures, motorized use will shift out of the northern portion of the project area to areas south of the Norton Creek Railroad Grade and the Bussel Creek Trail.

My access management changes will provide 18.5 miles of ATV access, similar to that provided by Alternative C (ROD p. 9 and FEIS p. 170). While Alternative B would provide 19.9 miles of ATV access, the decreased amount of miles available with the selected alternative is due to the need to prevent adverse damage to cultural resource sites associated with the Norton Creek Railroad Grade (FEIS p. 172). Under the selected alternative, the Norton Creek Railroad Grade will be opened and designated as ATV use up to its intersection with Road 3951, providing several loop riding opportunities of varying lengths that will be available to unlicensed riders. The remainder of Norton Creek Grade that connects to the Lines Creek Trail will not be opened and designated for ATV use. This will result in 1.4 fewer miles of ATV trails than would be available with Alternative B. With improved riding opportunities in the southern portion of the project area being provided by the designation of loop trails, the difference between the selected alternative and Alternative B is expected to be minor (FEIS p. 173).

The Bussel Creek Trail will be managed for non-motorized use due to the need to protect wildlife and aquatic resources (FEIS p. 172). A restrictive device will also be installed to effectively close the Incline Railroad Grade to motorized use. Damage is occurring to cultural resources and erosion and rutting is also occurring due to the steep grade. This grade was never intended to be open for motorized use.

The selected alternative, similar to Alternatives B and C, will provide a non-motorized recreation experience in most of the northern portion of the project area. Road management prescriptions will be implemented to protect resource values including wildlife, watershed and fisheries. These changes will effectively create a non-motorized recreation experience in the area north of the Bussel Creek Trail and the Norton Creek Grade. Motorized access will still be available via Roads 1904, 758 and 1498 that run generally north to south through the project area. This area would provide a non-motorized recreation opportunity for hunters and visitors desiring that type of experience (FEIS p.172).

The selected alternative will provide for a continued diversity of recreational opportunities within the project area and is consistent with the Idaho Panhandle National Forests Forest Plan (FEIS p. 174)

#### **f. Old Growth**

Existing old growth stands have been identified and allocated within the Bussel Project Area (FEIS pp. 151-152). There will be no timber harvest or road construction actions implemented within any old growth stands with my decision (ROD p. 14). Therefore, there is no expected effect to old growth (FEIS p. 153) and all forest plan old growth requirements applicable to the Bussel Project Area and the Idaho Panhandle National Forests, as a whole, will continue to be met with implementation of the selected alternative (FEIS pp. 154-155).

#### **g. Wildlife**

The existing transportation system was reviewed to determine if there are any unnecessary roads or roads that are causing unacceptable resource damage (FEIS p. 202). The selected alternative will decommission 10.7 miles of unneeded road (see Table 6). This amount of decommissioning is similar to that proposed for alternatives B and C. The restorative treatments (Road Prescription D) associated with the decommissioning (FEIS p. 25) will provide for an overall reduction in road densities within the project area and contribute both to a reduction in road maintenance costs and over the longer-term provide for improvements in water quality and fish populations within the project area (FEIS pp. 106, 234).

The selected alternative will implement road closures in the northern portion of the project area to help to mitigate and reduce the impacts of open roads, thereby providing for protection of resource values including wildlife, watershed, and fisheries (FEIS p. 172). The selected alternative increases the amount of secure habitat within the project area for wildlife by over 1,000 acres, resulting in an improvement in elk habitat potential in Elk Habitat Unit 8, and 32% improvement (FEIS p. 266). The selected alternative reduces resource damage caused by motorized vehicles, including conversion of Bussel Creek Trail #258 from motorized to non-motorized, where unacceptable resource damage has been occurring to meadow and

stream from riders leaving the trail and driving cross country through the riparian area of Bear Creek meadows and Little Bear Creek (FEIS pp. 169 and 173).

Alternative A does not respond to this need because it would not implement actions to more effectively manage motorized access within the project area, decommission unneeded roads, improve wildlife security, or reduce resource damage caused by roads and vehicles.

#### **h. Noxious Weeds**

Noxious weeds primarily exist along travel corridors, dispersed use areas and other disturbed areas within the Bussel project area (FEIS p. 146). Ground disturbing activities and opening the tree canopy to sunlight can increase the area available for noxious weed colonization. I have included design features in my decision, which will reduce the availability of colonization sites for weeds, including seeding disturbed soil with certified weed-free seed mixes and using mulching agents. In addition, all off-road logging and construction equipment (including machinery used in restoration projects) will be cleaned prior to entering the project area to remove dirt, plant parts, and material that may carry weed seeds (ROD p. 14). The key to preventing long-term establishment of weeds is the implementation of out-year monitoring after project implementation and the early treatment of any new weed occurrences. Required project monitoring includes these steps, and after project completion a review will be conducted for new populations of noxious weeds (ROD p.22 Table 11). If new populations are found more intensive surveys will be conducted, sites will be mapped, and treatment will be scheduled.

The selected alternative is consistent with the requirements of the forest plan. Any weed control within the project area shall be done in accordance with the principles of integrated pest management. New populations of noxious weeds will be treated in accordance with priorities set by the noxious weed program and new invaders will be treated upon discovery. Other weed infestations will be treated according to the direction in the St. Joe Noxious Weed Project EIS and treatments will be monitored for effectiveness (FEIS p. 150).

#### **i. Plant Species at Risk - Threatened, Endangered, and Sensitive Plant Species (TES)**

There are no known sites of federally listed plants on the forest (FEIS p. 156), though potential habitat within the Bussel project area exists for both Water howellia (*Howellia aquatilis*) and Spalding's catchfly (*Silene spaldingii*) (FEIS pp. 156, 162). Field surveys for TES plants were conducted in 2005 and 2006 within the Bussel project area. Most timber harvest will take place in the moist forest habitats, so effects to sensitive plants will be mainly confined to the moist forest guild species. The selected alternative could impact about 1,635 acres of moist guild habitat and 212 acres of wet forest guild habitat through timber harvest actions (FEIS p. 162). However, selected design features will protect all documented occurrences of sensitive plants providing and mitigate for new ones discovered prior to implementation. All documented occurrences will utilize site specific buffers to prevent project related impacts from occurring (Table 9). In the event that previously unknown TES plant populations are found prior or during project implementation, the District Botanist will implement necessary mitigation measures (ROD p. 14).

The selected alternative will have "no effect" on either Water howellia or Spalding's catchfly and "no impact" on known occurrences of sensitive plant species within the project area (FEIS pp. 162 and 163). The selected alternative is consistent with the Endangered Species Act and forest plan requirements for maintaining populations of identified sensitive plant species will be met (FEIS p. 163).

#### **j. Economics**

Although amenity and commodity resource values are both important, I find that trade-offs between them are difficult to measure in monetary terms. The project's economic analysis focused on those values that

could be quantified, thus it has a timber management emphasis. Amenity resource values were primarily discussed in the context of other key issues, such as recreation water quality, wildlife, and fish habitat.

The alternative that I have chosen for implementation includes the sale of about 49,000 CCF of national forest timber. Market conditions when the timber harvest occurs will determine the actual revenues and payments. The economic analysis predicted a high bid of about \$37.50/CCF for Alternative B and \$13.50 for Alternative C (FEIS p. 62). Because of the similarities between the selected alternative and Alternative B with respect to timber harvest treatments and road construction, I expect a somewhat similar bid value for the selected alternative.

Recent and current timber market conditions have emphasized the necessity for designing and implementing economically viable vegetation management projects because avoiding unsold sales is important to ensuring accomplishment of our restoration objectives. Currently market conditions within the timber industry are difficult. Since March of 2006, the Softwood Commodity index has declined approximately 26% and March 2008 was the 11<sup>th</sup> consecutive quarter to trigger a market related contract term addition (PF: E-7, E-9, E-11). Alternative C contains a heavy proportion of helicopter logging, which is an expensive yarding method (FEIS p. 62). Alternative C contains almost double the proportion of helicopter logging, when compared to the selected alternative and Alternative B (FEIS p. 39).

Based upon recommendations from the Regional Forester and his staff to make our timber harvest contracts more economically viable in the currently depressed timber market, the use of helicopter yarding has been carefully scrutinized (PF: E-12). The selected alternative will utilize only that amount of helicopter yarding, which is absolutely necessary to accomplish our priority objectives. Other acres, which were identified for helicopter yarding in Alternative C will be accessed via road and treated with conventional harvesting systems.

The more balanced logging system composition of the selected alternative (Table 3), including both higher cost helicopter and lower cost skyline/cable and ground-based logging systems, will provide for improved economic feasibility of the subsequent timber harvest contracts resulting from my decision.

## **V. Other Alternatives Considered**

### **A. Alternatives Not Given Detailed Study**

#### **1. Prescribed Burning (burning with no commercial timber harvest or burning outside proposed harvest units)**

Existing stand characteristics, adjacent privately owned land, potential risk of damage to actively managed timber stands, and the anticipated effects of the current trends in climate change on potential fire severity preclude the use of fire as the primary tool for managing the vegetation within the Bussel Creek watershed even though low- or mixed-severity fire is not uncommon to some of the habitat types within the analysis area. The use of fire as the primary management tool within this analysis area would not meet the stated purpose and need for vegetation management or for local community contributions.

Early in the season it would not be possible to use prescribed fire under the tree canopy because of moist conditions, but when conditions begin to dry in mid-summer risk of escaped fire becomes too high. Canopy cover within the analysis area is very high. High canopy cover results in heavy shading of the forest floor, keeping fuel temperatures low and fuel moistures high throughout the spring and early summer. Natural fuels and the forest floor climate make it very difficult for a fire to spread on the ground during typical spring prescribed burning conditions. Later in the season on warm days from July through September the transition from benign surface fire to problematic crown fire can occur rapidly and is difficult or impossible to control. This type of fire behavior would result in much mortality and make it very difficult to keep a fire on the National Forest System lands. This would pose a substantial unacceptable risk to adjacent privately owned lands.

Therefore, I did not give this alternative given detailed consideration (FEIS p. 11).

## **2. ATV Access for the Entire Bussel Project Area**

Providing motorized recreational access is part of the purpose and need for this project, but direction for management of National Forest System lands in the Bussel Creek Drainage includes multiple uses. Most of the Bussel 484 Project Area falls within Management Areas 1 and 4. Forest Plan direction related to recreation and access for those areas are:

MA 1: Provide opportunities for dispersed recreation. Manage dispersed recreation primarily for roaded modified and roaded natural Recreation Opportunity Spectrum (ROS) classes. Maintain a diversity of recreation opportunities (IPNF Forest Plan, p. III-2).

MA 4: Provide for opportunities for dispersed recreation consistent with wildlife habitat needs. Manage dispersed recreation primarily for roaded modified and roaded natural ROS classes. Motorized use is generally restricted to designated routes. Within critical habitat components motorized recreation use may be restricted to provide needed wildlife security (IPNF Forest Plan, p. III-17).

The purpose and need for the proposed action has identified that access restrictions are needed to reduce sediment production, provide non-motorized recreational opportunities, protect sensitive areas, and increase the amount and improve the distribution of wildlife security. The interdisciplinary found this alternative did not warrant detailed study because it did not meet the purpose and need for action (FEIS p. 12).

## **3. Restoration Alternative with No Motorized Access**

All of the action alternatives, including my selected alternative are restoration alternatives; however, the Bussel Creek Drainage has a long history of motorized use, and it is the intent of our existing forest plan to continue that use. The selected alternative will increase the amount of secure habitat within the project area for wildlife by over 1,000 acres (FEIS p. 266). Road closures will be implemented to protect resource values including wildlife, watershed, and fisheries. There are many areas other places on the St. Joe District where motorized access is not allowed. As stated above, most of the Bussel 484 Project Area falls within Management Areas 1 and 4. Forest Plan direction related to recreation for those areas includes:

MA 1: Provide opportunities for dispersed recreation. Manage dispersed recreation primarily for roaded modified and roaded natural Recreation Opportunity Spectrum (ROS) classes. Maintain a diversity of recreation opportunities (IPNF Forest Plan, p. III-2).

MA 4: Provide for opportunities for dispersed recreation consistent with wildlife habitat needs. Manage dispersed recreation primarily for roaded modified and roaded natural ROS classes. Motorized use is generally restricted to designated routes. Within critical habitat components motorized recreation use may be restricted to provide needed wildlife security (IPNF Forest Plan, p. III-17).

The selected alternative will reduce the miles of roads and trails designated for motorized use in order to increase wildlife security, protect water quality, and provide non-motorized recreational opportunities; but it will continue to provide motorized access as permitted in the Forest Plan. This alternative did not meet the purpose and need for action and was not given detailed study.

## **4. Restrict Motorized Access on Lines Creek Trail 246 and Only Allow Non-motorized Use**

The selected alternative represents a compromise for wildlife security and motorized access in the project area. It will increase wildlife security in the eastern part of the project area and provide motorized access in the western part. The existing condition and the selected alternative allow motorized access on Trail 246. This is part of the effort to balance the need for wildlife security in the eastern part of the project area with the need to provide motorized access some place in the project area (FEIS p. 12).

## **5. Keep Bussel Creek Trail Open to Single-Track Motorized and Connect to Marble Creek**

This is the existing condition and is considered under Alternative A. The selected alternative balances motorized access with resource protection. The selected alternative will provide increased wildlife security in the eastern part of the project area, while improving the motorized access in the western part of the project area. The State of Idaho has set total maximum daily loads (TMDLs) for sediment in Bear Creek and Little Bear Creek that require a reduction in sediment. Eliminating motorized use of the trail will help reduce sediment production at the crossings at Bear Creek and Little Bear Creek (FEIS p. 107). Allowing motorized access on the Bussel Creek Trail has resulted in people using motorized vehicles off the trail in the meadows (FEIS pp. 160, 169). Restricting motorized access on the trail will help protect the adjacent meadows.

## **6. Seasonal Closure of Road 3658 that would Allow ATV Access Part of the Year**

Forest Road 3658 currently has a gate at its junction with Forest Road 758. The gate is not effective in prohibiting use (e.g. ATV), and wildlife security is not provided because of motorized vehicle use on the road. Based on experiences with anything other than making it physically impossible for motorized vehicles to use a road, a seasonal restriction will not provide the security that is needed. Problems with seasonal restrictions are primarily because of unauthorized use and the Forest Service's inability to enforce restrictions (FEIS pp. 166, 167). Putting the road into storage (Road Management Prescription C) is the only way to assure that the security needed and analyzed for will actually be realized. Also, the State of Idaho developed TMDLs for Bear Creek and Little Bear Creek. Removing culverts and rehabilitating stream crossings would eliminate chronic sources of sediment in these streams and eliminate the potential for large sediment contributions if culverts were to wash out (FEIS pp. 94, 217).

## **7. Leave Culverts in Place**

Sediment can enter streams where roads cross streams. Removing culverts and rehabilitating stream crossings would eliminate chronic sources of sediment and eliminate the potential for large sediment contributions if culverts were to wash out. The State of Idaho developed TMDLs for Bear Creek and Little Bear Creek that require the Forest Service to reduce sediment production. Roads are the biggest human-caused contributors of sediment, so rehabilitating stream crossings is the most effective method for reducing sediment additions. When roads are not needed or are not needed for a long time, removing culverts reduces road maintenance costs and eliminates the risk of culverts washing out (FEIS pp.217, 241).

## **8. Create Vistas to Incorporate Public Education about Past and Present Management**

The need to create vistas was not identified because the project area currently provides some viewing areas. The Bussel Creek Drainage is within the Marble Creek Historical Area, so the opportunity for additional interpretive signs does exist. This project will not preclude installing additional signs in the future if funding becomes available.

## **9. Limit Ground-based Skidding to Dry Conditions or Frozen Ground with at Least Two Feet of Snow**

Analysis shows that the selected timber harvest using the indicated logging systems and mitigation measures will meet Forest Plan and Regional standards for soils (FEIS pp. 200-201), so the need to require additional measures was not identified. Winter logging does not always guarantee protection of soils. Weather conditions that allow effective winter logging do not always occur on the St. Joe Ranger District. If snow accumulations do result in a protective layer, weather conditions can change overnight making operations on snow impossible. At other times too much snow can make operations impracticable. Logging operations

will be restricted to those periods of time when unacceptable resource damage will not occur. Nothing in my decision will preclude winter logging as an option for use in minimizing ground disturbance, when mutually agreeable to both the timber sale purchaser and Forest Service, but it is not a requirement.

## **B. Alternatives Considered in Detailed Study**

### **1. Alternative A – No Action**

The National Environmental Policy Act (NEPA) requires that an EIS include a “no-action” alternative to serve as a baseline to compare action alternatives. I did not select this alternative for implementation because it would not respond to any elements of the purpose and need:

- Treatments to promote and accelerate the development of long-lived, early-seral, shade intolerant species, including western white pine and western larch and treatments to reduce stand densities to enhance and encourage resilience to insects and disease would not be conducted.
- No wood products would be provided to the local economy to contribute to local employment, income and lifestyles nor would biomass for the St. Maries Fuels to School Project be provided.
- Progress toward aquatic ecosystem restoration would not occur in the short term. Activities to reduce sediment production and increase stream shading in Bussel Creek and its tributaries would be delayed.
- Increasing the amount of and improving distribution of wildlife security areas in the project area to contribute to meeting forest plan goals and objectives for big game habitat would be delayed.

Given the existing conditions, I believe that deferring activity for all forested stands in the analysis area would not be consistent with forest plan direction for this area. Specifically MA 1 goals to manage those lands suitable for timber production for the long-term growth and production of commercially valuable wood products would not be realized under a no-action scenario. I believe an active restoration approach for both aquatic and terrestrial ecosystem conditions is most consistent with governing direction and the best available science. Alternative A would not initiate the regime of positive treatment needed to bring this landscape to desired future conditions in the long term.

### **2. Alternative B**

Alternative B is the proposed action (FEIS pp. 14 to 18). Alternative B would implement similar amounts of silvicultural treatments to achieve the elements of the vegetative element of the purpose and need. It would construct 5.8 miles of system and 0.5 miles of temporary road to provide necessary access for the silvicultural treatments. All 5.1 miles of system road would have been put into storage (Road Prescription C). Temporary road, 0.5 miles will be decommissioned. About 6.7 miles of road would be reconstructed (including Road 3570A).

To accomplish the identified access management related needs, this alternative would have decreased open road density by 11.5 miles and ATV roaded access by 15.3 miles. It would have repaired and restored the entire Norton Creek Railroad Grade and designated it open to motorized vehicles less than 50 inches wide (4.3 miles), which would result in an adverse effect to a portion of this railroad grade (FEIS pp. 57, 58).

Alternative B would also have provided for aquatic restoration by obliterating of 10.7 miles of existing road, removing fish barriers, placement of large woody debris on 2.5 to 3 miles of stream, and riparian planting to increase shade on 1.8 miles of stream. Long-term sediment reductions of about 7.1 tons per year in the Bear and Little Bear watersheds would be realized from road recontouring and stream crossing restorations (FEIS p.233).

With modifications, including not reconstructing Road 3570A, limiting ATV access to 2.9 miles of the Norton Creek Railroad Grade and deferring a decision on precommercial thinning treatments in lynx habitat

and whether to construct Road NE22, this alternative is the selected alternative. The rationale for selecting this modified alternative has been disclosed in this Record of Decision.

### **3. Alternative C**

Alternative C was designed to address issues regarding road construction and cultural resources (FEIS pp. 18-22). Alternative C does not include any road construction and, therefore, does not address the purpose and need element of providing long-term access for vegetation treatments as well as does the selected alternative and Alternative B (ROD, pp. 26-27). About 5.4 miles of road would be reconstructed compared to Alternative B's 6.7 miles. Reconstruction would not take place on Road 3570A, which is an historic wagon road, thus avoiding an adverse effect to the integrity of this cultural resource (FEIS p. 58). Alternative C would implement silvicultural treatments on the same number of acres as Alternative B, but a helicopter logging system would be used to harvest 1,431 acres versus 712 acres for Alternative B. The greater reliance on helicopter logging systems makes Alternative C more expensive to implement (FEIS p. 61).

This alternative would have decreased open road density by 11.5 miles and ATV roaded access by 15.3 miles, similar to Alternative B. Existing ATV trail access would decrease by 1.2 miles for Alternative C versus a 0.2 mile increase for Alternative B. The Norton Creek Railroad Grade would be open to ATV access for only 2.9 miles, which is 1.4 miles less than under Alternative B. Prohibiting ATV use of the 1.4 miles segment of this grade would avoid an adverse effect to the historic integrity of this cultural resource (FEIS p. 57). Watershed restoration actions, similar to Alternative B, would be implemented with this alternative.

While I did not select road construction feature that this alternative was designed to address, I have implemented the cultural resource feature of this alternative and modified or deferred the amount of road to be constructed under the selected alternative from 5.8 miles in Alternative B to 5.2 miles. This will reduce road reconstruction by 1.3 miles and the selected road construction actions will not involve any new stream crossings, which will greatly reduce the potential for sediment delivery to streams (FEIS pp. 94, 97). Therefore, I expect the selected alternative to be comparable to Alternative C with regard to overall net sediment reduction benefits (FEIS pp. 231, 233).

### **C. Environmentally Preferred Alternative**

The environmentally preferable alternative is defined by CEQ as the alternative (or alternatives) causing the least impact to the biological and physical environment, while best meeting the goals listed in section 101 of the National Environmental Policy Act. Alternative B Modified would best preserve, protect, enhance historic, cultural, and natural resources; while attaining a wide range of beneficial uses and supporting diversity, and a variety of individual choice.

Identification of the environmentally preferable alternative requires consideration of conditions that are present or foreseeable in both the short and long-terms. In the short term, it could be argued that Alternative A, would best meet the definition of "environmentally preferable" because it would not alter the existing biological and physical environment and thus would not result in any short-term impacts to vegetation, water, wildlife or social values. However, Alternative A doesn't address the pressing environmental issues identified in the final EIS, such as the need to improve watershed function or the need to promote and accelerate the development of long-lived, early-seral, shade intolerant species. It could be argued that Alternative A would not "enhance the quality of renewable resources" either in the short term or the long term. Since the majority of the project area is allocated in the forest plan for timber management, it is difficult to argue that Alternative A would provide the "best balance between population and resource use.... and sharing of life's amenities". Further, taking no action would likely lead to undesirable and unintended consequences because the environmental conditions of the area would continue to trend away from desired watershed and forest plant community conditions.

Implementing Alternative B without my modifications would result in adverse impacts to identified cultural resource sites. Thus Alternative B would not enhance historic or cultural resources. Alternative C would provide for enhancement of historic and cultural resources but would not achieve access related elements of the purpose and need as well as Alternative B. Thus, Alternative C would not achieve as desirable a “balance between population and resource use” that the selected alternative would achieve. The selected alternative will provide for long-term management access, but by either storing or decommissioning the roads to be constructed with this decision, risks to wildlife and water related resources will be substantially reduced. This will effect a more desirable balance between population and resource use.

I believe Alternative B Modified, the selected alternative, is environmentally preferable because it addresses the environmental issues identified in the final EIS, including forest vegetation needs, watershed health, wildlife needs, social needs, and recreation issues while balancing public needs. Although the final EIS identifies short-term impacts, these will be outweighed by the long-term ecological benefits that will result from the actions to improve stream function and fish habitat, restore and maintain western white pine and western larch, provide secure habitat for wildlife, and provide enhanced recreation opportunities. The selected actions will trend the project area toward its desired future condition, while providing economic, social, and environmental values. This decision will address social and environmental issues while trending the area toward desired conditions without creating inappropriate risks of short- or long-term environmental consequences. I believe it meets the definition of “environmentally preferable” to a greater degree than the other alternatives considered in detail.

The Environmental Protection Agency (EPA) reviewed the Bussel 484 DEIS pursuant to their responsibility under the National Environmental Policy Act (PI-95). The EPA commended the Forest Service for the inclusive process we used to develop this project based on watershed assessments, roads analysis, public input and the Forest Plan to craft a proposal that addresses multiple goals at a landscape scale.

## **VI. Consistency with Forest Plan and Other Laws and Regulations**

Numerous laws, regulations, and agency directives require that my decision be consistent with their provisions. I have determined that my decision is consistent with all laws, regulations, and agency policy. The following summarizes findings required by major environmental laws.

### **A. National Forest Management Act**

#### **Forest Plan Consistency**

The National Forest Management Act requires projects to comply with forest plan direction. The Idaho Panhandle Forests Land and Resource Management Plan (Forest Plan) establishes management direction for the Idaho Panhandle National Forests. This management direction is achieved through the establishment of Forest goals and objectives, standards and guidelines, and Management Area goals and accompanying standards and guidelines. Projects and activity decisions must demonstrate and explicitly document consistency and compliance with Forest Plan forest-wide standards, management area standards, and monitoring plan requirements.

Alternative B Modified does not require any Forest Plan amendments. My selected management area suitability area changes are not forest plan amendments because the forest plan does not require every such adjustment to be an amendment (IPNF Forest Plan, Appendix M). Rather these adjustments are to be forwarded to the planning team and accumulated in accordance with the monitoring plan and a determination will then be made if a forest plan amendment is needed.

Upon review of the pertinent information, I find the actions and activities contained in the selected alternative are consistent with Forest Plan direction:

- Air Quality / Fire / Fuels: The selected alternative will be monitored and controlled by airshed regulations to avoid violation of air quality standards, in compliance with the North Idaho Smoke Management Plan, as directed in the IPNF Forest Plan (FEIS p. 55). Prescribed burning and mechanical treatment of activity fuels are consistent with direction in the forest plan. Continued fire suppression will be conducted in accordance with the guidance provided by the current IPNF Forest Plan (FEIS p. 130).
- Fisheries: Alternative B Modified complies with IPNF Forest Plan standards and guidelines for fisheries (FEIS pp. 116 and 117). Standard #1 and Standard #2 (as replaced by INFS) no longer apply due to a 2005 forest plan amendment removing these standards from the plan (Fry Emergence Amendment, June 2005). Standard 3 does not apply to this project because none of the streams identified in that standard are located in this project area. Standard 4 will be met because new road construction will not involve any stream crossing and two existing culverts acting as fish barriers will be replaced under this decision. Standard 5 was met because fisheries surveys were used to coordinate activities with other resources. Several projects have been identified in this document that would benefit the fishery when they are implemented. The intent of Standard 6 is being met due to the extensive review of the stream systems and the implementation of standards described in INFS.
- Forest Vegetation: The selected alternative is consistent with goals, objectives, and standards for timber management and silvicultural practices (FEIS p.144).
- Cultural Resources: The selected alternative complies with Forest Plan direction for cultural resources (FEIS p. 59).
- Noxious Weeds: The selected alternative will meet intent for moderate control of noxious weeds, as stated in the IPNF Forest Plan, through the implementation of design features. Weed control within the project area shall be done in accordance with the principles of integrated pest management, which is consistent with the Forest Plan (FEIS p.150).
- Old Growth: Specific goals, objectives and standards for old growth management as described in the Forest Plan will be met with the selection of Alternative B Modified. The project is consistent with all Forest Plan standards for old growth (FEIS pp. 154-155). The standards that apply specifically to this project are discussed below. Discussion of other standards are included in the final EIS. The definitions of old growth developed by the Regional Old Growth Task Force, documented in *Old-Growth Forest Types of the Northern Region* (Green et al, 2005) were used in the validation and analysis process of old growth in this project. These definitions of old growth have been incorporated into Forest Plan standard *10a*. The Idaho Panhandle National Forest is meeting Forest Plan standard *10b* in the Forest Plan which state, “Maintain at least 10 percent of the forested portion of the IPNF as old growth.” The IPNF has allocated 11.8% of forested acres to be retained as old growth (FEIS p. 154). The Bussel 484 Project involves one Old Growth Management Unit (OGMU): OGMU 8 (St. Maries, 04). This old growth management unit has approximately 13,083 acres in National Forest System lands, with 2,528 acres (approximately 19%) allocated to Old Growth Management. The current old growth allocation within this OGMU meets Forest Plan Old Growth standard *10c* (FEIS p. 154). Timber harvest is not proposed in any allocated old growth. None of the stands proposed for timber harvest meet minimum criteria for old growth. The selected alternative is in compliance with the Forest Plan Old Growth standard *10d* (FEIS p.154). The habitat type series for allocated old growth within this OGMU is generally represented by the habitat type series available within this project area. See Table 3-37 in the *Forest Vegetation* section of the final EIS. All alternatives in this project are in compliance with the Forest Plan Old Growth standard *10e* (FEIS p. 154). Old growth standard *10f* describes desirable patch size stating: “One or more old-growth stands per old-growth unit should be 300 acres or larger.....The remaining old-growth management stands should be at least 25 acres in size. Preferred size is 80 plus acres.” OGMU 8 (St. Maries, 04) is in compliance with the Forest Plan Old Growth standard *10f* (FEIS p. 154). The selected alternative will not implement road construction

within allocated old growth stands, so this proposal is in compliance with old growth standard 10g (FEIS p.155).

- **Plant Species at Risk:** The selected alternative will meet the intent of the IPNF Forest Plan for the management of plant species at risk (FEIS p.163). One forest plan management goal is to "manage habitat to maintain populations of identified sensitive species of animals and plants". A forest plan standard for sensitive species is to "manage the habitat of species listed on the Regional Sensitive Species List to prevent further declines in populations which could lead to Federal listing under the Endangered Species Act". The forest plan also identifies the need to "Determine the status and distribution of Threatened, Endangered, and Rare (sensitive) plants on the IPNF". The project complies with these forest plan goals and standards. Inventoried locations of rare plants populations were found in Units 41, 84, 114, 134, 148, 170, 175, 176, 198, 200, 215, 224, 248, 254, 296, 311, and 321. The individuals or plant populations in these units will be buffered from any road or harvest activity (Table 11).
- **Recreation:** The selected alternative will be within Forest Plan standards for recreation because a diversity of recreational opportunities will be provided, and the Recreation Opportunity Spectrum classes will remain the same (FEIS p. 174).
- **Visual Quality:** The selected alternative, with associated design features and site-specific mitigation measures, will meet IPNF Forest Plan standards for visual quality (FEIS p. 211).
- **Soils:** All treatment units will meet the IPNF Forest Plan Soils Standard of maintaining acceptable productivity on 80% of activity areas (FEIS p. 200). At least 80 percent of the activity areas will be maintained in a condition of acceptable productivity potential. Soil productivity will be improved on about 48 acres of decompacted and recontoured roads in the selected alternative (FEIS pp. 200-201). Special monitoring and mitigation features were identified to protect soil quality and productivity in Units 14, 70, 100, 170, 215, 224, 225, 226, 232, 233, 248, 251, 254, 271, and 322 (Table 11). Soils in these units will be monitored after timber harvest and after fuels treatment to verify whether ground-based units with existing detrimental disturbance meet soil quality standards as expected. In unit 224 the effectiveness of decompacting skid trails will be monitored by the forest soil scientist.

Sufficient large, coarse woody debris will be maintained for soil productivity, tree tops will be left in units, and slash will be left on the ground over winter to leach nutrients into the soil. Design standards will be sufficient to maintain productivity (FEIS pp. 187-188, 200).

- **Water:** The project complies with IPNF Forest Plan goals and standards for water (FEIS p. 240-241). Management activities on NFS lands will not significantly impair the long-term productivity of the water resource, and they will meet or exceed state water quality standards. The selected alternative will provide for a long-term net decrease in sediment production (FEIS p. 231 Table 3-66) which would improve water quality, improve habitat conditions and improve support of beneficial uses. Selected riparian plantings may eventually increase stream shading and reduce stream temperature (FEIS p. 241). BMPs will be implemented with the selected alternative (ROD p. 16), and their effectiveness should be high (FEIS Appendix B). Although the watershed model used in the analysis estimates a slight increases in water yield for Alternative B Modified; it is unlikely that the proposed activities would increase water yields to levels that would cause appreciable changes to stream channels or sediment transport (FEIS pp. 236-238).

RHCAs are identified for watersheds of the Bussel project area. Landslide-prone areas and streams will have buffers applied to them to provide stream shading and prevent sediment entry into the stream system, as required by the Inland Native Fish Strategy Forest Plan Amendment. Timber harvest will not be implemented on areas with high mass failure potential (FEIS p. 178).

See the discussion below concerning the Clean Water Act and State Water Quality Laws and Regulations. The selected alternative will remove 57 additional stream crossings.

- **Wildlife:** The selected alternative is consistent with applicable Forest Plan goals, direction, standards, and guidelines for the management of wildlife habitat and species populations (FEIS p. 280). See additional discussion about Threatened and Endangered species under the Endangered Species Act below. Viable populations of management indicator species (elk, marten, moose, goshawk, and pileated woodpecker) will be maintained (FEIS pp. 248, 259, 262, 263, 266, 276). Alternative B Modified will result in a 1,027-acre increase in security areas and a 19% increase in elk habitat potential for Elk Habitat Unit 8 (FEIS p. 266). Moose are known to occur and are relatively common in the wildlife analysis area. The parameters used to evaluate effects on elk and other MIS are applicable and sufficient for addressing potential effects on moose (FEIS p. 248). Based on the amount of mature sawtimber forest structure and immature sawtimber, the existing condition of the Bussel analysis area is below the criteria needed for a low quality subdrainage. This is due primarily to past fire and timber harvest. The relatively small changes in the amount of mature/older forest structure and young forest structure will not appreciably affect the availability of suitable marten habitat, and there will be no change in the quality of the “subdrainage”. Succession of immature sawtimber stands would at some undetermined future date result in a minimum of 76% of the analysis area in mature sawtimber (FEIS p. 275). This would meet the criteria for a high-quality subdrainage. The selected alternative will maintain suitable habitat to support pileated woodpeckers in 7 of 8 home ranges (FEIS p. 260).

The project will meet Forest Plan goals, objectives, and standards for cavity habitat (FEIS p. 278). Habitat for sensitive species will be managed to prevent further declines in populations which could lead to federal listing under the ESA (FEIS pp. 271-280). The selected activities are not expected to influence the reproductive success or affect populations of wolves (FEIS p. 273). There will be no impact on black swift, common loon, flammulated owl, fringed myotis, harlequin duck, northern bog lemming, peregrine falcon, pygmy nuthatch, Townsend’s big-eared bat, and wolverine. The project may impact individuals or habitat but will not likely contribute to a trend towards federal listing or loss of viability to the population or species of black-backed woodpecker, western (boreal) toad, Coeur d’Alene Salamander, fisher, and gray wolf (FEIS p. 280-281).

### **Diversity**

The IPNF Forest Plan contains an array of components that contribute to the wildlife/fisheries habitat capability of the Idaho Panhandle National Forests. Based upon consideration of these components of the Forest Plan, the monitoring and design criteria of the decision, an analysis of effects of the Bussel 484 project at the Forest and Regional scale, and the Biological Assessments/Evaluations, I concluded that my decision poses little risk to the diversity of native species. In addition, my conclusion is based on a review of the record that shows a thorough review of relevant scientific information, a consideration of responsible opposing views, and the acknowledgment of incomplete or unavailable information, scientific uncertainty, and risk.

### **Suitability**

Suitability: All proposed vegetative treatments are on lands suitable for timber production (FEIS p. 144; PF: V-5, V-12 and V-14). During analysis of this project, there were stands (units) proposed for treatment that were tentatively identified as allocated to Management Area 9 (MA 9), which indicates constraints related to vegetation management and specifically timber management. Analysis indicated that these stands are suitable for timber management (PD-68, V-5, V-12). Therefore, following the forest plan timberland suitability adjustment procedure (see IPNF Forest Plan, Appendix M), these stands are reallocated from MA 9 to MA 1 (suitable lands designated for timber production) and the mapping of the MA 9 boundary has been changed to better reflect that condition. These adjustments will be monitored in accordance with the forest plan.

### Roads

The NFMA requires that the necessity for roads be documented, and that road construction be designed to "standards appropriate for the intended uses, considering safety, cost of transportation, and impacts on land and resources" [36 CFR 219.27(10)]. NFMA also requires that "all roads are planned and designed to re-establish vegetation cover on the disturbed areas within a reasonable period of time, not to exceed 10 years....unless the road is determined a necessary permanent addition to the National Forest Transportation System" [36 CFR 219.27(11)].

Management actions associated with the Bussel 484 project include the construction of approximately 4.5 miles of new system road and 0.5 miles of temporary road on National Forest System land, construction of 0.2 miles of road on land owned by Potlatch Corporation, and the reconstruction of approximately 5.4 miles of existing to access treatment units. The new system road will be constructed to meet all BMP standards, and all temporary roads will be rehabilitated after use. This meets the intent of 36 CFR 219.27(10) and (11).

### Timber Management Requirements

The minimum specific management requirements for projects and activities that must be met in carrying out projects and activities for the National Forest System (NFS) are set forth in this section. Under 16 U.S.C. 1604 (g)(3)(E), a Responsible Official may authorize site-specific projects and activities to harvest timber on NFS lands only where:

- 1) Soil, slope, or other watershed conditions will not be irreversibly damaged. The selected alternative will not irreversibly damage soil, slope, or other watershed conditions (FEIS pp. 184, 194, 232, 238).
- 2) There is assurance that the lands can be adequately restocked within five years after final regeneration harvest (FSM 1921.12g). With the selected alternative approximately 367 acres will require regeneration, and these areas can be restocked within five years (FEIS pp. 140-141, 144). Analysis of current and historical regeneration data for the project area support the conclusion that adequate stocking of the proposed harvest units is assured with site preparation efforts occurring in a timely manner following harvest. The project file contains supporting documentation of current and historical reforestation data (V-2).
- 3) Streams, streambanks, shorelines, lakes, wetlands, and other bodies of water are protected from detrimental changes in water temperatures, blockages of water courses, and deposits of sediment where harvests are likely to seriously and adversely affect water conditions or fish habitat. The timber harvest associated with the selected alternative will not adversely affect water conditions (FEIS pp. 232-238) or fish habitat (FEIS pp. 97-104).
- 4) The harvesting system to be used is not selected primarily because it will give the greatest dollar return or the greatest unit output of timber. The decision to implement the selected alternative is based on a variety of reasons as discussed in this record of decision, not solely on economics.

A Responsible Official may authorize projects and activities on NFS lands using cutting methods, such as clearcutting, seed tree cutting, shelterwood cutting, and other cuts designed to regenerate an even-aged stand of timber, only where:

- 1) For clearcutting, it is the optimum method; or where seed tree, shelterwood, and other cuts are determined to be appropriate to meeting the objectives and requirements of the relevant plan (16 U.S.C. 1604 (g)(3)(F)(i)). I have determined that clearcutting is the optimal method of treatment for Units 100, 153, 302, and 322 in the selected alternative. My determination is based upon diagnosis found in the project file (PF: V-3, V-4, V-5) and the evaluation of effects found in Chapter 3 of the final EIS (pp. 137-144)

- 2) The interdisciplinary review has been completed and the potential environmental, biological, aesthetic, engineering, and economic impacts have been assessed on each advertised sale area and the cutting methods are consistent with the multiple use of the general area (16 U.S.C. 1604 (g)(3)(F)(ii)). An interdisciplinary team reviewed the selected alternative and determined the proposed timber harvest activities are consistent with the multiple use of the general area (FEIS, Chapter 3)
- 3) Cut blocks, patches, or strips are shaped and blended to the extent practicable with the natural terrain (16 U.S.C. 1604 (g)(3)(F)(iii)). The selected alternative, with associated design features, meets the Forest Plan standards for visual quality (FEIS p. 211).
- 4) Cuts are carried out according to the maximum size limit requirements for areas to be cut during one harvest operation (FSM 1921.12e). All proposed openings are within size limitations (FEIS p. 144).
- 5) Timber cuts are carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, esthetic resources, cultural and historic resources, and the regeneration of timber resources. Timber harvest will be carried out in a manner consistent with the protection of soils (FEIS pp. 200-201), watershed (FEIS pp. 240-241), fish (FEIS pp. 116-117; FEIS Appendix D), wildlife (FEIS p. 281; FEIS Appendix C), recreation (FEIS pp. 170, 173-174), esthetic resources or scenic quality (FEIS p. 211), cultural resources (FEIS pp. 57-59), and regeneration of timber resources (FEIS p. 144).
- 6) Stands of trees are harvested according to requirements for culmination of mean annual increment of growth (FEIS p. 144; PF: V-5, [16 U.S.C. 1604 (m); FSM 1921.12f; FSH 1909.12, ch. 60]).

## **B. The Clean Water Act**

A declared objective of the Clean Water Act (CWA) of 1977 (33 U.S.C. 1323) is to "...restore and maintain the chemical, physical, and biological integrity..." of streams (U.S., 1988). The selected alternative will meet the Clean Water Act objective of restoring or maintaining biological integrity as described in the water analysis (FEIS pp. 212-241). The CWA directs the Forest Service to meet state substantive and procedural requirements respecting control and abatement of pollution. Through a Memorandum of Understanding with the State of Idaho (IDWR, 1993), the Forest Service is responsible for implementing nonpoint source pollution control and the Idaho Water Quality Standards (IDAPA 58.01.02) on National Forest System lands. Forest Service water quality policy is to: promote the improvement, protection, restoration and maintenance of water quality to support beneficial uses, promote and apply approved Best Management Practices (BMPs) to control non-point source pollution, comply with state and national water quality goals, and design monitoring programs for specific activities and practices that might affect in-stream beneficial uses (IDWR, 1993).

Buffer strips would protect the physical integrity of the water within the Bussel Creek drainage from temperature modification and sediment routing. The chemical integrity of the water would not be affected by activities because no toxic pollutants are expected to enter the stream system. No fueling of equipment would occur within RHCA buffers. The overall sediment level is expected to decrease with the completion of all activities including activities (FEIS p. 231-232). Also, a cumulative reduction in sediment production is expected for Bussel Creek when activities on National Forest System lands and other lands are considered (FEIS pp. 233, 239).

The biological integrity of the water in the Bussel Creek area will be protected and enhanced from the selected activities. Fifty-seven stream crossing removals and sediment reduction actions will enhance water quality. Riparian plantings will eventually decrease stream temperature and provide aquatic habitat improvement (FEIS p. 107).

### **C. State Water Quality Laws & Regulations**

The State of Idaho established the Idaho Water Quality Law (§39-3601 et. seq.) and Water Quality Standards (IDAPA, 58.01.02) designed to protect beneficial uses. The State's Antidegradation Policy (IDAPA 58.01.02.051) directs that existing uses and the level of water quality necessary to protect those uses must be maintained and protected. In order to meet the intent of the CWA, the Forest Service is responsible for implementing non-point source pollution control and the Idaho Water Quality Standards on National Forest System lands.

Designated beneficial uses for the Bussel Creek watershed are Cold Water Aquatic Life and Primary or Secondary Contact Recreation (IDAPA 58.01.02.110.11; IDHW, 1988). Bussel Creek is listed on Idaho's 2002 303(d) list of Water Quality Limited Water Bodies. The pollutants of concern are temperature and sediment. TMDLs were developed for Bear and Little Bear Creeks within the Bussel Creek watershed. The Bear and Little Bear TMDLs call for reducing sediment by 14 tons per year from NFS land. The temperature TMDL calls for increasing shade canopy over the stream channels by 20 to 8% in Bear and Little Bear Creeks.

The selected alternative will meet Idaho Water Quality Law, with the reasoning stated above for the Clean Water Act. Overall, the amount of sediment produced will be reduced by an estimated 7.1 tons/year from National Forest System lands in Bear Creek and Little Bear Creek when all selected activities are considered. Beneficial uses will be maintained through long-term sediment reduction, the application of best management practices, and design features for protection of soil and water discussed above (FEIS pp. 240-241).

Trees will not be harvested in riparian habitat conservation areas, so shade will be maintained along stream channels; and the selected riparian planting will move toward meeting the temperature TMDL (FEIS pp.33, 230, 232, 241).

Sediment production would be lowered by decommissioning and storing roads. Best management practices will be utilized during road recontouring and stream crossing rehabilitation. The short-term sediment generated during this work was included in the sediment analysis which shows a net decrease of sediment in the watershed. The short-term sediment generated during road recontouring and stream crossing rehabilitation is not expected to cause further beneficial use impairment because it is a short-term effect at each crossing ultimately resulting in a long-term reduction; the activity is essential to the promotion of public interest; it is a soil stabilization measure; and it is activity which results in overall enhancement or maintenance of beneficial uses (FEIS pp. 97, 101, 240-241).

Analysis indicates that the selected alternative will not increase water yield to an extent that it would accelerate channel erosion (FEIS pp. 236-237). Analysis also shows the combined and cumulative effects of the selected alternative will not degrade water quality with respect to sediment in these segments (FEIS p. 234).

### **D. The Endangered Species Act (16 USC 1531 Et Seq.)**

As required by the Endangered Species Act, biological assessments were prepared addressing the potential impact to threatened or endangered species utilizing the project area. The analysis concluded that this project would have no effect on water howellia or Spalding's catchfly. Additionally, the selected alternative may effect, but is not likely to adversely affect the Canada lynx and bull trout (FEIS Appendix C).

Through informal consultation, the USFWS concurred that the project is not likely to adversely affect the Canada lynx and bull trout (FEIS Appendix C). Upon review of the Bussel final EIS, the Biological Assessments, and Biological Evaluations for wildlife, plants, and fish, and the Letter of Concurrence from the USFWS, I find the decision complies with this Act.

### **E. National Historic Preservation Act, American Indian Religious Freedom Act and Native American Grave Protection Act**

Systematic inventory and reports are complete for this project area, and the Idaho Historic Preservation Office and Native American groups have been given the opportunity to comment (FEIS pp. 7, 56, 59; FEIS Appendix I; PF: PI-32, PI-57, PI-63, PI-83A). Cultural resource consultation with the Coeur d'Alene tribe regarding the Bussel 484 project was one of the topics of discussion at a recent meeting between the cultural resource staffs of the Coeur d'Alene Tribe, and the Idaho Panhandle National Forests on March 18, 2008. A map showing District project areas including the Bussel 484 Project Area was provided to the tribe's cultural resource staff for their comments on potential effects to areas of significance to the Coeur d'Alene Tribe.

The project area has been systematically surveyed for cultural resources (FEIS p. 56, 59) and all known and newly discovered sites will be protected with this decision. These surveys have identified a number of cultural or historic properties in the project area. No sites of cultural or religious significance to federally recognized affected American Indian tribes have been identified in the project area (FEIS p. 56). Any future discovery of cultural resources sites or caves will be inventoried and protected if found to be of cultural significance. A provision will be included in contracts to ensure protection of any such sites (ROD p. 13).

### **F. Clean Air Act**

Upon review of Chapter 3 in the final EIS, I find that the activities in my decision will be coordinated to meet the requirements of the State Implementation Plans, Smoke Management Plan, and Federal air quality requirements (FEIS p. 55).

### **G. Compliance with Other Laws, Regulations, and Policies**

#### **1. Executive Order 12898 – Environmental Justice**

I have considered the effects of this project on low income and minority populations and concluded that it is consistent with the intent of the Environmental Justice Act of 1994 (EO 12898). No impacts to minority or low-income populations were identified (FEIS p. 62).

#### **2. The Northern Region Overview and Scientific Findings for the Interior Columbia River Basin**

The Northern Region Overview focuses on priorities within northern Idaho and Montana for restoring ecosystem health and availability of recreation opportunities. The Overview concludes that there are multiple concerns in the Northwest Zone of the Regions and that "this sub-region holds the greatest opportunity for vegetation treatments and restoration with timber sales. From a social and economic standpoint, using timber harvest for ecological restoration would be a benefit to many communities that still have a strong economic dependency, more so than other zones in the Region." Timber management fits well with the forest types in northern Idaho and can be used to provide openings to restore larch, white pine, and ponderosa pine and reduce fire risk. The selected alternative is consistent with the Northern Region Overview and the Scientific Findings for the Interior Columbia River Basin by promoting long-lived, early-seral tree species like larch and white pine with the proposed timber harvest. At the same time it will benefit the local economy.

**VII. Contact Person**

For additional information concerning this decision or the Forest Service appeal process, contact Cornie Hudson (Project Leader) or Chuck Mark (District Ranger) at the St. Joe Ranger District, 222 S. 7<sup>th</sup> Street, Suite 1, St. Maries, Idaho 83861; (208) 245-2531.

**VIII. Appeal & Implementation Information**

This decision is subject to administrative review (appeal) pursuant to 36 CFR Part 215. Appeals, including attachments, must be filed within 45 days from the publication date of this notice in the *Coeur d’Alene Press*, the newspaper of record. Attachments received after the 45-day appeal period will not be considered. The publication date in the *Coeur d’Alene Press* is the exclusive means for calculating the time to file an appeal. Those wishing to appeal this decision should not rely upon dates or timeframe information provided by any other source. Individuals or organizations who submitted comments during the comment period may appeal this decision. Paper appeals must be submitted to:

USDA Forest Service, Northern Region ATTN: Appeal Deciding Officer P.O. Box 7669 Missoula, MT 59807	or	USDA Forest Service, Northern Region ATTN: Appeal Deciding Officer 200 East Broadway Missoula, MT 59802
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Office hours are 7:30 a.m. to 4:00 p.m., Monday through Friday, excluding federal holidays.

Electronic appeals must be submitted to: [appeals-northern-regional-office@fs.fed.us](mailto:appeals-northern-regional-office@fs.fed.us). In electronic appeals, the subject line should contain the name of the project being appealed. An automated response will confirm your electronic appeal has been received. Electronic appeals must be submitted in MS Word (.doc), plain text (.txt), or rich text format (RTF). In cases where no identifiable name is attached to an electronic message, a verification of identity will be required. A scanned signature is one way to provide verification.

It is the appellant's responsibility to provide sufficient project- or activity-specific evidence and rationale, focusing on the decision, to show why my decision should be reversed. The appeal must be filed with the Appeal Deciding Officer in writing. At a minimum, the appeal must meet the content requirements of 36 CFR 215, and include the following information:

- The appellant’s name and address, with a telephone number, if available;
- A signature, or other verification of authorship upon request (a scanned signature for electronic mail may be filed with the appeal);
- When multiple names are listed on an appeal, identification of the lead appellant and verification of the identity of the lead appellant upon request;
- The name of the project or activity for which the decision was made, the name and title of the Responsible Official, and the date of the decision;
- The regulation under which the appeal is being filed (in this case 36 CFR 215);
- Any specific change(s) in the decision that the appellant seeks and rationale for those changes;
- Any portion(s) of the decision with which the appellant disagrees, and explanation for the disagreement;
- Why the appellant believes the Responsible Official’s decision failed to consider comments; and
- How the appellant believes the decision specifically violates law, regulation, or policy.

If an appeal is received on this project there may be informal resolution meetings and/or conference calls between the Responsible Official and the appellant. These discussions would take place within 15 days after the closing date for filing an appeal. All such meetings are open to the public. If you are interested in

attending any informal resolution discussions, please contact the Responsible Official or monitor the following website for postings about current appeals in the Northern Region of the Forest Service:  
[http://www.fs.fed.us/r1/projects/appeal\\_index.shtml](http://www.fs.fed.us/r1/projects/appeal_index.shtml).

If no appeals are filed within the 45-day time period, implementation of the decision may occur on, but not before, five business days from the close of the appeal filing period. When appeals are filed, implementation may occur on, but not before, the 15<sup>th</sup> business day following the date of the last appeal disposition.

*for Susan Skalski*  
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RANOTTA K. MCNAIR  
Forest Supervisor  
Idaho Panhandle National Forests

*May 21, 2008*  
\_\_\_\_\_  
Date