United States
Department of
Agriculture

Forest Service

Intermountain
Region

April 2012

Mill Creek–Council Mountain Landscape Restoration Project

FINAL ENVIRONMENTAL IMPACT STATEMENT

Volume 2–Appendices

Payette National Forest

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Appendix 1—Unit Treatment Table

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The tables below lists the acres by unit number that will be treated and the acres that will be treated by each method by Alternative.

LEGEND – See Chapter 2 for a description of treatments

TREATMENT METHOD

TABLE ENTRY	TREATMENT
OPEN SERAL	Open seral stands
OPEN SERAL BURN ONLY	Open seral stands burn only
BIOMASS PCT	Stands older than 30 years that would be precommercial thinned with potential biomass removal
PCT	Precommercial thinning
RESERVE	Reserve stand
RESERVE BURN ONLY	Reserve burn only
RESERVE HARV/BURN	Reserve harvest and burn
RESERVE HELI/BURN	Reserve helicopter harvest and burn
RESTORATION	Restoration stand
REST. BURN ONLY	Restoration burn only
REST. HELI/BURN	Restoration helicopter harvest and burn
NO TREAT	No treatment

YARDING METHOD

T	Tractor
T/ORJ	Tractor/Off Road Jammer
C	Cable
S	Skyline
H	Helicopter
N/A	No Yarding

UNITS DISPLAYED AS 0 ACRES ARE LESS THAN 0.5 ACRES AND IN MOST CASES ARE ADJACENT TO A LARGER UNIT WITH A DIFFERENT TREATMENT AND/OR HARVEST METHOD

Table 1. Mature timber stands

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
1413	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	13
1421	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	5
1617	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	9
1618	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	23
1622	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	26
1707	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	5
1708	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	25
1926	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	3
2402	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	6
2445	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	5
2521	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	6
2537	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	11
2601	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	10
2603	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	15
2608	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	13
2611	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	21
2613	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	26
2616	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	14
2617	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	6
2919	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	6
2943	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	<0.5
3100	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	13
3116	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	10
3118	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	4
3125	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	9
3133	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	13

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
3142	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	24
3144	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	15
3148	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	8
3150	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	4
3158	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	12
3161	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	6
3170	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	4
3177	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	9
3206	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	7
3502	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	33
3514	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	11
3520	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	38
3523	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	10
4112	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	3
4119	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	6
4121	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	11
4140	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	11
4141	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	21
4178	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	13
4179	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	20
4181	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	8
4187	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	4
4201	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	11
4203	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	11
4208	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	32
4217	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	14
4218	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	10
4222	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	4

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
4235	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	4
4254	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	11
4255	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	5
4256	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	7
4257	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	84
4283	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	4
4324	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	9
4325	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	8
4509	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	6
4529	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	49
4705	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	46
4954	OPEN SERAL	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	OPEN SERAL BURN ONLY	N/A	4
1425	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	NO TREAT	N/A	<0.5
1702	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	NO TREAT	N/A	2
1922	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	NO TREAT	N/A	13
1924	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	NO TREAT	N/A	5
2932	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	NO TREAT	N/A	1
3501	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	NO TREAT	N/A	2
4276	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	NO TREAT	N/A	5
4410	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	NO TREAT	N/A	<0.5
4501	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	NO TREAT	N/A	5
4504	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	NO TREAT	N/A	27
1535	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	<0.5
1703	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	2
1929	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	1
2412	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	3
2413	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	<0.5
2444	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	<0.5

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
2530	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	4
2541	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	7
2605	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	1
2606	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	1
2614	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	1
2618	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	2
2934	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	2
3166	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	1
3521	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	<0.5
3522	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	9
4209	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	17
4239	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	6
4249	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	16
4250	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	15
4265	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	6
4268	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	3
4347	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	11
4402	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	<0.5
4955	RESERVE	RESERVE BURN ONLY	RESERVE BURN ONLY	RESERVE BURN ONLY	N/A	4
4315	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	NO TREAT	H	16
4505	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	NO TREAT	H	4
4506	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	NO TREAT	H	7
1422	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	6
1615	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	17
1616	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	7
2411	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	5
2530	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	2
4170	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	3

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
4209	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	9
4227	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	2
4239	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	47
4249	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	4
4250	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	12
4263	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	9
4278	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	17
4302	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	15
4471	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	8
4955	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	9
4957	RESERVE	RESERVE BURN ONLY	RESERVE HELI/BURN	RESERVE BURN ONLY	H	6
1425	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	NO TREAT	T	20
1524	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	NO TREAT	T	13
1702	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	NO TREAT	T	13
1922	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	NO TREAT	S	21
1922	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	NO TREAT	T/ORJ	21
1924	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	NO TREAT	T	5
2932	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	NO TREAT	T	5
3501	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	NO TREAT	S	6
3501	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	NO TREAT	T	9
4276	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	NO TREAT	S	10
4410	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	NO TREAT	T	29
4421	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	NO TREAT	T	8
4501	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	NO TREAT	T	17
4504	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	NO TREAT	T	67
1505	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	11
1508	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	12
1535	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	4

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
1554	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	11
1703	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	11
1928	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	5
1929	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	ORJ	3
2412	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	3
2413	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	17
2444	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	6
2541	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	C	9
2541	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	S	<0.5
2541	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	20
2605	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	S	11
2606	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	S	20
2614	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	16
2618	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	S	2
2618	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T/ORJ	4
2934	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	S	5
2934	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	6
3164	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	15
3166	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	22
3202	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	8
3521	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	10
3522	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	21
3526	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	S	5
4265	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T/ORJ	12
4268	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	10
4347	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T/ORJ	9
4402	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	9
4411	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T	7

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
4510	RESERVE	RESERVE HARV/BURN	RESERVE HARV/BURN	RESERVE HARV/BURN	T/ORJ	4
1424	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	<0.5
1509	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	1
1510	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	1
1523	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	1
1528	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	<0.5
1614	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	8
1824	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	2
1828	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	<0.5
1845	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	2
2228	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	<0.5
2346	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	1
2349	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	1
2615	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	1
2619	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	1
2933	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	1
3167	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	<0.5
4316	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	1
4317	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	7
4320	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	<0.5
4336	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	22
4408	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	2
4413	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	2
4519	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	1
4541	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	27
4542	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	5
4962	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	2
4964	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	NO TREAT	N/A	1

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
1417	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	11
1534	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
1536	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
1537	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
1555	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
1717	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
1823	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
1825	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
1843	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
1901	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
1909	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
1927	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
2101	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
2103	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2104	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2105	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2106	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	5
2107	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
2112	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	9
2128	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
2135	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	5
2136	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	8
2138	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
2139	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
2147	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2148	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
2204	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	6
2206	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	3

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
2211	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	4
2212	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	6
2213	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
2214	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
2215	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	10
2219	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2220	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2226	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2231	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2301	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2302	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
2303	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	8
2305	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2306	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
2308	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	13
2309	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
2310	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	6
2312	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
2319	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	3
2320	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2323	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	5
2326	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
2330	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	3
2333	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
2338	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
2343	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2348	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	7
2352	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
2353	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2607	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2626	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
2631	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
2706	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2707	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
2708	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	4
2709	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
2910	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
2915	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
2916	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	11
2925	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
2927	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	3
2928	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
2929	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2930	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
2931	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	3
2936	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
2939	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	5
2942	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
3102	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
3105	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
3114	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
3343	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	3
3344	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
3503	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	10
3515	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
4103	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
4113	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
4126	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	8
4127	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	3
4133	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	3
4134	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
4135	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
4136	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
4142	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
4145	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
4153	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
4159	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
4164	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	14
4166	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
4180	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	3
4185	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	4
4191	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	3
4200	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
4204	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
4206	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
4210	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
4213	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	4
4215	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
4237	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
4240	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
4284	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	3
4309	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
4327	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
4337	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	5

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
4338	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
4407	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	3
4414	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
4424	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	4
4425	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	17
4430	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	6
4466	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	4
4470	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	6
4472	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
4473	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
4508	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	7
4518	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	2
4549	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	5
4549	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	37
4550	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	15
4552	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	3
4552	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	32
4952	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	<0.5
4953	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	3
4960	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	8
4963	RESTORATION	REST. BURN ONLY	REST. BURN ONLY	REST. BURN ONLY	N/A	1
3160	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	NO TREAT	H	12
4317	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	NO TREAT	H	16
4345	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	NO TREAT	H	19
4542	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	NO TREAT	H	7
4962	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	NO TREAT	H	4
4964	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	NO TREAT	H	11
1409	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	11

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
1410	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	15
1638	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	7
2108	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	8
2109	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	12
2122	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	17
2127	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	6
2226	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	10
2311	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	6
2312	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	6
2320	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	6
2321	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	2
2338	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	6
2343	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	29
2345	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	11
2347	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	27
2348	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	2
2350	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	14
2351	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	4
2607	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	11
2630	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	13
2631	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	14
2707	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	16
2905	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	5
2907	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	21
2908	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	7
2910	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	8
2915	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	7
2927	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	1

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
2928	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	5
2929	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	10
2935	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	3
2936	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	30
2938	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	15
2939	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	19
2940	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	5
2941	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	18
2942	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	4
3101	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	5
3103	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	6
3105	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	12
3159	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	23
3162	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	6
3515	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	22
4117	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	6
4122	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	16
4133	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	30
4134	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	28
4135	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	17
4136	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	39
4137	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	17
4138	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	14
4159	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	68
4162	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	22
4169	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	5
4174	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	10
4180	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	5

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
4183	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	8
4185	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	30
4191	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	6
4204	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	11
4205	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	6
4206	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	36
4212	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	7
4213	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	56
4223	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	23
4231	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	9
4237	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	15
4238	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	7
4240	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	29
4241	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	8
4242	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	26
4284	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	16
4340	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	9
4416	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	3
4417	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	3
4422	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	6
4424	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	12
4425	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	42
4430	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	11
4466	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	9
4469	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	8
4470	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	31
4472	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	12
4473	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	9

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
4475	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	7
4549	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	12
4952	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	22
4953	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	24
4960	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	36
4961	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	14
4963	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	6
4965	RESTORATION	REST. BURN ONLY	REST. HELI/BURN	REST. BURN ONLY	H	4
1416	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	ORJ	8
1416	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	S	5
1416	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	4
1424	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	S	4
1509	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	16
1510	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	14
1511	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	5
1519	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T/ORJ	21
1523	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	3
1528	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	S	4
1528	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	5
1529	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	8
1531	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	S	4
1531	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	9
1533	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	S	49
1533	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	4
1543	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	11
1546	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	7
1614	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	S	21
1614	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T/ORJ	38

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
1824	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	34
1828	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	27
1845	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T/ORJ	64
1923	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	10
1925	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	16
2102	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	32
2228	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	13
2346	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	46
2349	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	42
2615	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	S	9
2615	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T/ORJ	4
2619	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	11
2620	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	7
2933	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	12
3167	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	36
4105	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	17
4311	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T/ORJ	14
4313	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	50
4314	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	ORJ	21
4316	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T/ORJ	18
4320	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	35
4323	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T/ORJ	16
4343	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	2
4408	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	47
4413	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	29
4415	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T/ORJ	7
4512	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	2
4519	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T	6

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
4526	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T/ORJ	7
4528	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T/ORJ	4
4959	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	NO TREAT	T/ORJ	5
1417	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	20
1417	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	29
1419	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	13
1420	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	7
1423	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	6
1423	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
1499	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	17
1534	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	6
1536	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	12
1537	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	4
1538	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	27
1541	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	27
1545	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	2
1551	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	5
1553	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	7
1553	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	20
1555	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	34
1605	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
1605	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	11
1610	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	34
1621	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
1625	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	10
1626	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	4
1627	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
1634	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	7

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
1635	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	4
1637	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	14
1637	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	2
1704	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	34
1706	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	15
1717	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	33
1812	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	12
1821	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
1823	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	36
1825	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	5
1825	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	21
1843	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	31
1901	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	11
1903	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	ORJ	7
1905	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	24
1906	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
1909	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	35
1921	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
1927	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
2101	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	25
2103	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	10
2104	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	35
2105	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	28
2106	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	63
2107	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	23
2110	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
2111	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	5
2112	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	20

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
2112	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	1
2113	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	29
2114	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	C	8
2115	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	4
2117	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	5
2118	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	15
2120	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
2121	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	2
2123	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	4
2124	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	12
2125	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
2126	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
2128	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	C	11
2130	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	13
2135	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	6
2136	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	11
2136	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	16
2137	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	3
2138	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	18
2139	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	14
2140	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	9
2147	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	28
2148	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	11
2148	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	3
2149	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	17
2150	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	10
2154	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	C	4
2156	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	6

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
2201	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	17
2202	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	12
2203	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	29
2204	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	61
2205	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	20
2206	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	29
2207	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	3
2208	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	69
2209	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
2210	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	31
2211	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	ORJ	3
2211	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	24
2211	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	13
2212	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	45
2212	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	11
2213	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	10
2214	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	36
2215	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	17
2216	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	20
2217	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	5
2218	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
2219	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	9
2220	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	ORJ	2
2220	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	8
2221	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	2
2221	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	15
2222	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	8
2231	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	35

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
2301	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	36
2302	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	33
2303	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	15
2305	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	21
2306	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	26
2307	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	59
2308	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	34
2309	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
2310	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
2319	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	4
2322	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	5
2323	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	22
2324	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	7
2325	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	21
2326	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	7
2327	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	9
2327	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
2328	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	13
2328	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	10
2329	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	8
2329	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
2330	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	22
2330	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	15
2331	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	10
2333	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	7
2334	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	7
2334	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	6
2335	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	1

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
2336	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
2339	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	5
2348	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	20
2352	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	8
2353	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	10
2353	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	1
2354	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	C	6
2354	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	2
2447	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	9
2501	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	4
2511	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	7
2540	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	9
2612	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	15
2612	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	12
2623	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	6
2624	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
2626	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	C	3
2626	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	7
2706	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
2708	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	32
2709	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	10
2909	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	9
2916	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	18
2920	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
2924	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	8
2925	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
2927	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	10
2930	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	7

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
2931	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	C	11
2937	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	2
2939	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	C	10
2942	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	2
3102	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	22
3102	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	3
3114	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
3120	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	10
3131	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	9
3132	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	17
3134	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
3155	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	10
3204	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	4
3343	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	16
3344	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	2
3503	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	46
3508	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	12
3509	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	12
3513	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	37
3519	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	18
3519	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	11
3524	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
3525	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	11
4101	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	46
4103	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	28
4109	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	3
4113	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	12
4113	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	15

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
4114	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	11
4115	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	18
4116	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	9
4126	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	14
4126	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	20
4127	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	4
4139	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
4142	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	68
4143	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	5
4143	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	14
4145	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	16
4152	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
4153	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	7
4155	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	55
4164	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	ORJ	3
4164	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	48
4166	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	8
4167	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
4171	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	32
4172	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	ORJ	18
4174	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	13
4200	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	32
4202	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	5
4210	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	22
4214	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	31
4215	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	7
4221	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	19
4228	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	3

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
4229	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	10
4230	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
4301	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	46
4309	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	7
4309	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	9
4327	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	18
4337	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	27
4338	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	ORJ	8
4339	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	20
4401	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	28
4404	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	12
4405	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
4407	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	8
4409	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	11
4412	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	24
4414	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
4507	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	2
4507	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
4508	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	12
4508	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	6
4510	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	18
4518	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	26
4521	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	5
4527	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T/ORJ	7
4956	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	T	6
4958	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	8
4959	RESTORATION	REST. HARV/BURN	REST. HARV/BURN	REST. HARV/BURN	S	35

Table 2. Traditional precommercial thinning and precommercial thinning with potential biomass removal

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
1	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	26
1	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T/ORJ	22
2	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	11
2	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T/ORJ	4
3	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	19
4	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	3
5	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	8
6	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	15
7	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	7
8	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	10
9	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	6
10	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	10
11	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	11
12	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	4
13	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	7
14	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	9
15	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	26
16	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	28
17	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	3
18	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	5
19	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	14
20	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	10
21	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	42
22	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	13
23	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	7
24	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	12
25	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	7

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
28	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	20
29	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	21
31	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	11
32	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	5
35	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	38
36	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	3
37	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	5
38	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	11
39	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	14
40	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	17
41	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	20
42	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	24
43	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	4
44	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	26
45	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	8
46	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	34
47	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	41
49	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	43
50	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	3
52	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	9
53	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	16
54	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	6
55	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	12
56	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	51
57	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	6
58	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	5
59	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	11
60	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	7

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
61	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	12
62	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	13
63	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	60
64	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	27
65	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	5
66	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	13
67	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	4
68	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	20
69	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	3
70	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	8
71	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	3
72	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	4
73	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	13
74	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	21
75	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	36
76	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	3
77	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	15
78	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	5
79	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	31
79	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	<0.5
80	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	2
81	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	6
82	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	70
83	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	46
84	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	7
85	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	22
86	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	19
87	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	10

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
88	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	14
89	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	6
90	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	12
91	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	14
92	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	7
93	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	14
94	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	15
95	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	5
96	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	6
97	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	27
98	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	53
99	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	22
100	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	22
101	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	28
102	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	38
103	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	33
104	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	7
105	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	31
106	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	6
107	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	9
108	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	14
109	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	34
110	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	6
111	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	10
112	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	17
113	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	21
114	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	78
115	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	1

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
116	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	9
117	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	11
118	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	6
119	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T	6
10355	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T/ORJ	5
10897	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T/ORJ	4
11061	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	T/ORJ	18
13359	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	6
13369	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	8
13444	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	4
13489	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	3
13836	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	17
13838	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	13
13965	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	9
13968	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	11
13977	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	10
13991	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	<0.5
13992	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	23
14036	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	16
14045	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	5
14050	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	6
14087	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	4
14100	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	10
14102	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	9
14109	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	2
14174	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	16
14209	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	11
14399	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	22

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
14417	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	15
14422	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	9
14425	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	17
14442	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	10
14560	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	14
14563	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	22
14575	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	5
14607	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	17
14653	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	4
14655	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	6
14661	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	4
14712	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	NA	13
14735	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	NA	57
14745	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	14
14751	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	NA	24
14861	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	6
14897	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	6
15183	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	24
15221	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	NA	2
15270	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	2
15272	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	30
15859	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	5
15861	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	3
15862	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	5
15864	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	5
15867	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	6
15868	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	3
15869	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	22

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
15871	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	4
15874	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	6
15875	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	8
15876	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	18
15877	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	1
15878	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	2
15880	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	17
15881	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	7
16076	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	1
16119	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	2
16178	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	5
16406	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	2
16408	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	4
16480	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	1
16481	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	<0.5
16486	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	2
16522	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	2
16523	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	3
16529	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	2
16531	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	<0.5
16554	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	<0.5
16567	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	<0.5
16568	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	1
16577	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	2
16613	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	4
16636	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	1
16747	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	<0.5
16760	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	1

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
16850	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	3
16852	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	5
16864	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	2
16879	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	1
16910	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	3
16913	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	1
16952	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	NA	4
16963	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	NA	2
17048	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	2
17183	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	<0.5
17208	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	NA	1
17232	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	1
17233	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	1
17234	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	1
17593	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	2
17595	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	2
17596	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	1
17597	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	4
17598	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	1
17600	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	2
17601	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	1
17603	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	1
17604	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	1
17745	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	1
17841	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	5
18120	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	1
18124	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	2
18216	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	<0.5

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
18379	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	3
18380	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	3
18392	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	<0.5
18417	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	1
18679	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	<0.5
18984	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	1
18987	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	1
18992	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	ORJ	<0.5
18993	BIOMASS	BIOMASS PCT	BIOMASS PCT	BIOMASS PCT	S	<0.5
3203	PCT	PCT	PCT	PCT		3
3333	PCT	PCT	PCT	PCT		11
10344	PCT	PCT	PCT	PCT		16
10345	PCT	PCT	PCT	PCT		8
10352	PCT	PCT	PCT	PCT		7
10356	PCT	PCT	PCT	PCT		3
10357	PCT	PCT	PCT	PCT		6
10358	PCT	PCT	PCT	PCT		11
10359	PCT	PCT	PCT	PCT		40
10360	PCT	PCT	PCT	PCT		6
10361	PCT	PCT	PCT	PCT		5
10362	PCT	PCT	PCT	PCT		6
10363	PCT	PCT	PCT	PCT		20
10364	PCT	PCT	PCT	PCT		19
10367	PCT	PCT	PCT	PCT		6
10368	PCT	PCT	PCT	PCT		4
10369	PCT	PCT	PCT	PCT		17
10370	PCT	PCT	PCT	PCT		3
10371	PCT	PCT	PCT	PCT		17

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
10393	PCT	PCT	PCT	PCT		14
10405	PCT	PCT	PCT	PCT		7
10407	PCT	PCT	PCT	PCT		25
10453	PCT	PCT	PCT	PCT		8
10454	PCT	PCT	PCT	PCT		9
10458	PCT	PCT	PCT	PCT		4
10460	PCT	PCT	PCT	PCT		14
10461	PCT	PCT	PCT	PCT		28
10464	PCT	PCT	PCT	PCT		17
10766	PCT	PCT	PCT	PCT		21
10767	PCT	PCT	PCT	PCT		16
10769	PCT	PCT	PCT	PCT		7
10770	PCT	PCT	PCT	PCT		8
10771	PCT	PCT	PCT	PCT		7
10772	PCT	PCT	PCT	PCT		5
10773	PCT	PCT	PCT	PCT		4
10774	PCT	PCT	PCT	PCT		31
10778	PCT	PCT	PCT	PCT		1
10785	PCT	PCT	PCT	PCT		8
10788	PCT	PCT	PCT	PCT		11
10796	PCT	PCT	PCT	PCT		12
10798	PCT	PCT	PCT	PCT		8
10801	PCT	PCT	PCT	PCT		2
10805	PCT	PCT	PCT	PCT		10
10806	PCT	PCT	PCT	PCT		10
10807	PCT	PCT	PCT	PCT		3
10812	PCT	PCT	PCT	PCT		3
10813	PCT	PCT	PCT	PCT		24

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
10814	PCT	PCT	PCT	PCT		3
10815	PCT	PCT	PCT	PCT		37
10816	PCT	PCT	PCT	PCT		29
10817	PCT	PCT	PCT	PCT		3
10818	PCT	PCT	PCT	PCT		36
10819	PCT	PCT	PCT	PCT		6
10820	PCT	PCT	PCT	PCT		19
10821	PCT	PCT	PCT	PCT		5
10822	PCT	PCT	PCT	PCT		44
10823	PCT	PCT	PCT	PCT		44
10824	PCT	PCT	PCT	PCT		7
10828	PCT	PCT	PCT	PCT		48
10829	PCT	PCT	PCT	PCT		51
10832	PCT	PCT	PCT	PCT		5
10834	PCT	PCT	PCT	PCT		21
10835	PCT	PCT	PCT	PCT		14
10836	PCT	PCT	PCT	PCT		9
10838	PCT	PCT	PCT	PCT		13
10839	PCT	PCT	PCT	PCT		9
10841	PCT	PCT	PCT	PCT		9
10846	PCT	PCT	PCT	PCT		12
10848	PCT	PCT	PCT	PCT		4
10859	PCT	PCT	PCT	PCT		28
10866	PCT	PCT	PCT	PCT		33
10892	PCT	PCT	PCT	PCT		13
10898	PCT	PCT	PCT	PCT		3
10899	PCT	PCT	PCT	PCT		7
10905	PCT	PCT	PCT	PCT		7

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
10906	PCT	PCT	PCT	PCT		23
10909	PCT	PCT	PCT	PCT		7
10928	PCT	PCT	PCT	PCT		1
10929	PCT	PCT	PCT	PCT		6
10930	PCT	PCT	PCT	PCT		<0.5
10931	PCT	PCT	PCT	PCT		10
10932	PCT	PCT	PCT	PCT		17
10933	PCT	PCT	PCT	PCT		14
10934	PCT	PCT	PCT	PCT		22
10935	PCT	PCT	PCT	PCT		10
10936	PCT	PCT	PCT	PCT		10
10937	PCT	PCT	PCT	PCT		11
10938	PCT	PCT	PCT	PCT		2
10939	PCT	PCT	PCT	PCT		37
11171	PCT	PCT	PCT	PCT		17
11211	PCT	PCT	PCT	PCT		24
11295	PCT	PCT	PCT	PCT		7
11627	PCT	PCT	PCT	PCT		10
11639	PCT	PCT	PCT	PCT		19
11710	PCT	PCT	PCT	PCT		11
11747	PCT	PCT	PCT	PCT		49
11774	PCT	PCT	PCT	PCT		8
11780	PCT	PCT	PCT	PCT		18
11787	PCT	PCT	PCT	PCT		6
12067	PCT	PCT	PCT	PCT		21
12288	PCT	PCT	PCT	PCT		3
12370	PCT	PCT	PCT	PCT		18
12372	PCT	PCT	PCT	PCT		10

UNIT	TREATMENT ALT 1	TREATMENT ALT 2 AND 5	TREATMENT ALT 3	TREATMENT ALT 4	HARVEST METHOD	Acres
12386	PCT	PCT	PCT	PCT		6
12527	PCT	PCT	PCT	PCT		11

Appendix 2—Road Treatment Table

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The following table displays road management actions by alternative within the Project Area.

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
50149	OPEN	OPEN	OPEN	OPEN	OPEN	2.25
50150	SEASONAL	SEASONAL	SEASONAL	SEASONAL	SEASONAL	2.31
50165	OPEN	OPEN	OPEN	OPEN	OPEN	8.72
50165	SEASONAL	SEASONAL	SEASONAL	SEASONAL	SEASONAL	2.51
50167	OPEN	OPEN	OPEN	OPEN	OPEN	7.39
50169	OPEN	OPEN	OPEN	OPEN	OPEN	11.61
50172	OPEN	OPEN	OPEN	OPEN	OPEN	13.53
50173	OPEN	OPEN	OPEN	OPEN	OPEN	3.37
50176	OPEN	OPEN	OPEN	OPEN	OPEN	2.47
50177	OPEN	OPEN	OPEN	SEASONAL	OPEN	1.29
50181	OPEN	OPEN	OPEN	OPEN	OPEN	2.28
50182	SEASONAL	SEASONAL	SEASONAL	SEASONAL	OPEN	1.34
50182	SEASONAL	SEASONAL	SEASONAL	SEASONAL	SEASONAL	1.55
50183	OPEN	OPEN	OPEN	OPEN	OPEN	1.79
50185	OPEN	OPEN	OPEN	OPEN	OPEN	0.31
50198	CLOSED	CLOSED	CLOSED	CLOSED	DECOM	0.14
50198	CLOSED	CLOSED	CLOSED	CLOSED	LONG-TERM CLOSURE	2.71
50198	CLOSED	LONG-TERM CLOSURE	DECOM	LONG-TERM CLOSURE	DECOM	0.60
50198	OPEN	OPEN	OPEN	OPEN	OPEN	0.19
50199	OPEN	OPEN	OPEN	OPEN	OPEN	11.43
50200	OPEN	OPEN	OPEN	OPEN	OPEN	7.94
50204	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	2.41
50232	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.03
50234	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.53
50234	OPEN	OPEN	OPEN	OPEN	OPEN	0.23
50249	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.87

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
50249	OPEN	OPEN	OPEN	OPEN	OPEN	0.50
50252	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.64
50252	OPEN	OPEN	OPEN	SEASONAL	OPEN	1.53
50285	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	2.14
50285	OPEN	OPEN	OPEN	OPEN	OPEN	0.36
50285	OPEN	OPEN	OPEN	SEASONAL	OPEN	1.22
50348	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	2.28
50348	OPEN	OPEN	OPEN	OPEN	OPEN	0.22
50349	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.45
50350	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.37
50352	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.21
50353	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.46
50354	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.28
50447	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.71
50447	OPEN	OPEN	OPEN	SEASONAL	OPEN	3.06
50448	OPEN	OPEN	OPEN	SEASONAL	OPEN	0.55
50464	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.10
50474	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.02
50474	OPEN	OPEN	OPEN	SEASONAL	OPEN	0.09
50476	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.67
50482	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.49
50482	SEASONAL	SEASONAL	SEASONAL	SEASONAL	SEASONAL	0.50
50486	OPEN	OPEN	OPEN	OPEN	DECOM	1.46
50486	OPEN	OPEN	OPEN	OPEN	OPEN	0.64
50486	OPEN	OPEN	OPEN	OPEN	SEASONAL	1.00
50487	OPEN	OPEN	OPEN	OPEN	DECOM	1.74
50487	OPEN	OPEN	OPEN	OPEN	OPEN	1.77

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
50524	SEASONAL	SEASONAL	SEASONAL	SEASONAL	SEASONAL	3.17
50587	OPEN	OPEN	OPEN	OPEN	OPEN	1.37
50588	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.63
50622	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	2.14
50623	SEASONAL	SEASONAL	SEASONAL	SEASONAL	SEASONAL	3.92
50626	OPEN	OPEN	OPEN	OPEN	OPEN	0.24
50699	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.21
50700	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.68
50900	CLOSED	LONG-TERM CLOSURE	LONG-TERM CLOSURE	LONG-TERM CLOSURE	DECOM	1.70
50901	CLOSED	IMP-CLOSE	IMP-CLOSE	IMP-CLOSE	LONG-TERM CLOSURE	2.24
50901	N/A	TEMP	NEW—CLOSED	NEW—CLOSED	NEW—CLOSED	0.18
50901	OPEN	OPEN	OPEN	OPEN	OPEN	0.02
50902	CLOSED	LONG-TERM CLOSURE	LONG-TERM CLOSURE	LONG-TERM CLOSURE	DECOM	0.41
50902	CLOSED	LONG-TERM CLOSURE	LONG-TERM CLOSURE	LONG-TERM CLOSURE	LONG-TERM CLOSURE	3.28
50902	CLOSED	LONG-TERM CLOSURE	LONG-TERM CLOSURE	LONG-TERM CLOSURE	OPEN	0.92
50903	CLOSED	CLOSED	CLOSED	CLOSED	LONG-TERM CLOSURE	1.49
50904	CLOSED	CLOSED	CLOSED	CLOSED	DECOM	0.06
50904	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	0.87
50906	OPEN	OPEN	OPEN	OPEN	DECOM	0.38
50906	OPEN	OPEN	OPEN	OPEN	OPEN	0.32
50907	CLOSED	CLOSED	CLOSED	CLOSED	LONG-TERM CLOSURE	0.52
50909	CLOSED	LONG-TERM CLOSURE	LONG-TERM CLOSURE	LONG-TERM CLOSURE	DECOM	1.12
50909	CLOSED	LONG-TERM CLOSURE	LONG-TERM CLOSURE	LONG-TERM CLOSURE	LONG-TERM CLOSURE	0.33
50910	CLOSED	CLOSED	CLOSED	CLOSED	LONG-TERM CLOSURE	0.72
50911	CLOSED	CLOSED	CLOSED	CLOSED	DECOM	0.69
50911	CLOSED	CLOSED	CLOSED	CLOSED	LONG-TERM CLOSURE	1.79
50911	N/A	N/A	N/A	N/A	NEW—CLOSED	0.15

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
50912	CLOSED	CLOSED	CLOSED	CLOSED	LONG-TERM CLOSURE	0.78
50913	CLOSED	CLOSED	CLOSED	CLOSED	DECOM	1.12
50914	CLOSED	CLOSED	CLOSED	CLOSED	LONG-TERM CLOSURE	1.42
50915	CLOSED	IMP-CLOSE	IMP-CLOSE	IMP-CLOSE	IMP-CLOSE	1.20
50915	SEASONAL	SEASONAL	SEASONAL	SEASONAL	SEASONAL	0.52
50916	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.90
50996	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.98
50997	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.22
51321	OPEN	OPEN	OPEN	OPEN	OPEN	0.21
51349	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.34
51351	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.56
51352	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.17
51353	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.36
51353	N/A	TEMP	NEW—CLOSED	N/A	NEW—CLOSED	0.87
51356	CLOSED	LONG-TERM CLOSURE	LONG-TERM CLOSURE	LONG-TERM CLOSURE	LONG-TERM CLOSURE	1.54
51358	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	1.71
51359	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.84
51360	CLOSED	CLOSED	CLOSED	CLOSED	LONG-TERM CLOSURE	1.52
51360	SEASONAL	SEASONAL	SEASONAL	SEASONAL	OPEN	0.01
51363	CLOSED	CLOSED	CLOSED	CLOSED	LONG-TERM CLOSURE	0.56
51371	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	3.31
51372	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.23
51373	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.29
51374	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.85
51375	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.57
51376	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.08
51378	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.26

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
51379	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.41
51380	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.76
51381	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.89
51382	OPEN	OPEN	OPEN	OPEN	OPEN	1.60
51383	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.64
51383	OPEN	OPEN	OPEN	OPEN	OPEN	0.21
51384	OPEN	OPEN	OPEN	SEASONAL	OPEN	1.28
51385	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.85
51385	OPEN	OPEN	OPEN	OPEN	OPEN	0.63
51414	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.31
51493	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.22
51494	SEASONAL	SEASONAL	SEASONAL	SEASONAL	SEASONAL	1.31
51495	OPEN	OPEN	OPEN	OPEN	OPEN	0.38
51531	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.05
51531	OPEN	OPEN	OPEN	OPEN	OPEN	0.01
51532	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.07
51533	OPEN	OPEN	OPEN	OPEN	OPEN	0.10
51535	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	2.23
51544	CLOSED	CLOSED	CLOSED	CLOSED	DECOM	0.67
51544	SEASONAL	SEASONAL	SEASONAL	SEASONAL	SEASONAL	0.50
51545	CLOSED	CLOSED	CLOSED	CLOSED	DECOM	0.39
51546	CLOSED	CLOSED	CLOSED	CLOSED	DECOM	0.14
51550	CLOSED	CLOSED	CLOSED	CLOSED	DECOM	0.80
51588	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	2.46
51598	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.27
51599	CLOSED	LONG-TERM CLOSURE	LONG-TERM CLOSURE	LONG-TERM CLOSURE	LONG-TERM CLOSURE	0.79
51602	OPEN	OPEN	OPEN	SEASONAL	OPEN	0.58

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
51603	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.41
51603	N/A	TEMP	NEW—CLOSED	NEW—CLOSED	NEW—CLOSED	0.21
51604	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.64
51605	OPEN	OPEN	OPEN	OPEN	OPEN	0.46
51606	OPEN	OPEN	LONG-TERM CLOSURE	SEASONAL	LONG-TERM CLOSURE	0.46
51624	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.07
51672	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.17
51672	N/A	TEMP	NEW—CLOSED	N/A	NEW—CLOSED	0.39
51672	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.00
51673	N/A	TEMP	NEW—CLOSED	N/A	NEW—CLOSED	0.68
51675	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.24
51677	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.16
51678	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.47
51679	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.40
51680	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.21
51681	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.34
51682	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.20
51689	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	3.54
51690	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.95
51691	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.10
51691	N/A	TEMP	NEW—CLOSED	N/A	NEW—CLOSED	0.22
51692	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.61
51693	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.36
51696	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	4.46
51697	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.83
51700	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.05
51701	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.24

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
51702	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.21
51817	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.06
51835	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.18
51836	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.37
51837	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.93
51838	CLOSED	IMP-CLOSE	IMP-CLOSE	IMP-CLOSE	IMP-CLOSE	0.64
51839	CLOSED	IMP-CLOSE	IMP-CLOSE	IMP-CLOSE	IMP-CLOSE	0.49
51840	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.76
51841	CLOSED	IMP-CLOSE	IMP-CLOSE	IMP-CLOSE	IMP-CLOSE	0.69
51842	CLOSED	CLOSED	CLOSED	CLOSED	DECOM	0.13
51843	CLOSED	CLOSED	CLOSED	CLOSED	DECOM	2.26
51844	CLOSED	CLOSED	CLOSED	CLOSED	DECOM	0.16
51845	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.48
51845	OPEN	OPEN	OPEN	OPEN	OPEN	0.42
51846	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	2.93
51847	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.04
51847	N/A	TEMP	NEW—CLOSED	NEW—CLOSED	NEW—CLOSED	0.10
51848	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.73
51849	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.25
51849	OPEN	OPEN	OPEN	OPEN	OPEN	0.22
51850	CLOSED	CLOSED	CLOSED	CLOSED	LONG-TERM CLOSURE	1.09
51851	CLOSED	IMP-CLOSE	IMP-CLOSE	IMP-CLOSE	IMP-CLOSE	1.94
51852	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	1.09
51852	SEASONAL	SEASONAL	SEASONAL	SEASONAL	SEASONAL	0.09
51853	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.64
51853	SEASONAL	SEASONAL	SEASONAL	SEASONAL	SEASONAL	1.03
51854	CLOSED	CLOSED	CLOSED	CLOSED	LONG-TERM CLOSURE	1.50

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
51855	CLOSED	CLOSED	CLOSED	CLOSED	DECOM	0.68
51855	CLOSED	CLOSED	CLOSED	CLOSED	LONG-TERM CLOSURE	0.16
51856	CLOSED	DISPERSED REC	DISPERSED REC	DISPERSED REC	DISPERSED REC	0.14
51856	CLOSED	OPEN	OPEN	OPEN	OPEN	0.16
51858	N/A	TEMP	NEW—CLOSED	N/A	NEW—CLOSED	0.97
51859	N/A	TEMP	NEW—CLOSED	N/A	NEW—CLOSED	0.19
51860	N/A	TEMP	NEW—CLOSED	N/A	NEW—CLOSED	0.49
51861	N/A	TEMP	NEW—CLOSED	NEW—CLOSED	NEW—CLOSED	0.36
51862	N/A	TEMP	NEW—CLOSED	NEW—CLOSED	NEW—CLOSED	0.42
51863	N/A	TEMP	TEMP	TEMP	TEMP	0.31
51864	N/A	TEMP	TEMP	TEMP	TEMP	0.54
51865	N/A	TEMP	TEMP	TEMP	TEMP	0.13
58006	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.08
501493000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.35
501501010	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.74
501651500	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.14
501651500	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.09
501651600	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.07
501651700	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.10
501651700	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.09
501651800	UNAUTHORIZED	DISPERSED REC	DISPERSED REC	DISPERSED REC	DISPERSED REC	0.04
501651900	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.15
501652000	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	1.08
501652000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.06
501652000	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.51
501652000	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.10
501652000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.23

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
501652010	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.03
501652020	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.02
501652030	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.02
501652040	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.06
501652500	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.08
501652700	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.61
501652800	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.25
501652810	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.69
501652900	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.04
501653000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.14
501654000	UNAUTHORIZED	UNAUTHORIZED	DECOM	DECOM	DECOM	1.48
501654000	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.21
501654001	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.02
501654100	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	DECOM	0.22
501654200	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	DECOM	0.73
501655000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.77
501671000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.75
501671500	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.23
501672000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.11
501675000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.52
501690700	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.20
501690900	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.19
501691000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.39
501692000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.12
501692901	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	DECOM	0.08
501693000	UNAUTHORIZED	DISPERSED REC	DISPERSED REC	DISPERSED REC	DISPERSED REC	0.04
501693000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	DECOM	0.24

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
501693010	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	DECOM	0.26
501693010	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.17
501701000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.47
501701900	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.06
501702000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.26
501702010	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.29
501719500	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.63
501719510	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.02
501719550	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.16
501720310	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.25
501720500	UNAUTHORIZED	DECOM-MOD	DECOM-MOD	DECOM-MOD	DECOM-MOD	0.30
501720600	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.05
501720700	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.03
501720800	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.05
501720900	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.08
501721000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.07
501721100	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.06
501721200	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.12
501728000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.23
501729000	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.36
501731000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.16
501732000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.82
501733000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.99
501734000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.54
501762000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.30
501764000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.73
501765000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.70

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
501767000	UNAUTHORIZED	UNAUTHORIZED	DECOM	DECOM	DECOM	0.48
501768000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.22
501768010	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.06
501770210	UNAUTHORIZED	DECOM-MOD	DECOM-MOD	DECOM-MOD	DECOM-MOD	0.17
501770220	UNAUTHORIZED	DECOM-MOD	DECOM-MOD	DECOM-MOD	DECOM-MOD	0.84
501771010	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.34
501772000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.23
501773000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.16
501774000	UNAUTHORIZED	DECOM-MOD	DECOM-MOD	DECOM-MOD	DECOM-MOD	0.18
501810200	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.18
501810300	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	DECOM	0.32
501812000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	DECOM	0.31
501812000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.16
501813000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.19
501822000	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.49
501831000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	4.49
501831010	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.16
501832000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.61
501980100	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.72
501980200	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.53
501980210	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.02
501980220	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.19
501980230	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.17
501980300	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.91
501980310	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.16
501980400	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	1.30
501980410	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.85

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
501980700	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.04
501980800	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.68
501980810	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.40
501980820	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.90
501980900	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.12
501981000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	1.38
501981010	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.60
501981100	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.11
501981200	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.13
501981300	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.06
501981400	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.07
501981600	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.36
501991000	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.18
501991000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.07
501992000	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.15
501993000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.44
501994000	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.11
501995000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	UNAUTHORIZED	ADD TO SYSTEM	0.35
501995000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.41
501995010	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.04
501995100	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.03
501995200	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.33
501995210	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.25
501995211	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.05
501995300	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.15
501995400	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.09
501995600	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.09

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
501996000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.18
501997000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.06
501999000	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.56
501999000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.69
502001000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.71
502001000	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.74
502001500	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.43
502002000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.54
502002500	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.28
502005000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.43
502006000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	DECOM	0.27
502006000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.63
502006400	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.50
502045000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.24
502341000	UNAUTHORIZED	DECOM-MOD	DECOM-MOD	DECOM-MOD	DECOM-MOD	0.64
502341010	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.24
502345000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.34
502349000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.17
503481000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.03
503482000	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.74
503482200	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.19
503483000	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.51
503491000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.14
503492000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.13
503501000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.28
504473000	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.71
504571000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	1.00

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
504645000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.19
504761000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.18
504821000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.12
504822000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.15
504860300	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.25
504860300	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.65
504860310	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.45
504870200	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.58
504870200	UNAUTHORIZED	DECOM-MOD	DECOM-MOD	DECOM-MOD	DECOM-MOD	0.37
504870210	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.85
504870300	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.09
504870400	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.14
504870500	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.10
504870600	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.07
504870600	UNAUTHORIZED	DISPERSED REC	DISPERSED REC	DISPERSED REC	DISPERSED REC	0.04
504870600	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.01
504870610	UNAUTHORIZED	DISPERSED REC	DISPERSED REC	DISPERSED REC	DISPERSED REC	0.04
504870620	UNAUTHORIZED	DISPERSED REC	DISPERSED REC	DISPERSED REC	DISPERSED REC	0.08
504870621	UNAUTHORIZED	DISPERSED REC	DISPERSED REC	DISPERSED REC	DISPERSED REC	0.03
504870700	UNAUTHORIZED	ADD TO SYSTEM - REC	ADD TO SYSTEM - REC	ADD TO SYSTEM - REC	ADD TO SYSTEM - REC	0.17
504870710	UNAUTHORIZED	DISPERSED REC	DISPERSED REC	DISPERSED REC	DISPERSED REC	0.03
504870800	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.14
504870800	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	2.57
504870810	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.09
505241000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.12
505241000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.41
505242000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.25

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
505243000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.41
505243010	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.15
505244000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.08
505245000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.40
505245010	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.41
505246000	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.11
505246000	UNAUTHORIZED	UNAUTHORIZED	DECOM	DECOM	DECOM	0.47
505873100	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.73
505873110	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.06
505873120	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.02
505873200	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.25
505873300	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.05
505874000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	DECOM	0.47
505874500	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.00
505875000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.28
505876000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.03
505889000	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.45
506170100	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.67
506225000	UNAUTHORIZED	DECOM-MOD	DECOM-MOD	DECOM-MOD	DECOM-MOD	1.00
506225000	UNAUTHORIZED	UNAUTHORIZED	DECOM-MOD	UNAUTHORIZED	DECOM-MOD	0.59
506225200	UNAUTHORIZED	DECOM-MOD	DECOM-MOD	DECOM-MOD	DECOM-MOD	0.13
506225200	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.70
506225220	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.50
506228000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.87
506229000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.34
506231000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	1.17
506232000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.07

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
506233000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.83
506233500	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.37
506260100	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.26
507001100	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.02
507002000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.17
507005000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.22
509011000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.04
509012000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.04
509021000	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.21
509022000	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.20
509023000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.08
509025000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.05
509026000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.74
509031000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.24
509031100	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.07
509111000	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.29
509111100	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.20
509112000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.06
509114000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.38
509114000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.40
509115000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.25
509131000	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.13
509141000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.41
509141500	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.09
509151000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.92
509961000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.08
509971000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.06

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
509971001	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.08
513510900	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.08
513511000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.96
513511110	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.14
513581000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.09
513591000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.28
513601000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.60
513604000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.43
513604000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.32
513604100	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.56
513604130	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.20
513715000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.38
513729000	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.10
513729010	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.08
513729050	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.07
513729070	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.13
513731000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.24
513821000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.19
513831000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.25
515350500	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.05
515351000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.21
515441000	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.39
515443000	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.42
515443100	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.08
515461000	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.39
515462000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.10
516031000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.28

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
516051000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.28
516241000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	UNAUTHORIZED	ADD TO SYSTEM	0.15
516242000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	UNAUTHORIZED	ADD TO SYSTEM	0.22
516801000	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	1.04
516801010	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.33
516801020	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.04
516802000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.16
516821000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	1.00
516822000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	1.18
516822010	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.53
516822020	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.11
516964000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.15
516971000	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.26
516972000	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.31
517011000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.13
517020200	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.17
517021000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.62
518354000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.19
518395550	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.29
518395560	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.08
518395561	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.08
518399000	UNAUTHORIZED	UNAUTHORIZED	DECOM-MOD	UNAUTHORIZED	DECOM-MOD	0.84
518399000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	1.57
518399500	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.15
518399500	UNAUTHORIZED	DECOM-MOD	DECOM-MOD	DECOM-MOD	DECOM-MOD	0.18
518399550	UNAUTHORIZED	DECOM-MOD	DECOM-MOD	DECOM-MOD	DECOM-MOD	0.47
518402000	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.19

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
518404000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.29
518409000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.44
518451000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.11
518451010	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.26
518452000	UNAUTHORIZED	CONV. TO TRAIL	CONV. TO TRAIL	CONV. TO TRAIL	CONV. TO TRAIL	0.39
518461000	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.33
518462000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.40
518470500	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.11
518471000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.24
518481000	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.37
518511000	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.70
518511010	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.09
518512000	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.61
518513000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.28
518513500	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.05
518514000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.56
518514010	UNAUTHORIZED	UNAUTHORIZED	DECOM	UNAUTHORIZED	DECOM	0.10
518515000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	UNAUTHORIZED	USE AND DECOM	0.07
518521000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.93
518522000	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.12
518522010	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.19
518523000	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.93
518523010	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.34
518523020	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.41
518524000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.16
518531000	UNAUTHORIZED	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	ADD TO SYSTEM	0.46
518531010	UNAUTHORIZED	DECOM	DECOM	DECOM	DECOM	0.33

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
518531020	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.26
518531021	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.20
518531030	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.06
518531040	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.10
518531040	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	UNAUTHORIZED	USE AND DECOM	0.07
518531041	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	UNAUTHORIZED	USE AND DECOM	0.11
518531042	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.14
518532000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.07
518533000	UNAUTHORIZED	USE AND DECOM	USE AND DECOM	USE AND DECOM	USE AND DECOM	0.36
518541000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.30
518541010	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.32
518542000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.22
518543000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.17
518543010	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.04
518543011	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.13
518544000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	0.27
518560500	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.14
518561000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	DECOM	DECOM	0.25
50169R	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	0.34
50904P	N/A	N/A	N/A	N/A	NEW—OPEN	0.50
50906P	N/A	N/A	N/A	N/A	NEW—OPEN	0.42
51358P	N/A	N/A	N/A	N/A	NEW—OPEN	0.27
US953470	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.08
US953500	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	1.59
US953570	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.06
US953580	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.34
US953585	PRIVATE	PRIVATE	PRIVATE	PRIVATE	PRIVATE	0.15

Road Number	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Miles
US954000	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.20
	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	UNAUTHORIZED	0.02

Note:
Forest Service System Roads
CLOSED: Roads closed year-round
LONG-TERM CLOSURE: Roads identified for extended closure (greater than 15 years)
IMP-CLOSE: Roads identified for closure improvement (physical barrier) to increase effectiveness
NEW—CLOSED: Proposed new road construction, closed
NEW—OPEN: Proposed new road construction, open year-round
OPEN: Roads open year-round
SEASONAL: Roads closed during hunting season

Unauthorized Roads
ADD TO SYSTEM: Roads identified as needed for Forest Service administrative use that would be added to the Forest Service system and closed when not used administratively
ADD TO SYSTEM—REC: Roads identified to be added to the Forest Service system and opened for dispersed recreation
CONV. TO TRAIL: Roads identified for adding to the Forest Service trail system for recreational non-motorized use
DECOM: Roads identified for decommissioning (obliteration) to improve soil and water conditions or improve wildlife security
DECOM-MOD: Roads identified for decommissioning (obliteration) to improve soil and water conditions that have been identified as important to livestock permittee use. Decommissioning will be modified appropriately to allow for cattle trailing or other approved permittee activities.
DISPERSED REC: All unauthorized roads identified for dispersed recreation use consistent with Forest Travel Plan direction
UNAUTHORIZED: Existing roads not on the Forest Service System
USE AND DECOM: Existing roads that would be used as temporary roads and obliterated following use

Other
N/A: Not applicable to the alternative
PRIVATE: All private roads
TEMP: Temporary road construction
SPECIAL USE: Roads authorized under special use permit use

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Appendix 3—Cumulative Effects

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PAST, PRESENT AND REASONABLY FORESEEABLE ACTIVITIES

Past, present, and reasonably foreseeable activities listed below are activities and natural events which are known to have already occurred, are currently occurring, or are likely to occur in the vicinity of the proposed Mill Creek–Council Mountain Landscape Restoration Project (Project) and may contribute cumulative effects. The area encompassing these activities and events includes the Council Ranger District on the Payette National Forest (Forest), State lands, and private property unless otherwise stated.

Past and present activities and natural events have contributed to the existing condition as described in the Existing Condition sections of Chapter 3 of the *Mill Creek–Council Mountain Landscape Restoration Project Final Environmental Impact Statement* (FEIS). These activities and reasonably foreseeable activities, may affect resources relevant to the proposal. Therefore, past, present, and reasonably foreseeable activities have been considered in the cumulative effects analysis for each resource area.

Activities listed as reasonable and foreseeable were gleaned from the Forest's quarterly Schedule of Proposed Actions (SOPA), and from interviewing Forest program managers. All relevant projects listed are likely to occur, based on the SOPA, and is displayed in Table 5.

This list, though comprehensive, may contain unintended omissions due to lack of records or knowledge. The listing is intended to demonstrate that relevant past, present, and reasonably foreseeable activities are identified and considered in the analysis of cumulative effects. However, these listings cannot stand alone, and must be supported with cumulative effects analysis by resource area in the "Effects" discussion of Chapter 3 of the DEIS. The described activities' effects need not be disclosed. What must be disclosed is how each activity, individually and together with other activities, might contribute to the overall effects of the project.

Because cumulative effects vary in time and space, each resource area has specified a pertinent cumulative effects analysis area in their discussion. To ensure the appropriate past, present, and reasonably foreseeable actions are considered, each resource area addressed all listed activities in the "Environmental Effects" discussion. For each activity, each resource area has disclosed why or why not a specific activity, or type of activity, would contribute to cumulative effects, and what those effects might be.

Areas considered for cumulative effects are contained in the following 6th level Hydrologic Unit Codes (HUCs) east of the Weiser River:

- Jackson Creek–Weiser River
- Cottonwood Creek
- Mill Creek–Weiser River
- East Fork Weiser River
- Warm Springs Creek–Weiser River
- Gaylord Creek–Weiser River

This cumulative effects analysis area encompasses 83,910 acres, of which 51,857 are within the National Forest boundary (Table 1, Figures 1 and 2).

Table 1. Land Cover Area and Percentage in Cumulative Effects Analysis Area and Project Area

Land Cover	Cumulative Effects Analysis Area (Acres)	Percent of Land Class Cumulative Effects Area (%)	Project Area (Acres)	Percent of Land Class Project Area (%)
Water	12	0.0	3	0.0
Perennial Ice/Snow	3	0.0	0	0.0
Developed, Open Space	682	0.8	25	0.0
Developed, Low Intensity	476	0.6	0	0.0
Developed, Medium Intensity	66	0.1	0	0.0
Developed, High Intensity	11	0.0	0	0.0
Barren Land (Rock/Sand/Clay)	8	0.0	8	0.0
Deciduous Forest	5	0.0	2	0.0
Evergreen Forest	50,950	60.7	39,526	76.2
Shrub/Scrub	26,887	32.0	11,437	22.0
Grassland/Herbaceous	2,714	3.2	877	1.7
Pasture/Hay	1,664	2.0	5	0.0
Cultivated Crops	39	0.0	0	0.0
Woody Wetlands	245	0.3	13	0.0
Emergent Herbaceous Wetlands	216	0.3	1	0.0
TOTAL	83,977 [a]	100.0	51,894 [a]	100.0

Source: NLCD 2001. *Originator:* U.S. Geological Survey. *Publication Date:* 20030901. *Title:* National Land Cover Database Zone 18 Land Cover Layer

[a]. The land cover area acreage totals do not equal the cumulative effects and project area acreages due to the raster data square 30 x 30 meter pixel overlap of a line boundary following watershed and river boundaries.

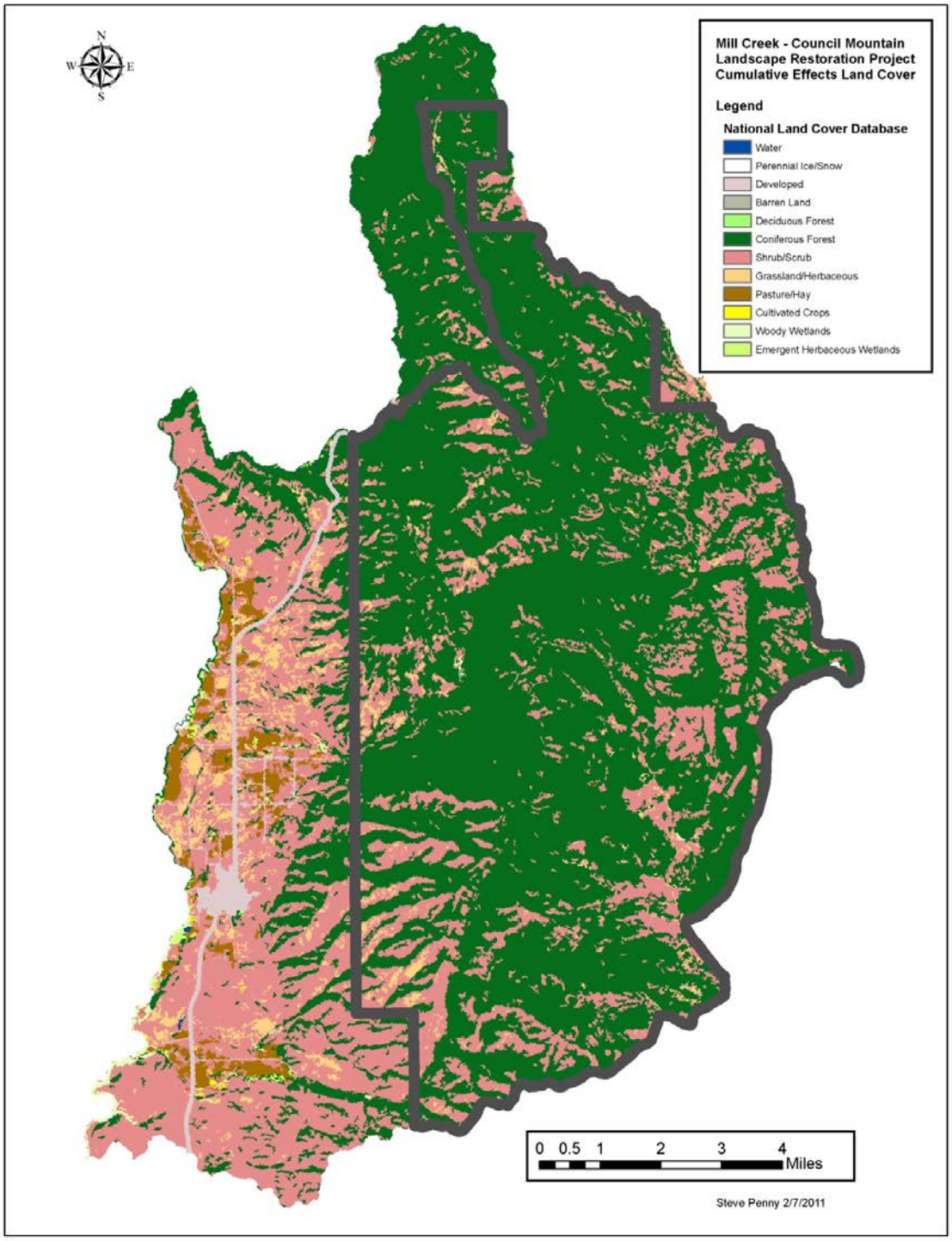

Figure 1. Land Cover, Cumulative Effects Analysis Area

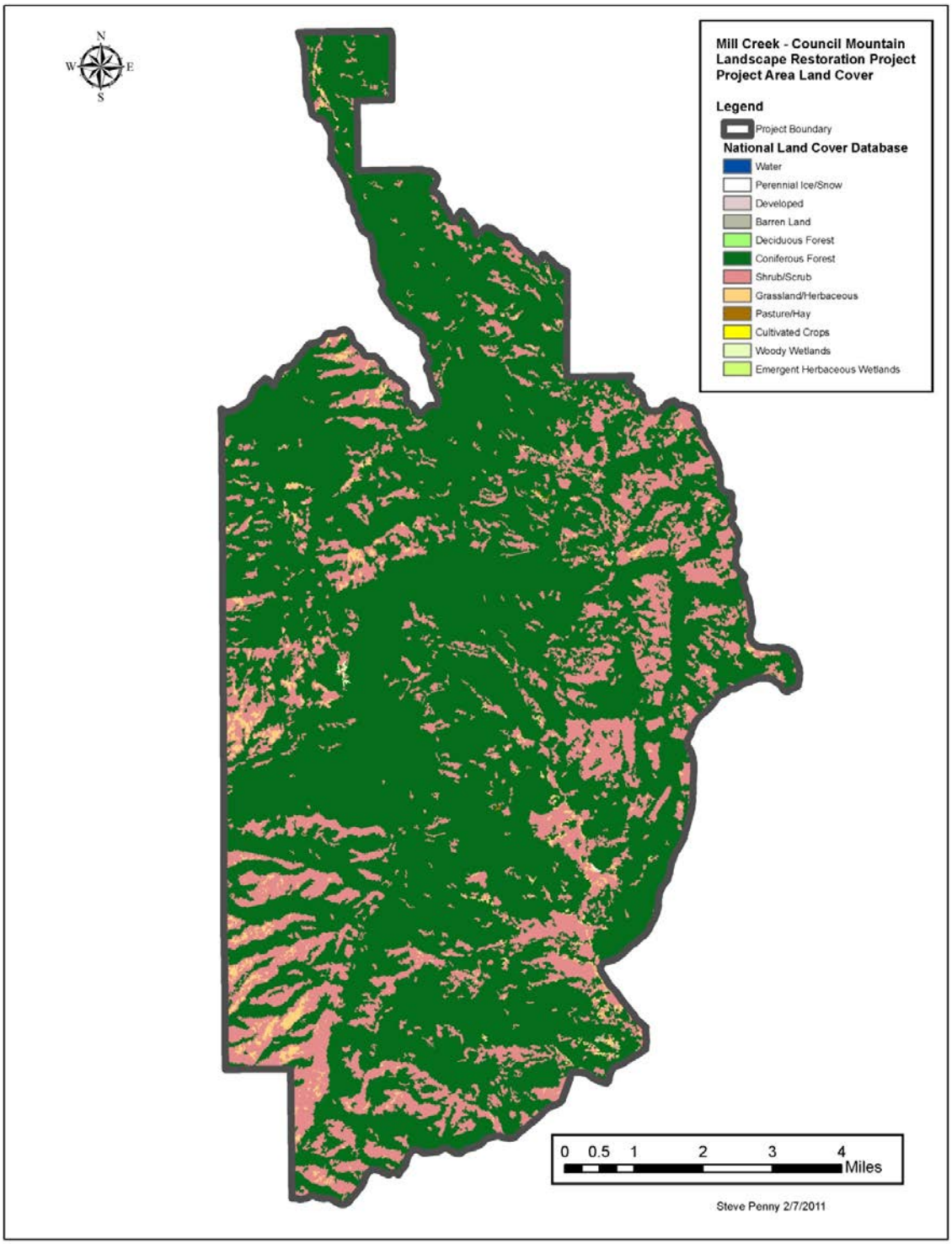

Figure 2. Land Cover, Project Area Land Cover

Past Harvest in Cumulative Effects Analysis Area and Project Area

Existing GIS data for past timber harvest in the Cumulative Analysis Area are given in acres by decade in Table 2 and shown in Figure 3. Detailed records of Pre 1960 timber harvest in the area are not available. Land for timber swaps between the Forest Service and the Boise Payette Lumber Company in the 1930's and 1940's resulted in the Forest acquiring the company land for rights to harvest timber on FS lands. Between 1940 and 1953, much of the land within the Project area was logged under the timber swap. Both Forest Service System and company lands were logged, most of the activity was in the Beaver Creek, middle portion of the East Fork Weiser River and Mill Creek drainages.

Table 3 provides harvest history by method for each decade in stands where with a single entry, and Table 4 provides harvest history where there have been 2 to 3 entries in stands. Figure 4 illustrates past harvest within the Project Area.

Table 2. Land Cover Area and Percentage in Cumulative Effects Analysis Area and Project Area

Sale Name	1960–1969 (acres)	1970–1979 (acres)	1980–1989 (acres)	1990–1999 (acres)	2000–2009 (acres)	No Data (acres)	Grand Total (acres)
21 CLEANUP	—	—	**118**	**33**	—	—	**151**
Clearcut-Stand	—	—	—	33	—	—	33
Over Story Removal	—	—	118	—	—	—	118
BABY AMBER 47	—	—	**112**	—	—	**9**	**121**
Clearcut-Stand	—	—	41	—	—	9	50
Sanitation Salvage	—	—	71	—	—	—	71
BEAVER CLEAV	—	—	—	**29**	—	**16**	**45**
Clearcut-Stand	—	—	—	9	—	—	9
Sanitation Salvage	—	—	—	20	—	16	37
BEAVER CREEK	**1368**	—	—	—	—	**45**	**1413**
Clearcut-Stand	331	—	—	—	—	40	371
Commercial Thin	451	—	—	—	—	5	456
Prep Cut—Shelterwood	3	—	—	—	—	—	3
Over Story Removal	206	—	—	—	—	—	206
Removal Cut-Par	230	—	—	—	—	—	230
Seed Cut—Shelterwood	53	—	—	—	—	—	53
Individual Selection Cut	95	—	—	—	—	—	95
BEAVER CREEK SALVAGE	—	—	—	**40**	—	—	**40**
Clearcut	—	—	—	40	—	—	40
BEAVER ROUGH	**13**	—	—	—	—	—	**13**
Sanitation Salvage	13	—	—	—	—	—	13

Sale Name	1960–1969 (acres)	1970–1979 (acres)	1980–1989 (acres)	1990–1999 (acres)	2000–2009 (acres)	No Data (acres)	Grand Total (acres)
BEYOND	—	—	—	**56**	—	—	**56**
Clearcut-Stand	—	—	—	20	—	—	20
Commercial Thin	—	—	—	0	—	—	0
Seed Cut-Shelterwood	—	—	—	37	—	—	37
BUSTED FLAT	—	—	—	**49**	—	—	**49**
Clearcut-Stand	—	—	—	49	—	—	49
COLD SPRING	—	—	—	**529**	—	—	**529**
Clearcut-Stand	—	—	—	529	—	—	529
DESERET	—	—	—	—	—	**88**	**88**
Clearcut-Stand	—	—	—	—	—	27	27
Commercial Thin	—	—	—	—	—	62	62
DEWEY CREEK	—	—	—	—	—	**1125**	**1125**
Clearcut-Stand	—	—	—	—	—	1125	1125
DEWEY SALVAGE	—	—	—	—	—	**132**	**132**
Clearcut-Stand	—	—	—	—	—	94	94
Commercial Thin	—	—	—	—	—	38	38
DRY BEAVER	—	**361**	—	—	—	—	**361**
Clearcut-Stand	—	73	—	—	—	—	73
Commercial Thin	—	31	—	—	—	—	31
Prep Cut-Seed Tree	—	47	—	—	—	—	47
Over Story Removal	—	9	—	—	—	—	9
Removal Cut-Par	—	142	—	—	—	—	142
Removal Cut-She	—	24	—	—	—	—	24
Individual Selection Cut	—	36	—	—	—	—	36
EAST FORK	**230**	—	—	—	—	—	**230**
Clearcut-Stand	88	—	—	—	—	—	88
Commercial Thin	47	—	—	—	—	—	47
Over Story Removal	16	—	—	—	—	—	16
Removal Cut-Par	21	—	—	—	—	—	21
Sanitation Salvage	9	—	—	—	—	—	9

Sale Name	1960–1969 (acres)	1970–1979 (acres)	1980–1989 (acres)	1990–1999 (acres)	2000–2009 (acres)	No Data (acres)	Grand Total (acres)
Individual Selection Cut	49	—	—	—	—	—	49
EDDIES	—	—	—	**9**	—	—	**9**
Removal Cut-She	—	—	—	9	—	—	9
FILLY	—	—	—	**77**	—	**17**	**94**
Clearcut-Stand	—	—	—	25	—	12	36
Commercial Thin	—	—	—	40	—	5	45
Seed Cut-Shelterwood	—	—	—	12	—	—	12
FILLY CREEK THIN	—	—	—	**11**	—	—	**11**
Commercial Thin	—	—	—	11	—	—	11
FOURTH GULCH	—	**326**	—	—	—	—	**326**
Clearcut-Stand	—	152	—	—	—	—	152
Commercial Thin	—	78	—	—	—	—	78
Individual Selection Cut	—	46	—	—	—	—	46
Timber Stand Improvement	—	50	—	—	—	—	50
FURRY BEAVER 1	—	—	**29**	—	—	—	**29**
Clearcut-Stand	—	—	12	—	—	—	12
Sanitation Salvage	—	—	16	—	—	—	16
GAYLORD	—	—	**139**	—	—	**31**	**170**
Clearcut-Stand	—	—	44	—	—	—	44
Commercial Thin	—	—	58	—	—	—	58
Seed Cut-Shelterwood	—	—	38	—	—	31	69
GRANITE	—	—	—	**128**	—	—	**128**
Clearcut-Stand	—	—	—	128	—	—	128
GRANITE SQ	—	—	—	**48**	—	—	**48**
Clearcut-Stand	—	—	—	37	—	—	37
Commercial Thin	—	—	—	11	—	—	11
HALL FIRE SALVAGE	—	—	—	—	**263**	—	**263**
Sanitation-Salvage	—	—	—	—	263	—	263
HALL RIDGE	—	—	—	**210**	—	—	**210**

Sale Name	1960–1969 (acres)	1970–1979 (acres)	1980–1989 (acres)	1990–1999 (acres)	2000–2009 (acres)	No Data (acres)	Grand Total (acres)
Clearcut-Stand	—	—	—	182	—	—	182
Prep Cut-Seed T	—	—	—	28	—	—	28
HO HUM	—	**36**	—	—	—	—	**36**
Sanitation-Mort	—	36	—	—	—	—	36
IKE	—	—	—	**9**	—	—	**9**
Clearcut-Stand	—	—	—	9	—	—	9
JOKER BENCH	—	—	—	**480**	—	—	**480**
Clearcut-Stand	—	—	—	240	—	—	240
Commercial Thin	—	—	—	217	—	—	217
Removal Cut-Par	—	—	—	7	—	—	7
Seed Cut-Shelterwood	—	—	—	10	—	—	10
Select Cut-Comb	—	—	—	6	—	—	6
JOKER CREEK	—	**325**	—	—	—	—	**325**
Clearcut-Stand	—	59	—	—	—	—	59
Select Cut	—	265	—	—	—	—	265
LUMPYS	—	—	—	**25**	—	—	**25**
Sanitation Salvage	—	—	—	14	—	—	14
Sanitation-Salvage	—	—	—	11	—	—	11
LVBV	—	—	—	**162**	—	—	**162**
Clearcut-Stand	—	—	—	112	—	—	112
Select Cut	—	—	—	50	—	—	50
MILL CREEK B	—	—	—	**392**	—	—	**392**
Clearcut-Stand	—	—	—	151	—	—	151
Commercial Thin	—	—	—	129	—	—	129
Prep Cut-Seed T	—	—	—	8	—	—	8
Sanitation Salvage	—	—	—	34	—	—	34
Individual Selection Cut	—	—	—	60	—	—	60
Timber Stand Improvement	—	—	—	9	—	—	9
MRS EDS	—	—	—	**145**	—	**26**	**172**
Clearcut-Stand	—	—	—	5	—	—	5

Sale Name	1960–1969 (acres)	1970–1979 (acres)	1980–1989 (acres)	1990–1999 (acres)	2000–2009 (acres)	No Data (acres)	Grand Total (acres)
Sanitation Salvage	—	—	—	125	—	26	152
Seed Cut-Seed T	—	—	—	15	—	—	15
NEAR BLUE BENCH	—	—	—	**21**	—	—	**21**
Sanitation Salvage	—	—	—	21	—	—	21
OLD CASCADE	—	—	—	—	—	**535**	**535**
Clearcut-Stand	—	—	—	—	—	86	86
Commercial Thin	—	—	—	—	—	449	449
OLD JOKER	**185**	—	—	—	—	—	**185**
Commercial Thin	185	—	—	—	—	—	185
PIN CREEK	—	**180**	—	**15**	—	—	**195**
Clearcut	—	6	—	—	—	—	6
Clearcut-Stand	—	10	—	15	—	—	25
Commercial Thin	—	37	—	—	—	—	37
Prep Cut-Seed Tree	—	58	—	—	—	—	58
Removal Cut-Par	—	63	—	—	—	—	63
Individual Selection Cut	—	6	—	—	—	—	6
RED POINT	—	**122**	—	—	—	—	**122**
Commercial Thin	—	92	—	—	—	—	92
Individual Selection Cut	—	30	—	—	—	—	30
SLIMFAST	—	—	—	**146**	—	—	**146**
Commercial Thin	—	—	—	146	—	—	146
SPYDER	**51**	—	—	—	—	—	**51**
Clearcut-Stand	51	—	—	—	—	—	51
TORDON	—	—	**76**	—	—	—	**76**
Sanitation Salvage	—	—	76	—	—	—	76
UPPER MILL	—	—	—	**7**	—	—	**7**
Clearcut-Stand	—	—	—	7	—	—	7
VICK CREEK	**327**	—	—	—	—	—	**327**
Clearcut-Stand	189	—	—	—	—	—	189
Commercial Thin	37	—	—	—	—	—	37

Sale Name	1960–1969 (acres)	1970–1979 (acres)	1980–1989 (acres)	1990–1999 (acres)	2000–2009 (acres)	No Data (acres)	Grand Total (acres)
Prep Cut-Shelterwood	43	—	—	—	—	—	43
Sanitation Salvage	11	—	—	—	—	—	11
Individual Selection Cut	48	—	—	—	—	—	48
WALLY SS	—	—	—	**149**	—	—	**149**
Clearcut-Stand	—	—	—	21	—	—	21
Sanitation Salvage	—	—	—	102	—	—	102
Seed Cut-Seed T	—	—	—	—	—	—	26
Grand Total	**2174**	**1350**	**474**	**2770**	**263**	**2024**	**9056**

Table 3. Harvest History by Harvest Method–Single Entry. Acreage and Decade

Harvest Method	1960–1969	1970–1979	1980–1989	1990–1999	2000–2009	No Data	Total
Helicopter	—	—	—	104	—	—	104
Jammer	—	—	—	16	—	—	16
Single-Span Sky	128	138	—	327	—	—	594
Tractor	1713	842	167	1289	263	1423	5698
Tractor Jammer	—	—	—	529	—	—	529
No Data	—	116	—	43	—	17	176
Grand Total	**1842**	**1096**	**167**	**2309**	**263**	**1440**	**7117**

Table 4 Harvest History by Harvest Method–Two or Three Entries, Acreage and Decade

Harvest Method	1960–1969	1970–1979	1980–1989	1990–1999	2000–2009	No Data	Total
Single-Span Sky	—	—	—	45	—	—	45
Tractor	333	190	307	382	584	—	1796
No Data	—	64	—	34	—	—	98
Grand Total	**333**	**190**	**307**	**461**	**584**	—	**1939**

In addition to the existing GIS past-harvest data, the Forest has stand data that indicates past management; however, there are no data for these stands except acreage. This acreage, in the Cumulative Effects Analysis Area, totals 7,552.

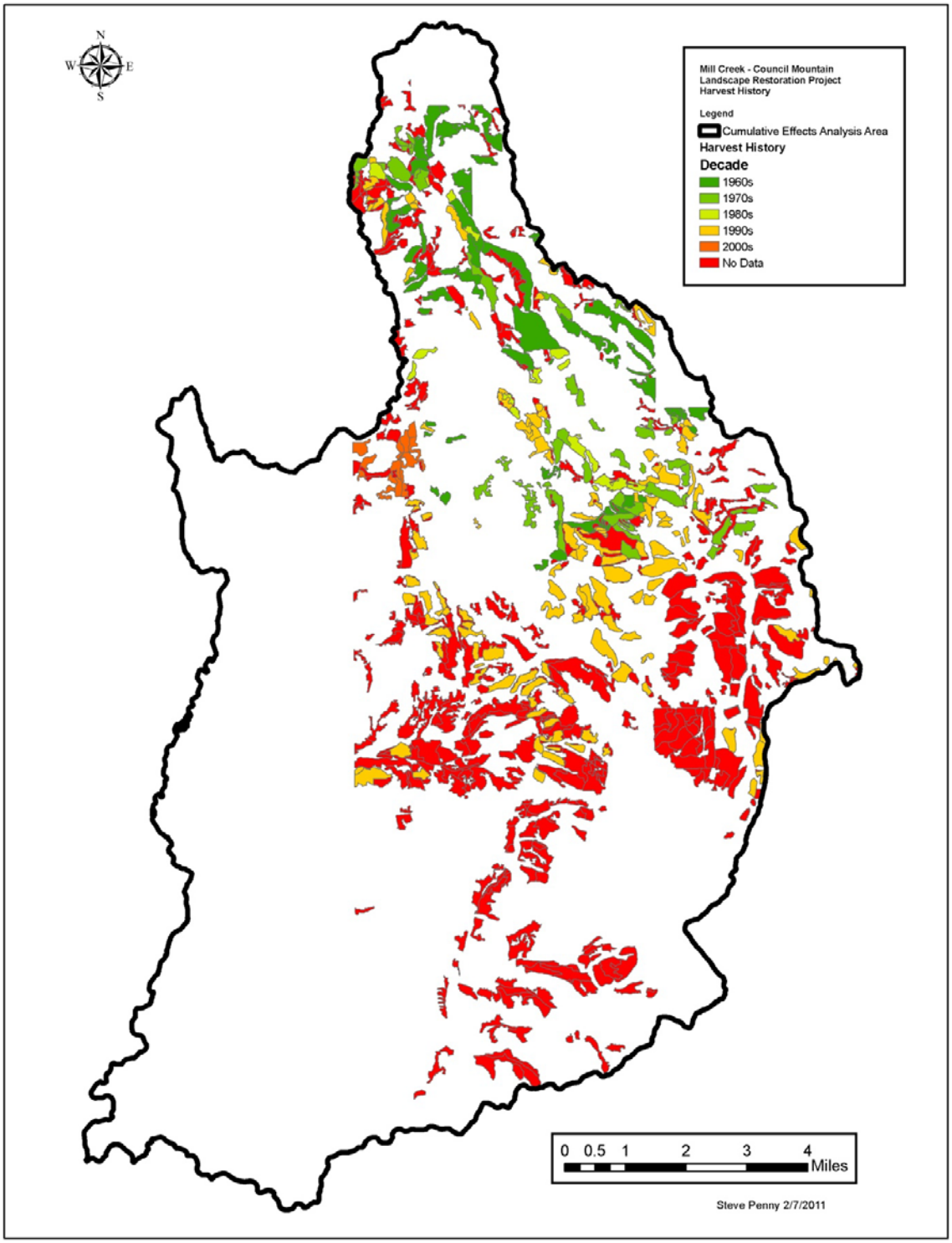

Figure 3. Past harvest within the Cumulative Effects Analysis Area

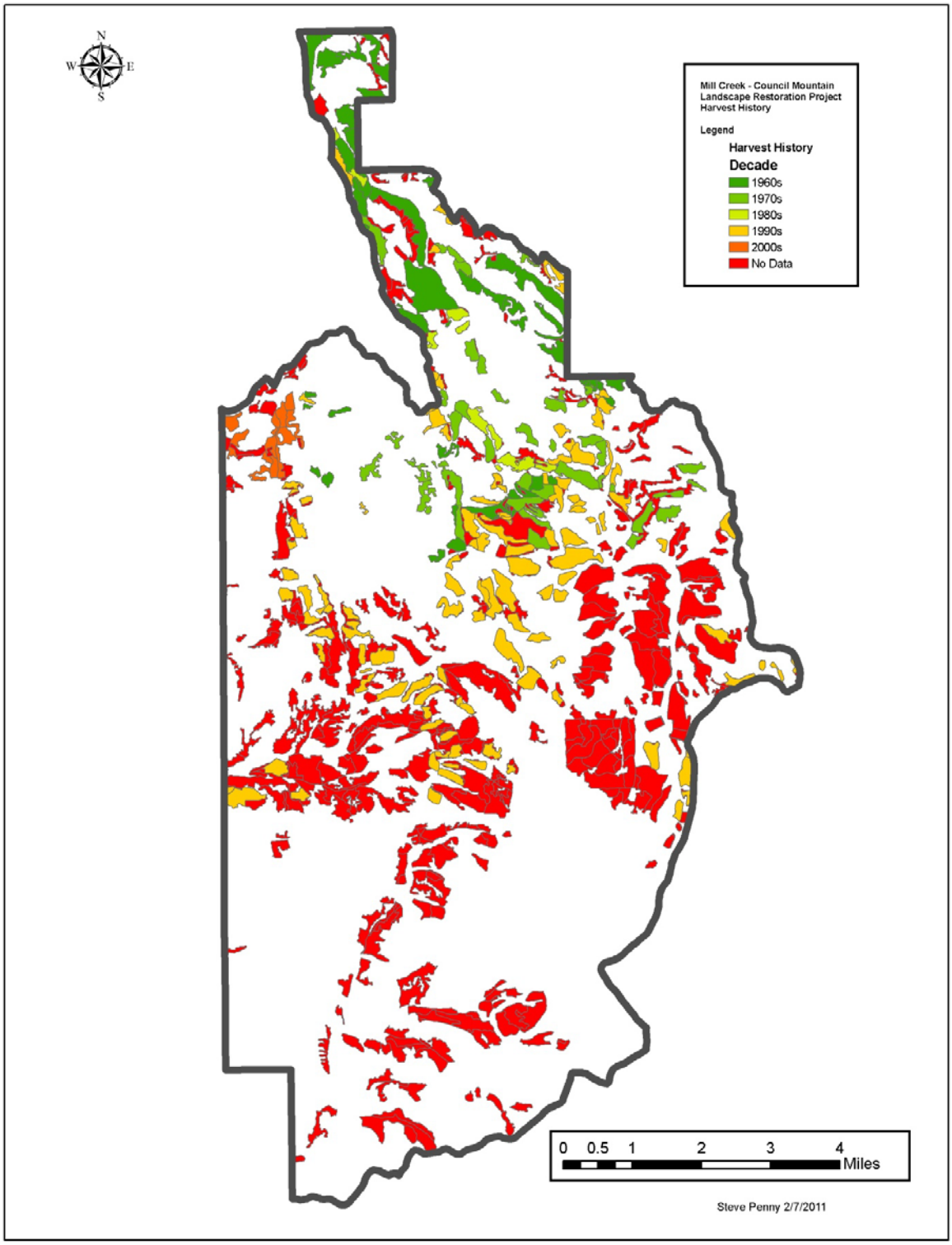

Figure 4. Past harvest within the Project Area

Table 5. Other actions that may be considered in the Cumulative Effects Analysis for the Mill Creek–Council Mountain Landscape Restoration Project

Project #	Action	Description	Date
	Past & Present		
1	Timber Harvest/ Precommercial Thinning/ Prescribed Fire/Reforestation on National Forest	Timber harvest—see past harvest table and maps (Appendix pp. 3-1 through 3-12) From 1959 to 2005, Geographic Information System records show a total of 7,852 acres reforested within the project area and approximately 5,280 acres precommercially thinned. Records on prescribed fire are not complete; most of the planted areas received site preparation that may have included pile burning or broadcast burning. Landscape burning for restoration has not been implemented in the project area.	Early 1900s to present, and reasonably foreseeable
2	Timber Harvest on Private Land	There are 25,969 acres of private land in the Cumulative Effects Analysis Area, of which about 7,450 acres are forested. Most of this area has been managed using various cutting methods with a variety of silvicultural treatments or high-grading. Boise Cascade harvested timber on approximately 160 acres in the Beaver Creek subwatershed in 1993 and 1994	Early 1900s to present
3	Timber Harvest on State Land	There are about 1,670 acres of State land in the Cumulative Effects Analysis Area. State land management maximizes returns to the trust beneficiaries of the state. The trust lands are intensively managed for timber growth and yield. Sections 16 and 36, T17N R1E, were acquired from the State of Idaho in June, 1990. This area was predominantly regeneration harvested and planted prior to the acquisition.	Early 1900s to present
4	State Land Acquisition	Sections 16 and 36, T17N R1E, were acquired from the State of Idaho in June, 1990. This area was predominantly regeneration harvested and planted prior to the acquisition.	1990

Project #	Action	Description	Date
	Past & Present		
5	National Forest System Roads	The majority of the road system in the Project area was developed in the 1940's, 1950's 1960's and 1970's for timber harvest. There were a few roads and wagon trails that were constructed prior to World War II. Research of old maps indicates some of the dates of roads in the area. On an 1896 map a road is shown up the bottom of Mill Creek drainage on the south side of the creek for about 2 miles beyond the present day Forest boundary. The road went to a lumber mill, that likely processed lumber for the early settlement of the Council area. In 1896 the road would have been built for wagon use. The Old Cascade road was then shown as a trail that went from Council Valley to Long Valley. A map from 1912 shows the Old Cascade Road as a road, and did not show the earlier roads in Mill Creek. Again in 1912 the road was likely constructed for wagons. A map from 1939 showed the Old Cascade Road, the Bluebunch Ridge Road, road to Deseret Cabin, a road up Cottonwood Creek to Cookhouse Gulch, and a mile of road up Beaver Creek from the Forest boundary. A map of the area from 1939 showed a mixed ownership over much of the area with the Boise Payette Lumber Company owning most of the private parcels within the Project area. A land for timber swaps between the Forest Service and the Boise Payette Lumber Company in the 1930's and 1940's resulted in the Forest acquiring the company land in exchange for rights to harvest timber on Forest Service System lands. Between 1940 and 1953, much of the land within the Project area was roaded and logged under the timber swap. Both the Forest and company lands were logged, most of the activity was in the Beaver Creek, the middle portion of the East Fork Weiser River and Mill Creek drainages. Timber harvest in the area in the late 1940's and early 1950's was usually done with a Caterpillar tractor towing a track mounted arch trailer. The tractor with the arch trailer was limited to travel on the sideslope, due to potential jack-knifing, so constructed skid roads were common and often difficult to distinguish from a road. Road construction equipment at that time period consisted mostly of bull dozer tractors. Roads were typically developed adjacent to streams with limited stream buffers. Commercial timber harvest on the Forest reached a peak in the 1960's. The road system in the area was expanded during this period and improvements such as graveling and improving drainage occurred on the main roads that were constructed in the 1950's under the land for timber swap. The original road construction in the late 40's and early 50's often constructed drainage crossings using native logs for culverts and bridges. The native timber structures were replaced and gravel was applied on the main access roads during the 1960's through the 1980's. Old log culverts are still found occasionally on older closed roads. These old log culverts are often decayed and caved in.	1900s to present, and reasonably foreseeable.

Project #	Action	Description	Date
	Past & Present		
5 Cont'd		Timber harvest on the Forest peaked during the in the 1960's and has declined since. The road system in the area was primarily developed for timber harvest. The Forest began using area transportation planning in the late 1970's and road construction and improvement activities were planned for on an area basis rather than individual harvest units. Environmental analysis on timber sales was also begun at this time, resulting in improved road planning and mitigations. Roads adjacent to streams were either graveled or relocated away from streams. Poor sections of road were either improved or decommissioned. The last 20 years has seen an emphasis on road decommissioning and obliteration. 28.9 miles of road have been obliterated within the Project area.	
6	Existing Powerlines	The 138 kV power transmission Oxbow-McCall line was constructed in 1972 and travels from Oxbow, Oregon, to McCall, Idaho. The authorized right-of-way is 100 feet wide. Due to Federal energy regulations, the utility company must clear the width of the right-of-way corridor. The company inspects the corridor annually and brings a crew in every 2 to 3 years to selectively clear trees, removing the larger hazard trees and leaving smaller types of vegetation within the right-of-way corridor. The Cambridge-to-McCall line was constructed in 2005, runs just north of the Oxbow-McCall line, and then ties into it. The Cambridge-to-McCall line is located in T18N, R1E, sections 4,5,6,7,18, and in R1W sections 24, 25, 26, 27, and 35, and runs on the western edge of the project area (This was an existing 69 kV line that Idaho Power upgraded to 138 kV as part of the Cambridge-to-McCall project), and then across the northern tip near the Tamarack sawmill. The new portion of the line cuts downward and ties into the Oxbow-McCall line. Another line runs north, outside the project area, to New Meadows. The Cambridge to McCall line is also a 138 kV transmission line with 100 feet right-of-way.	1972 to present, ongoing
7	Fire Suppression	Active fire suppression across the area since the 1930s has likely limited the number and extent of wildland fire and its associated effects on vegetation structure, composition, and function.	1930s to present; ongoing
8	Fires	The Hall Fire in 2003 burned 1,900 acres in the north end of the project area, of which 250 acres were salvage harvested in 2004 and subsequently planted.	1944 to 2011
9	Livestock Management	Cattle and sheep grazing have occurred throughout the area since the late 1800s. The Grazing Management Plan for the Beaver Creek subwatershed was revised in 1997 to protect riparian resources.	Late 1800s to present; ongoing

Project #	Action	Description	Date
	Past & Present		
10	Floods	Two major flood events that impacted roads and streams in the project area have occurred in the past 2 decades. First, 1997 floods resulted in the need for many road repairs, primarily in the Lower East Fork of the Weiser River. Second, floods in 2010 created a debris blockage at the US Hwy 95 crossing in the Lower East Fork of the Weiser River, which was cleaned by the Idaho Department of Transportation. Road repairs expected in 2011 include FS Roads 50172, 50165 and 50524. Repairs are also planned in 2012 on FS Road 50172; this includes replacement of the East Fork Bridge on road 50172, as the original bridge was destroyed in the flood.	

Project #	Action	Description	Date
	Reasonably Foreseeable		
11	Timber Harvest on Private Land	Reasonably foreseeable actions on private land in the Cumulative Effects Analysis Area include additional harvest treatments in the easily accessible areas, precommercial thinning in the regeneration treatment areas, and fuel reduction treatments around structures. In 1993 and 1994, Boise Cascade harvested timber on approximately 160 acres in the Beaver Creek subwatershed.	Ongoing
12	Timber Harvest on State Land	There are about 1670 acres of State land in the Cumulative Effects Analysis Area. State land management maximizes returns to the trust beneficiaries of the State. The trust lands are intensively managed for timber growth and yield.	Ongoing
13	Travel Management Plan	The recent Travel Management Plan Decision (signed February 2009) eliminated cross-country motorized travel from areas previously open (C, D and E areas on the 1995 Travel Map), closed unauthorized roads that may have been travelable with ATV or full size vehicles, increased the miles of motorized trails available for ATV use, and opened previously closed system roads to seasonal use within the Cumulative Effects Analysis Area. The 2009 Decision had no effect on winter use.	Ongoing
14	ATV and Other Motorized Use	Future motorized use would be on designated roads and trails only. No cross-country travel would be permitted. Levels of unauthorized use would decrease with increased education and public awareness of travel-management designations.	Ongoing
17	Recreation Use on National Forest System Lands	Camping is permitted June through October at numerous, dispersed camp sites with associated hiking, ATV/OHV, fishing, and hunting activities. Hunting is permitted in the spring (bear, turkey) and fall (big game) months. Fishing is permitted during the spring, fall, and summer; snowmobiling from December through March.	Ongoing

Project #	Action	Description	Date
	Reasonably Foreseeable		
18	Special Uses Water Diversions	Three ditches are located within the project area: the East Fork Ditch, Yantis/Tomlinson Ditch and Sorenson-Rhinehart Ditch. A permitted private water supply is located on Forest Service lands near Stevens. There is currently one authorized functioning ditch, one “authorization pending” functioning ditch and one “authorization pending” but currently non-functional diversion on National Forest land within the project area. The authorized, functioning ditch is diverted from the East Fork Weiser River near Bench Creek and supplies water to fields in the Council Valley to the west via the East Fork of Mill Creek; the total water right on this ditch is for 16.06 cfs. A fish screen was installed on this ditch in approximately 2003 to prevent bull trout entrainment; this screen sustained damage during the June 2010 floods and was repaired during the summer of 2010. The “authorization pending”/non-functional ditch within the project area is also located on the East Fork Weiser; the ditch does not currently run water, as the East Fork has downcut at least 3 feet below the point of diversion and numerous places along the ditch itself have collapsed. It appears the ditch has not been functional for at least fifteen years. The “authorization-pending” ditch is functional and is diverted from the North Fork of Cottonwood Creek. This ditch is used to irrigate fields in the Council Valley to the north and west; the total water right on the ditch is 12 cfs. The ditch is expected to be authorized by the Region 4 Ditch Bill Team in 2010; a fish screen is one of the recommendations for the ditch company to pursue as funding allows. While these diversions don’t likely affect peak flow periods, base flows below the diversions are reduced from their natural potential.	Ongoing

Project #	Action	Description	Date
	Reasonably Foreseeable		
19	Roads	The Record of Decision for the Gaylord North Project (USDA 2003c) included decommissioning 27.1 miles road. Most of this work has been done, but approximately 11.6 miles remains, 4.1 of which are located within the Beaver Creek drainage of the Project area. 1.6 miles would be used as temporary road in the Project and then obliterated and 2.5 miles, along with approximately 7.5 miles located within the Weiser River Fuels Reduction project (USDA 2011f) area in the Gaylord-Woodland subwatershed, will be decommissioned as funds become available. Road densities within the Project area are approximately 4.4 miles per square mile.	Ongoing
20	Road Maintenance	Road maintenance would include cleaning culverts, blading existing roads, and brushing right-of-ways.	Ongoing
21	Livestock management	Management of livestock grazing associated with the Council Mountain Allotments.	Ongoing
22	Firewood Harvest on National Forest System Lands	Harvest is to occur along open roads and in designated areas, while adhering to Forest Firewood Permits. FS Road 51371 in the Hall Ridge area was opened in 2011 in summer 2011 for firewood harvest as a part of the Firewood Roads 2011 project.	Ongoing
23	Noxious Weeds	Treatment of noxious weeds would follow directions in the 1987 Payette National Forest Noxious Weed and Poisonous Plant Control Program Environmental Assessment and Decision Notice.	Ongoing
24	Fire Suppression	Active fire suppression would continue under current forest plan and agency policy.	Ongoing
25	Weiser River Fuels Project	This project is located in the Weiser River watershed, adjacent to the north boundary of the project area, and is being proposed by the New Meadows Ranger District of the Payette National Forest. (See attached project description.) The project will use the authority of the Healthy Forest Restoration Act to create and maintain an area of reduced fuel loading and wildfire hazard on National Forest System lands adjacent to private property in the Weiser River area. U.S. Highway 95 and a major power line bisect the project area. This area is at risk of crown fire and intense surface fire during dry summer conditions. A total of approximately 3,744 acres would be treated by commercial timber harvest, precommercial thinning, and prescribed burning to reduce the risk of wildland fire damage to rural homes, private property, and other National Forest resources, and to increase the effectiveness of suppression resources. Timber harvest volume would be approximately 6.4 million board feet. There would be approximately 6.2 miles of road decommissioning with this project.	Implementation beginning in 2011 and continuing through 2015

Project #	Action	Description	Date
	Reasonably Foreseeable		
26	Wildlife Conservation Strategy (WCS) Forest Plan Ammendment	The WCS's draft environmental impact statement (DEIS) has been released and public comment received. This DEIS proposes to amend the *Payette National Forest Land and Resource Management Plan* by changing the management area prescription from a commodity emphasis to a restoration emphasis. If this is implemented, landscape restoration projects in high priority stands (e.g., low elevation ponderosa pine) would be planned across the forest. Increased prescribed burning and using fire for resource benefits would occur, and vegetation treatments would be designed to retain old forest conditions and large tree components, and to restore habitat to the historical range of variability. The Mill Creek–Council Mountain Landscape Restoration Project was designed to be in line with this expected direction.	Ongoing
27	Timber Harvest on State Land	A timber sale is planned for auction adjacent to the north end of the project area in spring 2012. The description in the Idaho Department of Lands 2012 Timber Sale Plan is as follows: "This sale is located approximately 7 miles southwest of New Meadows, Idaho in the Weiser River drainage. Both seedtree and clearcut prescriptions will be implemented. Both ground based skidding and cable yarding will be required. Approximately .3 mile of new spur road will be constructed, 5.7 miles of spur road will be reconstructed and 2.9 miles of spur road will be opened. One un-named Class I tributary to the Weiser River, Woodland Creek, a Class II tributary to the Weiser River, plus several un-named Class II intermittent streams occur within the sale area."	Ongoing
28	Timber Harvest/Precommercial Thinning on National Forest	In 2012, the Payette National Forest would begin planning a restoration project similar in size and scope to the Mill Creek–Council Mountain Landscape Restoration Project in the Middle Fork Weiser River drainage. This project would border the Mill Creek–Council Mountain Landscape Restoration Project along the south side of the Council Mountain Inventoried Roadless Area. Other activities planned on National Forest System lands in the Cumulative Effects Analysis Area include precommercial thinning young conifer plantations, treatments similar to those in the Proposed Action in mature stands and older plantations, and periodic underburns to maintain low levels of ground fuels and fuel ladders.	Reasonably Foreseeable & Ongoing

Project #	Action	Description	Date
	Reasonably Foreseeable		
29	Firewood Harvest on National Forest System Lands	Firewood Roads 2012 - Harvest is to occur along open roads and designated areas while adhering to Forest Firewood Permits. The US Fish and Wildlife Service's listing of critical bull trout habitat in the East Fork Weiser River may restrict firewood harvest within this area. Road 51371 is being considered for opening within the Project area in 2012. This project is expected to have a finalized proposal in May or June of 2012.	Reasonably Foreseeable & Ongoing
30	Improve National Forest System Recreation Trails	Existing designated system recreation trails would be maintained, including erosion control and hazard tree removal.	Ongoing
31	ATV and Other Motorized Use	Future motorized use on would be permitted only on designated roads and trails. No cross-country travel would be permitted. Levels of unauthorized use would decrease with increased education and public awareness of travel-management designations.	Ongoing
32	Recreational Use of National Forest System Lands	Recreational use would continue as described for the present; however, levels of use could increase commensurate with increases in local and regional population growth.	Ongoing
33	Adams County Cogeneration Plant	This power generation plant is being planned for construction in Goodrich, west of Council. It is expected to burn 130,000 tons of woody biomass per year. National Forest, State, and private sources would be used to fuel the plant.	Uncertain

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Appendix 4—Monitoring and Evaluation

Payette National Forest

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Monitoring and evaluation are used to determine whether the *Payette National Forest Land and Resource Management Plan* (Forest Plan) (USDA Forest Service 2003[1]) is being implemented correctly and to determine the effectiveness of Forest Plan standards and guidelines, management requirements, and mitigation measures. Implementation monitoring is used to decide whether the project was implemented as planned. Effectiveness monitoring determines whether the project design and mitigation measures were effective in meeting resource protection objectives. Items that would be monitored, if an action alternative is selected, are identified in Best Management Practices and Monitoring Plans on file in the Project Record at the Council Ranger District. Table 1 provides a monitoring plan summary, and for some elements a more detailed monitoring plan summary sheet follows.

Table 1. Monitoring plan summary

Resource	Monitoring Item	Timing	Personnel
Wildlife	Implementation and effectiveness of restoration treatments to provide wildlife habitat improvement	Implementation monitoring will coincide with all harvest-related activities. Effectiveness monitoring will occur for up to 5 years following on-site restoration activities.	Journey-level wildlife biologist and wildlife technicians, coordinated with Sale Administrator and Timber Management Assistant
Fisheries and Watershed	Implementation and effectiveness of RCA widths, RCA treatments and culvert replacements	Implementation monitoring will coincide with activities within RCAs. Effectiveness monitoring will occur annually for 3 years during activities and once after five years.	Journey-level fisheries biologist and biological and hydrologic technicians
Fisheries	Water temperatures in East Fork Weiser River, Dewey Creek, Cold Springs Creek and Joker Creek	Will continue to monitor water temperatures at established locations in Dewey Creek, East Fork Weiser River and Cold Springs Creek. An additional monitoring site will be added in the lower East Fork Weiser River below Bench Creek. Temperature monitoring will begin in 2012 and continue annually to 2022	Biological and hydrologic technicians, and fisheries biologist or hydrologist
Fisheries	Bull trout population	Fish surveys will be completed in Dewey Creek, upper East Fork Weiser River, Cold Springs Creek, Joker Creek and lower East Fork Weiser River. These would begin in 2012 annually for ten years.	Fisheries technicians, may be assisted by journey-level fisheries biologist
Resource	**Monitoring Item**	**Timing**	**Personnel**
Soil and Water	Implementation and effectiveness of road obliteration treatments	Implementation monitoring will occur during the year of decommissioning (mostly obliteration) activities. Effectiveness monitoring will occur, at a minimum, the first year after implementation, and then at years 3 and 5, unless findings indicate sites have stabilized and revegetated to their natural potential.	Hydrology technicians and GS-11 hydrologist

[1] USDA Forest Service. 2003. Payette National Forest Land and Resource Management Plan. USDA Forest Service, Payette National Forest, McCall, ID.

Soil and Water	Implementation and effectiveness of Timber Best Management Practices and Soil and Water Conservation Programs	The majority of the monitoring will occur during harvest operations. Where revegetation or reclamation is planned, monitoring will be conducted a minimum of twice—the first year for implementation and the second year for effectiveness—allowing one snowmelt and spring runoff to occur.	Hydrology technicians and GS-11 hydrologist
Soil and Water	Implementation and effectiveness of prescribed fire prescriptions/soil response	The majority of the monitoring will occur prior to, and immediately following, burning operations. Soil moisture at the time of burning, and vegetation/soil response to burning, will be evaluated.	Hydrology technicians and GS-11 hydrologist
Soil and Water	Implementation of coarse woody debris retention requirements in mechanical treatment units	Monitoring would occur during and/or immediately after mechanical treatment	Hydrology Technicians, GS-11 Hydrologist, Timber Sale Administrator
Soil and Water	Implementation of non-motorized trail construction erosion control and stream crossing design features.	Monitoring will occur after construction is completed	Hydrology technicians and GS-11 hydrologist
Vegetation	Fire effects on plantations, harvest units, and burn only stands	Monitoring will occur pre- and post-burning operations	Fuels Specialist and Silviculturist
Vegetation	Harvest unit boundaries and timber marking	Monitoring will occur during sale preparation activities.	Sale preparation Forester and Silviculturist
Vegetation	Need for site preparation and regeneration in harvest units and burn only units	Monitoring will occur after harvest and/or burning operations	Silviculturist
Vegetation	Need for protection of aspen regeneration	Monitoring will occur after harvest and/or burning operations	Silviculturist and Wildlife Biologist
Vegetation	Need for IPS beetle mitigation measures	Monitoring will occur during and after harvest operations	Silviculturist, Sale Administrator, and FHP Entomologist
Vegetation	Need for general bark beetle mitigation measures	Monitoring will occur after harvest and/or burning operations	Silviculturist and FHP Entomologist
Range	Noxious weeds	Monitoring will occur immediately after harvest and road work activities and continue for the following 5 years.	Range technicians
Cultural	Cultural and archeological sites	Monitoring will occur prior to ground-disturbing activities in areas needing clearance and on-going-in areas identified as “Eligible” by the State Historical Preservation Officer	Archeologist or Archeological Technician

MONITORING PLAN SUMMARY SHEET

Program: Wildlife - Northern goshawk (NOGO)

Activity, Practice, or Effects: Project Monitoring, Wildlife. Protection of NOGO nest sites.

Project Name: Mill Creek - Council Mountain Landscape Restoration Project (MCCM).
NOGO clearances for project activities in, or adjacent to nest stands and Post-Fledging Areas (PFAs).

Location: Payette National Forest, Council Ranger District, MCCM Project Area.

Objectives: Survey, and clear for implementation, sites of planned project activities in NOGO nest stands and PFAs, prior to other crew entry, or harvest activities.

Parameters:

1. Before project activities commence, conduct on the ground survey of stands designated as replacement nest stands via GIS to verify suitability as nest stands.
2. Before project activities commence, survey PFAs to ensure correct harvest prescriptions to meet Southwest Guidelines or other appropriate research for conservation of PFAs.
3. Conduct surveys to identify presence of NOGO adults and/or young at the nest, in the nest stand, or in the PFA.
4. Following appropriate Mitigation Measures, a timing restriction on entry into the nest stand and PFA is in place from March 1 to September 30.
5. If surveys by Wildlife staff show that NOGO adults and/or young are no longer present in the nest stand and/or PFA, other crew entry may be allowed by the Wildlife Biologist, in coordination with the Sale Administrator and the Timber Management Assistant.

Methodology: Wildlife staff will survey all known NOGO nest sites, the replacement nest stands, and the PFAs by ground surveys. In addition to visual and aural NOGO identification, recorded NOGO calls may be used to elicit vocal responses, allowing species identification.

Frequency: These surveys will be conducted *prior to other crew entry* of any NOGO nest stand, or PFA.

Duration: Surveys would follow requirements noted in the Mitigation Measures. It may be necessary to survey nest stands and PFAs several times during spring and summer, to determine if NOGO adults and/or young are present.

Data Storage: Wildlife Program Files on the District and Forest in NOGO GIS GeoDatabase.

Analysis: Update GIS information on nest stand and PFA condition

Report: Wildlife field reports summarizing survey results.

Cost: Cost varies, depending on personnel and time involved.

GS-5 Wildlife Techs ($146/day)

	Wildlife Biologist GS-11(4) ($341/day)
Personnel:	West Zone Wildlife Biologist and Wildlife staff.
Responsible Individual:	West Zone Wildlife Biologist, Payette National Forest.
Responsible Official:	District Ranger, Council Ranger District, Payette National Forest.
Prepared by:	Jon Almack, West Zone Wildlife Biologist, 02 March 2012.

MONITORING PLAN SUMMARY SHEET

Program: Wildlife – Selected Region 4 Sensitive Species and Management Indicator Species.

- White-headed woodpecker (R4SS, MIS)
- Pileated woodpecker (MIS)
- Flammulated owl (R4SS)
- Great gray owl (R4SS)

Activity, Practice, or Effects: Project Monitoring, Wildlife. Protect known nest sites, monitor occupancy of source habitat by MIS and sensitive species.

Project Name: Mill Creek - Council Mountain Landscape Restoration Project (MCCM). Pre-Implementation Wildlife Monitoring Surveys.

Location: Payette National Forest, Council Ranger District, MCCM Project Area.

Objectives: 1. Document presence of species in units receiving restoration treatment;

2. Locate nests and/or nest stands;

These objectives may change as more information is available. Portions of this work may be conducted by the Rocky Mountain Research Station or other researchers.

Parameters: 1. Conduct surveys in areas where species are suspected and locate nests.

Record location of nest tree, species of nest tree, nest height above ground, nest aspect on tree, period of use, nest stand characteristics, and adjacent stand characteristics.

Establish photo points at these sites.

2. Conduct *Before & After* sampling of restoration stands treated, to determine presence of species. After sampling should be annually for 5 years post-harvest & burn treatments.

3. Establish photo points at representative sites, providing a basic method for tracking changes in the stand over the period of time it is moved toward HRV.

Methodology: Use current methods applicable to this project and the monitoring objectives, as noted in professional journals and agency reports, to meet the stated objectives.

- Locate nests and nest stands with GPS, using UTM Zone 11T, with North American Datum 1983;
- Establish photo points for each nest and nest stand identified;
- Use survey transects already used by the Forest for surveys on these species.
- For white-headed and pileated woodpeckers, follow established Forest protocols.
- For flammulated and great gray owl surveys, conduct surveys at night, following established Forest protocols.

Frequency: Repetitive sampling should occur annually for the first 5 years post-treatment. At that point, evaluate to determine the need for changes in sampling design. As other restoration projects are conducted on the West and Central zones of the Forest, this sampling design may change again, to accommodate additional project areas with like treatments.

Duration:	Sampling should continue for at least 5 years, in order to determine long-term trends in population demographics.
Data Storage:	Wildlife Program Files on the Council Ranger District and Forest; Forest Service Wildlife database observation records; Idaho Department of Fish and Game, Idaho Fish and Wildlife Inventory System.
Analysis:	Specific analysis will follow the methods described by the Principal Investigator.
Report:	Annual reports summarizing survey results. Final project report, due when funding terminated.
Cost:	30 days for GS-5 Wildlife Technician @ $146 per day X 2 Techs = $8,760. 10 days for GS-11 West Zone Wildlife Biologist @ $341 per day = $3,410. Total cost = $12,170 per fiscal year. Long-term monitoring of these sites should continue, but cannot assign those funds at this time.
Personnel:	Principal Investigator/West Zone Wildlife Biologist and 2 Wildlife Technicians from the USFS.
Responsible Individual:	West Zone Wildlife Biologist, Payette National Forest.
Responsible Official:	District Ranger, Council Ranger District, Payette National Forest.
Prepared by:	Jon Almack, West Zone Wildlife Biologist, 20 March 2012.

MONITORING PLAN SUMMARY SHEET

Program: Wildlife – Rocky Mountain elk

Activity, Practice, or Effects: Project Monitoring, Wildlife. Road closure effectiveness for elk habitat security.

Project Name: Mill Creek - Council Mountain Landscape Restoration Project (MCCM).

Location: Payette National Forest, Council Ranger District, MCCM Project Area.

Objectives: On roads used for project activities and then closed, check to ensure that each road has an effective closure in place.

Parameters:

1. Identify roads that were opened for project use and then closed to vehicle access.
2. Locate the site of the road closure (gate, beginning of road obliteration, etc.).
3. Record the location and type of closure.
4. Document the effectiveness of the closure.
5. Report the effectiveness results to the District Ranger.

Methodology:

1. Use roads table from the FEIS to identify the roads that are slated for closure following use on the project.

2. Identify the type of closure specified for each road slate for closure. Temporary roads are to be fully obliterated. Preferred closure for NFS roads to be closed to public use is obliteration of the initial portion of the road visible from an open road. Other closure types could include a gates or barricades.

3. Record the location of the closure by GPS, UTM, Zone 11T, using North American Datum 1983.

4. Record at least one digital photograph of the closure site and of any situation that needs corrective action, to make the closure effective for preventing vehicle access to the road.

5. All results will be documented in a report to the District Ranger, so that ineffective closures can be assigned priority to be brought into compliance with this Project Design Feature.

Frequency: These surveys will be conducted following the period when the road is no longer needed for project activities and the appropriate closure has been placed. In some cases, a second survey may be necessary at a particular closure site, to ensure that the closure meets the intention of blocking vehicle access.

Duration: Many of these closure effectiveness monitoring surveys would be conducted immediately after the closure is put in place. Many of these activities will be on a sub-watershed basis. For example, once all of the access roads and haul routes are no longer needed in the East Fork Weiser River sub-watershed, these closure effectiveness surveys would be conducted for all of the closed roads in that sub-watershed.

Data Storage: MCCM Project Record, Wildlife Program Files on the Council Ranger District, and Forest files in the Roads GIS GeoDatabase.

Analysis:	No analysis required.
Report:	Wildlife field reports summarizing survey results.
Cost:	Cost varies, depending on personnel and time involved.
	1 GS-5 Wildlife Tech ($146/day) x 10 days = $1,460.
	Wildlife Biologist GS-11(4) ($341/day) x 5 days = $1,705.
Personnel:	West Zone Wildlife Biologist and Wildlife staff.
Responsible Individual:	West Zone Wildlife Biologist, Payette National Forest.
Responsible Official:	District Ranger, Council Ranger District, Payette National Forest.
Prepared by:	Jon Almack, West Zone Wildlife Biologist, 20 March 2012.

MONITORING PLAN SUMMARY SHEET

Program: Fisheries and Watershed

Activity Project Monitoring
Implementation and effectiveness of RCA widths, RCA treatments and culvert replacements

Project Name: Mill Creek–Council Mountain Landscape Restoration Project

Location: Council Ranger District: Cottonwood Creek, East Fork Weiser River, Gaylord Creek – Weiser River and Mill Creek–Weiser River subwatersheds

Objectives: *****To monitor RCA design prior to implementation.

*To monitor effectiveness of the stream buffers in protecting stream channels.

*To document the culvert replacements and determine if fish passage was provided.

Methodology: RCA widths will be verified prior to implementation. Intermittent stream channels will be surveyed to determine fish presence/absence prior to implementation and RCA widths will be adjusted as necessary.

A subset of RCAs will be visited to qualitatively assess if stream buffers adequately protected streams. Photographs will be taken for comparison and to document the condition of RCAs. Emphasis will be placed on RCAs in the lower East Fork Weiser River subwatershed (bull trout critical habitat).

Culvert replacements will be photographed and evaluated for fish passage.

This methodology may be adjusted, as needed.

Frequency/Duration: Implementation monitoring will coincide with activities within RCAs.

Effectiveness monitoring will occur annually for 3 years during activities and once after five years. Culvert replacements will be monitoring the year of implementation and annually for two years.

Personnel: One to two hydrological technicians and/or biological technicians, one fisheries biologist and/or hydrologist

Responsible Official: Greg Lesch, Council and Acting Weiser District Ranger

Prepared by: Trisha Giambra, West Zone Fisheries Biologist **Date**: February 2012

MONITORING PLAN SUMMARY SHEET

Program:	Fisheries
Activity	Project Monitoring Water temperatures
Project Name:	Mill Creek–Council Mountain Landscape Restoration Project
Location:	Council Ranger District: Cottonwood Creek, East Fork Weiser River, Gaylord Creek – Weiser River and Mill Creek–Weiser River subwatersheds
Objectives:	*To monitor stream temperatures in the project area.
Methodology:	Established stream temperature monitoring sites will continue to be monitored with thermographs placed in-stream at locations in Dewey Creek, East Fork Weiser River and Cold Springs Creek. Additional monitoring sites will be added in the lower East Fork Weiser River below Bench Creek and Joker Creek. Additional sites will be added in areas outside bull trout habitat however emphasis will be placed on the bull trout subwatershed. This methodology may be adjusted, as needed.
Frequency/Duration:	Temperature monitoring will begin in 2012 and will continue annually until 2022.
Personnel:	Biological and hydrologic technicians, and fisheries biologist and/or hydrologist
Responsible Official:	Greg Lesch, Council and Acting Weiser District Ranger
Prepared by:	Trisha Giambra, West Zone Fisheries Biologist **Date**: February 2012

MONITORING PLAN SUMMARY SHEET

Program: Fisheries

Activity Project Monitoring
Bull Trout Population

Project Name: Mill Creek–Council Mountain Landscape Restoration Project

Location: Council Ranger District: Cottonwood Creek, East Fork Weiser River, Gaylord Creek – Weiser River and Mill Creek–Weiser River subwatersheds

Objectives: *To monitor the local bull trout population in response to implementation of the MCCM Project.

Methodology: Fish surveys will be completed in Dewey Creek, upper East Fork Weiser River, Cold Springs Creek, Joker Creek and lower East Fork Weiser River following establish protocol. This methodology may be adjusted, as needed and may also include habitat data collection.

Frequency/Duration: Fish surveys are currently completed annually in Dewey Creek and the East Fork Weiser River. Project specific monitoring will begin in 2012 and occur annually for 10 years.

Personnel: Two to four fisheries technicians may be assisted by journey-level fisheries biologist.

Responsible Official: Greg Lesch, Council and Acting Weiser District Ranger

Prepared by: Trisha Giambra, West Zone Fisheries Biologist **Date**: February 2012

MONITORING PLAN SUMMARY SHEET

Program: Soil and Water

Activity, Practice or Effect: Project Monitoring, Soil and Water Resource Improvement, Implementation of Treatments.

Project Name: Mill Creek-Council Mountain Road Decommissioning (Obliteration)

Location: Council Ranger District, Gaylord Creek-Weiser River, East Fork Weiser River, Mill Creek-Weiser River, and Cottonwood Creek subwatersheds

Objectives: Determine if decommissioning has been properly implemented on approximately 29-65 miles of unauthorized and/or Forest Service system roads (depending on selected alternative) identified during the Mill Creek-Council Mountain EIS. Decommissioning methods for reducing surface erosion and sediment delivery and restoring soil-hydrologic function include: de-compacting the road surface, recontouring to natural slope profile (as much as possible) to disperse runoff, utilizing native vegetation transplants, natural mulch, slash, and ag or wood straw over disturbed surfaces to provide a minimum of 50% and maximum 80% ground cover, pulling culverts/re-establishing natural channel and seeding/fertilizing/straw mulching within riparian areas and at stream crossings. *The objective is to achieve restoration of natural ground contours and drainage patterns while attempting to match the coverage on the obliterated prism to the surrounding terrain without impeding would-be foot, wildlife, or livestock travel along the restored prism.*

Parameters: On-site field evaluation of treatments:

1. Visual evidence of surface coverage with ground cover, vegetation transplants, and mulching or seeding in riparian areas

2. Establish photo points and take before (existing condition) and post treatment photos. Utilize GPS coordinates and/or a permanent reference point to ensure replicability of photo point.

3. 100-pace heel to toe transects in conjunction with each photo point to determine amount and type of ground cover.

   *If time and budget constraints do not allow for this method, the minimum monitoring will include replication of photo points and a qualitative description of the site recovery/trend.

Methodology: Implementation monitoring will be accomplished through field verification of the planned treatments on selected roads, with emphasis placed on roads within riparian and/or sensitive areas (e.g., steeper slopes, bull trout habitat drainages). Where possible, both qualitative and quantitative comparisons to pre-existing conditions will be documented. Photographs will be taken for comparison.

Frequency: Implementation monitoring will occur during the year of decommissioning activities. Effectiveness monitoring will occur, at a minimum, the first year after implementation, and then at years 3 and 5, unless findings indicate sites have stabilized and revegetated to their natural potential.

Duration: Monitoring will continue for up to 5 years

Data Storage: District and/or Supervisor's Office files under Watershed Improvement

Analysis: Field documentation, summarization of heel-to-toe transect data and on-site photographs before and after project implementation; keep data in binder with project name on front and spine as well as stored electronically.

Report: The written report will follow the format of the Monitoring Results Data form developed on the Payette National Forest and be included in the annual monitoring results publication.

Cost: The total cost will be $3,030.00 per year. This covers 10 days for a GS-5 or GS-6 Hydro-Technician for implementation monitoring and 2 days for a GS-11 Hydrologist to evaluate the data and write a report. This also covers $350 for miscellaneous supplies, including transportation.

Personnel: One GS-5 or 6 Hydro-Technician and one GS-11 Hydrologist

Responsible Individual: West Zone Hydrologist and Hydrologic Technicians

Responsible Official: Greg Lesch, Council and Acting Weiser District Ranger

Prepared by: Melanie Vining, West Zone Hydrologist **Date**: April 1, 2011

Note: The road decommissioning itself could be done via contract or Forest crew (Force Account). If work is done via contract, the monitoring report should also evaluate the effectiveness of the contract language and oversight (i.e., Contracting Officers Representative, inspectors) at achieving desired results. This evaluation should be used as a tool by which to determine changes, if any, that could improve contract specifications or administration for road decommissioning.

MONITORING PLAN SUMMARY SHEET

Program: Soil and Water

Activity, Practice or Effect: Project Monitoring, Soil and Water Resource Improvement, Implementation of Treatments.

Project Name: Mill Creek-Council Mountain Road Decommissioning (With Permittee Access Coordination)

Location: Council Ranger District, Gaylord Creek-Weiser River, East Fork Weiser River, Mill Creek-Weiser River, and Cottonwood Creek subwatersheds

Objectives: Determine if decommissioning **that has been designated for coordination with grazing permittees in order to allow access for cattle trailing, salting, or fence maintenance** has been properly implemented as described in the Mill Creek-Council Mountain EIS. Decommissioning methods for reducing surface erosion and sediment delivery and restoring soil-hydrologic function include: de-compacting the road surface, recontouring to disperse runoff, utilizing native vegetation transplants, natural mulch, slash, and ag or wood straw over disturbed surfaces to provide a minimum of 50% and maximum 80% ground cover, pulling culverts/re-establishing natural channel and seeding/fertilizing mulching within riparian areas and at stream crossings. *The objective is to achieve restoration of natural ground contours and drainage patterns while attempting to match the coverage on the obliterated prism to the surrounding terrain without impeding would-be foot, wildlife, or livestock travel along the restored prism.*

NOTE: The methods described above match those described for full obliteration and, where topography allows, these will be utilized on these permittee coordination roads as long as this method allows for cattle movement and/or other permitted access listed above. However, certain roads of this category (especially if located on steep slopes) will require a travelway be either retained or reconstructed on the treated prism to allow safe passage for trailing or driving cattle. These travelways shall not exceed the width required to safely accommodate the permitted use, and should be outsloped to facilitate drainage. They should be closed at the road entrance to prohibit unauthorized motorized use. *During implementation of these treatments, coordination with the district range specialist is required.*

Parameters: On-site field evaluation of treatments:

1. Visual evidence of surface coverage with ground cover, vegetation transplants, and mulching seeding in riparian areas,

2. Establish photo points and take before (existing condition) and post treatment photos. Utilize GPS coordinates and/or a permanent reference point to ensure replicability of photo point.

3. 100-pace heel to toe transects in conjunction with each photo point to determine amount and type of ground cover.

   *If time and budget constraints do not allow for this method, the minimum monitoring will include replication of photo points and a qualitative description of the site recovery/trend.

4. *Assessment of whether retained travelway has been effective at allowing for permitted use and associated impacts are confined to this travelway or if they are affecting the rest of the treated prism. Assessment of any evidence of frequent unauthorized use impacting travelway beyond the permitted use. Photos (with GPS point) and a narrative are sufficient for this purpose.*

Methodology: Implementation monitoring will be accomplished through field verification of the planned treatments in selected roads, with emphasis placed on roads within riparian and/or sensitive areas (steeper slopes, bull trout habitat drainages, etc). Where possible, document both qualitative and quantitative comparisons to pre-existing conditions. Photographs will be taken for comparison purposes.

Frequency: Implementation monitoring will occur during year of decommissioning activities. Effectiveness monitoring will occur at a minimum the first year after implementation and then at year 3 and 5 unless findings indicate sites have stabilized and re-vegetated to their natural potential.

Duration: Up to five years.

Data Storage: District and/or Supervisor's Office files under Watershed Improvement.

Analysis: Field documentation, summarization of heel-to-toe transect data and on-site photographs before and after project implementation.

Report: The written report will follow the format of the monitoring results data form developed on the Payette National Forest and be included in the annual monitoring result publication.

Cost: The total cost will be $1500.00/year. This covers 5 days for a GS-6 Hydro-Technician for implementation monitoring of the project, and one day for a GS-11 Hydrologist to evaluate the data and write the report. This also covers $350 for miscellaneous supplies, including transportation.

Personnel: One GS-5 or 6 Hydro-Technician and one GS-11 Hydrologist.

Responsible Individual: West Zone Hydrologist and Hydrologic Technicians

Responsible Official: Greg Lesch, Council and Acting Weiser District Ranger

Prepared by: Melanie Vining, West Zone Hydrologist **Date**: 04/01/2011

Note: The road decommissioning itself could be done via contract or Forest crew (Force Account). If work is done via contract, monitoring report should also include an evaluation of the effectivness of the contract language and oversight (COR, inspectors) at achieving desired results. This evaluation should be used as a tool by which to determine changes, if any, that could be made to improve contract specifications or administration for road decommissioning.

MONITORING PLAN SUMMARY SHEET

Program: Soil & Water

Activity, Practice or Effect: Project Monitoring, Timber Management, Implementation and Effectiveness Monitoring of Timber BMP's and SWCP's.

Project Name: Mill Creek-Council Mountain Landscape Restoration Project

Location: Council Ranger District, Gaylord Creek-Weiser River, East Fork Weiser River, Mill Creek-Weiser River, and Cottonwood Creek subwatersheds

Objectives:

1. Determine if BMP's, SWCP's (as included in the timber sale contract) and project design features are being implemented.

2. Determine if BMP's and SWCP's are effective.

3. Determine if specific design features identified in the NEPA document have been carried forward to the Timber Sale Contract and implemented on the ground. Mitigations are listed in the mitigation tables under soil and water; some included in the table are listed below:

   a. Where necessary, construct slash filter windrows or utilize other erosion control methods as deemed appropriate by the district hydrologist or fisheries biologist in conjunction with the project engineer at the tow of fill slopes on newly constructed roads and landings. Slash filter windows constructed in RCAs should not be too large to allow for planting of native riparian vegetation following road construction.

   b. On slopes between 35 and 45 percent, restrict ground-based harvest equipment to designated areas at all times and require operators to winch logs to skidders.

   c. On tractor units, all skid trails would be designated and pre-approved by the Timber Sale Administrator and logs would be winched to the designated skidtrails. Skidtrails would be spaced at a maximum distance (preferred is 200 feet or greater) with consideration given to terrain, and to RCA location (literature shows that a 100-foot skidtrail spacing has affects to soil on approximately 11% of an area).

   d. Reclaim **all** skid trails after use by ripping to 16 inches or depth of compaction, recontouring to natural slope profile and pulling slash over the trail surface to provide a minimum of 50% to maximum of 80% effective ground cover.

   e. Field validate slope gradients in specific harvest units. Enforce slope restrictions for ground-based equipment operations.

   f. Ensure that no surface runoff is directly channeled into skyline corridors from landing areas. Stabilize disturbed areas by using waterbars, check dams, or placing slash in areas of exposed mineral soil.

   g. Permanent and temporary roads, skid trails, and landings identified for obliteration would be decompacted a depth of 16" or the extent possible, recontoured, seeded with native seeds (where need is identified), and provided with a minimum of 50% to maximum of 80% ground cover (vegetation

transplants at a rate of 15 per 100 linear feet, natural mulch, CWD, and ag or wood straw, in that order of preference) to an extent deemed necessary by a fisheries biologist or hydrologist. In addition to the above treatment, stream crossings would receive planted vegetation plugs and additional ground cover to an extent deemed necessary by a fisheries biologist or hydrologist, to reduce erosion, facilitate recovery of soil biological function and stabilize streambanks.

h. Re-use existing skid trails (as feasible) to limit creation of additional areas of DD and facilitate restoration of existing DD

i. Limit equipment operations to dry (<20% soil moisture) or frozen/snow covered conditions.

j. No equipment operation, new skid trails/roads or tree removal within 120 feet of intermittent channels and 240 feet of perennial channels unless equipment is on an existing road or skid trail unless approved by fisheries biologist or hydrologist- utilize "RCA Thinning Guidelines" (Appendix 6 of the FEIS) for this project.

k. Avoid road and skid trail construction on landslide prone areas; no reserve tree or clear cut treatments in landslide prone areas

Parameters: Planned monitoring includes specific BMP and SWCP requirements for Watershed Management, Vegetation Manipulation, Timber, Roads and Trails. The special mitigation measures, identified in the NEPA document, will also be listed on the BMP checklist (See Objectives 3.a-k.).

Methodology: The BMP's and site-specific mitigation measures will be monitored through qualitative field observations and some quantitative measurements of slope and distance. Field forms and on-site photographs will be evaluated for reporting monitoring results.

The Zone Hydrologist and Sale Administrator will review the NEPA document and other appropriate documentation in the office. Any special mitigation measures will be listed on the BMP checklist. The BMP's will be visually inspected during harvest activities and at the end of the operating season. Sale Administrators Daily Diary Log and Engineering Reports will also be reviewed to ensure tracking and compliance.

Frequency: The majority of the monitoring will take place during harvest operations. Where re-vegetation or reclamation occurs, monitoring will need to be conducted twice, the first year for implementation and the second year for effectiveness, allowing one snowmelt and spring runoff to occur.

Duration: Two years, to be re-evaluated at that time.

Data Storage: The results will be written up on the monitoring results summary form, and the data stored in Soil and Water files on the district. Photos taken during monitoring will be stored on the district, with the results.

Analysis: BMP monitoring forms, field notes, on-site photographs will be analyzed to answer the following questions:

1. Which of the Soil and Water BMP's were implemented?
2. Which of the Soil and Water BMP's appear to be effective at this time?

3. Do any of the Soil and Water BMP's need to be modified or improved?
4. Were any special mitigation measures implemented, and do they appear to be effective at this time?

Results will be used to validate contract compliance along with recommending any modifications needed for any BMP &/or SWCP practices. Recommendations may include additional mitigation measures to be completed, timing and application of BMP's, and actual construction modifications.

Report: The report will follow the format of the monitoring results data form and published in the annual monitoring results publication

Cost: The total cost will be $3290.00. This covers 10 days for a GS-6 Hydro-Technician for implementation and effectiveness monitoring of the project and three days for a GS-11 Hydrologist to do a field visit, evaluate the data and write the report. This also covers $350 for miscellaneous supplies, including transportation.

Personnel: One GS-6 Hydro-Technician and one GS-11 Zone Hydrologist.

Responsible Individual: West Zone Hydrologist and Hydrologic Technicians

Responsible Official: Greg Lesch, Council and Acting Weiser District Ranger

Prepared by: Melanie Vining, West Zone Hydrologist **Date**: 04/01/2011

MONITORING PLAN SUMMARY SHEET

Program: Soil and Water

Activity, Practice or Effect: Project Monitoring, Soil and Water Resource Improvement, Implementation of Treatments.

Project Name: Mill Creek-Council Mountain Prescribed Fire Activities

Location: Council Ranger District, Gaylord Creek-Weiser River, East Fork Weiser River, Mill Creek-Weiser River, and Cottonwood Creek subwatersheds

Objectives: Determine if prescribed fire objectives have been met within RCA's within the project area, as defined in Chapter 2 (description of Alternatives). Specifically, evaluate ground and ladder fuels consumed, channel shade affected (if any), and soil condition and response to fire.

Parameters: A total of 10 randomly-selected perennial and 5 intermittent RCA's across the project area will be monitored, with additional sites visited if specific resource concerns arise after prescribed fire operations take place. On-site field evaluation of treatments:

1. Fuels plots to monitor fuel loading before and after prescribed burning

2. Establish photo points and take before (existing condition) and post treatment photos.

3. Where time and personnel allow, heel to toe transects in conjunction with photo points to determine amount and type of ground cover, and severity of burn.

4. In at least two perennial RCAs, densiometer (or other appropriate tool) measurements to evaluate canopy and shade cover

Methodology: Implementation monitoring will be accomplished through field verification of the planned treatments. Where possible, document both qualitative and quantitative comparisons to pre-existing conditions. Photographs will be taken for comparison purposes.

Frequency: In order to establish a baseline, monitoring will begin before prescribed fire activities. Effectiveness monitoring will occur at a minimum the first year after implementation and then at year 3 and 5 unless findings indicate sites either were not affected by prescribed burning or have stabilized and re-vegetated to their natural potential.

Duration: Up to five years.

Data Storage: District files under Soil and Water.

Analysis: Field documentation, summarization of fuels plots, densitometer, heel-to-toe transect data and on-site photographs before and after project implementation.

Report: The written report will follow the format of the monitoring results data form developed on the Payette National Forest and be included in the annual monitoring result publication.

Cost: The total cost will be $4530.00/year. This covers 6 days for a GS-6 Hydro-Technician and a GS-9 Fuels Technician for effectiveness monitoring of the project, and two days for a GS-11 Hydrologist to evaluate the data and write the report. This also covers $350 for miscellaneous supplies, including transportation.

Personnel: One GS-6 Hydro-Technician, one GS-9 Fuels Technician and one GS-11 Hydrologist.

Responsible Individual: West Zone Hydrologist and Hydrologic Technicians

Responsible Official: Greg Lesch, Council and Acting Weiser District Ranger

Prepared by: Melanie Vining, West Zone Hydrologist **Date**: 04/01/2011

MONITORING PLAN SUMMARY SHEET

Program: Soil and Water

Activity, Practice or Effect: Project Monitoring, Soil and Water Resource Improvement, Implementation of Treatments.

Project Name: Mill Creek-Council Mountain – Long-term Soil Productivity (Coarse Woody Debris (CWD) Monitoring)

Location: Council Ranger District, Gaylord Creek-Weiser River, East Fork Weiser River, Mill Creek-Weiser River, and Cottonwood Creek subwatersheds

Objectives: Determine if CWD retention objectives have been met in mechical treatment units (commercial and non-commercial vegetation removal) within the project area, as defined in Chapter 2 (description of Alternatives) and the Soils section of Chapter 3. Specifically, evaluate the amount and size class of CWD remaining in a unit after treatment in the context of Forest Plan Apendix A recommendations for that PVG.

Parameters: A total of 9 randomly-selected harvest units (3 commercial thin, 3 reserve tree, and 3 biomass) across the project area will be monitored using CWD transects (based on Brown 1974 and used in the Grays Creek Fire Salvage CWD monitoring (2008 EA/DN; Council Ranger District), with additional sites visited if specific resource concerns arise after initial monitoring. On-site field evaluation of treatments:

1. Review contract requirements as transferred from EIS project design features to timber sale contract- note consistency and clarity of contract specification

2. Follow CWD transect protocol, on file at Council Ranger District hydrology office for method and total number of transects per unit.

3. Take representative photo to depict CWD levels in unit

Methodology: Implementation monitoring will be accomplished through field verification of the planned treatments. Where possible, document both qualitative and quantitative comparisons to pre-existing conditions. Photographs will be taken for comparison purposes.

Frequency: Monitoring will be done concurrently or immediately after harvest activities. The most effective timing would be while the sale is still active to take advantage of the opportunity to bring additional CWD into any units that are lacking.

Duration: Year of harvest/treatment.

Data Storage: District files under Soil and Water.

Analysis: Field documentation, summarization of transects by unit number (spreadsheet) and on-site photographs before and after project implementation.

Report: The written report will follow the format of the monitoring results data form developed on the Payette National Forest and be included in the annual monitoring result publication.

Cost: The total cost will be $2200.00/year. This covers 7 days for a GS-6 Hydro-Technician and 2 days for a GS-11 Hydrologist to evaluate the data and write the report. This also covers $350 for miscellaneous supplies, including transportation.

Personnel: One GS-6 Hydro-Technician and one GS-11 Hydrologist.

Responsible Individual: West Zone Hydrologist and Hydrologic Technicians

Responsible Official: Greg Lesch, Council and Acting Weiser District Ranger

Prepared by: Melanie Vining, West Zone Hydrologist **Date**: 04/01/2011

MONITORING PLAN SUMMARY SHEET

Program:	Fire and Fuels
Activity, Practice or Effect:	Project Monitoring, Effects of Prescribed Fire on Plantations
Project Name:	Mill Creek–Council Mountain prescribed fire program
Location:	Council Ranger District, Gaylord Creek-Weiser River, East Fork Weiser River, Mill Creek–Weiser River, and Cottonwood Creek subwatersheds
Objectives:	Evaluate the effects of prescribed fire on plantations and measure the mortality
Parameters:	The following on-site field evaluation of treatments will be used: 1. Visual 2. Photo points establishment
Methodology:	Implementation monitoring will be accomplished through field verification pre and post treatment. Pre treatment photo points will be established in key areas to get the best representation of condition.
Frequency:	Monitoring will occur post burn, within 1 year of implementation.
Duration:	1 year
Data Storage:	District and/or Supervisor's Office files under Fire and Fuels, report accomplishments in FACTS data base
Analysis:	Field documentation and on-site photographs
Report:	The report will document pre and post conditions of plantation via field notes and photos.
Cost:	The total cost will be $720/year. This covers 2 days for two GS-7 Fuels Technicians and 2 days for a GS-9 Fuels Specialist to evaluate the data and write the report.
Personnel:	Two GS-7 Fuels Technicians and one GS-9 Fuels Specialist
Responsible Individual:	West Zone Fire Management Officer
Responsible Official:	Greg Lesch, Council / Weiser District Ranger
Prepared by:	Christian Ramirez WZ Fuels Specialist **Date**: August 28, 2011

MONITORING PLAN SUMMARY SHEET

Program:	Range and Noxious Weeds
Activity, Practice or Effect:	Project Monitoring, Noxious Weed Inventory and Treatments
Project Name:	Mill Creek–Council Mountain Landscape Restoration Project
Location:	All areas of harvest activity and road construction and decommissioning on the Council Ranger District, Mill Creek-Council Mountain Project Area
Objectives:	Inventory and treat noxious weed infestations prior to project implementation. Monitor effects of timber harvest and road construction and decommissioning on existing noxious weed populations and potential new populations. Provide follow up monitoring and treatment to areas where infestations are found and treated.
Parameters:	All roads scheduled for obliteration will be inventoried and treated for noxious weeds pre and post project implementation. All roads scheduled to be constructed or improved for project activities will be inventoried and treated for noxious weeds pre and post construction. All gravel pit sites will be inventoried and treated pre and post material transportation. Records will be kept on where gravel is hauled within the project area so that follow up monitoring can take place on those sites and roads.
Methodology:	Monitoring will be accomplished through field inspections of the planned treatments including timber harvest, gravel pit sites, and road construction/improvement/obliteration.
Frequency:	Immediately pre and post any project activities.
Duration:	Monitoring will continue up to 5 years.
Data Storage:	Council Ranger District, 2150 files.
Analysis:	Field inspections and documentation followed by treatment if necessary.
Report:	Annually
Cost:	For annual monitoring and weed treatments $10,000 per year.
Personnel:	One GS-7 Weed Technician, one GS-5 RangeTechnician and one GS-11Rangeland Management Specialist
Responsible Individual:	West Zone Rangeland Management Specialist and Weed Technician
Responsible Official:	Greg Lesch, Council and Weiser District Ranger
Prepared by:	Andy Bumgarner, West Zone Rangeland Management Specialist **Date**: 02/02/2012

Appendix 5—
Modeling Assumptions

Payette National Forest

Melanie Vining, Hydrologist

Christian Ramirez, West Zone Fuels Specialist

August 2011

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5.1 BOISED MODELING ASSUMPTIONS FOR THE COUNCIL MOUNTAIN MILL CREEK LANDSCAPE RESTORATION PROJECT

5.1.1 THE BOISED MODEL

MODELING PROGRAM: BOISED is an operational sediment yield model used by the Boise and Payette National Forests to evaluate alternative land management scenarios. BOISED is a local adaptation of the R1/R4 sediment yield model developed by the Northern and Intermountain Regions of the U. S. Forest Service for application to forested watersheds associated with the Idaho Batholith (Reinig et al. 1991). The model predicts changes in erosion over time, and adjustments are made to fit the model to geologic parent materials other than granitics.

PURPOSE OF THE MODEL: BOISED can estimate onsite erosion and produces quantified estimates of average annual sediment yields for undisturbed condition, past activities, and proposed future activities. The model can be used to predict natural sediment rates and sediment yield increases that may result from road construction, timber harvest, and forest fire. BOISED models dominant erosion processes, including surface and mass erosion, for each landtype in a watershed to estimate natural sediment yields for undisturbed watersheds and sediment yields resulting from management activities.

METHODOLOGY: The user develops a data input file that contains the following information for an analysis area: acres for each landtype, harvest units, large fires, and miles of road within each subwatershed or drainage. Harvest units, large fires, and road miles must be stratified by landtype. Harvest units must also be stratified by harvest method and yarding method and must include year of harvest. Fire data must also be stratified by burn intensity and include date of fire. Road miles are further stratified by construction activity (e.g., new construction, light reconstruction, heavy reconstruction, reclaimed), level of use (e.g., open, closed), and must also include road gradient and year of original construction. Data are generally obtained from Geographic Information System (GIS) data based on field observations.

ASSUMPTIONS: The Boise National Forest Modified Water Resources Evaluation of Non-point Silvicultural Sources (WRENS) Procedure was applied to all landtypes on the Boise National Forest to generate a list of natural sediment yields and geologic erosion factors for the BOISED sediment yield model. Arnold (1988) completed estimates for natural sedimentation rates and geologic erosion factors for landtypes that exist on parent geologies other than the granitics of the Idaho Batholith, including those on the Payette National Forest.

Basic erosion rates for road construction and road management were estimated based on the relative amount of soil disturbance compared to new construction.

Sediment from logging, fire, and roads that is delivered to the stream system, is delivered in the same year erosion occurs. *Not all sediment is necessarily* delivered to streams, nor is it *all* necessarily delivered in the same year as erosion occurs. It is important to consider the mitigation measures and/or project design features for each specific action being modeled (for example, the use of Riparian Conservation Area buffers on timber harvest units) when evaluating the actual or likely sediment inputs from an action versus the modeled inputs.

LIMITATIONS: The BOISED program is intended to be used within small forested watersheds approximately 1–50 square miles (mi^2) (32,000 acres) in size. These boundaries may vary from

the watershed (5th field Hydrologic Unit Code [HUC]) to less than the drainage (7th field HUC), depending on the project and the geography of the area. The importance lies in modeling within the recommended spatial parameters of the model (1–50 mi^2).

The BOISED model simplifies for analysis an extremely complex physical system. It was developed from empirical data supplemented by extrapolation based on professional judgment and our current understanding of erosion and sediment transport processes on forested lands (Reinig et al. 1991).

Using the model as a highly reliable predictor of absolute quantities of sediment delivered to streams at specific times is inappropriate. Model results are only appropriate for comparing alternative management scenarios within a watershed (Here, the term "watershed" is used to describe the drainage in which modeling occurred.) (Potyondy and Burton 1992).

BOISED model outputs have error bands of at least ±100%, and they might be as high as ±250% (Potyondy and Burton 1992).

Sediment yield increases that differ by >20% are probably different enough, in terms of relative land disturbance, to be observable on the ground (Potyondy and Burton 1992).

The geomorphic threshold is based on watersheds sampled on the Clearwater National Forest and has never been field tested on the Payette National Forest; therefore, that portion of the model's output should not be applied on the Payette National Forest (Potyondy and Burton 1992). The sediment routing component is cited as "the weakest part of the model" and also should not be applied on the Payette National Forest (Potyondy and Burton 1992). The routing coefficient is a very broad-based value, derived for the average of many stream systems, and may not accurately reflect sediment transport characteristics of the particular stream system in question (Reinig et al. 1991).

STRENGTHS: The BOISED model is based on sound research data and produces results that accurately reflect our understanding of how real-world erosional processes work. The model correctly depicts relative proportional differences between disturbed and undisturbed conditions for proposed land-disturbing activities. Alternatives with large amounts of on-the-ground land disturbance have higher modeled sediment yields than alternatives with little land disturbance (Potyondy and Burton 1992).

DATA STORAGE: Data files are stored electronically on the hydrologist's computer hard drive and in hard copy with each project record. However, BOISED output can be reproduced at any time, provided the data input file and the BOISED software is available, so it is not necessary to retain copies electronically or in hard copy format.

OUTPUT: Output data from the BOISED model that are recommended for use on the Payette National Forest are as follows:

- Natural Sediment Yield—A table listing each landtype within the watershed and the respective acres, square miles, natural sediment yield, total landtype natural sediment yield, average landtype slope, and surface and mass sediment delivery ratios, as well as the geologic erosion factor assigned for each landtype
- Average Natural Sediment Yield—The total natural sediment rate divided by the square miles within the watershed (tons/square mile/year)

- Average Natural Sediment Yield to the Critical Reach—The total natural sediment rate to critical reach divided by the square miles within the watershed (tons/square mile/year)
- Timber Harvest Sediment Yield—Estimated sediment production from logging for each of the first three decades following the specified current year
- Fire Sediment Yield—Estimated sediment production from fire for each of the first three decades following the specified current year
- Roading Sediment Yield—Estimated sediment production from road construction activities for each of the first three decades following the specified current year
- Sediment Yield Summary Table—Summarized sediment yield, in one table, from all sources for 10 years prior to implementing the current project and for 10 years post-implementation. Total average annual sediment yield for each activity (e.g., logging, fire, roading) is listed in tons per year. This is the most useful output for most users.
- Total Management-Induced Sediment at Mouth—Total Delivered Sediment multiplied by the routing coefficient from page one of the output data
- Annual Percent Increase Over Natural Sediment—Projected sediment yield for any single year
- Three-year Running Mean Percent Increase Over Natural Sediment—Comparison of sediment yield from different management scenarios

5.1.2 Area of Analysis

Drainages at less than the subwatershed (6th field HUC) scale were chosen as the area for sediment analyses, as the project area spans at least four subwatersheds but only completely encompasses one. Drainages were delineated in GIS and BOISED modeling runs done for each of the eight drainages determined by the district hydrologist to be most impacted by, and representative of, project activities. A map of these drainages is included in the *Water Resources Specialist Report* (Vining, forthcoming). The areas analyzed are within the recommended limits of the model (1–50 mi^2), ranging from 1.3 to 18.3 mi^2.

5.1.2.1 Road Assumptions

- All forest road gradients were characterized using GIS and on-the-ground knowledge
- Roads with no recorded year of construction were assumed to be built in 1960, when timber harvest was at its peak
- Roads decommissioned prior to 2000 were not included in the analysis and assumed to be contributing no sediment to the system
- Roads were coded as open, closed, or reclaimed according to the most current travel management GIS data unless otherwise known from field data (administrative versus actual use)
- Existing condition run was based on BOISED default values
- Road construction and reconstruction associated with timber harvest will occur in 2012
- Temporary roads will be built in 2012 and reclaimed in 2014
- Constructed roads will become closed roads in 2014
- Road decommissioning will occur in 2014

- Data used for roads input associated with all action alternatives were taken from GIS in February 2010. Any minor changes made to the GIS data since then were not incorporated unless they amounted to more than a 10% change in any given drainage. If a change was significant enough to reflect a change in the output comparisons between alternatives, it was incorporated into the model. The same applied for mechanical treatments and prescribed fire.

Note: Due to the size of this project, it is highly likely that not all activities in any given category will take place within one year; however, it is also impossible to predict the timeline on which activities will occur. Therefore, "lumped" activities are modeled into one year in order to take a consistent approach.

Roads were categorized for input to BOISED as follows:

- For roads with two lines of input variables, the upper line is the existing condition and the lower line denotes coefficients used to model proposed activities.
- Road use was coded as heavy, light, closed, or reclaimed.
- Road mitigation coefficients (Burroughs et al. 1989 and Reinig 1991) were entered using numerical codes for the following factors in Tables 1, 2, and 3, which can help reduce sedimentation from roads.

Table 1. Road obliteration incorporates ripping (decompacting) the road tread, partial-to-full recontour, scatter slash for 50% effective cover, slash/mulch/logs or silt fence at perennial stream crossings, and seed and fertilizer.

Road Segment	Percentage of Total Area	Activity	Activity Reduction (%)	Total Reduction
Cut Slope	55	Recontour/slash/seed	95	0.55 * .95 = 52
Fill Slope	25	Recontour/slash/seed	95	0.25 * 95 = 24
Tread	20	Recontour/slash/seed	95	0.20 * 95 = 19
Totals	100			95%
		Erosion Mitigation Factor (by 3rd year after obliteration)		0.05

Table 2. Road gravelling incorporates adding a gravel tread to an existing native surface road

Road Segment	Percentage of Total Area	Activity	Activity Reduction (%)	Total Reduction
Cut Slope	55	None	0	0.55 * .0 = 0
Fill Slope	25	None	0	0.25 * 0 = 0
Tread	20	Gravel	80	0.20 * 95 = 16
Totals	100			16%
		Erosion Mitigation Factor (upon application of gravel surface)		0.84

Table 3. New road construction incorporates gravel within 200 feet of streams, slash filter windrows on fill slopes, slash/mulch/seed and fertilizer, or hydromulch on cut and fill slopes.

Road Segment	Percentage of Total Area	Activity	Total Reduction
Cut Slope	15	½ to 1 Slope/Mulch/seed	0.15 * 30 = 4.5
Contributing Area	40	Netting/seed mulch/filter	0.40 * 80 = 32
Fill Slope	25	Filter/windrow	0.25 * 80 = 20
Tread	20	Gravel	0.20 * 80 = 16
Totals	100	Weighted Average	73%
		Erosion Mitigation Factor	0.27

5.1.3 Harvest Assumptions

- Harvest activities will be conducted in 2012 (anticipated fall 2011 through fall 2012)
- All harvest activities were modeled using information from the vegetation prescription for each unit, which was obtained from the Timber Management Assistant
- Jammer/cable harvest was modeled as cable harvest
- Other harvest methods modeled include skyline, tractor, and helicopter (aerial)

Note: Due to the size of this project, it is highly likely that not all activities in any given category will take place within one year; however, it is also impossible to predict the timeline on which activities will occur. Therefore, "lumped" activities are modeled into one year in order to take a consistent approach

5.1.4 Prescribed Fire Assumptions

- Prescribed burning will be implemented from 2014 to 2019 and coordinated with Zone Fuels Specialist on reasonable assumptions for timing following timber harvest.
- All fire was modeled as low intensity.
- Burn blocks are large—assumed 60% of any given block actually burned, per West Zone Fuels Specialist.

5.2 FMA PLUS 3

5.2.1 Fire management analyst

MODELING PROGRAM: FMAPlus® Version 3 is a state-of-the-art suite of programs for use by resource managers to inventory and estimate surface and canopy fuel loading and to predict surface and canopy fire behavior and resulting fire effects. FMAPlus® Version 3 enables you to enter field data in user-friendly interface and provides ways to leverage existing data, such as Forest Vegetation Simulator runs, through the use of import capabilities. In addition, inventory data can be generated using a sophisticated Photo Series interface.

PURPOSE OF THE MODEL: FMAPLUS® can identify fire risk, plan prescribed fire, and prioritize fuel treatment

METHODOLOGY: The Crown mass program uses canopy base heights and canopy bulk density characteristics coupled with surface fuel profiles and topographic and environmental information to estimate surface fire behavior, potential crown fire involvement, and first order fire effects (Carlton 2005). Canopy base heights, canopy bulk density, surface fuel profiles, and topographic and environmental information are all inputs that are based upon user-defined fields.

5.2.2 ASSUMPTIONS:

The fire behavior calculations are provided for assessment purpose to compare different fuel profiles that might exist naturally or be created by vegetation prescriptions. The fire behavior and fire effect outputs are based upon user-defined inputs.

5.2.3 LIMITATIONS:

The predicted fire behavior is based on user-defined inputs of canopy base heights, canopy bulk density, surface fuel profiles, and topographic and environmental information. The fire behavior calculations are provided for assessment purpose to compare different fuel profiles that might exist naturally or be created via management actions (Carlton 2005).

5.2.4 STRENGTHS:

FMAPLUS® allows the user to manipulate different environmental and fuel loadings scenarios to model pre- and post-treatment activities.

DATA STORAGE: Data files will be stored on the Fuels Specialist computer hard drive as well as in the Project Record at the Council Ranger District.

OUTPUT: Once data are collected, a wide range of outputs can be generated, including assessments of loading both for surface and canopy fuels. From these assessments, fire behavior outcomes can be generated including canopy fire potential. Display options include graphs and tabular reports, which can be viewed or printed.

5.3 LITERATURE CITED

Arnold, J. F. 1988. A Procedure for estimating natural sediment yields and geologic erosion factors for the Boise National Forest. Boise National Forest, Boise, ID.

Burroughs Jr., Edward R., John G. King. 1989. Reduction of soil erosion on forest roads. USDA Forest Service Research Paper INT-264.

Carlton, D. 2005. Photo series explorer, crown mass, fuel model manager, fuels management anayst. Version 3.0.

Potyondy, J. P., and T. Burton. 1992. Guidelines for the use of the BOISED Sediment Yield Model and the fisheries habitat condition index (HCI) in forest plan implementation on the Boise National Forest. Draft document. USDA Forest Service, Boise National Forest, Boise, ID.

Reinig, L., R. L. Beveridge, J. P. Potyondy, and F. M. Hernandez. 1991. BOISED User's Guide and Program Documentation Version 3.0.1. USDA Forest Service, Boise National Forest, Boise, ID.

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Appendix 6—Riparian Conservation Area Thinning Guides

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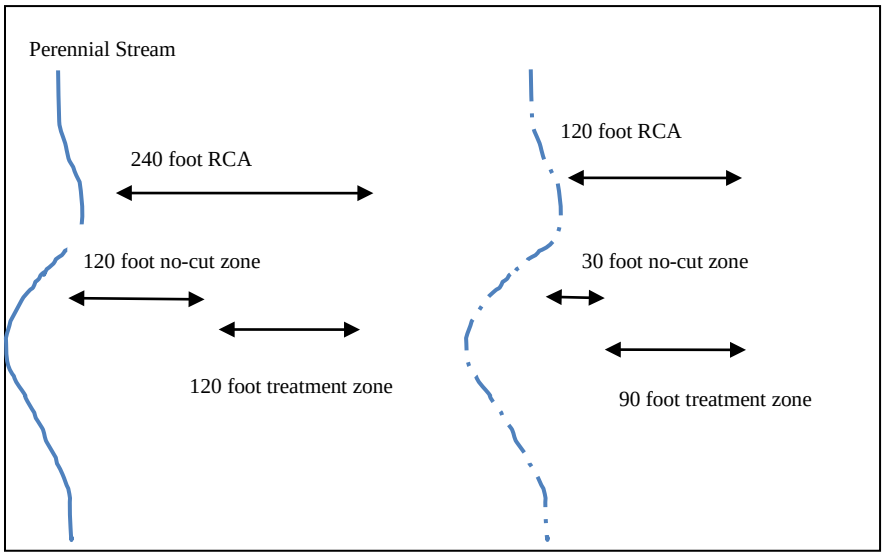
In this project, we will consider treating Riparian Conservation Areas (RCAs). This would apply to upland vegetation that occurs within the outer portion of an RCA, not riparian vegetation itself. This action, on a site-specific basis, is consistent with direction for upland vegetation desired conditions and riparian conservation areas in Forest Plan Appendices A and B, respectively (USDA Forest Service 2003b). Treatments would be limited to thinning where at least a 30% canopy closure would be retained and would be developed in consultation with the district fish biologist and/or hydrologist to ensure riparian function is maintained. We will not treat RCAs in occupied bull trout habitat in the Upper East Fork Weiser River (upstream of Bench Creek) including Dewey Creek (see Chapter 2 and Appendix 10 of USDA Forest Service 2012[1]). The maximum number of RCA acres that could be thinned with each action alternative can be found in Chapter 2 of the FEIS. The following guidelines will be used for RCA layout:

- Only the outer portion of the RCA will be treated; there will be no mechanical treatment in actual riparian vegetation. There will be a no-cut zone along the stream and limited equipment use in the remainder of the RCA.
- For an intermittent stream, thinning and limited equipment use may occur in the outer 90 feet of the RCA (furthest from the stream); the no-cut zone is a minimum 30 feet from the stream. See(Figure 1).
- For a perennial stream, thinning and limited equipment use may occur in the outer 120 feet of the RCA (furthest from the stream); the no-cut zone is a minimum 120 feet from the stream. See (Figure 1).

Figure 1. Diagram of no-cut and treatment zones for perennial and intermittent RCAs designated for thinning



[1] USDA Forest Service. 2012. Mill Creek–Council Mountain Landscape restoration project Draft Environmental Impact Statement. USDA Forest Service, Payette National Forest, McCall, ID.

No harvesting will be allowed in the no-cut zones. Equipment use and harvest within the outer portion of the RCA will be limited as described below:

- Harvest must be accomplished using hand felling and an off-road jammer or skyline yarder to winch trees to existing roads or skid trails. Helicopters could also be used in some areas to remove trees.
- *Existing* roads, skidtrails, and landings within the RCA but require approval by the fish biologist or hydrologist and all skid trails and temporary roads will be obliterated after use. Many times, these existing roads, trails, and landings will be the best or only way to harvest in the RCA or the adjacent unit; however, alternative routes to remove the logs should be explored.
- New road, skidtrail, and landing construction in an RCA may be approved by the fish biologist and/or district hydrologist under the following circumstances:
  - It is the only way to access an RCA stand or adjacent unit.
  - The slope is 20% or less.
  - Existing detrimental disturbance is low (below 15% in the unit).
- New or existing roads, skidtrails, and landings outside the RCA can be used.
- Use of old, existing landings within RCAs (and then subsequently restoring them) is generally preferable to building new landings, but must be approved by the district hydrologist or fish biologist.
- When no old landings are available, plan new landings as far from the stream as possible and obtain approval from the district hydrologist and/or fish biologist if the landing must be located within an RCA.
- Skyline harvest over a stream is allowed only if full log suspension can be achieved over the stream channel.
- All mitigation measures and project design features as listed in Table 2-10 of this FEIS would apply.

Selection:

- **For seeps** (wet areas characterized by riparian vegetation but limited in extent to saturated or wet soils and no channelized base flow): Flag and mark a 30-foot buffer around the edge (measured from the edge of saturated soils AND riparian vegetation). No skidding or harvest may occur within this boundary (Figure 2).
- **For springs, ponds, and wetlands** (characterized by riparian vegetation and a more-or-less year-round base flow that is channelized at some point [spring] or is characterized by flat topography and a shallow water table) (Brooks et al 1991). Flag and mark a 120-foot no-cut zone. Equipment restrictions are the same as for perennial streams as noted above. In some cases, where springs are tributary to a larger perennial stream—and are located close to, or within, the stream's RCA—incorporating them into the larger RCA and buffering around just the source of the spring may make sense (Figure 5).

In some RCAs it will not be possible to harvest up to the 30 foot or 120 foot no-cut zone due to topography or road/trail placement. Equipment may not be capable of reaching that far into the RCA from approved roads and trails. In these instances, the feasible boundary line should be

flagged where it is possible to harvest using a jammer or skyline yarder (i.e., 75 feet away from an intermittent stream instead of 30 feet).

RCAs that are not practical to treat will be buffered at 120 feet for intermittent streams and 240 feet for perennial streams; the maximum acres of RCA to be treated varies by alternative and will be limited to the selected alternative as described in the Record of Decision (ROD) for this project. Intermittent streams that are found to be fish-bearing will be buffered 240 feet.

To minimize effects to bull trout, RCAs in the Upper East Fork Weiser River (upstream of Bench Creek), including Dewey Creek, will not be treated.

During implementation, a map and description of the layout of the RCA portion of the unit would be provided to the hydrologist, or hydrologic technician, for field verification of the RCA treatment areas.

- NOTE: After the 2010 floods, many stream channels in the project area are likely to be damaged and altered, either by excess deposition or erosion/incision. As RCAs are evaluated for treatment, buffer off the outer edge of the disturbed stream bank/scoured area if damage (i.e., raw, steep banks) to the channel has occurred (Figure 4). If the RCA has experienced excessive erosion from side slopes (e.g., overland flow, new or frequent gullies) do not consider the RCA a candidate for treatment or contact the fish biologist and/or hydrologist for a field visit. In addition, ephemeral channels may have “blown out” (Figure 4), while others remain intact (Figure 5). Please create unit boundaries that protect existing vegetation and “bank trees” along these channels. No RCA buffer is required. If you are unsure whether a channel is intermittent or ephemeral because of recent erosion, contact the hydrologist and/or fish biologist.

Figure 2. Seep—no channelized flow and dries up by mid-summer

Figure 3. Spring (source)—channel flowing right to left

Figure 4. Note newly-incised channel, likely an ephemeral channel before the last flood event. If these are frequent, and evidence of overland flow and erosion from side slopes is present, a Riparian Conservation Area may not be a good candidate for treatment.

Figure 5. The two photos above show ephemeral channels—no damage, no defined bed and bank

Implementation:

All work (i.e., harvesting, skid trail and landing rehabilitation, slash chipping) should occur within the same season. In areas (i.e., Lower East Fork or Cottonwood Creek) where landings will be located along the main road within an RCA, hand-processing (limb and top) trees at smaller landings located atop cut slopes would be preferable to loading logs from the top of the bank to trucks on the main road so as to avoid the use of a mechanical processor and the necessity of a larger, constructed landing that would likely remove trees within the no-cut zone.

In certain cases, the main road in an area may be located on the outer edge of the RCA (between 200 and 240 feet for perennial or 100 and 120 feet for intermittent). In most cases it would be fine to use this road as the outer RCA boundary—pulling timber up to the road and harvesting above the road like a "regular" unit. *However, the layout crew should coordinate with the fish biologist or hydrologist to ensure there are no site-specific concerns and specific mitigations, such as erosion control at relief culverts and on bare sections of fill slope, may be recommended.*

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Appendix 7—
Payette National Forest Land and Resource Management Plan
Appendix A

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INTRODUCTION

Appendix A contains the mapping criteria, classification descriptions, and desired condition tables for vegetation outside of designated wilderness areas. There are separate tables and/or narratives that relate to: (1) desired conditions for separate components of forested vegetation, (2) desired conditions for woodland and shrub types, and (3) desired conditions for riparian vegetation, including vegetation in riparian conservation areas (RCAs). Desired conditions do not represent a static state; they are dynamic because the ecosystems we are working with are dynamic. The desired conditions are not something that every acre of the Forest at every point in time will possess—there will always be spatial and temporal variability. However, achievement of desired conditions, well distributed across the planning unit, is a long-term goal of Forest management. For these reasons, the desired conditions are to be evaluated at either the 5th field hydrologic unit (HU) or activity area (for snags and coarse woody debris), depending on the vegetation component of interest. A scale other than watershed may be used where it is determined that a different reference area is more appropriate for identifying opportunities for a specific type of treatment. Further details on the development of desired conditions can be found in Chapter 3 of the Final EIS, Appendix B of the Final EIS (Analysis Process), and in the Technical Reports that are part of the project record for Forested Vegetation, Snags and Coarse Woody Debris, and Non-Forest Vegetation.

In many areas, our current conditions deviate strongly from our desired conditions; this deviation creates opportunities for managing vegetation. Even under careful management, though, it may take several decades for these areas to approach desired conditions, and there are steps along that path where managers will have to choose among several approaches to maintain or trend toward desired conditions. There may be many different paths to a common endpoint that meet different management objectives, each with their own set of trade-offs. This will be the challenge of ecosystem management in managing vegetation and trying to achieve desired vegetative conditions. As we move forward in this process, and we learn more from monitoring and scientific research, our desired conditions may change, or we may alter the paths we choose to achieve them. For these reasons, it is not possible to describe a completely prescriptive approach to desired conditions, but merely offer guidance in how to consider desired conditions.

In some cases, there may be exceptions to the vegetative desired conditions. These exceptions may occur as a result of management direction in other resource areas, or when site-specific conditions are not appropriate for the desired conditions. Oftentimes, Management Area direction may have different, but overriding goals and objectives. Each Management Prescription Category (MPC) may also have a different theme as to how we would achieve desired conditions. All of this information needs to be considered when we design our projects. The desired conditions are general conditions that can be modified at the local or project level based on site-specific biophysical conditions.

DESIRED VEGETATION CONDITIONS

Forested Vegetation

Several tables below describe individual components of forested vegetation and their desired conditions. Table A-1 displays the Forested Potential Vegetation Groups. Forested vegetation refers to land that contains at least 10 percent crown cover by forest trees of any size, or land that formerly had tree cover and is presently at an earlier seral stage. Forested vegetation is described using habitat types, which use

potential climax vegetation as an indicator of environmental conditions. At the level of the Forest Plan, forested habitat types have been further grouped into potential vegetation groups (PVGs) that share similar environmental characteristics, site productivity, and disturbance regimes. Additional information on PVGs is available in the section entitled Vegetation Classification and Mapping in this Appendix.

Table A-1. Forested Potential Vegetation Groups[1]

7.1 Potential Vegetation Group
PVG 1 – Dry Ponderosa Pine/Xeric Douglas-fir
PVG 2 – Warm Dry Douglas-fir/Moist Ponderosa Pine
PVG 3 – Cool Moist Douglas-fir
PVG 4 – Cool Dry Douglas-fir
PVG 5 – Dry Grand Fir
PVG 6 – Cool Moist Grand Fir
PVG 7 – Cool Dry Subalpine Fir
PVG 8 – Cool Moist Subalpine Fir
PVG 9 – Hydric Subalpine Fir
PVG 10 – Persistent Lodgepole Pine
PVG 11 – High Elevation Subalpine Fir

[1] Forested vegetation refers to land that contains at least 10 percent crown cover by forest trees of any size or type, or land that formerly had tree cover and is presently at an earlier seral stage.

Tree Size Class

Tree size class is determined by the size of the overstory trees. The average diameter of the trees in the overstory or uppermost tree layer determines the stand's tree size class. A canopy layer has a distinct break in height, and must have a non-overlapping canopy closure of at least 10 percent. A few individual trees (such as relic trees) representing a distinctly different tree size are not recognized as defining a distinct canopy layer if the total canopy cover of those trees is less than 10 percent. Tree size class can also be determined from aerial photos by interpreting the average crown diameter of the overstory trees. For example, if the overstory trees average 22 inches diameter at breast height (DBH), then the stand is classified as a large tree size class, regardless of the size of trees that may occur in understory layers. Within any canopy layer diameter may vary considerably between individual trees.

Tree size class is based on the following diameter groupings:

- Grass/Forb/Shrub/Seedling < 4.5 feet tall
- Sapling 0.1" – 4.9" DBH
- Small trees 5.0" – 11.9" DBH
- Medium trees 12.0" – 19.9" DBH
- Large trees >20" DBH.

Table A-2 displays the desired amounts for each tree size class at the Forest-wide and 5th field HU scales. This table shows, for each PVG, a range in the percent of an area's forested vegetation desired for each tree size class. The range for each size class reflects the dynamic development of trees, considering growth rates, the type and extent of disturbances, and varying growing conditions.

The range in Table A-2 was developed from estimates of the historical range of variability (HRV). The low end of the large tree size class range is based on half the low end of HRV, provided that the minimum value does not fall below 20 percent. The upper end of the range for large trees is equal to the mean HRV value. The 20 percent value is a threshold that represents the minimum percent of a landscape area retained in the large tree size class because it is deemed necessary for assuring the viability of terrestrial wildlife species. The range for the Grass/Forb/Shrub/Seedling growth stage is based on the range of large trees and the time interval needed for this growth stage to advance to the next tree size class. The information presented in Table A-2 represents the full range of desired conditions for tree size classes encompassed by all Management Prescription Categories.

Table A-2. Forest-wide Range of Desired Size Classes Expressed as Percentage of Forested Vegetation Within Each PVG
(Includes forested vegetation in RCAs)

Tree Size	PVG 1	PVG 2	PVG 3	PVG 4	PVG 5	PVG 6	PVG 7	PVG 8	PVG 9	PVG 10	PVG 11
G/F/S/S	1 – 18	5 – 7	9	14 – 15	3 – 7	7 – 9	7 – 16	15 – 17	13 – 15	16 – 23	9 – 15
Saplings	2 – 12	3 – 7	9	7 – 9	3 – 7	7 – 9	11 – 15	11 – 15	8 – 15	11 – 16	14 – 15
Small	2 – 18	5 – 21	18 – 27	19 – 22	4 – 22	11 – 27	21 -- 22	22 – 23	17 – 22	46 – 48	19 – 22
Medium	3 – 29	7 – 35	23 – 36	24 – 36	7 – 30	18 – 36	32 – 36	28 – 29	25 – 29	20	22 – 38
Large	24 – 91	30– 80	20 – 41	20 – 34	33 – 84	20 – 56	20 – 21	20 – 21	20 – 37		20 – 27

Similar to Table A-2, Table A-3 displays a portion of the desired ranges for the Grass/Forb/Shrub/Seedling and large tree size classes at the Forest-wide and 5th field HU scales. This table shows only that portion of the range that falls within the estimated HRV and thus presents only the HRV portion of desired condition range that is displayed in Table A-2. The low end of the large tree range is based on the low end of HRV, provided that the minimum value does not fall below 20 percent. The upper end of the range for large trees is equal to the mean HRV value. The upper end of the desired condition range is the same in Tables A-2 and A-3. The 20 percent minimum value in Table A-3 is the same as that shown in Table A-2 -- it represents the minimum percent of a forested landscape area that should remain in the large tree size class to ensure the viability of terrestrial wildlife species. The range for the Grass/Forb/Shrub/Seedling growth stage is based on the range of large trees and the time interval needed for this growth stage to advance to the next tree size class. The ranges in tree size classes in Table A-3 displays the desired condition encompassed by all Management Prescription Categories except MPC 5.2.

Table A-3. Desired Percentage Ranges for Size Classes of Forested Potential Vegetation Groups, Outside of MPC 5.2 (Includes forested vegetation in RCAs)

Tree Size	PVG 1	PVG 2	PVG 3	PVG 4	PVG 5	PVG 6	PVG 7	PVG 8	PVG 9	PVG 10	PVG 11
G/F/S/S	1 – 12	4 – 5	9	14 – 15	3 -- 4	7 – 8	7 – 16	15 – 17	13	16 – 23	9 – 15
Large	47 – 91	59– 80	23 – 41	20 – 34	66 – 84	28 – 56	20 – 21	20 – 21	31 – 37	20	20 – 27

Note: References to PVG 10 in the above table is to be applied to the Medium Tree Size Class (overstory trees average diameter ranges from 12.0 to 19.9 inches diameter breast height). The overstory trees in PVG 10 stands (persistent lodgepole) generally do not attain an average diameter within the large tree size class (≥ 20.0 inches diameter breast height) even though individual trees may equal or exceed 20 inches in diameter.

Table A-4 displays a portion of the desired ranges for the Grass/Forb/Shrub/Seedling and large tree size classes at the Forest-wide and 5th field HU scales. This table shows only that portion of the range that falls outside of the estimated HRV and thus presents only a portion of the desired condition range that is displayed in Table A-2. The part of the desired condition range applies to those areas allocated to Management Prescription Category 5.2 where timber production is an emphasis. The low end of the large tree size class range in Table A-4 is the same as in Table A-2 -- it is based on half the low end of HRV provided that the minimum value does not fall below 20 percent. The upper end of the range for large trees is equal to the low end of HRV for large trees. It should be noted that for several PVGs the requirement that a minimum of 20 percent of the forested landscape be retained in the large tree size class results in conditions that fall within the estimate Historical Range of Variability. This is true for PVGs 4, 7, 8, 10, and 11 where the low end of the range is at or below 20 percent. The reason for requiring the 20 percent minimum value in Table A-4 is the same as in Tables A-2 and A-3 -- it represents the minimum percent of a forested landscape area that should remain in the large tree size class to ensure the viability of terrestrial wildlife species.

Table A-4. Desired Percentage Ranges for Size Classes of Forested Potential Vegetation Groups, Within MPC 5.2

Tree Size	PVG 1	PVG 2	PVG 3	PVG 4	PVG 5	PVG 6	PVG 7	PVG 8	PVG 9	PVG 10	PVG 11
G/F/S/S	13 – 18	5 – 7	9	15	4 – 7	8 – 9	7	15	13 – 15	16	9
Large	24 – 46	30– 58	20 – 22	20	33 – 65	20 – 27	20	20	20 – 30	20	20

Note: References to PVG 10 in the above table is to be applied to the Medium Tree Size Class (overstory trees average diameter ranges from 12.0 to 19.9 inches diameter breast height). The overstory trees in PVG 10 stands (persistent lodgepole) generally do not attain an average diameter within the large tree size class (≥ 20.0 inches diameter breast height) even though individual trees may equal or exceed 20 inches in diameter.

The desired range of the Grass/Forb/Shrub/Seedling tree size class is also displayed and was developed in the same manner as in the two tables above. The desired range of the Grass/Forb/Shrub/Seedling tree size class varies between the three tables (A-2, A-3 and A-4) because of the percent of large tree size class range associated with MPCs and the time interval needed for trees to develop from the Grass/Forb/Shrub/ Seedling tree size class to the Sapling tree size class.

For example, PVG 7 has a desired range for large trees that is essentially the same regardless of MPC (20 percent in Table A-4 and 20–21 percent in Table A-3); however, the range of the Grass/Forb/Shrub/ Seedling tree size class is limited to 7 percent in MPC 5.2, while in all other MPCs the range varies from 7 to 16 percent. This wider range occurs in the MPCs other than 5.2 because a significant portion of PVG 7 occurs in MPCs (1.2, 3.1, and 4.1). These MPCs emphasize passive management strategies that would generally have the Grass/Forb/Shrub/Seedling tree size class developing into the Sapling tree size class over a longer time period than under active management in MPC 5.2. This time interval is estimated to be three times longer (30 years versus 10 years) under MPCs 1.2, 3.1, and 4.1 than under 5.2. The result is that the range of the Grass/Forb/Shrub/Seedling tree size class is greater in Table A-3 for PVG 7, even though the range of desired large tree size class is essentially the same regardless of MPC. In other PVGs this same relationship may not hold true because either the range of desired conditions for the large tree size class is substantially different, or there is only a small percentage of a PVG in an MPC requiring longer time intervals, or both.

Although current conditions may prevent us from obtaining desired condition for quite some time, over a longer period (perhaps more than 100 years) management actions should result in forested vegetation that is approaching Forest-wide desired conditions for tree size classes, when all of the 5th field HUs are averaged together. The 5th HU is deemed an appropriate analysis unit for evaluating project-level contributions because mid-scale data and other information is generally available or is feasible to generate. This scale also coincides with other scales of analysis that may be undertaken before or as part of project-level planning. The 5th field HU also facilitates a good distribution of desired components across the Forest.

Canopy Closure

As previously mentioned the overstory or uppermost tree layer determines the tree size class, for a stand or other area delineated for management actions. Trees that compose a distinct break in height determine the canopy layer, and these trees must have a non-overlapping canopy closure of at least 10 percent. A few individual trees (such as relic trees) representing a distinctly different tree size are not recognized as defining a distinct canopy layer if the total canopy cover of those trees is less than 10 percent. These trees are instead included with the trees in the size class that are closest to their own size.

Canopy closure classes are based on the following:

- Low = 10-39% canopy closure
- Moderate = 40-69% canopy closure
- High = 70% or more canopy closure

Canopy closure may be determined through ocular estimates from aerial photo interpretation or while conducting stand exams. Canopy cover as expressed here represents total non-overlapping crown closure of all trees in a stand except for trees in the seedling size class. Trees in the seedling size class are used to estimate canopy closure only when they represent the only structural layer present.

For example, if the average diameter of the overstory trees is >20” DBH, then the stand is classified as being in the large tree size class, regardless of what size trees comprise other canopy layers that may be present in the understory. This is to be interpreted such that, in the 5th field HU of concern, the area occupied by stands classified as being in the large tree size class, for each potential vegetation group, should fall within the ranges indicated for each canopy closure class, or show that management actions will assist a PVG in moving towards a size class distribution within the ranges over the long-term.

Table A-5 displays the desired condition for canopy closure for the large tree size class associated with the large tree desired ranges displayed in Table A-3 above. This is the desired condition for all MPCs except 5.2.

Table A-5. Desired Percentage Ranges for Canopy Distribution within the Large Tree Size Class, Represented by Canopy Closure Classes – Outside of MPC 5.2
(Includes vegetation in RCAs)

Canopy Closure	PVG 1	PVG 2	PVG 3	PVG 4	PVG 5	PVG 6	PVG 7	PVG 8	PVG 9	PVG 10	PVG 11
Low	80-100	74 - 94	5 - 25	0 - 14	25 - 45	0 - 20	0 - 14	0	0	0	0 - 16
Moderate	0 -20	6 - 26	75 - 95	87-100	55 - 75	80-100	86-100	51 - 71	51 - 71	81-100	84-100
High	0	0	0	0	0	0	0	39 - 49	39 - 49	0 - 19	0

Note: References to PVG 10 in the above tables are to be applied to the Medium Tree Size Class (overstory trees average diameter ranges from 12.0 to 19.9 inches diameter breast height). The overstory trees in PVG 10 stands (persistent lodgepole) generally do not attain an average diameter within the large tree size class (= 20.0 inches diameter breast height) even though individual trees may equal or exceed 20 inches in diameter. Canopy closure classes are as follows: Low is 10-39%; Moderate is 40-69%; and High is >70%.

Table A-6 displays the desired condition for canopy closure for the large tree size class associated with the large tree desired ranges in Table A-4 above. This is the desired condition for MPC 5.2.

Table A-6. Desired Percentage Ranges for Canopy Distribution within the Large Tree Size Class, Represented by Canopy Closure Classes – Within MPC 5.2

Canopy Closure	PVG 1	PVG 2	PVG 3	PVG 4	PVG 5	PVG 6	PVG 7	PVG 8	PVG 9	PVG 10	PVG 11
Low	80-100	4-24	0-20	0-20	3-23	0-20	23-43	0	0	0	57-77
Moderate	0 -20	76-96	80-100	80-100	77-97	80-100	57-77	30-50	30-50	81-100	23-43
High	0	0	0	0	0	0	0	50-70	50-70	0 - 19	0

Note: References to PVG 10 in the above tables are to be applied to the Medium Tree Size Class (overstory trees average diameter ranges from 12.0 to 19.9 inches diameter breast height). The overstory trees in PVG 10 stands (persistent lodgepole) generally do not attain an average diameter within the large tree size class (≥ 20.0 inches diameter breast height) even though individual trees may equal or exceed 20 inches in diameter. Canopy closure classes are as follows: Low is 10-39%; Moderate is 40-69%; and High is >70%.

Although current conditions may prevent us from obtaining desired condition for quite some time, over a longer period (perhaps more than 100 years) management actions should result in forested vegetation that is approaching Forest-wide desired conditions for canopy closure, when all of the 5th field HUs are averaged together.

Species Composition

Table A-7 displays the desired condition ranges for forested vegetation species composition at the Forest-wide scale. Scales below the Forest-wide level are not expected to mirror these values because of the specific mix of habitat types that are present in individual analysis areas. For example, for PVG 1, the desired range of 96-99 percent ponderosa pine would be attained when evaluated at the Forest-wide scale.

The remainder of PVG 1, up to 4 percent of the area, would be any other combination of tree cover. For an individual 5th field HU, the proper species "mix" would be determined by the dominant management prescription categories (MPCs) for that watershed, and other concerns such as wildlife or wildland/urban interface.

Table A-7 represents the Forest-wide desired species composition across all size classes, as adapted from the Historical Range of Variability of the Idaho Southern Batholith Ecosystem (Morgan and Parsons 2001). Individual species represented by an asterisk (*) were not explicitly modeled during the development of the Historical Ranges of Variability. They were not included because they occur in habitat types that represent only a minor part of the PVGs within the Idaho Southern Batholith, or because of little information known about their historical occurrence within a PVG. This latter reason was often the case with quaking aspen.

The appropriate species composition for the 5th field HU being analyzed may vary from this table based on the mix of habitat types present. For project application it is necessary to determine the mix of habitat types that comprise the PVGs within the 5th field HU analysis area. For this usually more limited set of habitat types, describe the desired species composition that will achieve the goals of having landscapes dominated by early seral species that are better adapted to site conditions, and are usually more resilient to disturbances such as fire. The desired range of species in Table A-7 is evaluated for Forest-wide monitoring.

Table A-7. Desired Percentage Ranges for Species Composition of Forested Potential Vegetation Groups, For Forest-wide Evaluation

Species	PVG 1	PVG 2	PVG 3	PVG 4	PVG 5	PVG 6	PVG 7	PVG 8	PVG 9	PVG10	PVG11
Aspen	*	*	1-11	4-13	*	*	6-11	*	*	*	*
Lodgepole pine		*	*	10-20	*	1-5	28-42	25-34	29-37	82-94	18-25
Ponderosa pine	96-99	81-87	26-41	*	80-88	23-41	*				
Western larch					0-1	15-29	*	9-16	*		
Whitebark pine										*	32-47
Douglas-fir	0-2	10-16	47-69	66-81	7-17	15-25	24-34	23-37	*	*	
Englemann spruce					*	0-2	3-5	10-17	28-33	*	8-13
Grand fir					0-1	9-23	*				
Subalpine fir						0-3	12-21	11-17	29-33	*	18-29

Note: Use this table as a reference. For project purposes describe the desired species composition for the 5th field HU based on species composition of the habitat types present within the 5th field HU analysis area. Refer to the appropriate habitat type guide for the analysis area when determining the correct species mix including those species that may occur as accidentals.

Snags and Coarse Woody Debris

Snags and coarse woody debris are much finer-scale elements than vegetation components such as species composition, size class, and canopy closure. As such, they are to be evaluated during project planning for the activity area, which better reflects the scale at which to consider these elements and to plan projects that provide for maintaining or improving trends in snag and coarse wood amounts. The activity area for snags and coarse woody debris is the specific site affected, whether the effects are positive or negative. Actions affecting activity areas that need to be assessed include timber harvest, reforestation, timber stand improvement, and prescribed fire activities.

Snags and coarse wood are known to fluctuate both spatially and temporally. Snags are often found in clumps, whereas coarse wood recruitment over time may form from clumped snags. Coarse wood may move around on the landscape, often resulting in a more even distribution than snags. These tables are not meant to provide an even distribution of snags and coarse wood across every acre of the forested landscape, but to provide numbers that serve as a guide to approximate an average condition for an activity area.

Management actions should result in both short-term and long-term replacement of snags by retaining sufficient number of live trees, including those with broken tops, cavities, lightning scars, dead portions, etc. as future recruitment. Rely on site specific information, normal mortality rates, and experience with mortality of residual trees following vegetation management activities when determining the number of trees needed to provide for future snag recruitment.

Localized differences may also occur. For example, on certain habitat types, such as PVG 7 being managed for lodgepole pine as the early seral species, it may be difficult to have an abundance of material in the greater 20" DBH classes, primarily due to the smaller size generally attained by lodgepole pine trees. There may also be cases where local site conditions do not represent the conditions described by the Potential Vegetation Group. Such situations include broad ecotones between forest and non-forest communities, very shallow or highly disturbed soils like those that have resulted from some past mining activities, or other localized conditions that have affected the site potential. These differences should be documented during project design. Furthermore, although the best available science was used to determine desired condition values, new scientific information and monitoring studies may display that adjustments are needed in the numbers.

On a landscape or watershed level, certain areas can have very high snag/coarse wood numbers, while others may be much lower. At some point in time, areas that have low numbers may have a drastic increase due to a disturbance event, while a young regenerating forest that previously had high snag numbers may not have many current snags, but could have high tonnages of coarse wood left over from the previous stand and its disturbance event. Ecosystems and landscapes are dynamic; our intent is not to create a static condition on every acre, but to incorporate those dynamics into our implementation, while using management tools to improve conditions when necessary, or maintain those conditions that provide for desired components.

When planning an activity, the intent is to either maintain a desired condition, or to trend toward the desired condition. If an area is already within the range of desired conditions, a management action should either keep the area within the desired ranges, or when the action results in moving outside the range, a mechanism to move you back into the range needs to be provided. An example of this would be a prescribed burn that would burn some of the coarse woody debris, but would also create mortality of trees, which would become snags and future coarse woody debris. If an area is above or below the desired range, it may not be possible to meet the desired ranges over the short term. However, actions can be taken to trend toward the desired ranges. This would include leaving some portion of the snags and coarse woody debris that are available, although perhaps not enough to meet desired ranges. Another example is an action that over the long term produces larger size class trees, which would eventually become large snags and coarse woody debris.

Tables A-8 and A-9 display the desired ranges for snags and coarse woody debris that contribute toward wildlife habitat and long-term soil productivity.

Desired numbers were developed for each PVG so that the numbers would be reflective of productivities and disturbance regimes. Agee (2002) presents several diagrams that depict the spatial and temporal variability found in snag/coarse wood numbers, according to the fire regimes of different forest types.

Table A-8. Desired Range of Snags Per Acre for Potential Vegetation Groups

Diameter Group	PVG 1	PVG 2	PVG 3	PVG 4	PVG 5	PVG 6	PVG 7	PVG 8	PVG 9	PVG 10	PVG 11
10" – 20"	0.4-0.5	1.8-2.7	1.8-4.1	1.8-2.7	1.8-5.5	1.8-5.5	1.8-5.5	1.8-7.5	1.8-7.5	1.8-7.7	1.4-2.2
Greater than 20"	0.4-2.3	0.4-3.0	0.2-2.8	0.2-2.1	0.4-3.5	0.2-3.5	0.2-3.5	0.2-3.0	0.2-3.0	NA	1.4-2.2
Total	0.8-2.8	2.2-5.7	2.0-6.9	2.0-4.8	2.2-9.0	2.0-9.0	2.0-9.0	2.0-10.5	2.0-10.5	1.8-7.7	2.8-4.4
Minimum Height	**15'**	**30'**	**30'**	**30'**	**30'**	**30'**	**30'**	**30'**	**30'**	**15'**	**15'**

Note: This table is not meant to provide an even distribution of snags across every acre of the forested landscape, but to provide numbers that serve as a guide to approximate an average condition for an activity area.

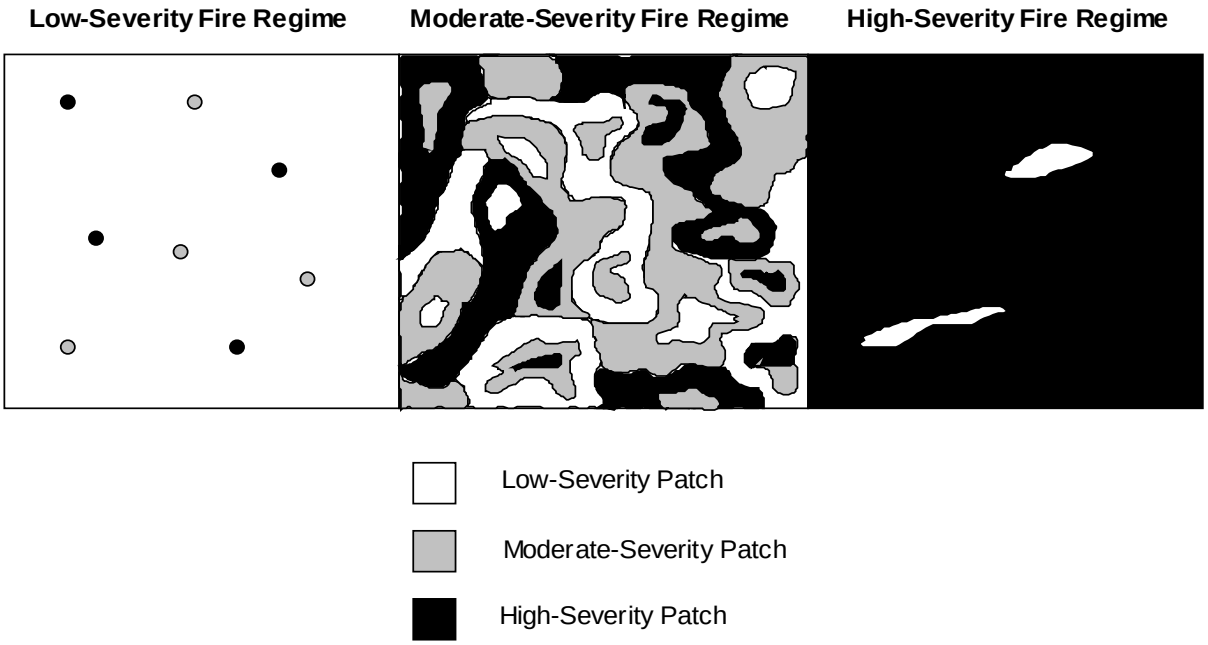
According to Agee, the landscape ecology of historical fire regimes is a function of place. Low-severity fire regimes had small patches and little edge, while high-severity regimes had the largest patch sizes and moderate edge. Moderate- or mixed-severity fire regimes had intermediate patch sizes and maximum amounts of edge. See Figure A-1.

Table A-9. Desired Range of Coarse Woody Debris, in Tons Per Acre, and Desired Amounts in Large Classes for Potential Vegetation Groups

Indicator	PVG 1	PVG 2	PVG 3	PVG 4	PVG 5	PVG 6	PVG 7	PVG 8	PVG 9	PVG10	PVG11
Dry weight (Tons per ac.) in Decay Classes I and II	3 – 10	4 – 14	4 – 14	4 – 14	4 – 14	4 – 14	5 – 19	5 – 19	5 – 19	5 – 19	4 – 14
Distribution[1] >15"	>75%	>75%	>65%	>65%	>75%	>65%	>50%	>25%	>25%	>25%	>25%

Note: The recommended distribution is to try to provide coarse wood in the largest size classes, preferably over 15" in DBH, which provide the most benefit for both wildlife and soil productivity. This table is not meant to provide an even distribution of coarse wood across every acre of the forested landscape, but to provide numbers that serve as a guide to approximate an average condition for an activity area.

Figure A-1. Patch Dynamics of Fire Regimes (Agee 1998)

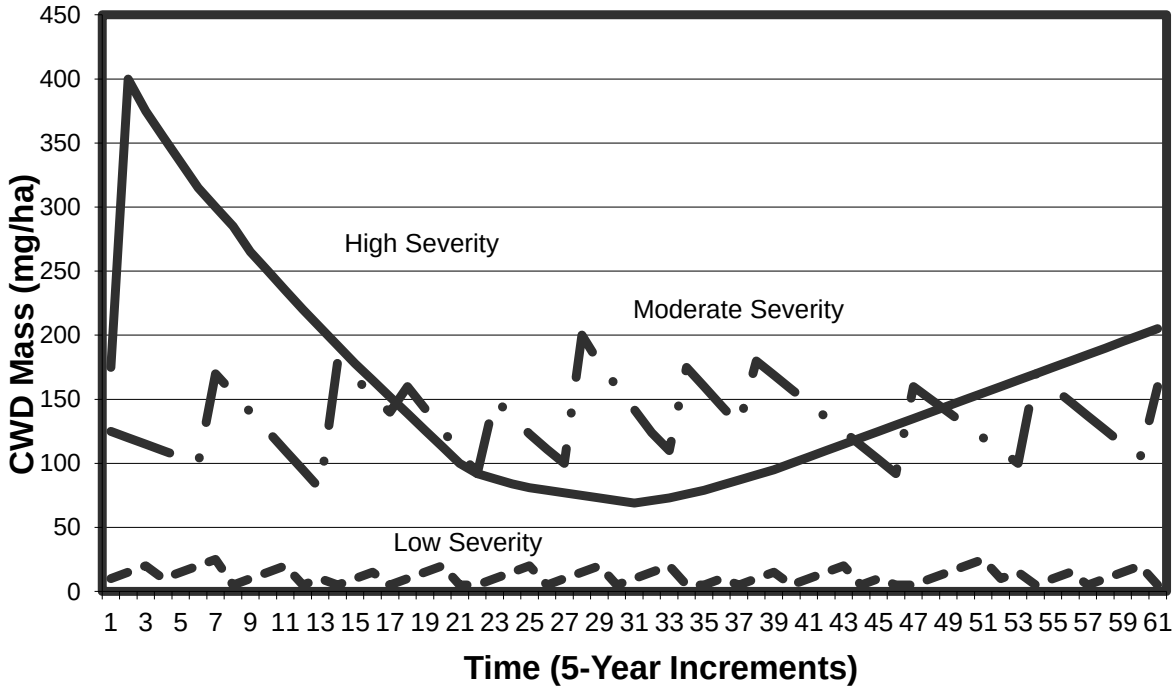


Agee (2002) also discusses how coarse woody debris dynamics (snags plus logs) have historically varied by fire regime (Figure A-2). In low-severity fire regimes, frequent, low-intensity fires limited coarse woody debris. His graph displays the fluctuations found in low-severity fire regimes, where levels will reach a peak, and then cycle downwards. As this graph displays, the peaks may be as high as 30-35 mg/ha (approximately 13-16 tons/acre), and the lows could be less than 1 mg/ha (approximately 0.5 tons/acre). The average on these graphs is probably somewhere around 5 tons (Graham pers. comm. 2001). Although fires were frequent, they rarely affected every acre. In moderate-severity fire regimes, fires both consumed and created coarse woody debris several times a century (Agee 2002). In high-severity fire regimes, a "boom-and-bust" dynamic operated: substantial coarse woody debris creation after a stand replacement fire, followed by a century or more without further substantial input.

These graphics represent well the spatial and temporal cycling of coarse woody debris and the patch dynamics at which they operate. Therefore, it is important to understand the dynamics of the particular PVG that a project is in, to best determine desired levels. In some PVGs, snags and coarse woody debris come as pulses over time (see Figure A-2). There may be little dead material available until a disturbance event, at which time levels may far exceed these desired conditions; over time levels will approach desired conditions, eventually recycling back to the first condition with little dead material.

Although snags and coarse woody debris are managed at the activity area, it is useful to have some knowledge of the larger landscape area to assist in determining the appropriate number and amount that fall within the desired ranges described in Tables A-8 and A-9. For example, in a watershed that has had large recent fires, there are probably an abundance of snags, therefore, project contributions may not be as important. In a heavily managed watershed, project contributions to snag and coarse wood levels may be more important than in a watershed with little active management. Areas with many roads may have higher impacts to snags from firewood gathering activities; therefore, scheduled projects may need to contribute higher levels within the desired range, to balance out effects that may or may not be directly related to the project.

Figure A-2. Temporal Cycling of Coarse Woody Debris by Fire Regime (Agee 2002)



To assist in determining the appropriate amounts of snags and course wood to manage for, it is also important to utilize the historical fire regimes that are typically found in each PVG. Table A-10 illustrates the historic fire regime by PVG.

Table A-10. Historical Fire Regimes For Forested Potential Vegetation Groups

Potential Vegetation Group	Historical Fire Regime
1-Dry ponderosa pine – Xeric Douglas-fir	nonlethal
2-Warm, dry Douglas-fir – moist ponderosa pine	nonlethal
3-Cool, moist Douglas-fir	mixed1-mixed2
4-Cool, dry Douglas-fir	mixed1-mixed2
5-Dry grand fir	nonlethal-mixed1
6-Cool, moist grand fir	mixed1-mixed2
7-Warm, dry subalpine fir	mixed2
8-Warm, moist subalpine fir	lethal
9-Hydric subalpine fir	lethal
10-Persistent lodgepole pine	lethal
11-High elevation subalpine fir	mixed2

Many of our forest stands will not be able to meet desired conditions for many decades. In many instances, the desired conditions cannot be met at this point in time, or within the 10-15 year planning period. The desired conditions presented in Tables A-8 and A-9 may not occur in young and many intermediate aged stands. This is part of the temporal variability in the numbers of snags and coarse woody debris. As we move toward desired conditions in large tree size, canopy closure, and species composition, so will we also move toward the desired conditions for snags and coarse wood. An area or group of stands may be within desired conditions in this 50-year period, and in the next 50-year period they may fall outside the range of desired conditions, while an adjacent area moves into the desired condition ranges. Vegetation within landscapes is dynamic, and it is anticipated that desired conditions will be achieved in a dynamic fashion.

In seedling, sapling, and small tree size stands, it may be difficult to have large-diameter snags and coarse woody debris. In this case, some of the tonnage and snag numbers can be in smaller size classes. However, it is not expected that the total amounts will be made up in smaller size classes. But there will be opportunities to trend toward the desired ranges. An example would be in a stand dominated by 6”-12” DBH trees. In a thinning operation, we would want to leave some distribution of material that falls within the range of size classes available, with preponderance toward the larger (12” DBH) trees. However, the amount of material retained that is less than 6” diameter should be balanced against the fire hazard that it, and the finer material that often comes with it, may create.

Several different factors determine the potential fire hazard created by surface fuels including kind, depth, continuity, extent, connectivity to overstory vegetation, and adjacent fuels. The risk of creating a potentially hazardous condition should also be considered relative to the management objectives for the area. For example, the willingness to accept risk associated with retaining material in the smaller class may be much different for a wildland/urban interface area than in an isolated site adjacent to wilderness. In addition, juxtaposition of the area within the landscape relative to fuel breaks and vegetative mosaics can help frame risk to the landscape at large. In a stand of primarily 3”-6” DBH trees, it would be difficult to come close to desired ranges based on concerns about that sized material. In these cases, our activities should reflect a trend toward creating larger material, which ties in with the desired conditions for large trees as well. For these reasons, we have included size class distributions for both snags and coarse woody debris.

Another reason to reduce reliance on small size classes for coarse woody debris is that our primary objective is to provide the majority of the wood in the large (>15” diameter) size class, as this material is retained on site longer. As stated above, some small and intermediate stage stands will not have the larger material available, and the expectation is not to compensate with an abundance of material in the small and medium size classes. However, if that is all there is available, some material should be left in those size classes to assist with long-term soil productivity. Brown et al. (2001) indicate that on sites where most of the coarse wood loading is comprised of larger pieces (>15” diameter), there is less of a hindrance to using prescribed fire. Conversely, leaving excessive material in the 3-6” diameter size class could hamper prescribed fire efforts in the future by creating conditions where fire would not achieve desired effects.

Spatial distribution of snags and coarse wood is also important. It would not be desirable for all the dead material in a watershed to be clumped into one corner, and the remainder of the area to have very little or no material. Snags are generally found in clumps, and the watershed would have groups of clumps throughout. This is why the activity area was chosen as the distribution unit. Within an activity area, snags should be provided in patches or more uniformly, depending on what is appropriate for the PVG. Snag patches should be distributed across the activity areas rather than clumped together in a portion of the activity area. Coarse woody debris is generally somewhat more evenly distributed. Within an activity area, distribution for coarse wood should reflect historical disturbance regimes appropriate for the PVG. When implementing a project, document how the project maintains or trends toward the desired conditions.

Management treatments may not produce all the dead material in the amounts and/or decay classes desired in a single action. However, treatments should be designed to provide structural, compositional, and functional elements that contribute to long-term sustainability of snags and coarse wood. In many cases, actions will consume coarse wood (e.g., prescribed fire). However, if the action results in the development of large trees, this will contribute to providing the desired levels of large snags and coarse woody debris over time.

Historical fire regimes, particularly the non-lethal and mixed1 regimes, continually recycled material. Larger material may take several fire cycles before it is fully consumed. This constant recycling also helps to provide a variety of decay classes, another important component of achieving desired conditions. Some wildlife species prefer hard snags, while others prefer those with more decay. Therefore management actions should result in a variety of snag and coarse wood decay classes. Only decay classes I and II count towards the desired amounts, to provide for continual recruitment into decay class III. The goal is to provide coarse woody debris in decay class III, because this material is eventually incorporated into the soil.

Vegetative Hazard and Wildfire

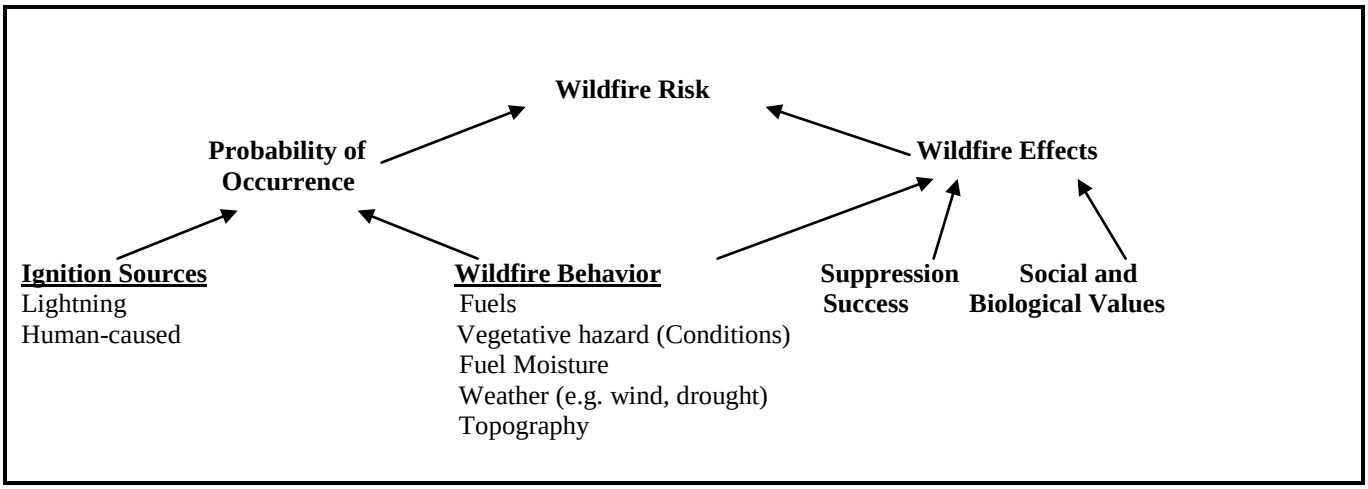
Vegetative desired conditions are directly related to vegetative hazard conditions in that they both define conditions that can occur on the landscape. In non-lethal and mixed1 fire regimes, conditions closest to historical are expected to reduce the risk of lethal wildfires due to the emphasis on larger, widely spaced trees. Ignitions that occur within these conditions are more likely to stay on the ground, increasing the chances of keeping a wildfire small (Omi and Martinson 2002, Wagle and Eakle 1979). This is not the case, however, in the mixed2 and lethal fire regimes. By definition, lethal fires are consistent with the way these regimes operate.

Wildfires, regardless of whether they are characteristic or uncharacteristic, are undesirable in some cases, particularly in wildland/urban interface areas. Although wildfire risks can in part be addressed through the use of defensible space, in many situations watersheds are a more appropriate scale to deal with concerns about firefighter and public safety, as well as the multitude of infrastructures, resources, and values that are often associated with interface. Therefore, the juxtaposition and arrangement of vegetative conditions relative to wildland/urban interface issues were considered at the watershed or 5th field HU scale. This is important because in some cases desired vegetative conditions may contribute to hazard. In particular, the desired conditions for forested vegetation in MPC 5.2 are more hazardous than areas outside of this MPC due to the emphasis on vegetative attributes that promote timber production. Here the large tree desired condition is lower than in other MPCs to allow for a greater mix of all size classes over time. In addition, stand densities are greater to provide sufficient volumes for removal of timber products.

Alhough these conditions increase the hazard associated with lethal wildfires, the risk of these types of events may be reduced using a variety of vegetation management techniques. These techniques can include strategic placement of fuel breaks, surrounding vulnerable areas with vegetative conditions where fires can be more easily suppressed, or arranging treatments in a way that breaks up the continuity of more hazardous conditions (Fulé 2001, Omi and Martinson 2002, Deeming 1990, Finney 2001, Graham et al. 1999). These types of treatments, if strategically located, can be effective without being extensive. Because desired conditions are evaluated at the 5th field HU or watershed scale, treatments to mitigate hazardous conditions to ajacent areas should not prevent achievement of desired vegetative conditions.

Although the vegetative management techniques described above can reduce the risk of lethal wildfire, they address only one (vegetative conditions) of several factors and, therefore, cannot eliminate this risk (Figure A-3). The efforts made by property owners on their own behalf are an essential element in protecting homes in the wildland/urban interface.

Figure A-3. Factors That Contribute To Wildfire Risk
(Adopted from Bachman and Allgöwer 1999)



Shrublands

Desired conditions have been developed for various sagebrush communities (refer to Vegetation Classification portion of this Appendix for descriptions of sagebrush types). Shrublands occur on areas not classified as forestland and where shrub cover is has the potential to be greater than 10 percent shrub cover. Desired conditions are expressed as ranges for the amounts of acres found in the various condition classes (canopy cover classes) for sagebrush. The canopy covers refers only to the canopy cover of sagebrush, and does not include the associated species that may be found co-occurring with sagebrush. To reach the desired ranges, conditions would have to be within these ranges. Forest-wide direction states that we will evaluate the desired conditions at the 5th level HU watershed. All of the desired ranges are Forest-wide desired conditions, and each watershed is the analysis unit that will therefore, contribute to the Forest-wide condition. Although current conditions may prevent us from obtaining desired condition for quite some time, over a longer period management actions should result in non-forested vegetation that is approaching Forest-wide desired conditions, when all of the 5th field HUs are averaged together. The 5th HU is deemed an appropriate analysis unit for evaluating project level contributions, and also ensures a distribution of desired components across the Forest.

Tables A-12 presents the desired condition values for the mountain big sagebrush and basin big sagebrush communities. As an example, in a watershed with 12,000 acres of mountain big sagebrush, 3600-4800 acres would be in the 0-10 percent canopy cover class, 3,600-4,800 acres would be in the 11-20 percent canopy cover class, and 2,400-3,600 acres with a greater than 21 percent canopy cover, but with no more than 600 acres with a canopy cover greater than 31 percent. This would average upward with other watersheds to meet Forest-wide desired conditions.

Often, other shrub species will co-occur with sagebrush species or subspecies. Refer to the Vegetation Classification portion of this Appendix for description of the types. The presence of these other species also has ecological importance in terms of their function and contribution to processes. However, sagebrush species and subspecies in this case are being used as indicators of conditions. If we manage to desired conditions, the other associated shrub species will also respond as we represent of range of conditions on the landscape for sagebrush community types.

Table A-11. Desired Condition Ranges for Mountain Big Sagebrush and/or Basin Big Sagebrush

Mt. Big Sagebrush Canopy Cover Classes	Desired Amounts Of Canopy Cover Classes By Percent Of Area
0-10% canopy cover	30-40% of area
11-20% canopy cover	30-40% of area
21-30%, >31% canopy cover	20-30% of total area, with <= 5% in the >31% canopy cover class

As was recognized for the forested vegetation types, in some cases it may take many years to develop conditions that meet the desired conditions. If a watershed has recently experienced a large extent wildfire, it can be many years before the necessary structural complexity can develop at a landscape level. Conversely, a watershed with little disturbance over many years may all be in a dense canopy cover. Management actions that reduce the canopy covers would be an example of "trending toward" desired conditions, even if only applied on a small scale. When at desired conditions, maintenance would entail management actions that keep the balance of canopy cover classes within the range of desired conditions, or can provide for moving back into desired conditions. As some acres become denser through succession, other acres may be treated to limit overall canopy cover density. Another example is a watershed at desired conditions, but with the canopy cover over 21 percent at the high end of range (30 percent of acres). Although at desired, it may be necessary for management activities to reduce some of the higher canopy covers, to prevent conditions from exceeding those desired ranges and not having enough in the other canopy cover classes. Natural disturbances will certainly play a role also in the movement of acres in and out of canopy cover classes.

Riparian Vegetation

For riverine riparian vegetation, which includes coniferous potential vegetation, refer to Tables A-1 through A-9 (size class (outside MPC 5.2), canopy closure (outside of MPC 5.2), species composition, snags, and coarse woody debris) for the desired conditions. This includes the upland portions of coniferous vegetation found in the RCAs. This information is also related to information presented in Appendix B, Table 1.

Riparian vegetation is dominated by a variety of species, age classes, and structures including deciduous trees, willows, alders, sedges and hydric grasses, depending on stream substrate, gradient, elevation, soil-hydrologic, and disturbance processes. Riparian areas have their own disturbance processes that influence vegetative dynamics, with an almost continual readjustment in successional stages in many areas. Riparian vegetation is also influenced by processes in the uplands, as well as by those upstream in the watershed.

There is a high variability in site conditions relative to the factors discussed above, which will influence riparian vegetation desired conditions in any site-specific location. Therefore, site-specific desired condition determinations are needed.

Grasslands, Montane Shrubs, Wetlands/Marshes, And Other Vegetation Types

Other vegetation types not described in the above sections do exist on the Forest. Desired conditions need to be determined on a project basis based on local and available information. Most of these other types are described in the Vegetation Classification section. Other Forest-wide and Management Area Direction may apply to these types, such as limiting potential establishment and spread of noxious weeds. Some of these communities may also be important as habitats for rare plants.

Spatial Patterns

Recent advances in theory and empirical studies of vegetation and landscape ecology indicate that if goals of maintaining biological diversity across landscapes are to be achieved in the long term, then management needs to consider issues such as variability, scale, pattern, disturbance, and biotic processes. This is a daunting task that requires both a conceptual framework to organize and simplify ecosystem complexity and knowledge of the details of particular systems (Spies and Turner 1999). Elements of spatial pattern—including items such as the amount, proportion, size, interpatch distance, variation in patch size, and landscape connectivity—occur within vegetation types and between vegetation types. Landscape spatial patterns affect ecological processes and can be illustrated through differences in plants species composition and structure, as well as habitat utilization by wildlife. Despite recent interest and progress, it remains challenging to determine for various processes or organisms the conditions under which spatial heterogeneity is and is not important (Spies and Turner 1999). Forested ecosystems often include recognizable patchiness, usually corresponding to physical changes in topography, hydrology, substrate, or as a reflection of large disturbances (Bormann and Likens 1979, Whittaker 1956). Patchiness in the landscape itself can create changes in microclimate at patch edges, displaying demographic fluxes of a large number of individual plant species. This can result in varied plant species distribution and edge- oriented patterns (Matlack and Litvaitis 1999). These effects can subsequently result in changes to ecological processes and habitat utilization.

Within a subwatershed or watershed, there may be several forested vegetation types interspersed with several non-forested vegetation types. Additionally, there may be several MPC designations superimposed upon these vegetation types. It is important to consider the composition of the landscape that contains a project area. At the project level, opportunities exist to consider spatial patterns and how a project can affect the spatial patterns, and what those effects (positive or negative) will be to plant and animal species. During project design, considerations of spatial patterns are dependent upon what conditions are currently present and the overriding management concerns for the area. Generally, these conditions and concerns are site-specific, depending on the appropriate scale at which the project is operating. Repeating patterns of change emerge at landscape scales, and some order can be found through descriptions of successional pathways, patch mosaics, and seral stages that facilitate the understanding and management of vegetation at landscape scales. The challenge and art is to simplify without losing important attributes and to work with simplifications without losing sight of the underlying complexity (Spies and Turner 1999). Another useful way of understanding vegetation dynamics is to characterize it as a shifting mosaic of patches of different ages and developmental stages (Bormann and Likens 1979). The proportion of different age classes or seral stages across a landscape and over time is one of the fundamental characteristics of the vegetation mosaic.

Quantitative methods are available (McGarigal and Marks 1995, Baker and Cai 1992, Turner and Gardner 1991, Turner 1990, Turner 1989, O'Neill et al. 1988) to describe spatial patterns that relate patterns to ecological processes in order to monitor changes through time, to compare different vegetation types, and to evaluate the effects of alternative management options within a spatial context (Spies and Turner 1999). Diaz and Apostol (1992) provide a process for developing and implementing land management objectives for landscape patterns, written specifically to help shape the landscapes created through National Forest land management activities. There is considerable variability in patterns among landscapes; the most productive approach is to make considerations on a case-by-case basis (Matlack and Litvaitis 1999). Subwatersheds may also possess very small amounts of a vegetation type. The majority of the vegetation type may be in an adjoining subwatershed, with only a small portion overlapping into the subwatershed of concern, or only small patches of a vegetation type may be found interspersed throughout. Consideration of whether or not meeting and sustaining a desired condition for such small amounts of vegetation will also depend upon the juxtaposition of these fragments to adjoining vegetation types or subwatersheds and the overriding management concerns of the area.

In some cases, the prevailing landscape pattern has been altered so strongly that determining appropriate landscape patterns may need to be based more on historical information. Historically, fire was an important

disturbance that maintained the dynamics between native grass and big sagebrush dominance. Frequent small fires opened the shrub canopy and aided establishment of native perennial grasses at small scales, creating a mosaic of grass and shrub communities in different stages of development at large scales (Knick 1999). The dynamics of the system changed when cheatgrass invaded the sagebrush ecosystem, providing continuous fuels, compared to more patchily distributed native bunchgrasses. This facilitated fire spread and loss of shrubs, resulting in shrublands fragmented into smaller patches, thus increasing the boundaries and the spaces between patches. Ultimately, many patches did not persist (Knick and Rotenberry 1997). This is an example where patch and pattern have changed and so may no longer provide for the processes and habitat associated with these systems (Knick and Rotenberry 2000, Connelly et al. 2000, Paige and Ritter 1999, Knick and Rotenberry 1995, Rotenberry and Wiens 1980). Consideration of spatial patterns and subsequent management will be particularly difficult in these highly disrupted ecosystems and vegetation types.

Recommended management considerations to positively influence spatial patterns include:

- Maintaining or restoring the full range of age class and patch size distributions,
- Developing future goals for spatial patterns,
- Utilizing management strategies that that can create different levels of edge or interior patches,
- Considering spatial patterns within the prevailing physical template, and
- Considering important locations such as special soils, riparian areas, wetlands, cliffs, talus, caves, and others (Spies and Turner 1999).

VEGETATION MAPPING

Forested Vegetation Mapping

Forested vegetation is described using habitat types, which use potential climax vegetation as an indicator of environmental conditions. Individual habitat types are named according to the dominant climax overstory species in conjunction with the dominant understory species. At the level of the Forest Plan, forested habitat types have been further grouped into potential vegetation groups (PVGs) that share similar environmental characteristics, site productivity, and disturbance regimes. The purpose of these groupings is to simplify the description of vegetative conditions for use at the broad scale. For additional details on the specific habitat types and groupings into PVGs, see Mehl et al. (1998) and Steele et al. (1981).

Forested PVGs were mapped using a modeling process. The Forest was divided into groupings of 5th field HUs that shared similar larger scale environmental characteristics, such as climate and geology. Each one of these 5th field HU groups was modeled separately. Models were based primarily on slope, aspect, elevation and land type association groups. Other information was brought into developing modeling rules within a 5th field HU group depending upon vegetation present in these groups and the availability of information. This additional information included forest inventory information, forest timber strata, cover type information, existing habitat type mapping, cold air drainage models and any other information that may have assisted with the development of modeling rules. Where necessary, some field verification did take place. Modeling rules were developed and processed in Arc Grid. Draft maps were sent to District personnel knowledgeable with the area for review, and refinements made as necessary.

Non-Forested Vegetation Mapping

Existing vegetation or cover type is a seral stage to a climax plant community, and generally results from some form of disturbance. The dominant overstory can vary with this successional change. Cover type classifications typically describe the current dominant vegetative cover or species occupying a site. Cover types can be used to describe seral stage species composition in relation to climax species composition or historical conditions.

Existing non-forested vegetation groups or cover types may approximate the dominant climax vegetation, or in other situations, display variations from past use, management, and/or disturbance. This form of classification recognizes ecological influences that contribute to broad-scale cover type extent and future development. Unlike forested vegetation, shrubland and woodland successional change is not likely to be fully detected at the broad scale using only cover types. This is because the same overstory species may occur as part of several successional stages for the vegetative community. However, a cover type's density or canopy cover can be used as a complimentary indicator to define, in part, successional change, ecological condition, and disturbance regime influence. Similar to forest canopies, shrub or woodland overstories exert a competitive influence on herbaceous understory composition and productivity.

Cover types representing shrublands, grasslands, meadows, etc. were mapped as existing vegetation cover types using a remote sensing classification of LANDSAT developed at the University of Montana (Redmond et al. 1998) or in areas not covered by this project, with the Idaho/Western Wyoming Land Cover Classification developed by Utah State University (Edwards and Homer 1996). Riparian life forms were also determined from the Utah State University data. A more detailed classification of riparian types is not available at the broad-scale.

VEGETATION CLASSIFICATION

Forest Vegetation - Potential Vegetation Groups

PVG 1 - Dry Ponderosa Pine/Xeric Douglas-fir
This group represents the warm, dry extreme of the forested zone. Typically this group occurs at lower timberline down to 3,000 feet and up to 6,500 feet on steep, dry, south-facing slopes. Ponderosa pine is a dominant cover type that historically persisted due to frequent nonlethal fire. Under such conditions, open park-like stands of large, old ponderosa pine dominated the area, with occasional Douglas-fir, particularly at higher elevations. Understories are sparse and consist of low to moderately dense perennial grasses such as bluebunch wheatgrass and Idaho fescue. In some areas, shrubs such as mountain snowberry and bitterbrush dominate. This group is found scattered throughout the Payette National Forest. .

PVG 2 - Warm, Dry Douglas-fir/Moist Ponderosa Pine
This group represents warm, mild environments at low-to-middle elevations, but may extend upward to 6,500 feet on dry, southerly slopes. Ponderosa pine, particularly at lower elevations, or large ponderosa pine mixed with smaller size classes of Douglas-fir, are the dominant cover types in this group. Historically, frequent nonlethal fire maintained stands of large, park-like ponderosa pine. Douglas-fir would occur on moister aspects, particularly at higher elevations. Understories are mostly graminoids such as pinegrass and elk sedge, with a cover of shrubs such as common snowberry, white spirea, and mallow ninebark. This group is found in many places on the Payette National Forest.

PVG 3 - Cool, Moist Douglas-fir
This group represents the cooler extremes in the Douglas-fir zone. The group can extend from 6,800 feet down to 4,800 feet following cold air. Adjacent sites are often subalpine fir. Some areas support grand fir. Ponderosa pine occurs as a major seral species only in the warmest extremes of the group. In cold air areas, particularly where cold air accumulates to form frost pockets, lodgepole pine may dominate. In some areas, Douglas-fir is the only species capable of occupying the site. The conifer cover types that historically dominated are a combination of several factors including fire frequency and intensity, elevation, and topography. Understories in this group are primarily shrub species including mountain maple, mountain ash, and blue huckleberry. Several other species, including scouler willow, thimbleberry, and chokecherry, may occur from disturbance, depending on its severity. Historical fire regimes were mixed (generally mixed1 where ponderosa pine occurs

and mixed2 where other species dominate), creating a diversity of vegetative combinations. Very little of this PVG occurs on the Payette National Forest; what does occur is found in isolated cool-air drainages.

PVG 4 - Cool, Dry Douglas-fir

Douglas-fir is the only species that occurs throughout the entire range of the group. Lodgepole pine may be found in areas with cold air. Quaking aspen is also a common early seral species. Understories are sparse due to the cool, dry environment, and often support pinegrass and elk sedge. Understories of low shrubs, such as white spirea, common snowberry, Oregon grape, and mallow ninebark, occur in some areas that represent slightly different environments across the group. The historical fire regime was primarily mixed1-mixed2, depending on the fuels present at the time of ignition. Organic matter accumulates slowly in this group; so fire effects depend on the interval between fires, stand density and mortality, and other factors. This group may be found in minor amounts at higher elevations in the Douglas-fir zone in other parts of the Forest. In these cases, it is usually found above 6,000 feet on sites that are too cool to support ponderosa pine. Where it is common, it occurs at lower elevations in areas that are beyond the extent of ponderosa pine.

PVG 5 - Dry Grand Fir

The Dry Grand Fir Group is found throughout the distribution of grand fir. It ranges from 4,300 to 6,400 feet in elevation, often on drier upper slopes and ridges. Ponderosa pine and Douglas-fir are common cover types that appear to have been maintained by fire regimes that were historically nonlethal to mixed1. In many areas this group may have resembled PVG 1 and PVG 2, with open park-like stands of large ponderosa pine. Mixed species stands were likely restricted to small micro-sites that burned less frequently. Understories are similar to PVG 2 in that pinegrass, elk sedge, and white spirea are common.

PVG 6 - Moist Grand Fir

This group ranges in elevation from 3,400 to 6,500 feet and represents more moist environments in the grand fir zone. It often occurs adjacent to dry grand fir, and the two may intermix with each other, depending on topography. Ponderosa pine is common at the drier extremes of the group, and lodgepole pine occurs in colder areas. Western larch may also be present as an early seral species. Cover types of Douglas-fir and Engelmann spruce also occur in this group. Understories in this group are shrubby and include blue huckleberry, mountain maple, mountain ash, mallow ninebark, and occasionally pachistima. A conspicuous herb layer is also common, particularly following disturbance. Historical fire regimes were mixed, ranging from mixed1 to mixed2, in part due to the wide environment represented by this group. Where ponderosa pine was maintained as a common seral species, it appears that fires were more often mixed1 because ponderosa pine produces a heavy seed that generally disperses only short distances. In other areas where western larch or Douglas-fir were maintained as common seral species, mixed2 fire may have been more common. Douglas-fir and larch produce lighter seed that can disperse much farther than ponderosa pine.

PVG 7 - Warm, Dry Subalpine Fir

This group is common on the Forest. It represents warmer, drier environments in the subalpine fir zone. Elevations range from 4,800 to 7,500 feet. At lower elevations, this group is found on steep, north-to-east aspects, but shifts to south-to-west aspects as elevation increases. Adjacent sites at lower elevations are Douglas-fir or grand fir, and these commonly intermix where topography controls cold air flow. Douglas-fir is the most common cover type throughout the group. Ponderosa pine may be found at the warmest extremes, particularly where this group grades into the Douglas-fir or grand fir zone. Lodgepole pine or Engelmann spruce may occur at cool, moist extremes, but these cover types rarely dominate. Understories are commonly shrubby and include mountain maple, mountain ash, serviceberry, and scouler willow. Historical fire regimes were generally mixed2, though mixed1 fires may have occurred where ponderosa pine was maintained.

PVG 8 - Warm, Moist Subalpine Fir

This group occurs mainly north of Cascade, primarily on the Payette National Forest and as a relatively minor PVG on the Boise National Forest. It becomes better represented on the Nez Perce National Forest. Elevations range from 5,000 to 7,200 feet but may follow cooler air down to 4,500 feet. This group occurs on moist, protected areas such as stream terraces, toe slopes, and steep, northerly aspects. Cover types include lodgepole pine, western larch, Douglas-fir, and Engelmann spruce. The presence of these and combinations depend on site conditions and past disturbances. Dense shrubs are common in the understory and include Sitka alder, menziesia, blue huckleberry, Utah honeysuckle, mountain maple, mountain ash, and serviceberry. Historical fire in this group was more commonly lethal, though underburns may have occurred occasionally. Ignitions likely occurred in adjacent areas due to the location of this group. Whether these areas burned or not may have depended on weather prior to and at the time of the ignition.

PVG 9 - Hydric Subalpine Fir

Seasonally high water tables control this group, and the extent may be small in some areas depending on the presence of these conditions. Elevations range from 9,000 to as low as 4,500 feet in frost pockets and along cold air drainages. This group most commonly occurs on wet toe slopes, stream terraces, seep areas, and old bogs. Cover types are lodgepole pine, followed by Engelmann spruce and subalpine fir. Early seral conditions usually support lodgepole pine because this species can tolerate intermittent high water tables and cold air that often accumulates. In severe frost-prone areas, lodgepole pine can persist for long periods. In other areas with better cold air drainage, Engelmann spruce and subalpine fir rapidly establish under the lodgepole pine. Understories in this group are primarily dominated by herbs and grasses that require the seasonal influence of a high water table. Shrubs are sparse, though Labrador tea can dominate some sites. Historically, fire was lethal in this group. Like PVG 8, ignitions more likely occurred on adjacent drier slopes, and burning in this group likely depended on weather conditions before and at the time of the ignition.

PVG 10 - Persistent Lodgepole Pine

This group is common throughout the subalpine fir zone. It represents cold, dry subalpine fir sites that range in elevation from over 9,200 down to 5,200 feet in frost-pockets. Lodgepole pine is the dominant cover type, though small amounts of other species may occasionally occur. Understories can be sparse. Generally, grasses and scattered forbs are the most common understory components. Shrubs are sparse and consist mainly of low-growing huckleberries, including dwarf huckleberry and grouse whortleberry. Historically, this group experienced lethal fire, though nonlethal fires may have occurred during stand development. Lodgepole pine is more often non-serotinous in western portions of the Forest and appears to become more serotinous moving easterly. Within the Forest, lodgepole pine may reproduce in areas that experience nonlethal fires. The result is more vertical stand diversity in some areas than is often found where lodgepole pine is mostly serotinous. Over time, the combinations of these low-intensity events, subsequent reproduction, and mountain pine beetle mortality would have created fuel conditions that allowed lethal fires to occur under the right weather conditions.

PVG 11 - High Elevation Subalpine Fir (with whitebark pine)

This group occurs at the highest elevations of the subalpine fir zone and generally represents the upper timberline conditions. It often grades into krummholz or alpine communities. Whitebark pine is a major seral species in this group. Engelmann spruce and subalpine fir are the climax co-dominates. In some areas, whitebark pine serves as a cover for Engelmann spruce-subalpine fir establishment. Understories are primarily forbs and grasses tolerant of freezing temperatures that can occur any time during the growing season. Shrubs are sparse due to the cold, harsh conditions. Historically, the fire regime in this group is characterized as mixed2, though the effects of fires were highly variable. Ignitions are common due to the high elevation, however fuel conditions were historically sparse due to the cold growing conditions and shallow soils. Therefore, fire effects were patchy. Fire regimes are mixed2 with whitebark pine being a major seral component.

Old Forest

"Old forest" is a component of the large tree size class, whereas "old growth" is typically described as a set of characteristics associated with the late successional stage of forested vegetation groups or types. Based on recent research encompassing the central Idaho batholith, old growth late successional stage characteristics were important, but not extensive on the historic landscape (Morgan and Parsons, 2001). However, the large tree component was common (Morgan and Parsons, 2001; Wisdom et al. 2000). Table A-12 (Morgan and Parsons 2001) shows the estimated percent of forested landscapes in the central Idaho batholith that were historically occupied by stands in the large tree size class (medium tree size class for PVG 10, persistent lodgepole pine), and by stands with late successional old growth characteristics. Estimates were developed for each of the 11 potential vegetation groups on the Ecogroup.

The main reason for the large differences between Large Tree percent and Old Growth percent is that vegetation structural conditions in central Idaho developed in conjunction with disturbance processes (fire, insect, disease, wind, etc.) and climate variations. Conversely, late successional old growth characteristics develop in the absence of frequent disturbances (Hamilton et al. 1993). In central Idaho, disturbance is a common occurrence. Historically, forested stands in lower-elevations vegetation groups likely developed large trees and relatively open canopies during mid-successional stages, and these conditions were maintained over time by frequent low-intensity fire disturbance. Dense stands and decadence typically associated with late successional stage conditions (old growth) rarely, if ever, occurred. Thus, historical stands dominated by large and old seral trees like ponderosa pine could be considered old forest, but not as "old growth" under any definition that incorporates a full set of late successional conditions.

Table A-12. Historic Levels Of Central Idaho Stands Occupied By Large Tree Size Classes And Stands With Late Successional Old Growth Characteristics
Appendix 8(From Morgan and Parsons, 2001)

	PVG 1	PVG 2	PVG 3	PVG 4	PVG 5	PVG 6	PVG 7	PVG 8	PVG 9	PVG 10	PVG 11
Percentage of PVG historically in the large tree size class (mean value)	91	80	41	34	84	56	21	21	37	19	27
Percentage of PVG estimated to represent old-growth	0	0	8.5	8.4	0.4	2.5	4	5.5	26	0	1.2

Note: Large tree size class refers to stands where the overstory trees average 20 inches diameter or greater. Medium tree size class refers to stands where the overstory trees average between 12 and 19.9 inches diameter.

The threshold to meet viability for large-tree-dependent terrestrial species has been determined to be 20 percent of the forest stands classified as being in the large tree size class. The 20 percent threshold has been adopted based on several references concerning viability and biodiversity needs for goshawk and other forest-dependent wildlife species that require one or more components of the large tree size class (Fahrig 1997, Graham et al. 1997, Graham et al. 1999, Graham and Jain 1998, Reynolds et al. 1992, Wisdom et al. 2000). This threshold has been incorporated into the desired conditions for forested vegetation PVGs found in this appendix, and into Forest Plan management direction (Wildlife Resources) through the following standard:

> Maintain at least 20 percent of the acres within each forested PVG found in a watershed (5th field HU) in large tree size class (medium tree size class for PVG 10, persistent lodgepole pine). Where analysis of available datasets indicates that the large tree size class (medium tree size class in PVG 10) for a potential vegetation group in a watershed (5th field HU), is less than 20 percent of the total PVG acres, management actions shall not decrease the current area occupied by the large tree size class, except when:
>
> > a) Fine or site/project scale analysis indicates the quality or quantity of large tree size class for a PVG within the 5th field HU would not contribute to habitat distribution or connective corridors for TEPCS and MIS species in short or long-term, <u>and</u>
> >
> > b) Management actions that cause a reduction in the area occupied by the large tree size class would not degrade or retard attainment of desired vegetation conditions in the short or long-term as described in Appendix A, including snags and coarse woody debris.

Other Forested/Woodland Vegetation Types

<u>Aspen</u>

Aspen covers a broad environmental range across the Intermountain Region (Mueggler and Campbell 1982). It grows at elevations as low as 5,000 and as high as 11,000 feet. Aspen occurs both as a seral and climax tree species within its range (Mueggler 1985). Where it is seral, it is an early seral stage of forested PVGs. Throughout these areas, individual stands are relatively small, seldom exceeding 5 acres (Mueggler 1985). Where aspen is seral, it is maintained on the landscape by disturbance. Historically, fire is considered a primary disturbance agent (Jones and DeByle 1985). Fires result in single-aged stands that develop from root suckering. Fire frequencies vary greatly and severities range from low to high. Aspen does not burn readily. However, all

but the lowest severity fires kill aspen because of its thin, uninsulated bark. Therefore, most fire effects in aspen are lethal.

Grassland And Shrubland Vegetation

Grassland Cover Types

Perennial Grass Slopes - This cover type connects with the dry forested cover types, mountain big sagebrush, and bitterbrush groups, and is more prevalent in the north and northwestern foothills and canyonlands of the Ecogroup. It usually occurs between the 10-to-18 inch precipitation zone, on southern and western aspects. The group is predominantly made up of bluebunch wheatgrass. Perennial grasses are dominant on the sites, composing 80 to 90 percent of production. Sandberg bluegrass is a lesser but constant associate. The forb component contains a large number of species, few of which are common throughout. The most common forbs are Indian wheat, shining chickweed, salsify, yarrow, lupine, balsamroot, biscuit root, hawksbeard, fleabane, milkvetch, and phlox. Ground cover is typically greater than 65 percent. This vegetation group can be susceptible to damage under very hot and dry conditions. Stand recovery is very difficult and slow in the Idaho Batholith. Historic fire intervals are frequent (20 years), with typically a mixed1 to mixed2 fire regime, depending upon the amount of Idaho fescue present. This group is highly susceptible to several invaders including annual bromes, rush skeletonweed, yellow starthistle, several knapweeds, dyer's woad, and Dalmatian toadflax.

Perennial Grass Montane - This cover type connects with numerous forested cover types, mountain big sagebrush and bitterbrush groups, and bluebunch communities. It is very highly rated, in terms of ecotone diversity. It usually occurs between the 18-to-30 inch precipitation zone on southern aspects, and 14 to 30 inches on northern aspects. Ground cover is usually greater than 80 percent. Idaho fescue is the predominant grass in this group. Other grass species that occur are slender wheatgrass, sedges, intermediate oatgrass, western needlegrass, and Richardson needlegrass. Forbs compose 40 to 65 percent of overall production. Common forbs are yarrow, bessaya, geum, Indian paintbrush, lupines, phlox, and balsamroot. Historic fire intervals are frequent (20 years) in typically nonlethal to mixed1 regimes. Certain species within the community are susceptible to fire damage under very hot and dry conditions, but recovery occurs in a few years. Trampling damage is minimal to nonexistent and primarily occurs at the higher elevations. Bluegrass is a common invader. This group is highly susceptible to several invaders including annual bromes, rush skeletonweed, yellow starthistle, several knapweeds, dyer's woad, and Dalmatian toadflax.

Shrubland Cover Types

Mountain Big Sagebrush - This cover type connects with the greatest number of other forest, non-forest, and riparian cover types. This type consists of large blocks with a wide range of distribution. This group occurs in the 14-to-18+ inch precipitation zone, on well-drained sites and on soils with a high content of rock or gravel. Structural stage ranges are typically balanced, with high ground cover and few cryptogams. Fire intervals can be frequent, ranging from 20-60 years, with a mixed2 fire regime. Historic vegetation disturbances were related to ungulate grazing of southern exposures, due to less snow and early green-up. Understory forb and grass species can be variable and diverse. Bitterbrush, grey horsebrush, and green rabbitbrush are frequently present. Snowberry is present on moister sites.

Montane Shrub - This cover type is usually interspersed as stringers and patches within the mountain big sagebrush, aspen, and conifer cover types. Its patchiness is strongly related to mesic soils with high water-holding capacity and/or northerly exposures. Typically this group has multiple vegetation layers that are dominated by sprouting species. Species include chokecherry, snowberry, serviceberry, and wild rose. Several other browse species may occur. This group usually has a rich and diverse herbaceous component. These conditions provide extremely diverse wildlife habitats and an important watershed group. Fire intervals are typically 20 to 40 years, with a mixed2 fire regime. Ungulate and grazing disturbance are not uncommon components. Insect and disease may be common, with occasional outbreaks.

Bitterbrush - This type is usually associated with southern to western exposures. Soils tend to be shallow (10 to 20 inches), with stony or rocky loams tending towards sandy textures. Typically bitterbrush occurs in small patches interspersed with the lower ecological thresholds of ponderosa pine and with all the sagebrush types except Wyoming Big Sagebrush. Older stands have a variety of age classes, while younger stands are typically homogeneous in age. In some sites sagebrush may appear as a co-dominant. Fire intervals are seldom, usually greater than 40 years, with a mixed1 fire regime. This group is highly susceptible to cheatgrass and diffuse knapweed invasion. Common understory species are bluebunch wheatgrass, Sandberg bluegrass, junegrass, needle and thread, and Idaho fescue. Perennial grasses make up the largest portion of the composition. Common forbs include yarrow, lomatium, lupine, arrowleaf balsamroot, and milkvetch.

Riparian Vegetation

There are no comprehensive riparian classifications or vegetative community descriptions for the Ecogroup. Hall and Hansen (1997) have developed a riparian habitat type classification for Bureau of Land Management Districts in Southern and Eastern Idaho that includes portions of the South Hills on the Sawtooth. Riparian community type classifications have been developed by Youngblood et al. (1985) for eastern Idaho-western Wyoming, and by Padgett et al. (1989) for Utah and Southeastern Idaho. Due to the lack of comprehensive classification information for our area, the Forest Plan Revision Team chose to use the Utah LANDSAT cover types to describe these communities.

Riverine Riparian
This cover type consists of vegetative communities dominated by conifer species and shrubs. The primary conifers are subalpine fir, Engelmann spruce, limber pine, and Douglas-fir, with some aspen. Other trees and shrubs include Rocky Mountain maple, serviceberry, chokecherry, thinleaf alder, currants, and willows. These communities generally occur on steep slopes and occupy edges of riparian zones with A and B stream channel types. Padgett et al. (1989) and Youngblood et al. (1985) stated that these community types in their areas likely represent successional stages within described forested communities. For this reason, Padgett et al. recommended consulting available forest habitat type classifications for additional information.

Deciduous Tree
This cover type consists of a dominant overstory of black or narrowleaf cottonwood. Associated tree species include thinleaf alder, Rocky Mountain maple, water birch, and aspen. Primary shrub species include chokecherry and willows. Location is generally below 5,500 feet along stream channels in lower canyons. This cover type usually requires a moist and coarse substrate.

Shrub Riparian
This cover type is dominated by willow species. Primary associated tree and shrub species include cottonwoods, swamp birch, thinleaf alder, Rocky Mountain maple, shrubby cinquefoil, and chokecherry. Grasses and forbs include sedges, tufted hairgrass, Geranium, louseworts, and American bistort. This type is found in mid to upper elevations in broad wet meadows and alluvial terraces on relatively low gradients (1 to 3 percent).

Herbaceous Riparian
This cover type is typically found in mountain meadows where soil moisture is abundant throughout the growing season. Principle species include sedges, woodrush, reedgrass, pinegrass, timothy, bluegrass, tufted hairgrass, saxifrage, and fireweed. This type has a wide range of occurrence, typically found in broad flat meadows.

Other Vegetation

Wetlands
Wetlands are those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, wet meadows, seeps, and similar areas. These lands are transitional between terrestrial and aquatic systems. Vegetative species found in wetlands are heavily influenced by local site conditions.

Marshes - This cover type is permanently or semi-permanently flooded and dominated by hydric species located adjacent to small streams, beaver ponds, lakes, and meadows. Sedges are the most common species. This type usually occurs around the 7,000-foot elevation level. Sites are dominated or co-dominated by bulrushes, cattails, woodrushes, or sedges.

Bogs, Fens, and Peatlands – These are wetlands that typically have sub-irrigated cold waters sources. Peatlands are generally defined as wetlands with waterlogged substrates and at least 30 centimeters of peat accumulation (Moseley et al. 1994). The vegetation is often dense and dominated with low-growing perennial herbs (Skinner and Pavlick 1994).

Wet Meadows and Seeps – These are wet openings that contain grasses, sedges, rushes and herbaceous forbs that thrive under saturated moist conditions. These habitats can occur on a variety of substrates and may be surrounded by grasslands, forests, woodlands, or shrublands (Skinner and Pavlick 1994).

Alpine
Alpine habitats are defined as the area above treeline in high mountains. Rocky or gravelly terrain is generally prevalent. Grasses and sedges often form thick sod-like mats in meadows. Most alpine plant species have unique adaptations to survive the harsh conditions of this habitat (Billings 1974). Many plants grow in mats or cushions. Perennials predominate in the alpine floras, as the growing season is often too short for annuals to complete their life cycles (Strickler 1990).

REFERENCES

Agee, James K., 1998, The Landscape Ecology of Western Forest Fire Regimes, *Northwest Science,* Vol. 72, Special Issue 1998, pp. 24-34

Agee, James K., 2002, *Fire as a Coarse Filter for Snags and Logs,* In: Proceedings of the Symposium on the Ecology and Management of Dead Wood in Western Forests, USDA Forest Service, Pacific Southwest Research Station, General Technical Report, PSW-GTR-181

Bachmann, Andreas, and Britta Allgower, 1999, *The Need for a Consistent Wildfire Risk Terminology,* Proceedings from: The Joint Fire Science Conference and Workshop, Volume I, Grove Hotel, Boise, Idaho, June 15-17, 1999, published by the University of Idaho and the International Association of Wildland Fire, pp. 67-77

Baker, William L. and Yunming Cai, 1992, The r.le programs for multiscale analysis of landscape structure using the GRASS geographical information system, *Landscape Ecology,* Vol. 7, No. 4, pp. 291-302

Billings, W. D., 1974, Adaptations and Origins of Alpine Plants, *Arctic and Alpine Research,* Vol. 6, No. 2, 1974, pp. 129-142

Bormann, F.H., and G.E. Likens, 1979, *Pattern and Process in a Forested Ecosystem: disturbance, development and the steady state based on the Hubbard Brook ecosystem study*. Springer-Verlag, New York.

Brown, James K., Reinhardt Elizabeth D, and Kylie Kramer, 2001, *Coarse Woody Debris and Succession in the Recovering Forest,* unpublished manuscript on file at the USFS Rocky Mountain Research Station, Missoula Fire Lab.

Connelly, John W., Michael A. Schroeder, Alan R. Sands, and Clait E. Braun, 2000, Guidelines to manage sage grouse populations and their habitats, *Wildlife Society Bulletin,* Vol. 28, No.4, pp. 967-985

Deeming, John E., 1990, Effects of Prescribed Fire on Wildfire Occurrence and Severity, *Natural and Prescribed Fire in the Pacific Northwest Forests,* pp. 95-104, Oregon State University Press, Corvallis, Oregon

Diaz, Nancy and Dean Apostol, 1992, *Forest Landscape Analysis and Design, A Process for Developing and Implementing Land Management Objectives for Landscape Patterns*, USDA Forest Service, Pacific Northwest Region, R6 Eco-TP-043-92

Edwards, T. and C.G. Homer, 1996, Idaho and Western Wyoming USDA *Forest Service Inventory and Assessment/Gap Vegetation Mapping Project,* Remote Sensing/GIS Laboratories, Department of Geography and Earth Resources, Utah State University, Logan UT

Fahrig, Lenore, 1997, Relative effects of habitat loss and fragmentation on population extinction, *Journal of Wildlife Management*, Vol. 61, No. 3 (1997): pp. 603-610

Finney, Mark A., 2001, Design of Regular Landscape Fuel Treatment Patterns for Modifying Fire Growth and Behavior, *Forest Science,* Vol. 47, No. 2, p. 219-228

Fule, Peter Z., Charles McHugh, Thomas A. Heinlein, and W. Wallace Covington, 2001, *Potential Fire Behavior is Reduced Following Forest Restoration Treatments,* USDA Forest Service Proceedings RMRS-P-22, pp. 28-35

Graham, Russell, 2001, pers. comm., coarse woody debris field trip to Boise Basin Experimental Forest

Graham, Russell T., Alan E. Harvey, Theresa B. Jain, and Jonalea R. Tonn, 1999, *The Effects of Thinning and Similar Stand Treatments on Fire Behavior in Western Forests,* USDA Forest Service, Pacific Northwest Research Station, USDI Bureau of Land Management, General Technical Report PNW-GTR-463

Graham, Russell T. and Theresa B. Jain, 1998, *Silviculture's Role in Managing Boreal Forests,* USDA, Forest Service, Rocky Mountain Research Station

Graham, Russell T., Theresa B. Jain, Richard T. Reynolds, and Douglas A. Boyce, 1997, *The Role of Fire in Sustaining Northern Goshawk Habitat in Rocky Mountain Forests,* Proceedings – Fire Effects on Rare and Endangered Species and Habitats Conference, Nov. 13-16, 1995, Coeur d'Alene, Idaho, International Association of Wildland Fire, c1997, pp. 69-76

Hall, James B. and Paul L. Hansen, 1997, *A Preliminary Riparian Habitat Type Classification System for the Bureau of Land Management Districts in Southern and Eastern Idaho,* USDI Bureau of Land Management, Idaho State Office, Technical Bulletin No. 97-11.

Hamilton, Ronald C. 1993, *Characteristics of Old-Growth Forests in the Intermountain Region,* USDA Forest Service, Intermountain Region, Ogden, Utah

Jones, John R. and Norbert V. DeByle, 1985, *Fire in Aspen: Ecology and management in the western United States,* USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colo. General Technical Report RM-119.

Knick, Steven T, 1999. Requiem for a sagebrush ecosystem *Northwest Science,* Vol. 73, no. 1

Knick, Steven T., and John T. Rotenberry, 1995, Landscape Characteristics of Fragmented Shrubsteppe Habitats and Breeding Passerine Birds, *Conservation Biology*, Vol. 9, No. 5. pp. 1059-1071.

Knick, Steven T. and John T. Rotenberry, 1997, Landscape characteristics of disturbed shrubsteppe habitats in southwestern Idaho (U.S.A.), *Landscape Ecology*, Vol. 12, pp. 287-297

Knick, Steven T., and John T. Rotenberry, 2000, Ghosts of Habitats Past: Contribution of Landscape Change to Current Habitats used by Shrubland Birds, *Ecology*. 81(1), pp. 220-227.

Matlack, Glenn and John Litvaitis, 1999, Dynamic forest mosaics, *Maintaining Biodiversity in Forest Ecosystems*, edited by Malcolm L. Hunter, Jr., pp. 210-233, Cambridge University Press, New York

McGarigal, Kevin and Barbara J. Marks, 1995, *FRAGSTATS: Spatial Pattern Analysis Program for Quantifying Landscape Structure,* USDA Forest Service, Pacific Northwest Research Station, General Technical Report PNW-GTR-351

Mehl, Carolyn A., Robert Steele, Steven Warren, Brad Holt, Jonathan B. Haufler, and Gary J. Roloff, 1998, *The Ecosystem Diversity Matrix for the Idaho Southern Batholith Landscape: A Users Manual,* Boise Cascade Corporation, 1111 West Jefferson Street, Boise, Idaho

Morgan, Penelope and Russ Parsons, 2001. *Historical Range of Variability of Forests of the Idaho Southern Batholith Ecosystem*, Revised Final Report, June 12, 2001

Moseley, Robert K., Robert J. Bursik,, Fred W. Rabe, and Linda D. Cazier, 1994, *Peatlands of the Sawtooth Valley, Custer and Blaine Counties, Idaho*, Cooperative Cost Share Project with the Sawtooth National Forest, The Nature Conservancy, and the Idaho Department of Fish and Game, pp. 1-15.

Mueggler, W.F., 1985, *Vegetation Associations, in Aspen, Ecology and management in the western United States*, USDA Forest Service General Technical Report RM-119, 283 p. Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colo.

Mueggler, Walter F. and Robert B. Campbell, Jr., 1982, *Aspen Community Types on the Caribou and Targhee National Forests in Southeastern Idaho*, USDA Forest Service, Intermountain Forest and Range Experiment Station, Research Paper INT-294

Omi, Philip N., and Erik J. Martinson, 2002, *Effects of Fuel Treatment on Wildfire Severity*, Western Forest Fire Research Center, Colorado State University

O'Neill, R.V., J.R. Krummel, R.H. Gardner, G. Sugihara, B. Jackson, D.L. DeAngelis, B.T. Milne, M.G. Turner, B. Zygmunt, S. Christensen, V.H. Dale, and R.L. Graham, 1988. Indices of Landscape Pattern, *Landscape Ecology* 1:153-162.

Padgett, Wayne G., Andrew P. Youngblood, and Alma H. Winward, 1989, *Riparian Community Type Classification of Utah and Southeastern Idaho*, USDA Forest Service, Intermountain Region, R4-Ecol-89-0.

Paige, Christine and Sharon A. Ritter, 1999, *Birds in a Sagebrush Sea, Managing Sagebrush Habitats for Bird Communities*, Partners In Flight, Western Working Group, 1999.

Redmond, Roland L., Troy P. Tady, Foster V. Fisher, Michele Thornton, and J. Chris Winne, 1998, *Landsat Vegetation Mapping of the Southwest and Central Idaho Ecogroups*, Executive Summary, Contract #53-0261-6-25, Wildlife Spatial Analysis Lab, Montana Cooperative Wildlife Research Unit, University of Montana, Missoula, MT

Reynolds, Richard T., Russel T. Graham, M. Hildegard Reiser, Richard L. Bassett, Patricia L. Kennedy, Douglas A. Boyce, Jr., Greg Goodwin, Randall Smith, and E. Leon Fisher, 1992, *Management Recommendations for the Northern Goshawk in the Southwestern United States*, USDA Forest Service, Rocky Mountain Forest and Range Exp. Station, Fort Collins, CO, GTR-RM-217

Rotenberry, John T. and John A. Wiens, 1980, Habitat Structure, Patchiness, and Avian Communities in North American Steppe Vegetation: A Multivariate Analysis, *Ecology*, Vol. 61, No. 5, pp. 1228-1250

Skinner & Pavlick, eds, 1994. *California Native Plant Society's inventory of rare and endangered vascular plants of California*, Fifth Edition, California Native Plant Society, Sacramento, California

Spies, Thomas A. and Monica G. Turner, 1999, Dynamic forest mosaics, *Maintaining Biodiversity in Forest Ecosystems*, edited by Malcolm L. Hunter, Jr., pp. 95-160, Cambridge University Press, New York.

Steele, Robert, Robert D. Pfister, Russell A. Ryker, and Jay A. Kittams, 1981, *Forest Habitat Types of Central Idaho*, USDA Forest Service, Intermountain Forest and Range Experiment Station, General Technical Report INT-114

Strickler, D., 1990, *Alpine Wildflowers: Showy wildflowers of Alpine and Subalpine Areas of the Rocky Mountain State*, Falcon Press Publishing Co., pp. 5-7

Turner, Monica Goigel, 1989, Landscape Ecology: The Effect of Pattern on Process, *Annual Review of Ecology and Systematics,* Vol. 20, pp. 171-197

Turner, Monica G., 1990, Spatial and temporal analysis of landscape patterns, *Landscape Ecology*, Vol. 4, No. 1, pp. 21-30

Turner, Monica G. and Robert H. Gardner, 1991, *Quantitative Methods in Landscape Ecology: The Analysis and Interpretation of Landscape Heterogeneity,* Spring-Verlag, New York

Wagle, R. F., and Thomas W. Eakle, 1979, A Controlled Burn Reduces the Impact of a Subsequent Wildfire in a Ponderosa Pine Vegetation Type, *Forest Science,* Vol. 25, No. 1, pp. 123-129

Whittaker, R.H., 1956, Vegetation of the Great Smoky Mountains, *Ecological Monographs*, 26:1-80.

Wisdom, Michael J., Richard S. Holthausen, Barbara C. Wales, Christina D. Hargis, Victoria A. Saab, Danny C. Lee, Wendel J. Hann, Terrell D. Rich, Mary M. Rowland, Wally J. Murphy, and Michelle R. Eames, 2000, *Source Habitats for Terrestrial Vertebrates of Focus in the Interior Columbia Basin: Broad-Scale Trends and Management Implications, Volumes 1, 2, and 3,* USDA Forest Service, Pacific Northwest Research Station, and USDI Bureau of Land Management, General Technical Report PNW-GTR-485

Youngblood, Andrew P., Wayne G. Padgett, and Alma H. Winward, 1985, *Riparian Community Type Classification of Eastern Idaho – Western Wyoming*, USDA Forest Service, Intermountain Region, R4-Ecol-85-01

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Appendix 8—See Map Packet

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Appendix 9—
Changes from Draft to Final Environmental Impact Statement

Payette National Forest

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9.1 CHANGES BETWEEN THE DRAFT AND FINAL EIS MILL CREEK LANDSCAPE RESTORATION PROJECT

Errors in the DEIS corrected in the FEIS

Road 502341010– Cookhouse Gulch, Cottonwood Creek

This road was not listed in the DEIS Appendix 2, Road Treatment Table. In Alternative 2 and Alternative 4 DEIS Appendix 2 lists this as Decommission. The FEIS has been updated to list the road as Alternatives 1, 2 and 4 - Unauthorized Road and Alternatives 3 and 5 – Decommission. The segment is 0.2 miles in length. This road is located in an RCA and adjacent to another road proposed for decommissioning in the action alternatives.

Road 518399000 – Cookhouse Gulch, Cottonwood Creek

Alternative 2 and Alternative 4 Maps display 0.8 miles of Decommission Soil and Water – Permittee Coordination and 1.6 miles as Unauthorized Road. The entire 2.4 miles should be displayed as Unauthorized Road.

Road 50481000 – Fire Gulch in the Beaver Creek Drainage

DEIS Appendix 2, Road Treatment Table, in Alternatives 1, 2 and 4 is listed as Unauthorized Road and in Alternatives 3 and 5 listed as Decommission. This road has been decommissioned and is deleted in the FEIS Appendix 2. The segment is 0.9 miles in length.

Road 50900- West of Dewey Creek

DEIS Appendix 2, Road Treatment Table, in Alternative 5 lists this road as Use and Decommission. This has been changed to Decommission. The Use and Decommission category was only used for unauthorized roads and has been changed in the FEIS Appendix 2 for consistency since this road is a FS System Road. The segment is 1.5 miles in length.

Changes from Draft to Final EIS

Road 50909 East Fork Weiser River/Dewey Creek Area

DEIS Appendix 2, Road Treatment Table, in Alternative 5 lists the 0.3 miles at the end of the road as Decommission. The FEIS Appendix 2 has been updated to list it as Long Term Closure because it is needed for management in the future.

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DEIS page 2-20, Section 2.3.2.3 Alternative 3 states:

Road Decommissioning (Obliteration) for Soil and Watershed Mitigation and Improvement

A total of 29.3 miles of unauthorized road would be decommissioned (obliterated). Alternative 3 includes more decommissioning than Alternative 2 (proposed alternative) to offset effects of new construction proposed in this alternative. Of the 29.3 miles of road decommissioned, 4.9 miles are currently used by livestock permittees for cattle trailing, and a path would be provided for that use.

Section 2.3.2.3 in the FEIS has been updated as follows due to changes in the road layer (changes in bold):

Road Decommissioning (Obliteration) for Soil and Watershed Mitigation and Improvement

A total of **29.5** miles of unauthorized road would be decommissioned (obliterated). Alternative 3 includes more decommissioning than Alternative 2 (proposed alternative) to offset effects of new construction proposed in this alternative. Of the **29.5** miles of road decommissioned, **5.7** miles are currently used by livestock permittees for cattle trailing, and a path would be provided for that use.

DEIS page 2-24, section 2.3.2.5 Alternative 5 states:

Road Decommissioning (Obliteration) for Soil and Watershed Mitigation and Improvement

A total of 40.5 miles of unauthorized road would be decommissioned (obliterated). Of the 40.5 miles of road decommissioned, 4.9 miles are known to be currently used by livestock permittees for cattle trailing, and a path would be provided for that use. A total of 14.9 miles of Forest Service System road would also be decommissioned, including the 3.2 miles of Dewey Creek and Joker Creek roads described above.

Long-term Closure of Roads for Soil and Watershed Mitigation and Improvement

A total of 22.6 miles of Forest Service System road would be put into long-term closure.

Section 2.3.2.5 in the FEIS has been updated as follows due to changes in the road layer (changes in bold):

Road Decommissioning (Obliteration) for Soil and Watershed Mitigation and Improvement

A total of **40.7** miles of unauthorized road would be decommissioned (obliterated). Of the 40.7 miles of road decommissioned, **5.7** miles are known to be currently used by livestock permittees for cattle trailing, and a path would be provided for that use. A total of **14.6** miles of Forest Service System road would also be decommissioned, including the 3.2 miles of Dewey Creek and Joker Creek roads described above.

Long-term Closure of Roads for Soil and Watershed Mitigation and Improvement

A total of **22.9** miles of Forest Service System road would be put into long-term closure.

Changes from draft to final EIS Table 2-8, due to the edits to the road layer

Table 2-7, DEIS, Alternative 3:

Transportation (Miles)	Alternative 3
Existing unauthorized road decommissioning (obliteration)	29.3
Existing unauthorized road decommissioning (obliteration) with permittee coordination	4.9

Table 2-8 FEIS, Alternative 3:

Transportation (Miles)	Alternative 3
Existing unauthorized road decommissioning (obliteration)	29.5
Existing unauthorized road decommissioning (obliteration) with permittee coordination	5.7

Changes from draft to final EIS Table 2-8, due to the edits to the road layer

Table 2-7, DEIS, Alternative 5:

Transportation (Miles)	Alternative 5
Existing unauthorized road decommissioning (obliteration)	40.5
Existing unauthorized road decommissioning (obliteration) with permittee coordination	4.9
FS System road decommissioning (obliteration)	14.9
FS System road long-term closure	22.6

Table 2-8 FEIS, Alternative 5:

Transportation (Miles)	Alternative 5
Existing unauthorized road decommissioning (obliteration)	40.7
Existing unauthorized road decommissioning (obliteration) with permittee coordination	5.7
FS System road decommissioning (obliteration)	14.6
FS System road long-term closure	22.9

Changes from draft to final EIS Section 2.3.2.1 Activities Included in All of the Action Alternatives

PCT would not be allowed in PVG 7 stands that are not self-pruning; therefore, approximately 150 acres of plantations were dropped from any thinning or harvest treatment as updated in section 2.3.2.1 of the FEIS, because they currently provide habitat for snowshoe hares. This correction in PVG assignments and the resulting drop of PCT treatment in the PVG 7 plantations also was documented in the Project Biological Assessment for Canada lynx.

Changes from draft to final EIS Section 3.6.7.1 Temperature (Bull Trout and Other Fishes) Watershed Condition Indicators

The final paragraph in this section in the DEIS states that:

The Temperature (other fishes) WCI is *functioning appropriately* in the Cottonwood Creek, East Fork Weiser River, and Mill Creek – Weiser River subwatersheds. In the Gaylord Creek – Weiser River subwatershed temperature (other fishes) is *functioning at risk*.

Section 3.6.7.1 in the FEIS has been updated as follows (changes in bold):

The Temperature (other fishes) WCI is *functioning appropriately* in the Cottonwood Creek and Mill Creek—Weiser River subwatersheds. It is *functioning at risk* in the Gaylord Creek—Weiser River subwatershed and ***functioning at unacceptable risk* in the East Fork Weiser River subwatershed**.

Changes from draft to final EIS Section 3.6.8.3 Threatened, Sensitive and Management Indicator Species

This entire section has been updated between the draft EIS and the FEIS:

In the DEIS the determination for Alternatives 2, 3, and 4 was *May Affect*, but are *Not Likely to Adversely Affect* bull trout.

The determination for westslope cutthroat trout was *No Effect*.

In the FEIS the determination for **all** action alternatives is *May Affect, Likely to Adversely Affect* bull trout.

The determination for westslope cutthroat trout is *No Impact*.

Please refer to this section in the FEIS for a full discussion of the rationale for the determinations.

Appendix 10—Response to Comment on the Draft Environmental Impact Statement

Payette National Forest

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PAYETTE NATIONAL FOREST
Mill Creek-Council Mountain Landscape Restoration Project
45-DAY PUBLIC COMMENT ANALYSIS PER 36 CFR 215

Substantive comments are defined as "comments within the scope of the proposed action, specific to the proposed action, have a direct relationship to the proposed action and include supporting reasons for the Responsible Official to consider" (36 CFR 215.2). Substantive comments provide meaningful and useful information from commenters about their concerns and issues and can be used to enhance project analysis and project planning.

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List of Abbreviations

AAT	Adopt-A-Trail Agreement
ACS	Aquatic Conservation Strategy
AOI	Annual Operating Instruction
ATV	All Terrain Vehicle
BA	Biological Assessment
BE	Biological Evaluation
CFLR	Collaborative Forest Landscape Restoration
CMP	Corrugated Metal Pipe
CWD	Coarse Woody Debris
CWS	Comprehensive Wildlife Strategy
DBH	Diameter at Breast Height
DD	Detrimental Disturbance
DEIS	Draft Environmental Impact Statement
DSR	Damage Survey Reports
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
Forest	Payette National Forest
Forest Plan	*Payette National Forest Land and Resource Management Plan*
FRCC	Fire Regime Condition Class
FRTA	Federal Roads and Trails Act (16 U.S.C. 533)
GIS	Geographic Information System
HERAs	Health and Ecological Risk Assessments
HFRA	Healthy Forests Restoration Act
HRV	Historical Range of Variability
ICBEMP	Interior Columbia Basin Ecosystem Management Project
IDFG	Idaho Department of Fish and Game
IDL	Idaho Department of Lands
IDPR	Idaho Department of Parks and Recreation
IDT	Interdisciplinary Team
IRA	Inventoried Roadless Area
LAU	Lynx Analysis Unit
LCAS	Lynx Conservation Assessment and Strategy
MA3	Management Area 3 (Weiser River, in reference to Forest Plan, Chapter 3)
MIS	Management Indicator Species
MVUM	Motor Vehicle Use Map
NEPA	National Environmental Policy Act
NF	National Forest
NFS	National Forest System
NFMA	National Forest Management Act
NLAA	Not Likely to Adversely Affect
NPDES	National Pollutant Discharge Elimination System
PCT	Precommercial Thinning
PDF	Project design feature
PFA	Post Fledging Area
PFC	Payette Forest Coalition
Project	Mill Creek – Council Mountain Landscape Restoration Project
PVG	Potential Vegetation Group
RCA	Riparian Conservation Area
RMRS	Rocky Mountain Research Station
ROD	Record of Decision
ROW	Right of Way
RS	Revised Statute
SFRS	Statewide Forest Resource Strategy
SHPO	State Historic Preservation Office
SWRA	Soil, Water, Riparian and Aquatic

SWOB	Soil and Water Objective (in reference to Forest Plan)
TAP	Transportation Analysis Process
TDML	Total Daily Maximum Load
TEPC	Threatened, Endangered, Proposed, and Candidate
TES	Threatened, Endangered, Sensitive
TSRC	Total Soil Resource Commitment
WCI	Watershed Condition Indicator
WCS DEIS	*Forest Plan Amendments Proposed to Facilitate Implementation of the 2011 Plan-Scale Wildlife Conservation Strategy Draft Environmental Impact Statement*
WUI	Wildland-Urban Interface

	Concerns	Forest Service Response
	Payette Forest Coalition	
1	Alternative 2 • The DEIS description of Alternative 2 is essentially the same as the proposed action presented to the PFC on March 24, 2011. • Alternative 2 is consistent with the PFC Recommendations. • Also note that the PFC continues to support the integrity of the entire Council Mountain Inventoried Roadless Area. This statement applies to all alternatives.	Thank you for your comment.
2	Alternative 5 The Coalition members discussed Alternative 5, and acknowledge that the actions in this alternative were proposed to address Aquatic Conservation Strategy elements of the Forest Plan. The PFC further recognizes the importance of watershed health and the quality of habitat for an isolated local population of bull trout. The method the Forest proposed to achieve restoration in the priority ACS watershed relies on long-term closures and road obliteration. These actions raised questions regarding road use and the analysis of environmental effects. The PFC could not resolve the questions, and the resulting uncertainty prevented the participants from reaching consensus. The primary issues are listed in Table 1. Individual PFC members will likely submit letters to elaborate on details for the issues relevant to them and their constituents.	Thank you for your comment.
3	**Table 1: Alternative 5 (Road Use) Issues Discussed by the PFC** *Forest Management* Do the road actions provide an adequate transportation network for long-term forest management? • Example 1: Plantations in the Dewey Creek and Cold Springs Creek regions of the ACS priority watersheds. The proposed obliterations create isolated stands that will require access to implement near-term treatment. • Example 2: The 2035 predicted condition of PVG 2 large tree class, high canopy density stands increases to 82% of the PVG 2 area in the landscape, much greater than the desired condition. Will the system road network support access for future treatments?	Forest Plan direction requires the road network to match the level of management activities occurring and supply the transportation system needed for resource management activities, including timber harvest, while providing resource protection. Changes in management access in Alternative 5 would consist of the following: • Road access to approximately 30 acres for potential future conventional timber harvest for future timber management would be eliminated. • Another 420 acres would likely require temporary roads, new road construction, constructed skid trails, and/or lengthy ground skidding. However much of this area is in vegetation types that are not a priority for treatment (dominated by grand fir, lodgepole pine and/or subalpine fir).

	Concerns	Forest Service Response
		Some of the lands with commercial timber in the Cold Springs Creek area are currently inaccessible for timber harvest by conventional logging systems because of the steep slopes and the majority of the old road system is located at the bottom of the drainage and not on the slope breaks up above. The end segment of Forest Service Road 50909 was proposed for decommissioning in Alternative 5 in the DEIS; however, because this segment is necessary for future management, Alternative 5 has been updated to treat this segment as a long-term closure in the FEIS. See Appendix 9—Changes from Draft to Final Environmental Impact Statement in the FEIS.
4	*Permittees* • In March 2011 the PFC agreed that retention of access to allotments by permittees was essential. The DEIS acknowledges that paths will be retained as needed by the permittees when roads are obliterated. The IDT provided draft contract specifications for this treatment. Monitoring standards are also needed to evaluate performance. • In the March 2011 review, the PFC and Payette Staff agreed that this is an administrative issue to be resolved between the District Ranger and the permittee. It was further agreed that the Forest Service would periodically report the status of these actions to the PFC. This agreement, documented in PFC meeting notes, should be acknowledged in the FEIS or ROD.	The Forest agrees that the retention of access to allotments, by permittees, is essential. Reasonable access will be coordinated wherever possible. District Staff and affected permittees have met on the ground and discussed potential conflicts with proposed road obliterations and will continue to do so on a case-by-case basis. Documentation of these site visits is in the Project record.
5	*ATV* • Between November 2010 and March 2011, the PFC discussed ATV routes and a plan prepared by Adams County. • At the March 24, 2011 PFC meeting, the IDT reported that 90% of the routes on the Adams County map were located on open roads, and pose no issue. It is unclear if the map was referenced in the design of Alternative 5. PFC members request that the FEIS incorporate the Adams County source map to be used as a baseline reference to evaluate proposed road action impact on ATV use.	Alternative 5 does not affect ATV access on the eight roads within the Project area that Adams County identified as ATV routes. These roads are open year-round to all vehicles, including ATVs. The routes identified by Adams County are included in the Project record.

	Concerns	Forest Service Response
6	*Recreation* • Historic trails have been a PFC discussion topic. At the March 24, 2011 PFC meeting the IDT reported that 19 historic trails were reviewed in detail. 15-16 of the trails were acceptable, i.e. eligible to meet trail maintenance standards.	This list of roads/trails was submitted by Adams County on February 18, 2011 with the request that we analyze these roads prior to decommissioning for their historic status. These routes were generated by Adams County from 1938 Metskers Maps. The Forest Archeologist and Council staff met and attempted to map the list of routes based on Metsker maps and the submitted list. It was determined that they were not eligible Historic Properties. These routes were digitized into GIS and the District Ranger, Project Leader and Adams County Representative met to review the list and map, route by route. Of the twenty routes evaluated, it was mutually greed to dismiss fifteen of these as not being impacted with the Project. This was due to other parallel roads and or trails close by currently providing access to the same general areas. The remaining five items were evaluated as follows: a) #1 Trail north between Dutch Oven and Sheep Creek from the Middle Fork Weiser Road to Council Mountain. This is outside the project area boundary on private and State of Idaho lands and is outside the scope of this project analysis. b) # 8 East Fork Weiser Road 50172. This was raised Adams County as an RS 2477 issue. The Forest Service and Adams County will work together to determine any road actions that would affect county assertions and there was agreement that the parties are comfortable with the current process in place to determine affected roads. c) #9 Bench Creek Road 50181 north into Sec 2. Access proposed by Adams County would be a trail that begins at the junction of FS System Road 50181 and FS System Road 50149 and would terminate 1.2 miles north near Red Point. The trail would start and end on an existing open road bed. The trail would not be part of a larger system of trails or routes since there are no other trails in the area. The trail would also have no destination or unique trail values to attract users. The trail would require users to back track, hike, or ride on Forest Service roads opened to full sized vehicles for

	Concerns	Forest Service Response
		great distances to access any other trails. The trail would be built on slopes greater than 50% and require extensive cut and fill work as well as multiple switchbacks. The new trail's values would be low and there is a high potential to have negative resource impacts due to the steep slope. In reviewing these trail characteristics and specific trail values, with the present and expected trails budget, Brant Petersen, West Zone Recreation staff, recommended that we do not construct a new trail in this location. Based on the above discussion, this route was not analyzed in this project. d) #10 Sec 26 NE to T17N R1E Sec 6. Road 50169 then south, Roads 50173 to 50165. In the follow-up meeting with the Adams County Representative, Forest Service System Road 50198 was listed as part of this trail proposal. It was determined through the Travel Analysis Process, using site-specific information, that the lower section of Forest road 50198 is neither needed nor practical for long-term management and is recommended for decommissioning (obliteration). The lower section of the road parallels Cold Springs Creek, which is a tributary to bull trout designated critical habitat. There are drainage issues on the lower section, with slumping on portions of the road cut and fill slopes and constriction of the floodplain in Cold Springs Creek. As part of the proposed action, it was recommended by District watershed and fisheries personnel that the lower section be obliterated, or the road be stabilized and put into long-term closure, to address those concerns. e) #12 "Road 50176, 50175, south unnumbered 51544, unnumbered – ties to ridge road that goes to Council Mountain #3." This trail proposed by Adams County begins on FS System Road 50165 or FS System Road 51544 and would terminate an estimated 2.5 miles south on Cold Springs Summit Ridge. This trail location was never field verified. The trail would be built on slopes greater than 40% to reach Cold Springs Ridge. This would require extensive cut and fill work as well as multiple switchbacks. The trail would be redundant as there are two other existing trails within two miles of

	Concerns	Forest Service Response
		this proposed trail location that provide hikers, horsemen, motorcycles and ATV's access to both Cold Springs Ridge and Council Mountain. In reviewing these trail characteristics and specific trail values for the proposed trail, Brant Petersen, West Zone Recreation staff, recommended that we do not construct a new trail in this location. The potential to have negative impacts to natural and cultural resources are high. The expense to construct and maintain a redundant trail within two miles of two other trails, with limited budget, was felt unnecessary to incorporate and analyze. f) Concerns were raised that the Civilian Conservation Corps built and restored many miles of trails that should be classified and treated as historic routes. The Heritage Program has currently identified 40 historic properties within the Project area: 18 of the 40 meet National Register of Historic Places (NRHP) criteria. One of the 40 historic sites includes a 7 mile linear trail that was a former Weiser Canyon livestock driveway. This former livestock driveway was used to trail cattle through about 7 miles of the Payette National Forest. Most of this former livestock driveway is difficult to follow because vegetation has overgrown the driveway. Dependent upon the alternative selected for implementation additional secondary Idaho SHPO consultation may be required to address any effects upon historic properties including effects to historic routes.
	• There has been confusion about the source map that served as a reference for the review. It is unclear if the same map was referenced in the preparation of Alternative 5. The PFC requests that the map of historic trails (RS 2477) be incorporated in the FEIS to serve as a baseline reference to evaluate potential conflicts with proposed road actions.	The District has consulted on RS 2477 routes with Adams County with respect to past and proposed road obliteration and will continue to coordinate with them as needed on RS 2477 concerns. The RS 2477 map resides with Adams County and the public should contact Adams County for the information. See response to comment #152 for further discussion of RS 2477 assertions of title. The ecological goal of road obliteration is to restore a suite of soil-hydrologic functions as described in Forest Plan on pages III-18-24 and Appendix B (WCIs), pages B12-B21.. Leaving a 3-foot-wide

	Concerns	Forest Service Response
	• Proposed actions for recreation facilities vary by alternative. However, no alternative includes a vault toilet at the Deseret cabin. The recommendation for the vault toilet was accepted by the Forest Service at the January 25, 2011 PFC meeting. The DEIS states that the recreation use does not justify the cost. The site is used by horsemen, hikers and ATV users. Note that the vault toilet at Deseret cabin will serve a different user group than the one located at Five Corners. • Trail users request that the Forest Service keep options open to extend trails for non-motorized use. A suggested strategy for obliterated roads is to retain an approximately three foot wide access trail that would be put back on the landscape while the equipment is on site. This strategy also allows cattle drift as requested by permittees.	prism on all obliterated roads would not achieve soil and water-related restoration goals. The proposal to install a vault toilet at Deseret Cabin is addressed in section 2.5 FEIS. Cross-country non-motorized use is not prohibited in non-motorized areas on the Forest; however, past attempts at providing a 3-foot-wide corridor for cattle drift and non-motorized use have promoted prohibiting ATV use during hunting season.
7	**Table 1: Alternative 5 (Environmental Effects) Issues Discussed by the PFC** *Cost/Benefit* • The increase in restoration cost resulting from the road actions lacks a justification of benefits to bull trout. In the absence of the cost / benefit analysis, the Coalition was unable to reach a consensus. The PFC recommends that the Final EIS analyze the cost and benefits. • For example – culvert and bridge replacement offers direct benefit per unit of cost. Open roads immediately adjacent to streams have a higher benefit per unit of obliteration cost than overgrown roads on the upper half of the slope, regardless of existing culverts and their size. The analysis should rank relative benefits between actions to improve setting priorities for contract implementation.	Through field surveys and interdisciplinary analysis of a roads network needed to accommodate public travel and resource management, roads were identified that were a) having a detrimental ecological impact on SWRA resources within the Project area, b) important for wildlife security, and c) not needed for future management or high value for public use. These roads were prioritized for decommissioning with emphasis in the upper East Fork Weiser River (bull trout habitat); Alternative 5 emphasizes watershed restoration in bull trout habitat within the Project area and represents an improvement over existing conditions. Bull trout are a federally listed species under the ESA. As such, the Forest is required to implement actions to restore the species. The Project complies with the ESA, draft Bull Trout Recovery Plan, and Forest Plan direction. For example, the Project implements TEPC objectives 03, 09, and 10; SWOB16; SWOB18; SWST01; SWST04; and MA3 objectives 0318, 0319, 0322, and 0323.
8	*Optional Methods* • The DEIS relies on a road density metric as an indicator of watershed health.	Road density is a watershed condition indicator and was evaluated in Chapter 3 in the FEIS according to Appendix B of the Forest Plan and to comply with SWST01 and SWST04. The FEIS discloses the

	Concerns	Forest Service Response
		effects to road density in all alternatives.
	• The credibility of this indicator is highly uncertain without considering key road characteristics. Are all roads delivering sediment to streams and lowering quality of bull trout habitat?	The DEIS relies only partly on the road density metric as an indicator of watershed function. This metric is part of the suite of WCIs in the Forest Plan Appendix B; all WCIs are addressed for this project (Fisheries Specialist Report and Watershed Resources Specialist Report).
	• The FEIS should address the variability of sediment delivery between roads due to attributes of road segments. Relevant attributes include surface condition with respect to vegetation, proximity to streams and the road prism. These characteristics should be evaluated prior to implementing contracts that include road obliteration in the high priority ACS watershed.	Key characteristics of individual roads, such as status (open or closed), on-the-ground use (known to be travelled even if closed, for example), surface (native or graveled), gradient, and landtype on which the road is built are all variables incorporated into the sediment modeling program BOISED, which was used as a means of comparing sediment yield between the alternatives for this project. Other attributes, such as proximity to streams and number of crossings, were also considered in analyzing the effects of the existing and proposed road system on watershed function. See Watershed Resources, Fisheries Resources, and Soils Resource, sections 3.5, 3.6, and 3.7 in the FEIS for more information.
	• Seasonal road closures should be considered as an alternative to road obliteration. The EIS should evaluate cost trade-offs between maintenance and obliteration. Obliteration is a one-time capital cost to restore the road to hill slope conditions. The cost of this action should be compared to the annual maintenance costs to retain the road. Road obliteration may increase costs to perform repetitive management actions such as noxious weed control, fire control, and facility maintenance.	Unauthorized roads that were proposed for decommissioning would not be proposed to be added to the FS System and closed seasonally since, by definition, they would be excess to FS System needs. Maintenance funds are not used on unauthorized roads. There would be no effect to facilities management in the Project due to road decommissioning and noxious weed control methods would not change. Fire suppression access was evaluated by the IDT in the process of road evaluation.
	Environmental Protection Agency	
9	The EPA is supportive of the proposed management direction in Alternative 5. We believe Alternative 5 is the environmentally preferable alternative because it would reduce road-related impacts to water quality in a high priority watershed. We also appreciate the cautious and thoughtful approach the Forest Service has taken with regard to the Council Mountain Inventoried Roadless Area in all of the action alternatives.	Thank you for your comment.

	Concerns	Forest Service Response
10	Our review identified two areas of concern that we recommend addressing in the Final EIS (FEIS). The first relates to direction in the EIS for riparian zones. The document is not consistent in terms of how management direction is characterized. This leads to some confusion as to where thinning will be focused. Also unclear is the potential acreage to be treated within the riparian zone, and the desired state of those stands post-treatment. The document discusses desired upland stand characteristics post treatment, but does not do the same for riparian stands. This is of particular importance given the downstream temperature impairment of the Weiser River.	The maximum potential acreage to be treated within RCAs by alternative is displayed in Table 2-8 of the FEIS. RCA does not inherently mean riparian zone; the 240- and 120-foot widths for perennial and intermittent streams, respectively, are derived from Forest Plan direction, but the Forest Plan also states that RCA widths may be adjusted based on the judgment of a hydrologist or fish biologist so long as riparian functions, including stream shade, as defined in the Forest Plan, are maintained or improved. In this project, some areas located within RCAs but outside of riparian vegetation may be thinned on a site-specific basis to achieve desired conditions; areas to be thinned are composed of upland vegetation similar or identical to that of the adjacent stand just outside the RCA. The desired post-treatment state of these stands is that they resemble desired conditions described for that particular PVG in Appendix A of the Forest Plan. See section 2.3.2.1 and Appendix 6 of the FEIS and the Water Resources Specialist Report for further information.
11	Our second concern relates to roads. There is variation in how the data are presented on roads and road impacts. Of particular concern is the information related to road reconstruction. Miles of road to be reconstructed varies throughout the document, and it is not clear whether the analysis took an adequately conservative approach when analyzing for potential impacts, including percent over natural sediment impacts. Each of these concerns is detailed in our attached comments. Based on our review, we are rating the DEIS as EC-2 (Environmental Concerns -Insufficient Information).	Any road proposed for physical reconstruction in the Project was included in BOISED modeling runs as reflected in the sediment percent over natural (%ON) metric for each alternative and listed in section 3.5, Watershed Resources, in the FEIS. Roads that are proposed for log hauling, for example, are modeled as reconstruction. The year of use when hauling would occur is modeled as heavy use, with use modeled as returning to light following completion of project activities. A description of these modeling assumptions can be found in Appendix 5 of the FEIS and a more comprehensive explanation of the BOISED model is incorporated by reference (Reinig et al. 1991). The sediment modeling took a conservative approach in modeling any road that could be used for project activities and required a more than minimal amount of heavy equipment work in road construction activities. The FEIS has been corrected to standardize the way roads were analyzed throughout the document.
12	Riparian Management There appears to be some inconsistency within the DEIS with regard to management direction for riparian zones. Page 2-10 and Table 2-	Standard RCA widths defined for this project are based on Forest Plan direction in Appendix B that allows using the site-potential tree height (based on PVG) for a particular area—one tree height for

	Concerns	Forest Service Response
	10 of the DEIS indicate that (on applicable stands) there would be harvest treatment "within the outer 120 feet of perennial streams and within the outer 90 feet of intermittent streams". On page 3-119 and in Appendix 6, however, it is stated that "no harvest would be allowed within a minimum of 30 feet of intermittent stream channels and 120 feet of perennial streams. From a review standpoint, it is unclear what is intended. Recommendations: • We recommend changing the wording on Page 2-10 and Table 2-10 to something that is more easily understood. Stating that there would be harvest "within the outer" 120 or 90 feet does not inherently make sense. Does this mean that harvest would be focused just inside the 120 or 90 foot buffer, or does this mean that harvest would be focused outside of the buffer? If the intent is to provide for harvest within 120 feet, that would seem to be inconsistent with the direction on page 3-119 and in Appendix 6. • Similarly, it is unclear for intermittent streams whether the intent is to allow for thinning between 30 and 90 feet of the stream, or if the intent is to focus thinning outside of 90 feet.	intermittent streams and two heights for perennial and intermittent streams that provide seasonal rearing and spawning habitat. For this project, those widths are 120 and 240 feet, respectively. As described in Appendix 6 of the FEIS, certain RCAs may be thinned, provided all riparian functions can be maintained; a maximum acreage is disclosed in the FEIS in Table 2-8. The outer portions of these RCAs are the only candidates for thinning: in a 240-foot RCA, only the outer 120 feet is a candidate for thinning and in a 120-foot RCA only the outer 90 feet is a candidate. The inner 120 and 30 feet of the perennial and intermittent RCAs, respectively, would be left untreated to provide a buffer between activity and the stream and to ensure no riparian vegetation was mechanically disturbed.
13	We also note that while desired future conditions for upland stands (including canopy closure targets) are discussed within the DEIS, target conditions for riparian stands are not. The indicators selected to compare the effects of the various alternatives on soil, water, riparian and aquatic resources (SWRA) are road-centric. While valuable and easily measured, the road-based indicators do not capture potential impacts related to harvest. We would like to see a treatment-based indicator added to the indicators list (i.e. acres treated mechanically within the RCA). We also recommend inclusion of desired future conditions for riparian stands, a commitment to maintain effective stream shade, and a methodology for determining effective shade on a site specific basis prior to harvest. An example of a robust analysis of riparian impacts can be found in the Ogden Vegetation Management Project DEIS. We raise these issues in light of the 2006 Weiser River Subbasin Temperature Total Maximum Daily Load. That document presents loading analyses for the Weiser River as a whole and ten of its	The Watershed Resources and Fisheries Resources Specialist Reports include descriptions of existing conditions and effects analysis for WCIs not covered in the FEIS. However, because in this Project area, roads have been identified as the major impediment to proper watershed function and are central to implementing the proposed action and other action alternatives, road-related indicators were chosen as appropriate for alternative comparison. Work directly on riparian vegetation, except where planting occurs after road obliteration in an RCA, is not proposed in this project. The maximum number of acres within RCAs that could be treated, by alternative, is included in Table 2-8 of the FEIS. In this project, areas located within the RCA but outside of riparian vegetation (and as described in response to comment #12) may be thinned on a site-specific basis to achieve desired conditions; areas to be thinned are composed of upland vegetation similar or identical to that of the adjacent stand just outside the RCA. The desired state

	Concerns	Forest Service Response
	major tributaries, including the East Fork of the Weiser River. According to the TMDL, the East Fork is currently receiving an excess solar load and needs to achieve a 63% reduction in order to achieve loading capacity. We recognize that none of the other tributaries within the project area are included in the temperature TMDL. However, because water temperature in a segment of flowing water can be strongly influenced by the waters flowing into and mixing with it, we believe it is important to consider any potential source of heat loading within the watershed. Recommendations: • We recommend inclusion of a treatment-based indicator under section 1.9.1.3, such as acres treated mechanically within the RCA. • We recommend inclusion of desired future conditions for riparian stands, a commitment to maintain effective stream shade, and a methodology for determining effective shade on a site specific basis prior to harvest. These could be included in Appendix 6. • We recommend that a discussion of the Weiser River Temperature TMDL (and the role of the East Fork Weiser River within that TMDL) be included in the FEIS.	of these stands post-treatment is that they resemble desired conditions described for that particular PVG in Appendix A of the Forest Plan. Section 3.5, Watershed Resources, of the FEIS includes a discussion of the Weiser River temperature TMDL. A plan for monitoring the effects of mechanical treatment and the effects of prescribed fire on RCAs is included in Appendix 4 of the FEIS.
14	Roads There is a lot of variation in how the data are presented on roads and road impacts. The numbers are split, or lumped depending on the table. This makes review confusing and difficult. For example, Table 2-7, under the "Transportation" heading, indicates that there would be 1 mile of new temporary road under Alternative 5. Under the SWRA heading of the same table, miles of temporary road construction and reconstruction total 12.3 miles. In contrast to both of these numbers, Table 3-47 includes a figure of 74.6 miles of road reconstruction. We recommend that the FEIS employ consistent terminology, and present the figures in a consistent way so as to facilitate review. We also recommend that you clarify the difference between the road reconstruction figures in table 2-7 and table 3-47. Finally, we request clarification on which of these figures were assumed when running the BOISED model. If 12.3 miles of reconstruction were assumed for the purposes of impact analysis,	The FEIS has incorporated these recommendations to the DEIS. Road actions have been defined in sections 2.3 and 2.4. Temporary road does not include reconstruction as defined and the 12.3 miles of temporary road referred to in Table 2-7 in the DEIS was a typographical error—this has been corrected to 10.8 miles. Table 3-47 has been corrected to match the definition of road reconstruction. BOISED has a “heavy” and “light” reconstruction definition to fine-tune likely disturbance. The miles assumed when running BOISED are the miles in Table 2-8 in the FEIS.

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	we recommend that you provide rationale for not using 74.6 miles. If warranted, we recommend that you reanalyze potential sediment effects.	
	Adams County Commissioners	
15	Thank you, for allowing the Adams County Board of Commissioners to review and comment on the draft Environmental Impact Statement for the Mill Creek-Council Mountain Landscape Restoration Project. Commissioner Paradis has also participated in the development of this project with the Rocky Mountain Elk Foundation (RMEF) sponsored Payette Forest Coalition (PFC). As a member of that coalition we support alternative two, which mirrored the PFC recommendations and prefer that alternative to be the agency's selected alternative. The commissioners could support some of the elements of alternative 5 to modify alternative 2 but with caveats that will be explained below. We firmly support the coalition and the collaborative process in the development of a management program for implementing a complex management program such as this landscape level restoration program, especially controversial programs. Mike Paradis hopes to continue working in the PFC as we deal with the New Meadows project area.	Thank you for your comments.
16	At page 1-5, para. 1, there is a statement about fewer ponderosa pine and western larch than existed historically. There is no cited basis for this statement. The footnote has a citation for Huckaby, et. al. 2003. that document relates to the Colorado Front Range and a variety of ponderosa pine (var. scopulorum) that responds to a very different intercontinental climatic situation. In addition western larch are not present in the range and seem tied tightly to the climax area of certain true fir species, which can be validated in the larch symposium proceeding. We also have a similar problem with statements at page 2-5 using Huckaby as a reference.	The statements on pages 1-5 and 2-5 refer to legacy trees. Legacy trees are older ponderosa pine and western larch that survived past fires. Many of these large old trees were removed during past harvest operations. See sections 1.3.1, 3.2.5.4, and 3.2.6.1 of the FEIS for a discussion of past management and other factors and its influence on forest structure and the Project effects to legacy trees.
17	At page 1-6, 2nd para., many things are vulnerable to future events such as the type of fire described, including un-roaded, un-managed forests. Therefore, pointing to roads that had vegetation recovery is a straw-man developed to support the agency's predilection to obliterate roads. Therefore, access is eliminated that might be used to manage the forests and reduce fire severity. These elements	District fire staff reviewed the roads needed for fire access during the interdisciplinary analysis of the road system. Reducing fire severity is more dependent on fuels treatments and fire reintroduction than on the road system. The impact of roads on watershed function and wildlife habitat is

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	plainly influence the health and welfare of the constituents of Adams County.	well documented (Luce and Wemple 2001, Trombulak and Frissell 2000).
18	At page 1-7,1st para., after all the discussion there has not been any explanation of how frequent are the events such as the June 2010 rainfall volume and duration on a saturated soil at the end of the snowmelt period. Is it sufficiently frequent to consider design criteria changes or is something close to the 1 in 100 years? The County Roads Department has been dealing with the damage from the storm as such does not consider it a normal storm event.	This event was not considered a “normal” storm event in respect to either quantity or duration of precipitation, and the accompanying snowmelt resulted in additional water moving through river systems. New culverts installed on NFS lands are designed to pass 100-year flows and road repairs are planned with both road integrity and ecological impacts in mind. Roads are always at some risk of failure due to natural events. The Project area has had two major flood events during the past 20 years: the New Year’s 1997 flood and June 2010 flood. Both flood events damaged the road system, including roads affecting streams. The East Fork Weiser River drainage had major damage from both the 1997 and 2010 flood events. The New Year’s 1997 storm and the resulting flood on the Westside of the Forest was an extreme event. Record snow packs followed by record rainfall caused flooding that was the highest recorded on all the stream gages within the Weiser River Basin. Five of the seven stream gages had peak flows that exceeded the 100-year flow. The June 2010 flood was caused by heavy rains in early June. The rain gage at the Squaw Flat SNOTEL site in the upper part of the East Fork Weiser River drainage recorded a total of 6.0 inches of rain in 3 days. The June 2010 flood event was more localized than the New Year’s 1997 flood. The only stream gage that exceeded the 100-year flow from the June 2010 flood was on the Middle Fork Weiser River, which received the most damage. However, no stream gage is located on the East Fork Weiser River so no data is available for this drainage. Major road damage occurred in the East Fork Weiser River and the Mill Creek drainages within the Project area. The main road damage was caused by plugged culverts and streambank cutting. The bridge across the East Fork Weiser River at milepost 0.7 washed out. The channel of the river moved after the 2010 flood in the area burned by the Hall Fire in 2003. Reduced rooting strength from fire-killed trees appeared to be a factor, as well

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		as log jams formed by the dead trees. Damage on the East Fork Weiser River road below Shingle Flat road was mostly bank cutting into areas of road fill that were repaired from the 1997 Flood. Repairs to the road after the June 2010 flood will include shifting the road away from the stream, rather than putting the road back to the original alignment as was done after the 1997 flood. Also included will be some channel structures to direct flow away from the road.
19	At page 1-8, 2nd para, 2nd bullet, while noxious weeds are not expanding and new invaders not present, there is no discussion how these species will respond to the new regimen and forest structural arrangement. These are introduced plants that may become significant problems with these changes. The county wishes to continue to work with the Forest Service to assure that these sources of weeds are controlled or eradicated. Access for control is very difficult without access roads and ATV trails.	Introduced plants can increase with ground disturbance and new structural arrangement in the forest. Therefore, the Forest will inventory and treat prior to and after Project implementation. If noxious weed infestations that pose potential concerns are found near Project sites, precautions will be taken to avoid further spread and contamination of the Project area. See section 1.10.4 in the FEIS. Paradoxically, weeds are introduced via motorized vehicles on roads; access facilitates treatment but also allows for weeds to spread.
20	At page 1-13,1.5.2, there is a cite (Kimball and Stephenson 2010), this is a draft document out apparently for review by peers and others. How or why this strategy is being used or adapted in its review draft form is unclear. This is especially true if it is a public policy document that has not completed the appropriate state government review and vetting steps. Unfortunately this is not the only problem with documents and their availability. Throughout the document there are citations to documents yet written by nearly every specialist on the ID team? How can a reviewer adequately review the data and reference resources if the write-up, with appropriate bibliography, is not available? Courts have typically ruled against proposed actions where plans or documents are available for public review.	This document is available for public review on the following website: http://www.idl.idaho.gov/bureau/ Management direction for the Project is provided by the Forest Plan. As stated on page 8 in *The Idaho Statewide Forest Resource Strategy*, "The Statewide Forest Resource Strategy (SFRS) is a long-term, comprehensive, coordinated strategy for investing state, federal and leveraged partner resources. It addresses the issues and priority landscape areas identified in the Statewide Assessment. The SFRS is statewide in scope. It is not a site-specific plan." The citation was included in section 4.8 of the DEIS and strategy described was not a sole driver of the Project, which is based on direction described in the Forest Plan. The specialist reports are in draft form prior to the ROD. Other citations can be provided upon request.
21	At page 1-16, 1st para., the PFC's statement dealing with elk security and habitat enhancement isn't even paraphrased correctly. This is	The reference stated to elk security and habitat enhancement wasn't found in the DEIS, page 1-16. The statement in the DEIS page 1-16

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	an element of some issue with some member of the PFC. Hunting and hunters provide a significant boost to our local economy.	was based on "*Recommendations, Payette Forest Coalition Landscape Conservation, March 01, 2010"* submitted to the Payette Forest Supervisor, and is found in the group's goals statement, page 3.
22	At 1.10.1, as you pointed out there have been a number of federal actions throughout the area especially since the early 1970's. Those project activities during that time frame supported a much more vibrant economy in Adams County. Prior to that time limited actions were occurring back to the 1930's. During the early history of the Payette, and its assimilated National Forests, an array of trails exist which provided people access through the National Forest. In many instances these trail routes were replaced by roads used to harvest timber or for other purposes. As they provided access and trail maintenance money was difficult to obtain the trails were abandoned or neglected by the agency. Now many of these roads that replaced trails are being scheduled for obliteration. This will reduce access to below historic levels. The Forest Service should assure that these trail routes remain when road obliteration is considered in the area. The roads often did not follow the exact trail location but accessed the same area. These roads that are planned for obliteration, should as a minimum, provide walking and horse-use access. Some of these trail-road conversions were identified by our Natural Resource Committee and also members of the PFC, maps were provided. The agency has an historical archive they can also reference in the Forest Supervisors office.	An interdisciplinary approach to road management was undertaken to determine the value of unauthorized routes in the Project area, including recreation and administrative values. Roads not needed for public or administrative access would be candidates for decommissioning, depending on the objectives of the alternatives. While ensuring access on all areas containing unauthorized routes was not a criterion for non-treatment or adding to the Forest Service System, alternate access is preserved in much of the Project area. Maps provided by Adams County and members of the PFC were evaluated for trail opportunities. Cross-country, non-motorized use using horses or hiking is not prohibited anywhere on the Forest, and the existing trail system provides ample opportunities for access across much of the Forest. See also response to comment #6.
23	At page 2-6, Restoration Stand ...., Members of our Natural Resources Committee that are silviculturists have raised the questions when they reviewed the Payette Wildlife Conservation Strategy during that comment period, as well as other constituents continue to ask questions on the actual sequencing and time frames of treatment of these areas (using the term stands), with, harvest entries and broadcast or area burning. The questions relate to the accommodation for obtaining regeneration and once it is established how that next crop is protected, the tending of any developing trees and the expected treatments to reach the desired size and spacing. This is without explanation yet combining prescribed fire with area treatments is a complicated task that failed a number of aspiring	Regeneration of trees is planned for through planting and natural regeneration in Reserve stands and through natural regeneration in Restoration stands. Site preparation would be through prescribed fire or excavator scalping in Reserve stands. Prescribed fire would provide site preparation in Restoration stands. Existing regeneration in plantations and patches of natural regeneration would be protected during the initial and future prescribed burning operations. Regeneration established after the harvest operations and initial prescribed burning would be protected during future prescribed burning operations. Future regeneration harvests in Reserve stands are expected to provide additional regeneration.

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	managers. Many of our experienced forest managers and some prescribed fire personnel do not believe outcomes you predict are actually achievable. It appears the cost of manpower and area preparations would be prohibitively expensive. This uneven-aged management activity needs substantial clarification about its execution. This is especially true since it is a substantial shift from previous existing management experience. The ability to accomplish it based on your forecasted "climate change" also needs substantial clarification. We are aware that this "restoration forest management" is expensive, requiring substantial investments with low levels of cost recovery. We are concerned about its actual financial capability to be implemented because of the financial situation in government. We obviously see a very direct effect on the County.	The objective for the landscape is to maintain a mix of age classes. Multiple age classes are desired between and within stands. The desired within-stand condition is patches of different age classes. PCT is proposed in existing plantations. Future PCT operations that would result from this project's actions would be expected to occur where regeneration occurs in small patches that combined would be economical to track silvicultural activities and treat, which is a combined area of 10 acres or more. PCT is discussed in section 2.3 of the FEIS. This type of forest management could be more expensive than previous practices. Reducing tree densities and favoring seral species would make forests more adaptable to predicted climate changes.
24	At page 2-6 thru 2-10, canopy closure is used as a metric standard for a number of forest restoration goals or standards. This is a very difficult standard to measure in the field or for anyone trying to verify accomplishment. A more appropriate measure would be basal area or between tree spacing by diameter class. An explanation in the appendix would be appropriate so it can be tested by those people so inclined. We have a similar problem with Appendix A of the Forest Plan referred to in this document.	Canopy closure can be estimated in the field based on trees per acre or average distance between crowns when an average crown diameter is used. This method will be used during implementation and monitoring.
25	At page 2-11 unauthorized roads, the problem with unauthorized roads is verification or validation of existence and documentation of problems or conditions. The agency has to restrict any sort of treatments to the actually identified unauthorized roads. A roadbed is a specific, identifiable location; therefore treatments must be restricted to a previously identified location. Simply identifying another roadbed in the field not identified by GIS or mapping feature should not be decommissioned because during the NEPA process X had been identified. Treatments should only be applied to a verified location as required by the law. In other words do not overreach treatment locations. If roadbeds are; sufficiently vegetated, or are on nearly flat ground, or fit the appropriate soil or rock situations, they present little problem, they have recovered as Congress expressed in the laws dealing with recovery of lands.	Unauthorized roads identified in the Project were cataloged from various sources, including field verification, historical information, and/or photo interpretation. The proposed treatments are disclosed in the FEIS in section 2.3, the roads are listed in Appendix 2, and maps are included in Appendix 8. Treating any road identified for decommissioning is tied to specific ecological objectives and will be monitored and tracked accordingly.

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26	At page 2-11 there is an inference that a TAP (transportation analysis process) was prepared for this area. Does this applied process comply with the process required by Part A of the Travel Management Plan rule? Is this the public involvement process without specific disclosure? We have been assured that County governments were going to be involved in this process, we apparently missed the meeting.	The IDT evaluated roads within the Project area using a project-specific roads and trail analysis. The focus of the roads analysis process for the Project was to identify soil and water resources and wildlife resources issues on the existing routes and identify routes needed to support the vegetation restoration management proposals for the Project. The Project did not include travel management as part of the purpose and need. The Forest will complete a TAP for the Council Ranger District following the procedures in Forest Service Handbook 7709.55, Chapter 20, by 2015 as specified in Agency direction. This District-wide TAP will identify the minimum road system and will inform future travel management NEPA decisions. The District-wide TAP will incorporate information gathered during the road and trail analysis for the Project. Adams County and the public were involved as described in section 1.8. Cooperation also included attending IDT meetings, receiving updates by the District Ranger and staff, receiving Commissioner meeting updates, and attending PFC meetings where transportation proposals were addressed.
27	At page 2-11, the road to trail conversion process while discussed has no specifications and the monitoring discussion in this appendix; it also does not allude to a changed specification or process for on the ground accomplishment. This needs to change and the ability to verify and test the actual use must be developed. This should be mutually monitored with the interested or involved publics. The public in the county has great doubt about the benefits of obliterating vegetated roads to achieve a water quality goal regardless of the Chiefs road closure policy.	Road converted trail would be designed to meet current standard trail design specifications for the type of trail it is designated (non-motorized travel as proposed in the Project). Once the road-to-trail conversion was completed, the new trail would be added to the annual MVUM. See Forest Service Handbook 2309.18 for trail management direction. Coordination with interested parties in monitoring effectiveness is planned for this project.
28	At page 2-14, dispersed recreation, the word "may" is used when discussing the potential development of dispersed recreation sites, turnouts, parking areas and passing areas on system roads with intersecting unauthorized roads. This should be a "will" consider statement making denial for political purposes, rather than environmental reasons very difficult. These short sections are an absolute non-problem and should not be any kind of environmental	Potential dispersed recreation sites will be evaluated prior to road treatment because not every unauthorized road/open system road has been inventoried and assessed for potential adverse effects to resources. If no adverse effects are determined, the site would be a candidate for a dispersed recreation site.

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	concern. Any environmental problems would have already been identified. The other beneficial effects are enhancements to recreation and public health and safety in using the authorized road.	
29	At page 2-15, Deseret Cabin trailhead, this discussion about recreation improvements missed the point about the facility need and a location. The Donnelly Snowmobile Club offered to build and help provide maintenance of a toilet at the 5 Comers road intersection at the head of the East Fork. That was a proposal encompassing all alternatives. The Backcountry Horseman wanted a toilet at the Deseret Cabin trailhead, they did not offer any funding or maintenance support through agreement. This area is a trailhead for horseman wanting to reach the Council Mountain road less area and conduct weekend rides from that area.	The vault toilet at Deseret Cabin proposal is addressed in section 2.5 of the FEIS.
30	At 2.3.2.3 Alternative 3, helicopter harvesting and associated new road construction in the identified PVG's should be an optional package that could be assigned to alternative 2 and 5 as a minimum. The agency is normally very conservative in their estimates or capability to operate on these kinds of areas. Using the option approach for treatments allows industry to make an economic choice. The Grays Creek fire salvage supports the fact that industry finds opportunity were the Forest Service does not. Being restrictive with seasonal operations could harm the potential use.	Helicopter logging in the Restoration and Reserve Burn Only stands has been analyzed in Alternative 3 and may be chosen by the Responsible Official. See section 2.3.2.3 in the FEIS. Operation periods are restricted in response to resource concerns.
31	At page 2-38 licks and wallows, it seems that the riparian management requirements provide sufficient wallow protection? Mineral licks associated with naturally minerals should be identified before sale implementation because they have unique wildlife interactions tied to them. Salt or other minerals placed by permittees should be coordination items handled by AOI's.	Most salting locations on NFS lands were established at the onset of livestock grazing to aid in livestock distribution across the landscape. Placing salt and minerals is restricted to certain areas as specified in the Forest Plan. The placement locations are also reiterated and coordinated through the AOIs. However, many salting locations are not known or recorded by the Forest. Appendix E of the Forest Plan (page E-7) addresses management of wallows and licks in relation to elk security. Wallows occur in many habitat classes, assuming the presence of adequate water and soil sources to provide a mud substrate. The Appendix E discussion states, "Generally, vegetation around licks or wallows should be two or more site (*sic*; sight) distances…" The Forest has standardized this approach to direct a minimum of two elk sight

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		distances, which would total 400 feet, as a radius around any identified wallow or lick. This sight distance could increase at locations with more open vegetal cover and/or less physical cover provided by terrain features around the wallow or lick.
32 MD5	At page 2-40, culverts, there does not appear to be any need for permanent culverts to have AOP when they are not fishery streams. This greatly increases costs with little or no benefit.	The Project complies with Forest Plan SWST08, which requires that, “Fish passage shall be provided at all proposed and reconstructed stream crossings of existing and potential fish-bearing streams unless protection of pure-strain native fish enclaves from competition, genetic contamination, or predation by exotic fishes is determined to be an overriding concern.” The project design features that relate to culvert installation or removal were updated in the FEIS Table 2-11.
33	At page 2-40, obliteration of temporary roads, one of the terms used but not found in the glossary is "grubbed". What is the process and how is it used or applied? Up to 80% ground cover is required, yet monitoring reports from other road obliterating projects on the Council District indicated such a high level is detrimental to long term recovery and stabilization by vegetation. Some reconciliation is needed. The commissioners have asked many times that the Forest Service consider a range of treatments for road decommissioning, yet obliteration is the only treatment apparently being considered. We have also asked about grass seeding with effective seed and techniques but few are being used in our estimation.	This portion of the mitigation and project design table refers to roads that would be obliterated by the timber sale contractor. The term “grubbed” here means decompacted. This term has been changed to “decompacted” in the FEIS. The 80% ground cover is a maximum and refers to the amount of slash and natural mulch used as erosion control and to enhance soil productivity. Efforts will be made during implementation to provide a finished product that is passable to foot travel while also meeting soil and water resource objectives.
34	At page 2-40, closed system roads, statements about culverts here and in the Alternatives don't seem to agree, especially culvert removal. There also seems to be disagreement with Alternative statements and administrative use allowance.	See response to comment #32. Long-term closure and Level I maintenance are described in Project Design Feature #19 in Table 2-11 in the FEIS. Administrative use would not occur on either type of road. If a road is in Level I maintenance and used for treatment, its maintenance level is changed during use.
35	At page 2-41, tractor units, the statements need some clarification and explanation. There are a number of statements that are open-ended.	The statements were restructured for clarity in the FEIS.
36	At page 2-43, 2nd item, effective cover is not defined in the glossary or an appropriate reference provided.	Thank you for your comment. A definition of effective cover is provided in the FEIS Glossary.

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37	At page 2-44, CWD, if there is no CWD > I5" there is no discussion about alternatives or in-lieu of standards. This should not be a haul-in requirement.	This project design feature does address areas where the large component (>15 inches diameter) is not available, stating that in these areas the contractor must “assure that CWD *trends* toward desired conditions are achieved”. CWD will be monitored (see Appendix 4, Monitoring) and determined by the timber sale administrator. In certain cases, if the timber sale contractor does not meet contract specifications for achieving a trend toward desired levels of CWD but material is available at the timber sale unit landing, the contractor may be required to return material to the unit.
38	At page 2-45, reclaim, there are word missing in the statements or there are redundant statements.	The FEIS has been updated for clarity.
39	At page 2-47, Ips, it is just as important to impose operational constraints on all thinning operations as it is to commercial operations. Adjacency has little to do with susceptibility to the insect. It would seem important to make biomass and firewood more available for future utilization by requiring placement of tops, culls and other woods waste above a road unless the material is being used to control sediment.	Ips beetle timing restrictions will be included in pre-commercial thinning contracts and in commercial sale contracts. The purchaser will be required to place slash piles and other potential forest products not utilized by the purchaser in locations where removal would be practical.
40	At 3.2.2 2nd para, there should be a citation about the historical forest structure of ponderosa pine and western larch.	The statement in the second paragraph of section 3.2.2 refers to legacy trees. Legacy trees are older ponderosa pine and western larch that survived past fires. Many of these large old trees were removed during past harvest operations.
41	At 3.2.5.2, PVG 6, the broad depiction in the write-up does little to describe or depict the generally mixed lethal fire regime of this group as it exists in the project area. The situations of its occurrence greatly influence how fires burn, both historically and current starts, as well as the fires growth in size and severity. There is no discussion of how location and aspect as well as topography and interspersion of vegetation as well as soil situation also greatly influence the lethality. The weather characteristics that support such large fires are also important, but not alluded to. This needs a bit more explanation because the ability to limit prescribed fire's damaging effects is a major element in considering its application if it is the only allowed vegetation management action. It would also seem appropriate to indicate how much reliance may be needed on mechanical treatments to actually achieve desired treatment	The Forest Plan includes Goal FMGO04 which states, “Use fire alone or with other management activities to treat natural and activity fuels to a level that reduces the risk of uncharacteristic or undesirable wildfires.” Section 3.2.5.3 of the FEIS describes the PVG and fire regime. Reference *Fire Ecology of the Forest Habitat types of Central Idaho*, Crane and Fisher (1986) pg.50 which describes the vegetation and fire regime of this PVG. Section 3.3.6.1 illustrates the 90th and 97th percentile weather used to describe what has historically happened in stands that have not been treated mechanically or with fire in over forty years. On pages 2-8 and 2-9 of the DEIS, the descriptions for each of the three types of Burn Only treatments include estimates on the amount of pre-burn handcrew or machine work that will be required

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	outcomes.	to achieve desired treatment outcomes.
42	At page 3-25 species composition, there is need for some predictions by percentage range to depict the expected amount of ponderosa pine or western larch regeneration that will actually occur in the openings created. Establishing this as a parameter will verify the reality of success or failure of the applied or prescribed treatments. This is very important since many of the retained large trees actually decline in frequency and volume seed production. It will also verify if the restriction of detrimental soil disturbance is influencing this recovery. Standards to monitor or evaluate against are important measure of the appropriateness of treatments.	Natural regeneration establishment in the Restoration stands will be highly variable. Opening size, seed source, soil exposure from prescribed burning and harvest operations, and precipitation amounts will determine seedling establishment. Species composition will also be variable. In the Reserve stand treatments, post-harvest conditions will be assessed to determine site preparation and planting needs. Seedling establishment will be likely and species composition will be controlled.
43	At 3.3.2, introduction, you cite Stephens et al. that indicates climate change will increasingly complicate fire management. All the while the agency is increasingly moving toward more prescribed fire with less mechanical treatments to aid in the preparing for the restorative fire prescriptions. The agency management changes do not seem to equivocate.	Stephens et al. (2009) is an experimental paper contrasting the effectiveness of combinations of mechanical and fire prescriptions to increase forest resistance to survive wildfires under a stated set of fire weather conditions. The results display that mechanical plus fire, fire-only, and mechanical-only treatments using whole-tree harvest systems were all effective at reducing potential fire severity under extreme fire weather conditions. They conclude that it is important for managers to consider the landscape context when planning fuel management strategies and to consider what type of management is locally most appropriate for all resources, including wildlife habitat, water quality, public safety, smoke production, and biodiversity. The Forest believes it is following their recommendations regarding the best use of mechanical treatment and prescribed fire. Stephens et al. also cite Millar et al. (2007) that presents global climate models do not provide enough accuracy or precision to enable us to project fire weather conditions into the future at even moderate spatial scales. Therefore, designing more fire resistant stands and landscapes will likely create forests more resistant to changes imposed on them by changing climates. Stephens et al. continue that it is more appropriate to design and test a range of specific forest structures to learn about their resistance and vulnerabilities, rather than restoring them to a presettlement condition that may not be appropriate for the future. While the Forest is designing a project that restores to the HRV to increase resiliency and resistance, the Forest Plan provides for an adaptive management framework through monitoring, which may indicate the direction that future

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		management should take, including the work of ongoing science in the field of climate change. To meet Forest Plan Goals FMGO03 and FMGO04 in the Project area, the Forest has identified areas where mechanical treatments followed by prescribed fire can be used. The Forest has also identified those areas that the forest would treat with low-intensity ground fire. The prescription for the use of all fire would range from 70th to 80th percentile weather. The prescription would be geared toward spring or late fall. The Forest's goal is to treat these stands under cooler weather conditions than is found in the heat of the summer, thus minimizing detrimental fire effects.
44	At 3.3.7.2 fire behavior, where is alternative 5 in the predicted effects on fire behavior?	Your comment is acknowledged and the section was updated in the FEIS
45	At page 3-68, elk, there is much discussion and cited information as well as bibliography cites, yet few of these discuss the addition and the resulting change of behavior on elk from the re-introduced apex predator, the Grey Wolf. Everyone associated with elk currently, relates substantially changed habits, habitat use patterns and general behavior. Has the proposal considered these factors even using anecdotal experience? There is little discussion about how historical populations estimated under the historical range of variability are so different from the desires and population goals set by Idaho Fish and Game. Changes in management strategy, population goals, and associated economics seem to be overlooked in the document. Elk security may need redefining with wolves around because they seem to be moving adjacent to populations of humans as a survival strategy.	The Rocky Mountain elk is a Species of Special Interest for the Forest. As such, the Forest is required to manage for appropriate habitat to support a viable elk population. Elk population goals are set by the IDFG. The Forest manages habitat to support the goal set for each elk management area that overlays NFS lands. The IDFG elk population goals include all population parameters, both demographic and stochastic; therefore, wolf predation is already considered in the stated goal. Elk habitat management by the Forest requires reducing elk vulnerability to human-caused mortality (Forest Plan direction WIGO01, WIGO02, WIGO02. WIOB11, WIOB12, WIST06, WIST07, WIGU08–14). IDFG has the jurisdiction for elk predator management, which is outside the scope of this project.
46	At page 3-76, action alternatives, fuelwood harvest is an authorized activity by the Forest Service. For that reason the authorization to use roads no matter the type is a part of the authorization process. The comments in this document about fuelwood and access for it seem to verify the general lack of coordination in management actions. It also points to a problem that appears tied to issues raised and dismissed by the agency during Travel Management Planning.	The current fuelwood permit issued in conjunction with the Boise National Forest authorizes using roads where resource concerns do not preclude fuelwood harvest. No unauthorized routes are available for fuelwood harvest except those specifically analyzed by the Ranger Districts and approved for use. Concerns related to the travel management decision issued in 2009 are outside the scope of this project.
47	At page 3-83, cumulative effects, there is a statement that indicates	The IDL is mandated by the State Constitution to maximize

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	the State of Idaho land managers are not on-board with the program that instigated the Forest Service's Wildlife Conservation Strategy. If this program is never going to be implemented on the large areas of State of Idaho Endowment lands then it should be made clear that the National Forest is a sole cooperator. It appears that the state law requiring maximizing financial returns from endowment lands would preclude maximizing woodpeckers and wildlife.	revenues for specific state functions. Therefore, wildlife management on IDL properties will not always match management on federal lands. The DEIS that proposes to amend the 2003 Forest Plan to include a Wildlife Conservation Strategy (WCS DEIS), still in Draft form, was developed with the best science available to appropriately manage wildlife species habitats on the Forest. It is anticipated that the WCS DEIS will work in concert with the IDFG CWS and will provide for sound wildlife management on the Forest. Wildlife management concerns on IDL lands are outside the scope of this project; however, analysis of the cumulative effects of resource management actions on IDL lands is required by NEPA and the ESA.
48	At page 3-120 alterative 1, it seems appropriate to point out high intensity, short duration storms, as well as events such as the June 2010 storm would continue to occur and culvert and other road failures could be expected without some form of treatments.	Thank you for your comment; it is true that these types of events can be expected to occur and continue to impact forest infrastructure. Treatments are proposed for road maintenance and reconstruction that would improve the ability of the road system to withstand flood events.
49	At page 3-121, short term effects, if prescribed burning emulates natural historic fire events and effects, shouldn't this sediment effect be part of the natural background in the BOISED model? Vegetation recovery and its influence are discussed but timing is never discussed to see if a successful treatment application, such as grass seeding, has an influence. We have a similar question about information on page 3-128.	BOISED does not incorporate average fire return intervals into its modeling of baseline conditions. Assuming that fire has played a role in soil erosion in the past is reasonable, but because of the difficulty in predicting how and when a particular area might have burned in a given year, BOISED does not include assumptions of fire occurrence prior to recorded fire history, which can be entered manually into the model. BOISED does allow for modeling different fire severities in planned future fire; prescribed fire, as it is done under specific conditions as described in the burn plan, is modeled as low to moderate intensity and low severity. Observations of vegetation recovery following low-severity prescribed fire, as well as ground cover and soil conditions immediately following a burn indicate little-to-no need for supplementary seeding; duff and litter are in ample supply after a low-severity prescribed fire to prevent soil erosion. Additionally, seeding would not reduce erosion immediately post fire if it were used because sprouting would follow the regeneration of native grasses and forbs in a low- or even moderate-severity burned area. The ecological goal of prescribed fire is to rejuvenate the natural vegetation in vegetation types that evolved with fire. The soil erosion modeled by BOISED can be used

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		to inform timing of prescribed fire implementation, but prescribed fire is disclosed as a temporary effect with a long-term benefit with respect to soil and water resources as it is a tool in restoring historical vegetation conditions, which in turn, contribute to the ecological integrity of the watershed
50	At pages 3-125 & 126, alternative 5, there is considerable discussion about short spikes of in-stream sediment from road obliteration processes, yet many of the roads proposed for obliteration are generally occupied by vegetation and has trees occupying the road profile. These roads may be providing a minor source of sediment through isolated failures. However, road obliteration will assuredly provide a substantial spike in sediment. This definitely will be detrimental to a fish population currently at very low levels and we suspect at high risk of extirpation. So the rationale to accomplish this large amount of road obliteration work in a short period, putting fish at high risk doesn't fit with our definition of enhancement.	Forest Plan Objectives TEOB03 and SWOB18 and MA 3 SWRA Objectives 0318, 0319, 0322, and 0323 would be met by reducing road densities in the Project area. The BOISED model is best used for comparing alternatives—Alternative 5, with more road construction and road obliteration (in other words, more ground disturbance in general) is modeled as having a greater sediment impact potential than the other action alternatives over the temporary to short term. However, using past on-the-ground monitoring of road obliteration effects, it is clear that BOISED overestimates the amount of sediment that would be contributed to a stream 1–3 years following treatment. There is a small pulse of sediment contribution during actual implementation on roads where ground disturbance occurs adjacent to flowing water. However, obliteration techniques and project design features have proven sufficient to minimize, if not eliminate altogether, sediment input from the obliterated road surface to the stream channel after implementation (USDA Forest Service West Zone Monitoring Results 1998–2008; Nelson et al. 2010). Project design features for road obliteration can be found in Chapter 2 of the FEIS, and effects analysis in Chapter 3, Watershed Resources and Fisheries Resources sections, sections 3.5 and 3.6.
51	At 3.8.1 roads open to the public in the project area are expressed as a concern. However, rationale for that statement is not really expressed. This National Forest is the people's land; roads allow it to be used for a variety of purposes. The costs and concerns of both sides of the issue are not apparent here.	The rationale for the roads open to the public as a concern is found in section 3.8.3.1, Roads Open to the Public, in the FEIS.
52	At 3.8.2, Forest Plan direction. The road network present on the Forest appears to more closely match the level of management that is being applied. In most cases, the agency in Forest Planning directives has established that a desired level of authorized road is .7 miles per	Section 3.8.2 in the FEIS includes a general statement describing a road network that would meet agency and public needs which includes direction for decommissioning roads not needed for long-term objectives. The Forest Plan does include direction to maintain or improve soil and water resource conditions and road density is

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	square mile and the objective for the agency personnel is to reach that goal. There was little evaluation of what the road mileage the resource managers would need to accomplish some defined level of management. To an even greater extent, there is no discussion of the limits of budget or other caveats that limit therefore define, land management capability. The Chief's policy dictates a reduction in road mileage regardless of the need or desire to accomplish needed management actions. You also pointed out that maintenance levels provide user safety. If that were a true statement of accomplishment then the recent Roads of Concern project would not have amounted to much of an issue. Timber management, including that which is accomplished for other resources, requires a long term reusable and accessible transportation commitment to perform recurring treatments. If that is not possible then management strategies must be changed dramatically as would fire management programs. It will certainly influence the public and its use of the Payette National Forest.	one of those Watershed Condition Indicators (WCIs) and is found in the Forest Plan, Appendix B, pg. B-19.The DEIS states that, “Specified road densities are not a Forest Plan Standard or Guideline, they are used as a watershed condition indicator” (DEIS page 3-179). The IDT evaluated the road system to determine what roads were needed for management. The Responsible Official is informed by the economic analysis. The Forest is not aware of a specific written policy from the Chief of the Forest Service that dictates reducing road density that is contrary to Forest Plan direction. The Roads of Concern project is outside the scope of the Project analysis.
53	At page 3-177, Table 3-47, it appears footnote 8 is attributed to the wrong elements, it should be road reconstruction.	Comment acknowledged and the FEIS has been updated. The footnote was applied to road construction when it should have been reconstruction; it was corrected in the FEIS, section 3.8.3.3.
54	At page 3-178, last para, this paragraph appears to be an admission that the present Travel Management Plan philosophy will not work. Without a suitable test to find if the philosophy will, it appears that performing all the extra work to preclude use is an expenditure that should not be necessary. Maybe the preclusion philosophy should be tried on roads rather than the elimination philosophy.	Forest monitoring of unauthorized routes indicates that some unauthorized use is occurring. The Agency continues public education efforts to reduce travel infractions. Law enforcement is also one method of ensuring motorized use does not occur on unauthorized routes. Placing barriers is the third method that may be used to help the public stay on authorized roads and trails. Until such time as public compliance with travel management designations is adequate to prevent resource impacts, including wildlife disturbance, these measures may be necessary to prevent unauthorized use.
55	At page 3-185, the discussion about biomass and Adams County should be re-written to reflect the current planning proposal. The	The DEIS acknowledges that the Adams County biomass plant is in the planning stage. All action alternatives include removing biomass

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	Commission is still seeking technology and facility capable of utilizing biomass in some way. Newer technology is being sought which allows a host of carbon sources to be treated. We believe that biomass utilization is very desirable, reducing the smoke of burning waste materials in the woods.	in support of this industry. The FEIS was updated in section 3.9.4.1 to delete references to electric generation.
56	At pages 3-185 & 186, payments, There should be substantial differences in how funding, directly to Adams County, functions under Stewardship and Timber Sale contracts. It is also important to recognize that Secure Roads and Schools funding is a thing of the past for this project. It should also be discussed that alternatives and the way they are implemented has a direct effect to Adams County government. The shift in direct revenues to the county is a major consideration for the project as well as the ability of the project to create jobs and generate a secondary stream of revenue within the community. The discussion does not provide a very clear picture of this element.	The Secure Rural Schools and Community Self-Determination Act and the 25% fund are National policy and regulation and beyond the scope of the Project. The type of contracting used is beyond the scope of the Project and will depend on the amount and type of funding available for implementing the Project. This will relate to national and regional Forest Service policy and direction. Additional discussion of payment to counties was included in section 3.9.4.1 in the FEIS.
57	At page 3-186, Table 3-49, thinning by types need to be shown to reflect both cost and possible revenues. This reflects the cost of other future management and possible outcomes.	Precommercial thinning costs were updated in the FEIS in section 3.9.4.2.
58	At 3.1 0.1 , the under or non-stocked forest land areas following treatment, which should include prescribed burned area effects, should be planted/reforested if the total is greater than 10 acres within 5 years. This is what the NFMA intended to have occur.	Harvest units and Burn Only stands would be assessed after treatment to determine reforestation needs.
59	There should be accomplishment targets set for any prescribed burn by type of treatment. A treatment burn level should be set that triggers a response for salvage harvest and reforestation. This sets a level of expected proficiency in performing the burn as well implementing a recovery and restoration standard if treatments do not meet those standards. Such a performance standard is necessary to evaluate the ability to apply prescribed fire and meet management expectations. By setting the standard the course of action the NEPA evaluation is completed to perform the recovery action when standards are exceeded. For example a burn prescription indicates that 10% of the burn area will have ½ acre opening created by burning standing groups of trees. When actually completed the area has 3 areas ranging from 5 to 10 acres with 80%	Additional NEPA would be required for salvage operations on a case-by-case basis.

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	of the live trees burned and dead or dying. The decision would be to implement salvage or set-up a fuel wood program to recover the dead trees and prepare for reforestation. The commission realizes that prescribed fire is not exact but recovery when errors occur should be part of a programs plan.	
60	Following the October, November and December 2011 meetings of the PFC it became obvious to the commissioners and our Natural Resources Committee participating members that coalition members would have had to been made aware much earlier of the Forest Plan Objectives established by WARS and the Aquatic Conservation Strategy relating to the East Fork drainage. For us this would have allowed a more detailed assessment of all systems within that drainage ecosystem. It would conceivably have altered treatment areas and timing to account for road management scenarios and a critical look at specific fisheries enhancements while assessing the cost and short as well as long term benefits.	Comment acknowledged.
61	The Roads sub-committee established by the PFC will probably aid in making more apparent our concerns since Commissioner Paradis is on that committee. That committee will hopefully establish some standards for assessing decommissioning activity as well as point out why we commissioners are so concerned about the impacts of road decommissioning. We hope the Forest Service will utilize that material. Our familiarity with Forest Service management decisions has indicated to us that while obliterating a road may be looked upon by some as a temporary exclusion, we historically have found that there is a permanence fixed to those Forest Service actions. We believe that it must be very clear that these actions are to correct a problem of some temporary immediacy and in the case of roads, access in the future, they will account for the watershed sediment problems through various means. It will NOT preclude road access in the future. Adams County in its law enforcement, search and rescue, access to and through the Forest has a very direct interest in roads and access management that we hope can be done collaborative with the Forest Service. Because of the formation of this PFC roads sub-committee at this late juncture, Adams County reserves the right to add additional comments toward this project after the official closure date of December 12. We have had verbal	Comment acknowledged.

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	commitment from Greg Lesch and Bob Giles that this is acceptable.	
62	Alternative 5 would have to reflect implementation of needed stand area treatment for all red, green and blue areas in the Cold Springs, Joker Creek and Upper East Fork that, to meet PVG restoration goals that would need treatment within the next 35 years. This would allow road decommissioning (not all obliteration) to occur with timber sale activity and reduce the re-entry treatment needs. This should provide some direct cost saving. The treatments would be aimed at reducing fire risk to legacy trees, as well as insect and disease control. More treatments of the red or PVG 6 areas in the identified areas should have occurred with the proposal, to reduce fire risk and enhance wildlife values in the future. That fits with the re-routing of traffic and road closures proposed.	Section 2.5, Alternatives Considered but Eliminated from Detailed Study, in the DEIS discusses further treatment of Reserve stands. Other stand types located within these large Reserve blocks would not be entered as discussed in section 2.3.2.1 in the FEIS. It is acknowledged that not choosing to treat these stands may increase the possibility of stand replacing wildfire occurrence until fuels reduction treatments occur and fire is returned on a more frequent basis.
63	While we support the obliteration of the identified system roads and developing and enhancing the alternate route we believe the entire program could have been supported by timber sales if treatments had been undertaken as we described. Our emphasis is on timber sale contractual actions paying for these activities instead of as currently proposed because of the exclusion of treatments in part of the East Fork. Standalone culvert replacement, road obliteration and special treatments are far too expensive to consider for such a limited benefit.	The Forest has utilized Stewardship contracting as a tool to provide services. However, if there is a need to improve resource conditions, it is identified and prioritized for funding along with other Forest proposals. Implementation of Project activities does not depend on the availability of Stewardship funding. The recently secured Collaborative Forest Landscape Restoration (CFLR) funds are also a means to fund restoration activities in the Project.
64	What we cannot support in the current Alternative 5 is the volume of non-riparian roads proposed for obliteration that will be needed for treatment in the near future. Access is an integral part of early stand management treatments to reduce costs or increase cost recovery. There also needs to be a much more selective use of decommissioning techniques. For example gates, erosion structures and blocking methods, along with under sized culvert removal should be considered. Roads to be obliterated should be those with limited vegetation recovery. It makes little economic or sediment production sense to obliterate roads with trees, brush and grass growing in the road bed so dense and so effective that it emulates the adjacent forest but with a road profile.	Roads identified for decommissioning, including obliteration, have been reviewed by the IDT and determined not to be needed for future management (see TAP in the Project record) with exceptions detailed in response to comment #3. The objective for roads proposed for obliteration in this project is long-term ecological recovery. Completely obliterating a road prism and restoring, as much as possible, the natural slope profile and drainage patterns, both surface and subsurface, best achieves this objective and has been proven successful (Nelson et al. 2010, USDA 2008; Luce 1997). Appropriate road management is also key to maintaining quality, available, wildlife habitats. The current road density within the Weiser River Watershed has a detrimental effect on wildlife. The

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		majority of the road closures or road obliteration would occur within the East Fork Weiser River Subwatershed because of bull trout habitat. However, the seasonal road closures proposed in Alternative 4 are very important for general wildlife security.
65	It is also very hard to support a costly aquatic project that has a very limited capability to increase a population of bull trout in the East Fork. These isolated remnant populations are not a substantial contributor to recovery of bull trout. In fact the State of Idaho biologists question the rationale of the federal government for even listing the bull trout because of the currently good population levels throughout Idaho.	Bull trout are listed under the ESA as threatened. The ESA, draft Bull Trout Recovery Plan, and Forest Plan requires the Forest to implement actions to recover bull trout local populations. See response to Comment #7.
66	Because Congress has not reauthorized Secure Rural Schools, Adams County does not support using the stewardship method for projects because it does not provide 25% receipts for the local schools and county road departments. The Forest Service should administer sale contracts and conventional timber sales to provide the 25% receipts. One of the goals of the PFC is to 'support and enhance the economic viability of surrounding communities'. Stewardship projects do not achieve this.	See response to comment #56.
67	The Forest Service should set a goal to have all activities finished within the project area within 5 years, instead of 10.	Currently, four timber sale contracts are planned within the Project area. One contract would be awarded each year for the next 4 years. Each contract would allow from 2 to 4 years for completion of work. Prescribed burning would occur after these timber sale contracts are completed. This schedule cannot be completed in 5 years.
68	In each of the 4 timber sale areas, the Forest Service should put up 1 or 2 small sales of 250MBF to give smaller contractors a chance to bid on projects. This would be in line with the economic recommendations of the PFC.	This recommendation will be taken into consideration when planning the timber sales.
69	Adams County has some real concerns about the negative balance of the entire project, estimated at -$2.5 million. Putting a project together like this is very irresponsible of the Forest Service to have to apply for that many appropriated dollars to finish the project. If additional revenue is required to accomplish the obliteration scheduled in Alt. 5, then enough timber needs to be harvested in the	The Forest has utilized Stewardship contracting as a tool to provide services. However, if there is a need to improve resource conditions as directed by the Forest Plan, funding may be committed from appropriated funds. Implementing Project activities does not depend on the availability of Stewardship funding. Recently secured CFLR funds could also be used in restoration activities.

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	Cold Springs Creek, Dewey Creek, and upper East Fork areas to pay for it.	
70	After careful review of the maps and an onsite tour, Adams County has discovered that road 50165, commonly known as the Old Cascade Road, is slated for full scale obliteration at the lower portion that provides access to private property, and the upper portion in the upper Dewey Creek to Squaw Flat areas. This road is a RS 2477, and obliteration is unacceptable to the County. An adjacent road is that is being called road 165 is gated and listed as a seasonal closure on the travel map, but in reality, the gate has stayed closed for years, substantiated by the large tank trap located approximately 100 yards east of the gate. Adams County asserted these RS 2477 claims in 1995 and is willing to continue with the validation process to acquire jurisdiction if the obliteration option is chosen.	The lower portion of this route (the section between the two private parcels referenced in the comment) is being coordinated with Adams County; the county has expressed interest in retaining access for winter non-motorized recreation. It is proposed for obliteration in the action alternatives; however, it would be left passable for foot travel. The upper portion of Forest Service Road 50165 was discussed with Commissioner Paradis; he agreed that as long as the current route designated as Forest Service Road 50165 remained intact and the gates opened following rifle season for snowmobile use, which can be accommodated, the proposed obliteration would be supported.
71	Although Adams County was granted cooperating agency status at the start of the project, there was very little contact from the team leader about upcoming meetings, meeting notes being shared, etc. The County was told that most meetings had been scheduled at the last minute. It would be our hope that that issue could be resolved in the future. In March of 20 11, Adams County passed a resolution asserting coordination status from the Forest Service, and at this point no action has been forthcoming, although a meeting is scheduled with the Supervisor this month.	Comment acknowledged.
72	Additional specific comments will be made at a future date when the PFC roads subcommittee can make recommendations. Until that time, Adams County supports Alt. 2, as does the PFC. The Forest Service should follow the recommendations of the PFC.	Thank you for your comments.
	Department of Environmental Quality, Linda Clark	
73	Air Quality Please review IDPA 58.01.01 for all rules on Air Quality, especially those regarding fugitive dust (58.01.01.651), trade waste burning (58.01.01.600-617), permits to construct (58.01.01.201), and odor control plans (58.01.01.776).	Air quality protection is coordinated with the State of Idaho to meet the Clear Air Act requirements. Project Design Feature #51 in Table 2-11 is included to ensure coordination with the Montana/Idaho State Airshed Group.

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74	Wastewater and Reuse • DEQ recommends verifying that there is adequate sewer to serve this project prior to approval. Please contact the sewer provider for a capacity statement, declining balance report and willingness to serve this project. • IDAPA 58.01.18 and IDAPA 58.01.17 are the sections of Idaho rules regarding wastewater and reuse. Please review these rules to determine whether this or future projects will require DEQ approval. All projects require preconstruction approval by DEQ including facilities planning, preliminary engineering reports, plans and specification and other documents unless they meet the provisions of Idaho Code §39- 118.2.d. Reuse projects require separate permits as well. Also note that at the discretion of any city, county, quasi-municipal corporation or regulated public utility, projects that fall within this provision may be referred to DEQ for approval. • DEQ recommends that projects be served by existing approved wastewater collection systems or a centralized community wastewater system whenever possible. Please contact DEQ to discuss potential for development of a community treatment system along with best management practices for communities to protect groundwater. • DEQ recommends that cities and counties develop and use a comprehensive land use management plan which includes the impacts of present and future waste water management in this area. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.	This project complies with all applicable environmental laws and regulations, including the Clean Water Act. See Chapter 1 of the FEIS (section 1.11, Applicable Laws and Executive Orders).
75	Drinking Water • DEQ recommends verifying that there is adequate water to serve this project prior to approval. Please contact the water provider for a capacity statement, declining balance report and willingness to serve this project. • IDAPA 58.01.08 is the section of Idaho rules regarding drinking water. Please review these rules to determine whether this or future projects will require DEQ approval	This project complies with all applicable environmental laws and regulations, including the Clean Water Act. See Chapter 1 of the FEIS (section 1.11, Applicable Laws and Executive Orders).

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	including facilities planning, preliminary engineering reports, plans and specification and other documents. All projects require preconstruction approval by DEQ unless they meet the provisions of Idaho Code §39-118.2.d. Also note that at the discretion of any city, county, quasi-municipal corporation or regulated public utility, projects that fall within this provision may be referred to DEQ for approval • If any private wells will be included in this project, we recommend that they be tested for total coliform bacteria, nitrate and nitrite prior to use and retested annually thereafter. • DEQ recommends using an existing drinking water system whenever possible or construction of a new community drinking water system. Please contact DEQ to discuss this project and to explore options to both best serve the future residents of this development and provide for protection of groundwater resources. • DEQ recommends cities and counties develop and use a comprehensive land use management plan which addresses the present and future needs of this area for adequate, safe, and sustainable drinking water. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.	
76	Surface Water • If the project will involve de-watering of groundwater during excavation and discharge back into surface water a short term activity exemption (from this office) will be needed which describes treatment of the water from this process to prevent excessive sediment and turbidity from entering surface water. • Please contact DEQ to determine whether this project will require a National Pollution Discharge Elimination System (NPDES) Permit. • If this project is near a source of surface water, DEQ requests that projects incorporate construction best management practices to assist in the protection of Idaho's	This project complies with all applicable environmental laws and regulations, including the Clean Water Act. See Chapter 1 of the FEIS (section 1.11, Applicable Laws and Executive Orders). Best management practices and related Project design features are included in the FEIS, Chapter 2. Stream channel alteration permits will be obtained for any Project activity requiring them. Congress included a provision in the 2012 Fiscal Year Omnibus Appropriations Bill declaring that, at least until the end of fiscal year 2012, stormwater runoff from forest roads and other silvicultural activities will not be subject to NPDES permitting requirements.

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	water resources. Additionally, please contact DEQ to determine whether this project is in an area with Total Maximum Daily Load stormwater permit conditions. • The Idaho Stream Channel Protection Act requires a permit for most stream channel alterations. Please contact the Idaho Department of Water Resources for more information. • The Federal Clean Water Act requires a permit for filling or dredging in waters of the United States. Please contact the US Army Corps of Engineers for more information regarding permits.	
77	Hazardous Waste and Ground Water Contamination • **Hazardous Waste**. The types and number of requirements that must be complied with under the federal Resource Conservations and Recovery Act (RCRA) and the Idaho Rules and Standards for Hazardous Waste (IDAPA 58.01.05) are based on the quantity and type of waste generated. Every business in Idaho is required to track the volume of wastes generated, determine whether or not each type of waste is hazardous, and ensure that all wastes are properly disposed of according to federal, state, and local requirements. • No trash or other solid waste should be buried, burned or otherwise disposed at the site. These disposal methods are regulated by various state regulations including Idaho's Solid Waste Management Regulations and Standards, Rules and Regulations for Hazardous Waste, and Rules and Regulations for the Prevention of Air Pollution. • **Water Quality Standards**. Site activities must comply with the Idaho Water Quality Standards (IDAPA 58.01.02) regarding hazardous and deleterious materials storage, disposal, or accumulation adjacent to or in the immediate vicinity of state waters, and the cleanup and reporting of oil filled electrical equipment, hazardous materials, used oil and petroleum releases. • **Ground Water Contamination**. DEQ requests that this project comply with Idaho's Ground Water Quality Rules (IDAPA 58.01.11) which states that "No person shall cause	This project complies with all applicable environmental laws and regulations, including the Clean Water Act. See Chapter 1 of the FEIS (section 1.11, Applicable Laws and Executive Orders).

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	or allow the release, spilling, leaking, emission, discharge, escape, leaching or disposal of a contaminant into the environment in a manner that causes a groundwater quality standard to be exceeded, injures a beneficial use of ground water, or is not in accordance with a permit, consent order or applicable best management practice, best available method or best practical method."	
78	Additional Notes • If an underground storage tank is identified at the site, the site should be evaluated for underground tanks and potential contamination; please call DEQ at 373-0550 for assistance. • If applicable to this project, DEQ recommends that Best Management Practices be implemented for any of the following conditions: wash water from cleaning vehicles, fertilizers and pesticides, animal facilities, composted waste, and ponds. Please contact DEQ for more information on any of these conditions.	This project complies with all applicable environmental laws and regulations, including the Clean Water Act. See Chapter 1 of the FEIS (section 1.11, Applicable Laws and Executive Orders).
	Department of the Interior, Allison O'Brien	
79	The Department of the Interior has reviewed the Draft Environmental Impact Statement for the Mill Creek-Council Mountain Landscape Restoration Project. The Department does not have any comments to offer.	Comment acknowledged.
	State of Idaho Department of Parks and Recreation, Jeff Cook	
80	We previously commented on the project during the notice of intent comment period on June 28, 2010. We were concerned about the effects this project would have on groomed snowmobile trail opportunities, dispersed camping opportunities, and prescribed burning effects to trails. Table 2-10 lists Project Design Features and Mitigation Measures starting on Page 2-35. In the Recreation and Visual Quality Measures on Page 2-48, the DEIS does not list any design features to protect groomed snowmobile trail opportunities. The FEIS needs to incorporate a design feature to protect groomed snowmobile trail opportunities. The IDPR recommends not allowing	In order to reduce conflicts with the groomed snowmobile routes, the following Project Design Feature (#57) has been incorporated in Table 2-11 of the FEIS. • There will be no hauling between December 15 and April 1 within the project area on the following FS System roads: 50173, 50169 east of the junction with 50486, 50165 between the junctions of 50173 and 50249, and 50172 between the junctions with roads 50486 and 50165. • On other haul roads located on groomed snowmobile routes the contractor would be required to leave a 6" snow floor during snow plowing operations and leave the berms far

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	timber harvest activities after December 15th as a design feature to project these opportunities.	enough apart for passage with a snow groomer. No hauling would be allowed on weekends or holidays between December 15 and April 1. And no hauling would be allowed between Christmas and New Year's Day. • The public would be informed of changes made to the groomed trail system as early as is practical each season. The Winter Travel Map would include these changes. • Adams County may plow the Cottonwood Road and a parking area to allow alternate access for snowmobilers wanting to access Council Mountain if the Mill Creek parking lot is unavailable. The Forest Service would work with Adams County to identify a site on the Payette National Forest suitable for parking, if adequate parking space cannot be found on private land. • Winter log hauling would not be allowed on both the Mill Creek and Cottonwood Creek Roads at the same time. • Winter hauling would be limited to no more than 2 winters on the Mill Creek Road. • The Forest would close and sign the plowed route from Mill Creek parking lot to Shingle Flat on both ends. This route would be closed to snowmobilers during the week. All log hauling activity would be stopped on this route after 10 pm Friday night and reopen Monday mornings. If logging contractor vehicles are used to fuel or maintain equipment over the weekend, warning signs would be placed prominently so that snowmobilers would be aware that they may encounter vehicles on the road even on weekends. • The Forest would post reduced speed limits in the shared use areas. • The Forest would post signs and maps in parking and chain-up areas alerting snowmobiles coming into the logging area to the activities and potential hazards in the area. Where considered necessary for public safety, a specific groomed route identified for log haul may be swapped for a different road that would be groomed for the snowmobile season if approved through the grooming agreement with IDPR. The District has worked with an area snowmobile club and individual enthusiasts to identify potential roads to use in such a swap. None of these potential swap roads are

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		located in Canada lynx habitat; therefore, the grooming and associated changes in snowmobile activity would not affect lynx.
81	The Recreation and Visual Quality Measures did not list any design features to project trails from prescribed burning. The IDPR recommends making sure all water control devices on the trails are cleaned out and operating before starting the prescribed burn. This action will help prevent the trails from rutting significantly.	Project Design Feature #53 in Table 2-11 of the FEIS lists the design features for trail protection measures from both prescribed burning and timber harvesting. The Forest timber staff would be responsible for ensuring the timber contract contains specifications for any needed repairs to trails during to harvesting. The Forest fire staff would be responsible for repairing any damage to the trail tread due to prescribed burning. Effects to visuals with prescribed burning would be apparent over the first 2–3 years after burning, but vegetation would cover the area within 3–5 years.
82	The measures also have a design feature that would restrict log hauling during high periods of recreation use, such as the opening of big game hunting season. This design feature is too general. Log hauling should be restricted during weekends and holidays as well. Expanding these design feature(s) to cover weekends and holidays would reduce recreation traffic and logging traffic interactions.	Table 2-11 in the FEIS was updated to include no hauling on the following holidays or the weekends closest to these holidays: Memorial Day, July 4th, and Labor Day. Restricting hauling on all weekends was considered but deemed too restrictive, considering the level of recreational use. During other weekends, signs will be out warning recreationist of timber hauling operations along the affected roads. See also response to comment #80.
83	Chapter 2 discloses the range of alternatives. Alternative 5 is identified as the preferred alternative. Alternative 5 would focus on improving watershed conditions for bull trout in the upper portion of the East Fork Weiser River subwatershed by reducing road-related impacts to water quality. Alternative 5 has the highest implementation costs of any of the alternatives. While this alternative might be desirable for the Payette National Forest, it may not have the funding to complete all the activities listed in this alternative.	Economics and funding commitments will be considered by the Responsible Official. The recently secured CFLR funds may be used to fund restoration activities.
84	Chapter 2 covers the transportation management starting on Page 2-11. Essentially the transportation management effects are pretty much the same across the range of alternatives for public access. The only roads that are being decommissioned are roads that are already closed to motorized access. Alternative 5 would reroute a road, using other roads, so essentially public access stays the same. With the construction of the non-motorized trail in Alternative 5, non-motorized access would be benefited.	Thank you for your comment. This is true with the clarification that Alternative 5 re-routes two roads: the Dewey Creek and Joker Creek roads.

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85	In the Payette Travel Plan, the Forest justified abandoning several trails on Cuddy Mountain because of a lack of funding to maintain the trail system. Has trail maintenance funding increased? While we support construction of new trails, we are concerned about the long-term maintenance of the trail. We don't want to see another trail abandoned because the new trail was constructed.	The section of non-motorized trail would provide a non-motorized trail experience close to town for non-motorized users to enjoy. Few non-motorized trail opportunities exist close to Council and the trail will be relatively easy to maintain because of the characteristics of the terrain it passes through.
86	Chapter 3 addresses the Affected Environment and Environmental Consequences. In our Notice of Intent response, we requested that recreation be addressed as an issue. The DEIS does not address recreation. Some recreation related information can be found in the transportation and socio economic sections. With the potential effects to winter recreation, dispersed camp site improvements and effects as well as visual effects, recreation needs to be disclosed in the FEIS. How many dispersed camp sites would be improved across the range of alternatives? How will recreation trail opportunities change through the range of alternatives and how will the project impact winter recreation? These are all issues that need to be addressed in the FEIS.	The DEIS addresses recreation concerns in section 1.10.7. Visual effects are addressed in Table 2-10, Project Design Features and Mitigation Measures. The trail opportunities are addressed in section 2.3.2.1, Activities Included in all Action Alternatives, and there is no change in the range of alternatives in the FEIS. Winter hauling restrictions were added to Table 2-11 in the FEIS as discussed in response to comment #80. Dispersed sites have not been identified on the ground, but as the opportunity exists and if determined there are no resource concerns identified or that they can be mitigated, the dispersed site implementation would occur in conjunction with road actions.
	Valley County Commissioners, Gordon Cruickshank, Chairman	
87	Valley County supports the comments submitted by Adams County, Idaho on the DEIS Mill Creek Council Mountain, Landscape Restoration Project.	Thank you for your comment.
	American Forest Resource Council, Irene K. Jerome	
88	AFRC strongly supports the Purpose and Need of the project, as well as the size and scope of the landscape restoration area.	Thank you for your comment.
89	Alternative 5 is identified as the Preferred Alternative for the project, which AFRC generally supports. We do have significant concerns regarding the extensive road closures and road decommissioning strategies identified in Alternative 5. AFRC recognizes the importance of watershed health and the quality of habitat for an isolated local population of bull trout. However, the method the Forest proposed to achieve restoration in the priority ACS watershed relies on long-term closures and road obliteration. These actions raised questions regarding road use and the analysis of environmental effects.	Road obliteration achieves the greatest ecological benefit over the long term and restores more than just vegetation to the surface. Watershed function also relies on soil productivity, natural soil infiltration rates, functioning hillslope hydrology (lateral movement of subsurface flow), and stable hillslopes, all of which are compromised, to some degree or another, by the presence of road prisms. The BOISED sediment model, as well as the selection and prioritization of roads proposed for obliteration or some other form of decommissioning, does consider the location and condition of specific roads. This information can be found in BOISED Modeling in

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	Does the Payette NF have a long term transportation plan that identifies the strategy for future forest management? We do not support complete road decommissioning if this will require road construction in the future. Are there other alternatives available that would meet watershed needs while still maintaining the road infrastructure? AFRC questions the road density metric used in the DEIS as an indicator of watershed health. The credibility of this indicator is highly uncertain without considering key road characteristics and raises questions as to which roads are actually delivering sediment to streams and lowering quality of bull trout habitat. The FEIS should address the variability of sediment delivery between roads due to attributes of road segments. Other relevant characteristics that should be evaluated prior to completely eliminating roads include analysis of surface condition with respect to vegetation and actually location of roads in relationship to the streams. AFRC would like to see further analysis of the effects and cost-benefits of obliterating roads compared to road maintenance or other methods of meeting the objectives for mitigating road sedimentation issues while still maintaining the permanent road infrastructure necessary for long term forest management, fire control, etc. There is a significant cost to the road strategies identified in Alternative 5 as compared to Alternative 2, which appears to be otherwise identical.	the Project record and Appendix 5 of the FEIS. See response to comment #26 for a discussion of the TAP. The road infrastructure needed for management and public needs was evaluated and it was determined that all alternatives would meet this need. The FEIS includes an analysis of cost in dollars per activity by alternative. How each action alternative meets the ecological goals and objectives of the Forest Plan must also be considered in the selection of an alternative by the Responsible Official. All roads proposed for obliteration or some other form of decommissioning in the Project were reviewed by the Project IDT and determined not to be needed for future management or have minimal impacts.
90	There is a significant component of prescribed fire associated with this project. What is the cost-benefit of that activity? Will timber salvage be an opportunity if prescribed burn projects go beyond mortality objectives? Or if prescribed fire goes outside defined boundaries and additional mortality occurs?	Prescribed burning will be planned to limit mortality to smaller trees and levels that would not create a salvage opportunity. However, should unforeseen events create mortality that could be salvaged, subsequent NEPA analysis would have to be completed. The Forest recognizes that completing complex landscape prescribed burning carries an inherent risk of undesired mortality and these burns must be carefully planned, implemented and followed up with monitoring to measure the success of the prescribed burning program.
91	The socio-economic analysis does not evaluate what the impacts to the local and regional economy would be if there was a loss of the existing forest infrastructure. Further, how would loss of existing forest infrastructure affect the forest's ability to implement forest plan requirements for vegetative restoration goals, wildlife habitat	Transportation planning for future access needs was an integral part of the transportation analysis. Proposed road decommissioning would not significantly affect future access needs. The needed road infrastructure would be left intact under any alternative.

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	improvement goals, and other resource goals?	
92	The DEIS calls for removal of biomass which is a desirable goal if it can be done cost effectively. It is not appropriate if it must be heavily subsidized by the tax payers. Are there sufficient biomass facilities in the surrounding area to require removal of this material in a cost-effective fashion?	As Adams County has noted in their comment (#55), the biomass facility planned for Council is being pursued but is not certain at this time. The other local facility that is currently utilized is located at Tamarack, Idaho on US Highway 95. The quantity of biomass utilized from the Project area will depend on the economic viability and the market conditions as they evolve. The Forest has been committed to assisting in the supply of biomass that could help this emerging market because of the economic benefit, renewable energy goals, and the reduction in particulate emissions when burning is done in industrial biomass burning plants.
93	AFRC is discouraged that the economic analysis shows a negative net present value for both Alternatives 2 and 5 on this project, recognizing that the current economy and timber markets directly affect that number. AFRC strongly endorses projects that are at a minimum “revenue neutral” for these landscape restoration projects as the resource is fully capable of supporting these projects.	Comment acknowledged.
94	Alternative 5 was added as a result of the scoping process and is identical to Alternative 2 other than the extensive road decommissioning that was added. This addition significantly increases the deficit status of the project. AFRC would appreciate the opportunity to further comment on the road closures and decommissioning strategies if that is an available option in the immediate future.	Comments can be submitted at any time; however, to be most useful, they are requested during designated public comment periods.
	Boise Cascade, Lindsay Warness	
95	Thank you for giving me the opportunity to provide comments on the Mill Creek – Council Mountain Landscape Restoration Project on behalf of Boise Cascade, LLC. I am happy to see the Forest Service (USFS) producing more “landscape scale” projects and encourage the USFS to continue to do so in order to economize costs. As you know, the size of the project does not affect the cost of the NEPA and landscape scale projects increase the economies of scale and reduce the overall unit costs of the NEPA analysis.	Thank you for your comments.
96	Boise Cascade manufactures engineered wood products, plywood,	Thank you for your comments.

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	lumber, and particleboard and distributes a broad line of building materials, including wood products manufactured by the company's wood products division. The company is privately owned and headquartered in Boise, Idaho. Boise Cascade owns mills that utilize wood from this area which includes the Mill Creek – Council Mountain Landscape Restoration project and we are particularly interested in the outcome of this project. This project, when implemented, will provide jobs and income for the local communities of southern Idaho and lumber mills in the Inland Northwest. I encourage the USFS to choose alternative 2 which provides the most opportunity while adhering to the multiple use mandate for the National Forests. Alternative #2 will provide the most impact relative to the investment (economies of scale), unit costs, and will allow for opportunities for future management.	
97	Under this alternative, the USFS has proposed mechanical treatments on approximately 5,081 acres (.2 % of the Payette National Forest) within the landscape restoration project of 51,975 acres. This means that less than 10% of the project area is slated for harvest, but over 35% of the project is slated for "burn only" treatments. If we are truly working towards restoration of our national forests and local communities, we should treat as much acreage as possible in every project and mechanical treatment should be considered before "burn only" prescriptions. Mechanical treatments provide merchantable timber and biomass for local businesses and provide jobs. Also, increasing the timber harvest by just 1 mmbf on this project will create an additional 9.2 jobs (pg. 3-184, Mill Creek DEIS). Please review the project for any additional opportunities to increase mechanical harvest opportunities within the area.	The Burn Only Restoration and Reserve stands were identified as such because they do not have road access for ground-based or skyline harvest systems. In Alternative 3, these stands are proposed for helicopter harvest, which would be the only feasible harvest method. Alternative 3 proposes helicopter harvest in 1,613 acres of Burn Only stands. Using fire alone to restore stands to the HRV is a viable treatment; however, using harvest treatments followed by prescribed burning would allow for better control of trees to be retained and the size of the openings created. The minimum number of Burn Only treatments in forested stands is in Alternative 3 (1,591 acres). The maximum number of Burn Only treatments is in Alternatives 2 and 5 (3,204 acres). A comparison of the effects of Burn Only treatments versus harvest and burn treatments is included in section 3.2, Vegetation Resources, in the FEIS.
98	I urge against choosing alternative #4. The DEIS states that alternative four was developed to respond to vegetation and wildlife issues. Some of the sensitive species analyzed (Canada lynx and northern Idaho ground squirrel) have not been found in the project area and I question why an alternative was developed to include these animals. Alternative 4 manages for the pileated woodpecker which is not considered a Region 4 Sensitive Species. Alt. 4	Thank you for your comments.

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	identifies road density as a problem for Elk but does not reduce road density (habitat security) for Elk. It also excludes high and moderate closure canopy closure stands in PVG 6, which, if managed as prescribed in alternative 2, would provide more early successional vegetation (forage) for elk. Conversely, alternative 2 is designed to increase habitat for Region 4 Sensitive Species within the project area, specifically the white-headed woodpecker and the flammulated owl. It is appropriate that the USFS implement alternative 2 which will manage for the Region 4 Sensitive Species, the white-headed woodpecker and flammulated owl. It will also reduce road densities by the same amount as alternative 4 but increase forage opportunities for elk.	
99	Under alternative 5, 65.2 miles of existing roads (authorized and unauthorized) is scheduled for obliteration. However, if only 20.3 miles of those roads are located within RCAs, how does obliterating an additional 44.9 miles of roads outside of the RCAs affect the bull trout habitat? Also, can the USFS confirm that none of roads proposed for obliteration will be needed for future landscape management requirements such as fire management or additional restoration activities? According to the DEIS, there will be a need in 20 years to manage some areas to return to HRV, has the USFS determined that the roads scheduled for obliteration under alternative 5 will not be needed for re-entry purposes? Also, the DEIS states that the effects of the treatments from alternatives 2 and 5 within the RCAs are the same (pg. 3-150). Is the DEIS referring to the effects of the vegetative treatments in the RCAs or do these treatments include road decommissioning?	Roads located outside of designated RCAs still impact overall watershed function and aquatic habitat (see FEIS Chapter 3, Watershed Resources and Fisheries Resources sections 3.5 and 3.6). The roads identified for obliteration have been analyzed from an interdisciplinary perspective and are not needed for the most part for future management, with exceptions detailed in response to comment #3. The DEIS refers to vegetation treatments within RCAs as the same between Alternatives 2 and 5.
100	Additionally, I suggest the USFS to do a cost analysis of alternative #5 and analyze whether the obliteration of roads is a necessary cost. There may be alternative cost effective measures that could be implemented. One option would be to define and obliterate only high priority roads (within RCAS) while closing lower priority roads to protect future management needs. In order to manage this area for future disturbances (such as fire), the USFS will need to maintain access to the landscape. Please ensure that all road obliteration is necessary and will not be needed for future entries into the project area for necessary management activities.	The FEIS includes an analysis of cost in dollars per activity by alternative. How each action alternative meets the ecological goals and objectives of the Forest Plan must also be considered in the selection of an alternative by the Responsible Official. All roads proposed for obliteration or some other form of decommissioning in this project were reviewed by the IDT and determined not to be needed for the most part for future management, with exceptions detailed in response to comment #3..

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	As the global demand for timber products continues to increase, it is vital that we continue to work together to expedite projects on our federal forests that will benefit all parties involved. The Mill Creek – Council Mountain is a good example of the community and USFS working together to produce an ecologically, economically, and socially viable project. Thank you for the opportunity to comment on this project; my colleagues and I look forward to seeing the results.	
	Idaho Power, Ron Piston	
101	Idaho Power has received the notice regarding the Mill Creek - Council Mountain Landscape Restoration Project and appreciates the opportunity to comment. Idaho Power owns and operates the Oxbow -McCall Transmission Line (Line 441). Line 441 is located within the northern portion of the restoration project area (Figure 1). Idaho Power accesses Line 441 using a mixture of access roads, service roads, and overland travel routes along the authorized right-of-way. We are concerned about the potential impact the proposed decommissioning (obliteration) of unauthorized roads and long-term closure of Forest Service System roads may have on our ability to access and maintain Line 441 in a safe manner and in accordance with industry standards. Access to this line is a key component of the authorizations and it is necessary for Idaho Power to continue to have access to this line and the associated access/service roads. The proposed change in motor vehicle access may significantly limit or prohibit our ability to conduct federally-required inspections and maintenance activities necessary to provide our customers with reliable service. We would appreciate the opportunity to work with the Forest Service to explore alternatives to decommissioning any roads necessary for accessing Line 441, such as installing gates or allowing Idaho Power to construct other roads to access our facilities.	The Forest has reviewed the special use permit and map provided and no roads used for access to Line 441 by Idaho Power Company will be impacted from this project.
102	We are also concerned that the proposed treatment prescriptions (i.e., prescribed bums) could potentially damage our line. Therefore, we ask that the Forest Service contacts us prior to any prescribed bums in the area, as we need to ensure that our facilities are protected.	The Forest recognizes your concern. Section 3.3.3 of the DEIS discusses the power line that goes through the North End of the Project. Additionally, it will be a requirement to include Idaho Power Company as a contact in our prescribed fire plan. This is a common practice in other Forest projects.

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	Tom Mahon Logging, Inc.	
103	We would like to see more consistency in the contracts between projects. We have been involved, either as a purchaser or subcontractor, on all three stewardship contracts (Summit Gulch, Crooked River, and Cuprum) that were offered a couple of years ago. Every contract lead to some type of confusion and misunderstanding as to what needs to be done and who was required to do it. The biggest area of confusion always seemed to involve slash treatments.	This recommendation will be taken into consideration when planning the timber sales.
104	You must eliminate “Per Job” bidding on items that can quantified. This includes biomass, logging costs, slash work, etc. These items need to be bid by the ton, acre or other measurable unit. The risk of this style of bidding falls on both the purchasers as well as the Forest Service. In Summit Gulch, the sale is over-running, and we are going to lose money on the logging cost line item. The additional volume not only affected the logging cost, but the biomass removal as well. In Cuprum, the helicopter volume under-ran. The Forest Service paid Boise a lot of extra money to harvest very little volume. One of the major reasons we declined to bid on Cuprum was the uncertainty with the helicopter logging costs. Knowing now that it under-ran, wish we’d pursued it more. You can say all you want about the purchaser’s responsibility to look at the jobs and bid accordingly. Nobody (Purchaser or Forest Service) has the resources to accurately predict how many tons of saw logs or biomass will be removed. You will receive more competitive bids from purchasers because we won’t have to bid so conservatively fearing an over-run. If non-logging work is required, it needs to be a separate line item. That includes items such as thinning & removing, loping, felling residual, pull slash, etc. Take those away from contractor’s responsibilities and make them line items.	This recommendation will be taken into consideration when planning the timber sales.
105	The Forest Service needs to be more “end results” orientated. Specify what you want the end result to be, then let the purchasers describe their methods to achieve those results. For example: fuels reduction. You want the units treated to a level of acceptance. Our	This recommendation will be taken into consideration when planning the timber sales.

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	proposal might look something like mechanically thin and remove when possible; thin, lop and scatter on the steeper ground; excavator pile where too much slash is present, etc. We will come up with a per acre price to address the fuels reduction issue. You will undoubtedly receive a wide array of proposals varying in costs and design. While in Crooked River, we had to change logging systems to meet designated acres of a particular slash treatment, when our original system did a better of logging. We had to log an area mechanically to meet “thin and remove” acres when the jammer was better suited for the area. By specifying the number of acres to treat a certain way, you’ve limited the contractor as well as yourselves as to the final result.	
106	You need to budget for the Mag-Chloride or equivalent for dust abatement around houses or campgrounds. I know it was a serious issue for people where the Cuprum road meets the pavement. There is no way a water truck can keep a gravel road dust-free all of the time.	This recommendation will be taken into consideration when planning the timber sales.
107	If a proposed project is large and has extensive roadwork, timber harvest timing restrictions, and biomass requirements, the contracts should be extended to four years. Roadwork and harvest restrictions seem to push back the biomass and road obliteration. There are too many jobs to be done in sequence for a three-year time deadline.	This recommendation will be taken into consideration when planning the timber sales.
108	Earlier this year, there was discussion regarding log branding, and how other regions were backing off on their requirements. For some reason, our region was not able to follow suit. This issue needs to be reevaluated so our requirements are lowered to comply with neighboring regions. Branding logs is a waste of time of time and money and does nothing to add to log accountability.	This recommendation will be discussed with the Regional Office timber staff.
109	We have serious concerns about the prescribed fire treatments being proposed in this project. We don’t believe you can burn twenty thousand acres and maintain control of the fire at all times. The result of the prescribed fire administered in the Summit Gulch Stewardship is a prime example. While only 500 acres, control of that fire was lost and thousands of perfectly healthy trees were needlessly burned. Not to mention a large block of land (20-50 acres	Thank you for your comment. The Forest does not plan to ignite 20,000 acres in one season. Much smaller blocks, ranging from 250–3,000 acres would be burned. Burn plans would be developed for each burn block and specific concerns would be addressed. Prescribed fire would be used to treat stands that cannot be accessed for harvest. The objective is to use low intensity fire to reduce fuels, recycle nutrients and rejuvenate forest floor vegetation.

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	– depends on who you talk to) that was completely destroyed. As a logging contractor, that fire was a real slap in the face. Countless hours were invested by everybody to insure all of the project's objectives were being met and guidelines were being followed. Those efforts to protect the residual stand and improve the forest were in vain and "went up in smoke". The Forest Service is fortunate that the majority of that burn is behind locked gates and out of site of the public. Imagine if that totally burnt block was at Shingle Flat or some other highly visible area. The public has been lead to believe that we need to reintroduce fire to treat our unhealthy forests. They think that prescribed fires are low intensity that just creep along the ground. Maybe that is the intent, but it is far from what is happening in the forest. What is really to gain from burning a stand of timber after logging? Can't the logging and post-logging operations give you the stand conditions you want? These are more cost effective and less risky ways of managing the forest. We have either removed or lopped potential ladder fuels in units that are overstocked and at risk of wildfire. The risks are too great for the minimal benefits to attempt prescribed fires on this scale. Let alone returning every 10 – 20 years to repeat the process.	Large blocks of stands primarily composed of vigorous seral trees would be designated for treatment to return stands to the HRV. Large blocks of stands that lack a preponderance of vigorous seral trees would be left untreated. These untreated blocks would provide habitat for wildlife species that prefer denser stand conditions. The planned arrangement of large blocks of treated and untreated stands can be visualized by comparing the Alternative 1 map (existing condition) to the action alternative maps. Treatment needs based on stand conditions was not the sole determining factor in deciding how many of these stands to treat. Other resource concerns, primarily wildlife habitat, were used to determine the amount and distribution of Reserve stand treatments (Prichard et. al. 2010).
110	As a member of the PFC, we are aware of the differences between Reserve and Restoration stands and that compromises were going to have to be made for consensus. Basically excluding the reserve stands from treatment makes no sense. This plan fails to provide treatment in many Grand Fir dominate stands. It is a fact that stands dominated by Grand Fir will not lead to a diverse forest, occupied by a mixed stand of conifers and an understory of forbs and grasses. Due to its thin bark, Grand fir is not as resilient to fire as seral species capable of occupying the same site. True firs are non-resinous and therefore lack the ability to defend themselves from insect attack. If left untouched, these stands will continue to grow and undesired species. These stands should be entered using all silvicultural methods which encourage retention of the seral species and	This comment correctly describes conditions in some Reserve stands and the probable development path of these stands. Other stand conditions that would place them in the Reserve category include severe dwarf mistletoe infections in Douglas-fir, western larch, or ponderosa pine and general low vigor conditions. See response to comment #109 for the discussion of stands selected for treatment.

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	removal of the climax species – Grand Fir. These stands should be directed toward the creation of a diverse forest canopy, complete with patches of old-growth characteristics adjacent to openings of seral regeneration, as well as supporting a vibrant understory. The alternative is a dark, dead and stagnant Grand Fir dominated forest susceptible to fire and insects. These new stands described above will lead to the historic conditions described in the Forest Plan as compared to the eventual wildfire, which is the future of these stands if left untreated.	
111	While we agree that the plantations need treatment, we know that like biomass, it is not economically viable. Even the older plantations that do have merchantable saw log material in them, they are low value logs. Recognize that thinning plantations with biomass removal is very expensive. The changes that were made regarding log utilization in Summit Gulch need to be the standard on the forest. Even though many of these trees will produce a minimum spec. log (8'6" with 6" top), they are undesirable to the sawmill and should not be required to be delivered. Instead, a pulp or other market should be utilized.	The cost of biomass removal in plantations will be considered in the development of contracts. Utilization specifications similar to the Summit Gulch contract modification will be considered in the development of contracts.
112	I said it the PFC meeting and I'll say it again… Biomass is a cash cow. As much as we would love to see it work, it is not economically viable. That doesn't mean you should totally abandon the idea, you just can't plan on grinding all of the logging slash with the money generated from the sale of the timber. It will take additional funding to accomplish this. In Summit Gulch, we have reduced the tons of biomass created by removing a pulp log from the non-merchantable portion of the tree. The pulp log is still an economic loser, but not nearly as bad as if it were ground into hog fuel. This option needs to be incorporated into future contracts. The logger needs to know ahead of time whether a particular brush pile is going to be chipped or not. As a contractor, if we know the pile is going to be chipped, our landings are smaller since we can put piles up against standing trees. If the pile is going to be burned, we will cut the landing bigger to prevent burning trees up around the pile. If the removal of biomass is still going to be required, it needs to be	The cost of biomass removal will be considered in the development of contracts. Utilizing pulp logs versus chipping will be considered in the development of contracts. The size of landings and the associated soil impacts are important. More detailed planning for burning versus removing non-sawtimber material will be considered in the development of contracts. The amount of biomass generated in harvest operations is difficult to estimate. Measuring biomass by the ton will be considered in the development of contracts.

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	per ton and not per job. The model being used to estimate the tons of biomass created is not accurate. In Summit Gulch, we returned brush back to cover skid trails as well removed over 700 tons of pulp that would have gone for biomass and still over-ran the estimated tons. Nobody can predict how many tons will be generated, so the only fair way is to do it by the ton.	
113	There is no reason why all proposed projects can't be economically self-sufficient. You have a product that people want – timber. Sell it to fund other projects. Table 3-49 shows a $944,970 dollar cost allocated to the prescribed fire. Does this include the slash work that the purchaser is required to accomplish? Quick math says you want to log and burn 5,000 acres at estimated minimum of $200 per acre in prep work is another million dollars.	The revenue displayed for commercial timber harvest in Table 3-49 in the DEIS has slash and fuels work within harvest units deducted. The prescribed fire costs are for burn areas outside of harvest units.
	East Fork Ditch Company, Dick Thompson	
114	Mitigation for RCAs outside the Upper East Fork Weiser River to comply with Standards and Guides SWST01 & SWST 04 would address my concerns for maintaining water flow in the East Fork Ditch and the East Fork of Mill Creek if implemented as described.	Thank you for your comment. Protecting the East Fork Ditch will be provided for during Project implementation and a Project Design Feature (#58) has been added to the FEIS in Table 2-11.
115	The constructed canal from our diversion near Bench Creek to Shingle Flat should be kept free of debris during the irrigation season, normally June 1 through October 20. Any debris placed in the canal after the irrigation season would be removed prior to the next season. The diversion, fish screen, canal bank, road, and cutouts need to be maintained in functioning form.	A project design feature (#58) addressing these concerns has been included in the FEIS, Table 2-11, and a contract provision based on this design feature would be included in contracts that could affect this ditch.
116	I use the bridge and Road No. 501980100 upstream from the confluence of Bench Creek and the East Fork Weiser River for hiking access to our fish screen during high water. The road is identified for obliteration. The road prism is stable, well vegetated, and does not contribute sediment. I request that it not be obliterated because any sediment from obliteration would enter our canal. If it is obliterated, please leave a trail to maintain access, and provide effective erosion control measures below the obliterated area.	Thank you for your input. Hiking access to the East Fork Ditch will be provided. Best management practices and design features for obliteration would provide erosion control measures.
117	Road numbers are a little difficult to read in an area, but I think Road	Thank you for your input; protection and maintenance of the integrity

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	No. 50996 crosses the East Fork Ditch in Section 29. Marti Wegner contacted me concerning culvert installation to cross the ditch. She also suggested that the ditch could be crossed without a culvert installation after the irrigation season. I agree as long as the ditch was repaired prior to the next irrigation season.	of the ditch channel will be provided for during Project implementation.
	Backcountry Recreation Club, Becky Johnstone	
118	Alternative 4 proposes to put gates across Road 50181. This is a part of the groomed snowmobile trail system under MOU with PNF and Valley and Adams County and the Idaho Department of Parks and Recreation. If the 2 gates are put in place they need to be spaced wide enough for a groomer and drag to pass through them and they need to be left open during the snowmobile trail grooming season.	FS System Road 50181 would stay open year-round in Alternative 4. The DEIS map shows the gates intersecting FS System Road 50181 also but they apply to FS System Roads 50252 and 50447 (as displayed in Appendix 2) and gates would not affect snowmobile grooming.
119	The Idaho Department of Fish and Game should be asked to calculate the carrying capacity of the project area for elk and deer under each alternative and the economic cost to the area for the reduction in elk and deer habitat and population. It is interesting that in their publication Wildlife Express, November 2011, Wild Woodpeckers, no mention was made of the white headed woodpecker. It seems odd the while the IDF&G puts so little importance on a species that the PNF is putting so much emphasis on. Both IDF&G and the PFC stressed that they are concerned about elk habitat in the area especially with the presence of wolves.	This concern is beyond the scope of this project.
120	WUI's around private inholdings should be identified on the maps, not just the ½ mile boundary on the west side of the project area. Please pay serious attention to the comments of private landowners within the PNF.	Known structure locations are included in the Fire and Fuels Specialist Report and used in conjunction with the identified WUI for treatment prioritization.
121	While the project area may have been largely unroaded 100-300 years ago there were many trails through the area in use by both game and Native Americans as evidenced by archaeological sites within the project area. There were also many miles of roads present in the project area prior to the Forest Service's establishment in the area. There historic roads and trails should not be obliterated or closed to the public. The Forest Service must respect the routes established in the area prior to their jurisdiction. Most of the historic	See response to comment #6.

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	routes were not in riparian areas.	
122	All water rights and mining claims should not be impacted by any changes in the transportation network. There were several irrigation ditches noted on earlier draft maps of the project area. The locations of those ditches were removed after I asked whether or not those routes shouldn't be left in place in order to allow water rights holders access to maintain those historic ditches. The ditches and access roads have been in place since before the PNF had jurisdiction in this area and should be left in place.	One mine claim is known to occur within the Project area and coordination will be completed with the claim holder during implementation. Ditch access is coordinated under special use permit.
123	No roads or trails should be obliterated or closed long term prior to the completion of the Transportation Analysis Plan, Subpart A of the Travel Plan. I found it odd that the Krassel Ranger District would be the first to undergo TAP when it has few timber management projects on the horizon and the Snow Free Travel Plan is still under litigation.	See response to comment #26.
124	Brook trout have been observed in the project area. No culverts which block their passage into potential bull trout habitat should be removed or upgraded to allow their passage.	Culverts replaced during the Project would not facilitate the expansion of brook trout. See the Fisheries Resources section 3.6, of the FEIS.
125	Recent correspondence with Supervisor Keith Lannom alarms me. He states that, "The Decision Memo is as specific as it can be; however, it is not exact and that is intentional." No roads not identified in the EIS should be obliterated without further NEPA review. I believe it is a violation of the process to obliterate roads without following the NEPA process so that potentially affected individuals can comment on the obliteration or other decommissioning. Roads have been obliterated in the Payette national Forest that are under MOU as groomed snowmobile trails and that are used by grazing permit holders. This should not be happening. If 65.2 miles of roads are going to obliterated it better be the 65.2 miles discussed in this document. I am hoping that the FEIS will be as specific as possible regarding what will be done and where. Agreements with permittees that allowed continued access should be spelled out in detail. We have been told too often during this process that certain routes needed by permit holders would remain open only to be told a week later that those routes would be obliterated.	The FEIS discloses by alternative the actions that would be taken on roads. We have coordinated with livestock permittees and permittee roads of concern are displayed on the Appendix 8 maps and noted in the legend with "permittee coordination." We have overlaid the current groomed trail network and determined roads on the groomed trails would not be decommissioned. Permittee access will be coordinated with the permittee in permit administration.

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126	There needs to be some description of what obliteration will consist of. Past obliterations on the Payette have left excessive amounts of debris on the ground making it impossible for wildlife to pass through the destruction or for people to hike along historic trails. We need written assurance that this won't continue. I find it hard to understand how 65.2 miles can be identified as needing obliteration if no one has walked all of those routes to determine what the exact problem is that restricts fish passage, causes sediment to move to streams or restricts the natural infiltration of water. I've seen routes that allow for passage of no more than one vehicle at a time obliterated to a width of 64 feet with four foot deep holes and so many live trees felled in the area that people and wildlife are no longer able to access trails that have been in place since the mid-19th century. We have been told that this will not occur in this project, but what assurance do we have if it isn't in writing? I understand the need to be vague when we are talking of road construction and which specific trees might be cut down, but road that are in place can be very specifically addressed as to which points in the road need what specific treatments. If there is no cut or fill there is no need to recontour. Would it be less expensive to resurface some sections of road than it will be to obliterate them if they can be used for recreation? Many forest roads haven't been maintained for 30 – 50 years or have received only minimal maintenance. Please do not use plastic culverts in areas where they may melt during forest fires.	A description of road decommissioning treatments is included in Chapter 2 of the FEIS. A monitoring plan for the implementation and effectiveness of road obliteration treatments are included in Appendix 4 of the FEIS. The Soils, Watershed, Wildlife, and Fisheries Resources sections in Chapter 3 all address the ecological objectives and environmental effects of road obliteration. The Responsible Official will consider both the monetary cost and the ecological benefit of road obliteration as it relates to meeting associated Forest Plan resource goals and objectives. The standard culvert type used on the forest is corrugated metal pipe (CMP).
127	I support the construction of a bathroom at 5 Corners on West Mountain. I recreate frequently in that area and it would be nice to have a restroom on the mountain that could be used by snowmobilers and others during the snow free months. 5 Corners has several gravel pits and offers sites that are easily accessible to those traveling many different roads. I think that it is a very good idea for the Forest Service to partner with user groups like the Donnelly Snowmobile Club to construct and maintain a restroom in that area. The Donnelly Snowmobile Clubs has demonstrated the ability to build and maintain a groomer shed and public restroom on West Mountain Road. User groups requesting facilities should be willing to shoulder the cost of construction and maintenance	Comment acknowledged.

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	especially in no fee areas.	
128	The Forest Service should recognize that forest roads vary widely and not all sediment produced from roads is actually delivered to streams. Roads and stream crossings vary in terms of surface, slope, traffic, general condition, proximity to streams and the presence and effectiveness of drainage and erosion measures, among other factors. Sediment delivery varies enormously. Using road miles is an inadequate basis for analysis.	Road density is a watershed condition indicator and was evaluated in Chapter 3 of the FEIS according to Appendix B of the Forest Plan to comply with SWST01 and SWST04. Chapter 3 in the FEIS discloses the effects to road density in all alternatives. Through field surveys and interdisciplinary analysis of a roads network needed to accommodate public travel and resource management, roads were identified that were a) having a detrimental ecological impact on SWRA resources within the Project area, b) important for wildlife security, and c) not needed for future management or high value for public use. These roads were prioritized for decommissioning with emphasis in the upper East Fork Weiser River (bull trout habitat). Decommissioning (obliteration) would restore natural hydrologic function and improve soil productivity in these areas. Road miles are only one factor considered when evaluating the condition of a watershed; a suite of criteria (watershed condition indicators) found in Forest Plan Appendix B are required to be considered. However, the effects of roads in general on watershed function and wildlife habitat is well-documented (FEIS Chapter 3, Watershed Resources, Soils Resource, Wildlife Resources and Fisheries Resources sections; also see Project specialist reports for same resources). On-the-ground road condition is considered when prioritizing roads for obliteration. It is widely recognized that full obliteration provides the greatest long-term ecological restoration benefit (see citations in above Chapter 3 sections and previously mentioned specialist reports).
129	The Forest Service must also consider to what extent the existing environment represents background or natural conditions. Frequent fires would have left slopes vulnerable to erosion pre European influence. Fires set by Native Americans would also have left areas vulnerable to increases in erosion. Given the costs of the proposed treatments and loss of public access it is important that the PNF document that the decommissioning will actually achieve reduction in the delivery of sediment from the road system to streams and improvement to water quality and fish habitat. The PNF should quantify how much of the sediment entry to streams and in stream levels of fine sediment are caused by naturally erosive conditions	The BOISED sediment model considers the inherent erodibility of specific landtypes in the Project area, as well as existing features such as roads and past events and management actions, for example wildfire and timber harvest. These influences can be viewed separately in the BOISED model and allow one to compare which are having the greatest impact on sediment levels compared to a “pristine” watershed. The existing condition (background) level of sediment is compared to proposed alternatives in section 3.5 Watershed Resources in the FEIS. There is also a discussion of BOISED model limitations in Appendix 5 of the FEIS, and BOISED model runs are included in the Project record.

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	versus anthropogenic inputs and whether or not the conditions are likely to change in response to the natural recovery or the planned management activities. We have stopped all off road travel and travel from all unauthorized roads in the PNF. How has that decreased sediment entry to streams and in stream levels of fine sediment? Those were pretty widespread measures aimed at reducing sediment and the social cost has been enormous to older and handicapped individuals.	
130	Routes open to ATV or 2 wheel motorized travel can be managed to PNF specifications by the Idaho Department of Recreation Trail Rangers at no expense to the Forest Service. Hiking trails have no significant funding from outside sources. Routes that are under MOU for Snowmobile trail grooming are also cleared at no expense to the Forest Service. It would seem that it would be more cost effective for the Forest Service to allow travel by all users especially when motorized users are willing and able to pay for maintenance.	While the State Ranger program is able to help us maintain our motorized trails, it is still important to provide for different types of user opportunities, both motorized and non-motorized.
131	The PNF needs to use best available science to document the benefits of its proposed work and of the alternatives such as road improvement in lieu of decommissioning. Many of the routes designated for obliteration in Alt 5 are already grown over. Culverts have been removed for some time. Trees are growing in the roads. They are not passable to ATV's or in some cases, even 2 wheel motorized vehicles. Will you reduce sediment if you have to rebuild the road before you can perform any maintenance? Are they better left as they are now? Obviously, they are not so compacted that trees and grass cannot grow. The soil will naturally de-compact as vegetation continues to grow.	The objective of road obliteration is to remove a road from the landscape and achieve complete ecological restoration over the long term (greater than 15 years) (see the Forest Plan; Chapter 3 of the FEIS; and the Fisheries Resources, Soils Resources and Watershed Specialist Reports for the Project). While some roads may be partially revegetated, the deep compaction and soil impacts associated with a roadbed are still considered in evaluation.
132	If you remove roads that access plantation stands at the north end of the project area you should develop an alternative that allows you to treat those plantation stands so that they will not need further treatment for the next 50 years and so that they pose no unnecessary fire hazard.	The commenter was contacted and asked to specify which roads were referred to here. She has not provided additional information. A response is not possible without specific roads being identified.
133	By obliterating roads you are reducing accessibility for logging, recreation, outfitting and fire control. While you can use smoke jumpers and retardant in some areas on some days, you do not always have availability or weather that permits the use of these	Road access for fire suppression, prescribed burning, and other management activities was analyzed in the DEIS. Using fire retardant in riparian areas in currently prohibited on the Forest, except in cases that may threaten public and firefighter safety.

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	resources. Roads offer a much more reliable and cost effective access to assess and access fires. You need access even for your proposed fire treatments. Further restriction on the use of fire retardant near riparian areas will further hamper fire management without roads.	
134	Weaver and Hagans (2004) Road Upgrading, Decommissioning and Maintenance – Estimating Costs on Small and Large Scales notes the importance of the assessment of all roads. It is unlikely that all miles of roads identified for obliteration are all contributing sediment. Using the Forest Service WEPP Model Smith Creek road was found to contribute 6% or less of the stream sediment load with natural sources contributing more than 94%. You have not looked at noxious weed control as a means of reducing sediment. Rush Skeleton weed leaves large areas unprotected by vegetation and erosion increases dramatically in areas with dense infestations. All of the field trip stops on the PNF had noxious weed infestations.	It is true that noxious weeds can decrease plant diversity which can lead to increased erosion. This is one of the reasons the Forest has a weed program and actively treats noxious weed infestations. See section 1.10.4, Noxious Weeds, and Table 2-11, Project Design Features and Mitigation Measures, in the FEIS. All field trip stops had noxious weeds because all field trip stops were on open roads, a major vector for weed infestation. The BOISED sediment model, which is discussed in both Chapter 3 (Watershed Resources) and Appendix 5 of the FEIS, does consider the status (open or closed), use, and condition of a road. It also factors in landtype (inherent erodibility and risk) and gradient. Other data, such as field notes and GIS analysis, also inform prioritization of roads proposed for decommissioning. It is widely acknowledged that roads affect watershed function in many ways, sediment being only one. The ecological objective of road obliteration is also to restore soil productivity (infiltration capacity, nutrient balance), hillslope hydrology, and long-term stability and resiliency to disturbance.
135	You should survey the Hall Fire area as well as past road obliterations within the project area for noxious weed infestations. Rush skeleton weed will slow revegetation in the Hall Fire area. This will further exacerbate erosion in the burned area.	This area has been inventoried in the past and treatments have occurred. The Forest will continue to treat known and new noxious weed infestations in this area.
136	The PNF should analyze the sediment generation that will result from decommissioning activities and evaluate how these new inputs will offset any anticipated improvements. Sediment on the South Fork of the Salmon River has been analyzed over many years. Disallowing all off road travel, closing roads, obliterating roads and paving the South Fork Road has resulted in an overall increase in sediment levels in the river. While there may have been some sediment reduction from these activities, it appears	Reduction and improvement of roads in an area is a long-term strategy for improving watershed function. With best management practices and project design features, sediment contribution from road decommissioning during implementation will occur but will be minimal (Nelson et al. 2010). See information in the Watershed Resource Specialist Report for a discussion and citations of literature documenting sediment contribution from road decommissioning for this project. Road-related issues in the South

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	that they are overwhelmed by naturally occurring sediment in that area.	Fork Salmon River are outside the scope of this project.
137	If this project is being conducted as a Stewardship Project and no funds will go to Adams County the PNF should be able to demonstrate the benefit of all of the proposed stewardship activities and that they will provide the greatest improvement for the least cost.	Comment acknowledged. The method of implementation is at the discretion of the Responsible Official. Estimated jobs and income resulting from implementing the Project are displayed in Table 3-60 and the monetary values and costs of implementing the Project are shown in Table 3-61 in the FEIS. Estimating monetary benefits to resources is subjective but the discussion of the benefits and effects is found in each resource section.
138	Vegetation needs to be reduced to reduce the threat from large, uncharacteristic wildfires. Alt 2 accomplishes this without unjustified road obliteration. Helicopter logging should be included if it is economically feasible. This would improve elk habitat and further reduce fire hazard.	Alternative 3 includes helicopter logging most of the Restoration and Reserve stands that are designed as Burn Only in Alternative 2. The Responsible Official may chose this alternative.
139	Grazing, irrigation, mining and logging predates the establishment of the Forest Service in this area. Roads were in place that facilitated travel between Council and Cascade and Council and New Meadows (then Salmon Meadows). These historic routes of travel should not be closed to the public.	See response to comment #6.
140	How will such a drastic reduction of vegetation affect the amount of water that reaches the streams, snow runoff rate and water temperatures in the project area? How will repeated burning affect temperatures in the area? Rainfall amounts?	Please see the Watershed Resources Specialist report for a discussion of water yield with respect to vegetation manipulation. Prescribed fire, at low to even moderate severity, will not significantly reduce deep-rooted species (i.e., trees), so prescribed fire is not anticipated to affect decreased evapotranspiration and/or increased water yield. Project design features and mitigation measures listed in Table 2-11 of the FEIS, RCA protection and no-activity zones near streams are expected to protect riparian functions and processes and aquatic resources, including stream temperatures. The Project is not expected to affect rainfall amounts.
141	Why was so much emphasis put on white headed woodpecker habitat and so little put on elk, an economically important species in Idaho?	This project is designed to restore, where appropriate, the forest landscape to the HRV. Restoration of lower-elevation, ponderosa pine-dominated stands should also provide habitat characteristics required by white-headed woodpeckers. To assume that this Project

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		was designed specifically for white-headed woodpeckers would be incorrect. The woodpecker simply benefits from the proposed restoration treatments. Elk habitat requirements include the same stand structures required by white-headed woodpeckers but also include stands of very dense, multi-age, mixed-species, mature and over-mature forest structure not used by white-headed woodpeckers. These more dense stands required by elk were identified early during Project design to allow for appropriate elk habitat management. Large blocks of interconnected stands, with these elk habitat components present, were not designated for restoration treatment at this time to maintain well-distributed habitat to support a viable population of elk in the Project area over the next several decades as well as for the benefit of other wildlife species dependent on this type of stand structure. The Forest Plan requires that we address the vulnerability of elk to hunting mortality. Research in most western states, including Idaho, identifies one effective method to reduce this mortality—road management, which includes specific seasonal road closures during the fall rifle season and, in some cases, year-round road closure or road obliteration. All of the subwatersheds in the Project area have road densities that exceed accepted levels for appropriate elk management. Therefore, several roads were identified for seasonal closure during the hunting season in Alternative 4. Additionally, year-round road closures and/or road obliteration, whether for wildlife habitat quality or for watershed and fish habitat quality, will improve elk habitat security. The elk is a species of special interest for the Forest. As such, we highly value the importance of elk as a part of an intact ecosystem and as an important part of the cultural and social well-being of the local communities.
142	A more viable road system in this area would allow for regular harvest and treatments of the forest to maintain forest health and reduce the chance of large, catastrophic wildfires. Why not establish a road system that allows for needed management in this area that is capable of good timber production. You are reducing your ability to meet timber production goals.	Transportation planning for future access needs was an integral part of the transportation analysis. Road decommission that would significantly affect future access needs is not proposed. The needed road infrastructure would be left intact under any alternative except for a small portion of the Project area in Alternative 5. See response to comment #3 for a discussion of these areas.
143	Too much emphasis has been put on the yet unfinished Wildlife Conservation Strategy. At this time, the Forest Plan calls for	This Project design falls under the Forest Plan requirements to restore the forested landscape to conditions that would occur here

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	management for timber production in this area. This project appears to lead to a condition that will not allow for economical timber harvest in the future. Large trees will predominate and smaller trees will be burned at regular intervals. Roads will be left unusable in areas with plantation stands.	prior to European settlement. By applying the scientific basis for the WCS DEIS and ACS (The ACS is part of the Forest Plan) to these restoration activities, the Forest is following our mandate to manage NFS lands in a manner appropriate for all natural resources. Harvest and burning will likely always be the main tool in restoration management of western forests. The Forest plays an important role in this restoration effort. See also response to comment #142 and refer to response to comment #23 for a discussion on reforestation and the maintenance of different age classes in the Project area.
144	Erosion and the generation of sediment are natural functions of an ecosystem. Streams and rivers change channels regularly and sediments contribute important nutrients to the flora and fauna in the waterways. What was the historic rate of sedimentation in this area? In the absence of fire, how far off from that average are we? Floods regularly occurred in this area even before European settlers came to the area.	The BOISED model uses landtype as its basis, which includes variables such as geologic parent material, aspect, slope, and landforming processes. It assumes a natural erosion rate for each particular landtype. Fire return intervals are not part of the BOISED model but, based on research, are approximately 5–25 years in some parts of the Project area and 5–70 years in others in the majority of stands proposed for treatment (refer to sections 3.2 and 3.3 in the FEIS for more information on fire return intervals). Assuming that floods are part of the evolution of the landscape in this Project area is reasonable. The effects of floods can be amplified by the restriction of a flood plain by a structure such as a road, which constricts the stream channel and concentrates energy where the floodplain would normally dissipate it. Please see the Watershed and Fire and Fuels Resources specialist reports and the same sections in Chapter 3 of the FEIS, as well as Appendix 5 (Modeling Assumptions) for more information.
145	How much mercury will be released by burning in this project? Mercury from forest fires represents the single largest potentially manageable source of natural mercury emissions in Idaho. Much of the area of Idaho at high risk to forest fires exhibits naturally high concentrations of mercury. The 2007 East Zone Fire burned areas near several mercury mines. While most of the mercury in fire emissions is in gaseous form, about 15% is associated with airborne particles, such as soot, some of which may fall to earth near the fire. Mercury emissions from Idaho forest fires are estimated to average almost 4,000 pounds each year (Wiedinmyer, Christine and Freidli,	See section 1.10.9 in the FEIS for air quality concerns addressed. Approximately 20,000 acres are estimated to receive prescribed fire over approximately a 10-year period. The No Action alternative would continue to invite uncharacteristic wildland fire. This type of wildland fire would create larger patches of stand replacing fire; it is expected that mercury release and smoke emissions produced would be much greater than a landscape that has received mechanical treatment and/or prescribed fire. Currently there is no requirement to measure the potential amount of mercury release.

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	Hans "Mercury Emission Estimates from Fires: An Initial Inventory for the United States" Environ. Sci. Technol. 2007, 41, 8092–8098. http://pubs.acs.org/cgi-bin/aor.cgi/esthag/aor/w4Hw/41/i23/pdf/es071289o.pdf), but more effort is needed to quantify this source to the Idaho air shed. Does this project area contain any historic uranium mines? There were several on West Mountain. What level of PM 2.5's will be generated by the fires and what will the Forest Service do to ensure minimal impact to people in the area. The 2011 prescribed burns cause the air quality in McCall to fall into the moderate level for most of the days that burning occurred. Air quality was worse in McCall than in Boise. This has an impact on the health of people in the area. This cost should be included in your economic analysis. Don't burn during inversions. Our population may be small but the health of the communities within the PNF should not be compromised. Another consequence of fire involves changes in nutrient loads, which in turn affect mercury uptake. For example, the 5-fold increases in whole-body mercury levels reported in rainbow trout in partially burned vs. unburned catchments in Moab Lake in Jasper National Park, Alberta, Canada were attributed to increases in phosphorus and nitrogen in addition to the increased mercury. These nutrient increases persist for several years, and can influence trophic structure and productivity in lakes which affect mercury uptake (Kelly, Erin N., Schindler, David W., St. Louis, Vincent L., Donald, David B., and Vladicka, Katherine E. 2006. Forest fire increases mercury accumulation by fishes via food web restructuring and increased mercury inputs. Proceedings of the National Academy of Sciences, Vol. 103, No. 51. http://www.pnas.org/content/103/51/19380.full).	The Idaho DEQ monitoring network measures the levels of five of the six ambient air criteria pollutants identified by the federal Clean Air Act. The criteria pollutants are: • Particulate matter (PM10) = particulate matter less than or equal to 10 microns in diameter; PM2.5 = particulate matter less than or equal to 2.5 microns in diameter • Carbon monoxide • Nitrogen dioxide • Sulfur dioxide • Ozone • Lead (airborne lead is no longer considered a major health threat in most of the United States. With the phase-out of leaded gasoline and closure of the Bunker Hill Mine, DEQ no longer monitors airborne lead levels.) As a member of the Montana/Idaho Airshed Group smoke management program, the Forest uses the Operating Guide dated June 2010 to minimize airshed impacts and the *Interagency Prescribed Fire Planning and Procedures Guide*. These procedures are designed to ensure the Forest meets the Clean Air Act and State and local air quality standards.
146	Serious consideration should be given to treatments in riparian areas that open up the canopies and allows sunlight to penetrate so grasses can grow and reduce the amount of sediment reaching the streams. These is a large body of research that shows too much shade allows too little grass to grow in riparian areas and sediment levels increase.	A more open canopy does increase forest floor vegetation. RCA treatments were designed following Forest Plan direction. RCA treatments are included in all of the action alternatives.
147	Frequent disturbance by fire can create good habitat for many noxious weeds found in the area. What are your plans for increasing	Noxious weed control efforts will continue at a level consistent with annual funding. The Forest concentrates weed control efforts along

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	noxious weed control? You state that most noxious weeds are associated with roads. How many surveys have you conducted off roaded areas? The Frank Church River of No Return Wilderness Area's noxious weed population increases approximately 4,000 acres each year. This area has few roads. Obviously the Payette National Forest Noxious Weed and Poisonous Plant Control Program Environmental Assessment approach isn't working. Rush skeleton weed and knapweeds spread quickly in areas away from roads following fires. Road obliteration will open up many miles of potential seed beds that have gone untreated in the past on the PNF.	roadsides because they are major sources of contamination and spreading. Inventorying every square mile of the Forest would not be reasonable or feasible. The Forest does know of weed infestations in roadless areas, some of which are treated and others which are not because of their remoteness, infestation size, or type of weed. New infestations are reported each year by the public and Forest Service personnel. These sites are recorded and some are treated immediately. Many sites go untreated because the Forest does not have the means to treat every infestation. The Forest realizes many undiscovered and unknown weed infestations exist. The Forest will inventory and treat areas in the Project area before and after Project implementation.
148	The Idaho Roadless Plan calls for increasing ATV and 2 wheel motorized trails where appropriate to offset the loss of off road travel opportunities. Since off road travel supposedly released large amounts of sediment, we should expect to see a huge reduction which will allow for increased number of authorized motorized trails. This will also contribute to the local economy in a positive way while resulting in almost no cost to the Forest Service since Idaho Department of Parks and Recreation's Trail Rangers will build and maintain those trails to Forest Service specifications.	IDPR does not build trails on NFS lands. The Forest must first identify where they want to build a trail, complete the required NEPA process, and apply for a grant (if needed) to help pay for trail construction. The Forest must complete many steps prior to applying for a grant, and even then, is not guaranteed it will be funded. IDPR is a partner in maintaining many motorized trails on the Forest but does not maintain all of them. The Forest must still commit many dollars per year to maintaining motorized trails across the Forest. The Forest has been working toward putting ATV trails on the ground with NEPA completed during Travel Planning. A 2.5-mile ATV trail is planned for construction during the 2012 season east of Indian Mountain in the Little Weiser drainage on the Council Ranger District. This is outside of the Project area.
149	Allowances should be made to harvest stands that have higher than expected damage following burning. The large burns of 2007 released huge populations of beetles which have spread from the burned stands to what were healthy stands. Harvesting burned stands quickly would keep beetle populations down and reduce their spread to otherwise healthy stands. It would also generate revenues that could be used to improve roads and plant desired species in those areas.	Additional NEPA analysis would be required for salvage operations. Salvage logging after a wildfire can reduce the spread of bark beetles and generate revenue.
150	There should be written assurances that roads needed by livestock permittees will not be obliterated before alternate routes are established. Many of the trails used by the livestock permittees have	The Forest is considering and will continue to consider reasonable access for livestock permittees on a case-by-case basis. Obliterated roads will be seeded as needed. See Table 2-11, Project Design

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	been in place before the establishment of the PNF. These historic routes are as historically important to the area as Native American artifact sites. If you do not want to seed obliterated roadways with species that have forage value for cattle at least consider planting species that have forage value for elk and deer.	Features and Mitigation Measures.
151	Consideration should be given to realigning the boundaries of the Council Mountain IRA to exclude plantation stands which are clearly not appropriate in an IRA. If this is not the project to do this in then please explain what the process is to correct these boundaries. We asked Supervisor Rainville and she claimed she didn't know but then put forth a proposal that resulted in realignment of classification boundaries in the Krassel and McCall Districts. Sorry if we don't trust the Forest Service. They have a long history of saying one thing and doing another in this area.	This subject is outside the scope of this project.
152	You should include RS-2477 in the Applicable Laws and Executive Orders section.	Comment acknowledged. The Forest Service recognizes legally documented Rights-of-Way (ROWs) held by State, County, or other local public authorities. This includes ROWs under R.S. 2477 that have been adjudicated through the federal court system or otherwise formally established, such as easements conveyed under the FRTA. The only means to conclusively establish the existence of R.S. 2477 ROW across federal land is by obtaining a judgment from a Federal Court under the Quiet Title Act (28 U.S.C. 2409a). This analysis recognizes that Adams County has previously asserted R.S. 2477 ROWs on some of the routes considered in the Project. The assertions on these routes lack the complete background documentation of title; therefore, determining the merit of these assertions is not possible and is beyond the scope of this analysis. Because evaluation of assertions of title made under R.S. 2477 is outside the scope of this Project, the law is not applicable to the Project and will not be discussed in the Applicable Laws and Executive Orders section.
153	Historically, Native Americans mainly burned meadow areas to maintain the open space and improve forage for wildlife. Do you have documentation that they burned 2,000 acre forested tracts?	Frequent fires also occurred naturally and burned more than meadows. See Table 3-1 in the FEIS, Fire Regime Descriptions, of the FEIS, for details on historical fire return intervals, fire intensities, and vegetation patterns. The proposed Restoration and Reserve

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		stand treatments would move forested conditions in the Project area towards conditions similar to those that were created by nonlethal and mixed1 fire regimes as described in Table 3-1 of the FEIS.
154	We were told at the Council open house that TAP was not being done in this area until 2014. The DEIS refers to the TAP performed for this project. The public should be involved in the TAP process. I do support adding 14.7 miles of previously unauthorized road to the Forest Service System.	Public involvement in the Project-specific TAP was concurrent with scoping and comment in the NEPA process as described in section 1.8. See also response to comment #26. A District-level TAP will be completed by 2015. The District analysis will incorporate the information generated in the Project-specific TAP.
155	Please note that many of the roads you are talking about decommissioning have not had any maintenance for 40-50 years but still remain passable to the public. You should consider redirecting funds for obliteration to road maintenance.	Roads proposed for decommissioning were determined to be in excess of Forest Service System needs balanced against the Forest and public value; therefore, spending maintenance funds to maintain them would not be financially prudent. Maintenance funds are also recurring costs whereas funds spent on decommissioning are considered one-time costs.
156	Since there are no public campgrounds in the area please look at leaving spurs that do not cause any resource damage open so that the public can camp, park, cut fire wood, etc. at these locations rather than driving up to 300 feet off roads as allowed for dispersed camping. While vehicles are allowed to pull off the road to park it is often very difficult to do so and will cause resource damage. People with trailers need to be able to park on a fairly stable surface so that they can unload horses, ATV, bikes, etc.	Roads proposed for decommissioning were evaluated for dispersed camping and described in section 2.3 of the FEIS and as allowed in the Travel Management decision for the Council and New Meadows Ranger Districts, Snow-free Season, 2009.
157	Alternative 2 supports the objectives of the Payette Forest Coalition, of which I am a member. I would like to see the helicopter logging discussed in Alt 3 retained as an option if economics allow. This is supposed to be a 10 year projects and economics can change considerably during that time period.	The Responsible Official has the option of including helicopter logging in the ROD for any stand that was analyzed for helicopter logging in Alternative 3.
158	Will the Wildlife Specialist Report be completed before the FEIS is published and will it be available to the public? Many decisions appear to have been made based on this report that appears to be incomplete at this time. The Snow Free Travel Plan was completed and made many references to a Wildlife Specialist Report that was still very much in draft form even after the appeal period was over. Many statements were made in that report that were waiting on the proper citations for documentation. This would seem to allow the	The Wildlife Specialist Report provides most of the foundation for preparation of the Biological Evaluation and Biological Assessment. As such, the Specialist Report is often the last document completed for the Project Record because it is compilation of information with on-going updates used to support the other documents that are required by the NFMA, NEPA, and ESA. The Specialist Report is the document that helps the Wildlife Biologist identify the best science and the most current data available for the analysis of each project.

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	Wildlife Specialist to make any sort of comment that cannot necessarily be justified.	All specialist reports will be finalized prior to the availability of the FEIS.
159	While Idaho Department of Fish and Game elk numbers are within target numbers within this zone, they do not meet the mix of cows/calve/ bulls desired and the 2 units within the zone that are largely on the PNF do not meet target populations or population mixes. Elk are being forced onto private lands and this project will reduce elk habitat forcing an even greater economic burden on private landowners in the zone. This should be weighed in your economic analysis. On page 3-68 you state that elk populations are at or above the desired population levels in this unit. IDF&G state that they are not at desired population levels on the PNF in the project area. Elk populations are concentrated on private property in areas where the road densities exceed those on the PNF in the project area. If the Wildlife Specialists Report was complete and had been reviewed, I am hoping this error would have been caught. It is very significant. I have verified this information with Jeff Rohlman, IDF&G. Treatments should be scheduled to maximize elk habitat and minimize adverse effects. Elk need 30 acre of hiding cover for the cover to be affective.	The IDFG Big Game Hunting Regulations for 2011 stated that the elk population exceeds the IDFG population goal for this area; apparently this statement in the hunting regulations pamphlet is incorrect, according to Jeff Rohlman (Regional Wildlife Biologist, IDFG, personal communication March 2012). IDFG elk population surveys provide a different picture of local numbers; the Weiser River Unit (#32) shows elk numbers meeting the IDFG population goal; however, in Unit #32A, which includes the Project area, the population goal is not met. Mr. Rohlman agrees that one of the best ways to ensure quality elk habitat (including hiding cover, reduction of hunting vulnerability, and minimized adverse effects from human activities) is to reduce road density on Forest lands; this statement is supported by years of research on elk management by IDFG, the Forest Service, and virtually every State wildlife agency in the American West. Once Restoration stands were identified in the Project, the next step in design was to incorporate large blocks of interconnected habitat for elk as the basis for our implementation strategy. Elk move onto private lands in spring, fall, and winter to take advantage of high quality foods that are present off-Forest. The elk use these sites in direct opposition to the wildlife management 'rules" set by humans. The Forest coordinates wildlife management with IDFG, but the management of elk off- Forest is not our jurisdiction. We will continue to work with IDFG to manage for a healthy elk population on, and adjacent to, the Forest.
160	The Wildlife Conservation Strategy you reference relied heavily on the ICBEMP which was found to be profoundly flawed. Have you addressed the many flaws in this document?	The WCS DEIS relies on the science used in the ICBEMP. The WCS DEIS was developed in the context of the ICBEMP and complements the *Idaho State Comprehensive Wildlife Conservation Strategy* (IDFG 2005). The underlying philosophy of the science and related conservation concepts supporting the ICBEMP and WCS DEIS is that restoration of historical vegetative conditions (i.e., desired conditions) and emulation of their inherent disturbance processes would conserve the vast majority of these species of concern (Haufler et al. 1996; Hunter et al. 1988; Noss 1987;

	Concerns	Forest Service Response
		Raphael et al. 2000; McComb and Duncan 2007; Wisdom et al. 2000). As with any large-scale effort in wildlife management, there likely will be some applications of current scientific theory that may not seem appropriate. However, the basic design and science behind the ICBEMP and the WCS DEIS do fit currently documented wildlife science and accepted wildlife management strategies that are used throughout the American West.
161	Elk wallows are a feature that are supposed to be identified and protected according to the Forest Plan. Have elk wallows that occur on roads slated for obliteration been identified and have measures been taken that ensure that they will be protected? I have seen them obliterated on more than one project in the PNF even after they were specifically commented on and retention requested. This continues to be a problem when specialists wanting to obliterate miles of road do not spend time in the field to look at what they are obliterating. While 65.2 miles is a lot of miles of road to obliterate it is not so large a mileage that it couldn't be walked by a specialists at least before the obliteration contract is written. It should also be walked before the contractor is paid to ensure that what was requested was actually done. Lack of hiding cover seems to be a major factor in decreasing elk habitat. 100% of the area does not need to provide cover but feeding areas can be enhanced if they are close to adequate cover especially with the presence of wolves. Is there any way to look at an alternative that provides good scattered cover for elk that does not require the obliteration or closing of roads? IDF&G states that 30 acre patches of dense vegetation provides adequate hiding cover. Is there any research that includes wolves in the equation?	Management requirements and project design features require coordination with the Wildlife Biologist prior to any on-the-ground work. Any special habitat features, such as elk wallows or mineral licks, found on roads planned for obliteration are brought to the attention of the Wildlife Biologist and addressed according to Forest Plan and/or Project direction. Roads under contract for obliteration are routinely inspected to ensure work meets contract specifications prior to acceptance (Documentation on file at Council Ranger District and Forest Supervisor's Office). Hiding cover is a function of the density of vegetation and distribution of physical features (e.g., boulders, hills) surrounding an individual elk that block the human view of at least 90% of the animal. Reducing road density in an area reduces the vulnerability of elk to hunter mortality (Unsworth et al. 1993, McCorquodale et al. 2003, Rowland et al. 2005). The amount of hiding cover, the structure of that cover, the required size of a hiding cover patch, the road density needed to provide a security cover block of at least 250 acres, etc., have all been documented by multiple research studies throughout the West. Some of the most noted of these studies were conducted in Central Idaho (Unsworth et al. 1993), as well as northeastern Oregon (Rowland et al. 2005); therefore, much of the information available applies well to the Forest. The low proportions of appropriate hiding and thermal cover for big game in this area are directly correlated to the vegetation that has developed following decades of timber extraction, road construction, and fire suppression. The Project, which includes mechanical and fire treatments to move the vegetation to more appropriate structural characteristics, does not provide the level of road density reduction

	Concerns	Forest Service Response
		to produce habitat security in required levels for elk. The Forest analysis of elk habitat security, of which hiding cover is a part, uses the "Hillis Paradigm" to guide habitat and road management for elk security. This strategy depends heavily on reducing road density to provide adequate amounts and distribution of secure habitat for elk. The Forest Plan addresses requirements for elk habitat security but does not include the additive effects from predation by wolves. Research that either supports or disproves whether 30-acre patches of dense vegetation provides adequate hiding cover for elk in the presence of wolves could not be located. Managing the wolf population is the jurisdiction of the IDFG. Even though the Forest management strategy for elk is less than desired for the Project, the overall forest restoration objectives for the Project would be met and include consideration for future habitat conditions and an elk population at a level within the HRV.
162	Scope of Analysis 3-110 – It seems that a lot of conclusions have been reached but the analysis has not yet been done. Are you planning to complete the analysis before the FEIS?	The analysis has been completed as documented in section 3.5 of the FEIS and supported in the Watershed Resources Specialist Report and Project record.
163	3-113 You state that there are 2.7-6.4 miles of road per square mile within the project area. Only 97.6 miles of road are open year around and 11.4 miles of 2-wheel motorized trail. This amounts to 1.34 miles of road open to motorized travel during elk hunting season. Perhaps your calculations for elk security prisms should be calculated using only the roads that are open during elk hunting season. If motorized travel is the problem you seem to be saying it is, there should be no problem in areas where there is no motorized travel.	The Project DEIS reports two main categories of road densities: open road densities and total (authorized and unauthorized) road densities. The reported range of 2.7–6.4 miles of road per square mile (p. 3-113) refers to total road densities. The wildlife analysis (pg. 3-68 through 3-69) reports summer open road and motorized trail densities of 1 to 2 miles per square mile (by watershed). Both open road and total road densities affect elk security. Open road densities are most easily dealt with through closures during the hunting season, but closures do not fully mitigate impacts to elk for a variety of reasons discussed below. Many wildlife research papers discuss the overall effects of road density on wildlife habitat quality and security for many animal species. (Thomas et al. 1979, Hillis et al. 1991, Unsworth et al. McCorquodale et al. 2003, Benkobi et al. 2005, Rowland et al. 2005, Wisdom et al. 2005, Naylor et al. 2009). Most studies show that an open or drivable road density of more than 1.0 mile of road per square mile of land has detrimental effects to wildlife in general.

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		Some wildlife species may be more sensitive than others to the current road density in a given area. Most elk studies show a rapid decline in elk habitat effectiveness, once the 1.0 mile road density is exceeded (Hillis et al. 1991, Unsworth et al. 1993, McCorquodale et al. 2003, Rowland et al.). This discussion concerns overall habitat quality and the effectiveness of that habitat to provide feeding, breeding, and security sites for the elk population considered. One recommended method in the Forest Plan (Appendix E) for determining elk habitat security uses the Hillis Paradigm (see response to comment #161). This method identifies Elk Security Areas defined by putting a 0.5-mile buffer on either side of open roads, seasonally open roads, and motorized trails. The land between the buffered roads and motorized trails circumscribes *potential* habitat security polygons. The Forest Plan recommends elk habitat security polygons be at least 250 acres, totaling at least 30% of the Project area. Additionally, security habitat requires an appropriate amount of both hiding and thermal cover. The Forest Plan protocol for the Hillis method buffers all open and seasonally open roads and motorized trails because these buffers provide a more conservative picture of elk security across the landscape and across seasons. This does not mean that seasonal road closures are not important to help decrease the vulnerability of elk to hunting mortality, but seasonal closures are not as effective as year round closures or no roads at all. In addition, the effectiveness of road closures affects the overall security of elk habitat. For example, the Travel Plan does not require a closed road to be barricaded or removed from the landscape; therefore, a closed road that still provides the opportunity for unauthorized use loses the assumed security of that closed road. As mentioned in responses above, elk habitat security involves several components to be effective. Security of habitat is not simply a function of no motorized travel. The available habitat must have appropriate amounts of hiding and thermal cover. The Hillis Paradigm also states that simply closing roads does not provide

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		secure habitat for elk because closing a road to vehicles usually increases access by hunters on foot and horseback. At some point, that is likely not measureable, the number of non-motorized hunters may reach a level that equals, or exceeds, the level of vulnerability to hunting mortality that was present when vehicle access was allowed. Thus, elk habitat security is not simply a function of road closures but involves many factors, such as habitat structure and distribution, vegetal species composition, terrain features, juxtaposition of habitat classes, levels and types of hunting and predation pressure, and weather conditions.
164	I support the relocation of the Dewey Creek and Joker Creek Roads suggested in Alternative 5. The road should be built before the roads it is replacing are obliterated.	Thank you for your comment. We will consider impacts to the transportation network prior to sequencing of work should these actions be part of the selected alternative and ROD.
165	The PNF should make all documents cited in the EIS available on their web site.	The entire record of citations would be prohibitively large to post to the Forest Service website and few requests are made for these documents; however, these documents are available to the public upon request.
166	Many times roads were constructed over existing trails. Those trails should be restored when roads are obliterated. The following routes scheduled for obliteration are parts of historic roads or trails: T16N R1E Sec 21 up Cookhouse Gulch. This road accesses the historic cookhouse and mill sites and is still in use for cattle movement. There was a well-defined trail that ran through Sec 32, 33, 34, 27, 26, 25 and 24 on its way to Council Mountain in 1899 that should remain in place. There was a trail that ran through Sec 3 and tied into the existing trail to the Council Mountain Lookout approximately where Road 50204 is. That road should be reconverted to a trail if it is no longer going to be used as a road. Conversion of this section of road to 2	The Forest Service currently coordinates with the affected county (here, Adams County) on any proposed road obliteration involving routes mapped all or partially as RS 2477 routes. Current road obliteration specifications allow for non-motorized passage once work is completed. We have the map of RS 2477 assertions from the County and have worked with the County and others, including the commenter, to avoid impacts to historic routes. See also response to comment #6. T16N R1E This area was looked at with an Adams County representative and it was determined that it is not impacted by the Project (response to comment#6). Road 50204 is currently an FS System road and will be retained on the Forest Transportation Atlas and its status will not be changed with this Project.

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	wheel motorized would allow people to park at the Mill – Cotton Gravel Pit and to ride up to Council Mountain. Closing this route will land lock the 198 Mill Creek – Cabin Creek Trail. T16N R 2E 210 Granite Creek Trail is a historic trail.	FS System Trail 210, the Granite Creek Trail, is outside of the Project Area and beyond the scope of this project.
	T17N R 1 E The Mill Creek Road was mapped in 1899 as the Trail from Council to Long Valley and FS 50183 ran north to the East Fork Weiser River.	T17N R1E This area was looked at with an Adams County representative and it was determined that it is not impacted by the Project (response to comment#6). Also see above concerning RS2477. The Council – Long Valley route is historic and actions affecting this route are consulted with the SHPO.
	A route also ran from Mill Creek Road north through Sec 31, 30, 19, 18, 7, and 6 to what is now Hwy 95 (originally the Stage Route to Salmon Meadows). A route also existed roughly where FS Road 50172 exists today.	The Stage Route is mostly outside of the project area. The portion inside the project area was reviewed by the Forest Archeologist and it was determined there would be no effect to Eligible Historic Properties due to the Project activities. The status of FS System Road 50172 would not change with an alternative in this project.
	The route that travels north of the East Fork Weiser River is also historic. Cold Spring in Section 15 has historically been connected to Dry Beaver Spring in Section 11 by a route passing through section 10 and on to what is now the Beaver Creek Gravel Pit in Sec 1, passing through Sec 2.	This route is shown on the 1938 Metzgers Map and was reviewed by the Forest Archeologist. It was determined there would be no effect to Eligible Historic Properties due to the Project activities.
	The current Joker Creek Route is also historic. When it is relocated it should not lose its historic status.	The Joker Creek Road in its current location is shown on the 1938 Metzgers Map. Secondary Idaho SHPO consultation may be required to address any effects upon historic properties including effects to historic routes.
	There has been a route connecting the East Fork Weiser River Road to the Mill Creek Road passing through Sections 13, 24, 25 and 26 historically. Ideally an ATV route could be left through that area. The main road now seems to follow Dewey Creek. Earlier routes were further to the west and not along the creek but up on the ridge.	This route is shown on the 1938 Metzgers Map and was reviewed by the Forest Archeologist. It was determined there would be no effect to Eligible Historic Properties due to the Project activities.
	The road from Cold Spring Summit in Section 26, Road 51682 should be open to the 2 wheel motorized route that leads from the North Fork Mill Creek Spring as it is a historic route.	A section of FS System Road 51682 is currently open to two-wheel motorized use. The portion not open to two-wheel motorized us terminates in an area that would encourage illegal off-road use into the Council Mountain Inventoried Roadless Area and this road is not

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		considered an Eligible Historic Properties by the Forest Archeologist.
	T17N R2E Historically, the Council and Long Valley Trail passed through Sections 31, 32, 28, north of the current route of Road 50165 in Section 31. This historic route which has been in place since before 1899 should remain open to the public.	FS System Road 50165 is an Eligible Historic Property and the project will not change the status of this road except as described in response to comment #70. Currently year-round open segments of this road would remain open year-round in this project's alternatives. The Council – Long Valley route is historic and actions affecting this route are consulted with the SHPO.
	T18N R1E In 1899 there was a route that ran through Sections 30, 29, 20, 21, 16, 15, 10, 11 and 2. It was the historic trail from Council to Salmon Meadows. This historic trail should be maintained through the project area. This was a route separate from the Stage Route.	This route is mostly outside of the project area. The portion inside the project area was reviewed by the Forest Archeologist and it was determined there would be no effect to Eligible Historic Properties due to the Project activities.
	A historic route ran from Road 50169 to the south through Sections 21, 28 and 33. You should attempt to relocate that trail. Parts of it are covered by the road system in that area.	Dependent upon the alternative selected for implementation additional secondary Idaho SHPO consultation may be required to address any effects upon historic properties including effects to historic routes.
	The route that ran northwest of Beaver Creek through Sections 6, 5, 8, 17, 16, 21, 27 and 35 is historic and should be retained and open to the public.	This route is mostly outside of the project area. The portion inside the project area was reviewed by the Forest Archeologist and it was determined there would be no effect to Eligible Historic Properties due to the Project activities.
167	Will the Fish Resource Specialist Report be made available to the public? It is disturbing that documents so important in determining how and what should be done on this project area still in draft form and cannot be checked for accuracy.	The Fisheries Specialist Report can be found in the Project record and is available to the public upon request.
168	Bull trout have historically survived in much warmer water than currently found in this watershed. Nutrients are more of a limiting factor than water temperature. Reducing sediment will further reduce nutrient availability. You should investigate the cost and benefit of increasing nutrients in the watershed vs. reducing sediment and measure the effect on bull trout populations.	The Fisheries Resources analysis in section 3.6 of the FEIS discusses the thermal tolerance and the effects of sediment on bull trout.
169	You cite Beche et al. (2005) to show no effect on sediment in watershed streams 1 year after low-to-moderate intensity prescribed	Beche et al. (2005) does not specify soil type or depth as variables examined in the study, but soil parent material in the study area in

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	fire with active ignition within RCA's. What were the soil types in the studied area? What are the soil types in the project area? What are soil depths in both areas?	general is granodiorite and andesite. Soils in the Project area are largely derived from basalt, with a high percentage of fine material (clays). A description of soils specific to the Project area can be found in the Soils Resources section 3.7 of the FEIS.
170	Idaho DEQ has found that lack of vegetation because of fires increases sediment and water temperatures. How do you expect to remediate areas that burn at higher than expected temperatures? You should include harvest where economically feasible to generate funds for remediation.	See response to comment #140.
171	How much sediment has been reduced in stream channels due to eliminating all off road travel and closing route to motorized travel within this project area?	Sediment production from off-road and native surface road use has been well documented (Luce et al. 2001; Trombulak and Frissell 2000). Reducing surface disturbance via reducing road or overland travel use results in less soil disturbance and, eventually, less erosion as vegetation recovers. Sediment is delivered to streams in many ways and at many locations in any given watershed, so quantifying a reduction as the result of prohibiting off-road use in a watershed is difficult and has not been done for this Project area. But stream and soil survey results are available on file at the Council Ranger District office.
172	The DEIS states that Alternative 5 may affect and is likely to adversely affect bull trout. How can you advocate and alternative that is likely to adversely affect bull trout? There would be less impact if you decreased road obliteration to locations where it is truly needed.	The determination "May Affect, Likely to Adversely Affect" is based on the temporary handling of fish during culvert replacements and a potential, temporary effect from road obliteration within RCAs along Dewey Creek. The long-term benefit to bull trout from road obliteration and culvert replacements outweighs the potential temporary effect to bull trout. This project complies with Forest Plan objective TEOB10 and standards TEST01, TEST06, SWST01, and SWST04.
173	Are the jobs you show Forest Service jobs or jobs in the community? What are the jobs you fell will be created because of this project? Who prepared this section of the DEIS?	The estimated jobs displayed in Table 3-60 are based on Project implementation activities. Most of the estimated jobs would be in the private sector. Prescribed fire implementation jobs would be either Forest Service or private. A list of preparers is found in section 4.1 of the FEIS.
174	How many miles you are cataloging as roads are no longer functioning as roads in this project area?	Table 1-1 describes the existing roads and Table 2-8 describes the road actions. Roads that would be decommissioned would no longer be considered roads in the Forest Road Atlas or other databases.

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		Unauthorized roads are not catalogued as FS System roads. However, these unauthorized roads may or may not currently be being used by full-sized vehicles and/or ATVs; some may be fully or partially vegetated and others may be fully passable. The Project record contains notes on the condition of roads surveyed on the ground, as well as other known road conditions.
175	Your Landtypes color scale is not very clear. The green background further obscures the color differences.	The Landtype Map (Figure 3-59) in the section 3.7, Soils Resources, has been updated in the FEIS to help display the color scale better.
	Heartland Chapter of Backcountry Horsemen of Idaho, Anita vanGrunsven, Jean Luze Revaul	
176	Conditions for agreement we have also asked for are: 1). A Vaulted Toilet at Deseret Cabin. While this has been something we have asked for all along, this important point seems to come and go from Payette National Forest Documents.	See response to comment #29.
177	2). A three foot trail would be put back on Obliterated Roads for non-motorized use. These might overgrow in time or be available for a new trail system when the Timber work is done. This would be done while the heavy equipment is still on site as a money saving tool	The ecological goal of road obliteration is to restore a suite of soil-hydrologic functions as described in Forest Plan on pages III-18-24 and Appendix B (WCIs), pages B12-B21. Leaving a 3-foot-wide prism on all obliterated roads would not achieve soil and water-related restoration goals. Placing 3-foot wide trails on obliterated roads has been shown to encourage prohibited ATV use primarily during hunting season and is not something the Forest would want to promote. The Forest does not want to encourage “user built and maintained” trails that are not a part of the official trail system, which includes both motorized and non-motorized trails. Trails on NFS lands need to be approved by the Forest. Of course, cross-country non-motorized use is not prohibited, but developing user created trails is not allowed.
178	3). The RS2477 ATV map will be included in this DEIS. Adams county submitted this months ago, and again, this was somehow overlooked in this Draft. While this is not a travel plan, we think it is necessary to touch these bases in simplicity. Our membership wants access kept open in this study area.	Adams County submitted a comment letter on February 18, 2011, requesting the Forest Service review the “ATV loop trails proposed by Adams County during the Travel Plan process.” The Forest Service met with Commissioner Paradis to discuss the proposal and it was determined the that the proposed action and alternatives being developed would not impact those routes—all were open ATV routes except for one road that had been decommissioned. These communications are available in the Project record.

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		The County also raised concerns with possible RS 2477 assertions. The County Commissioner supplied the hard copy RS 2477 map to the Forest Service to review and existing digital data was reviewed to determine potential impacts. This process is on-going that will continue to be coordinated between the two agencies. Because the Adams County RS 2477 map is better viewed in the original hardcopy form, it is suggested to contact Adams County for review. Evaluation of RS 2477 assertions is outside the scope of this project.
179	The Forest Service in October of 2011, late in the process, created its own version and preferred choice in Alternative 5. It includes, among many other road closures, the obliteration of the present Dewey Creek and Joker Creek Roads and then reconstruction further from the creeks. Alternative 5 spends $700,000 more than Alternative 2. Alternative 2 has 19 miles of roads to be obliterated while Alternative 5 has 65 miles of roads to be obliterated. Alternative 5 also has additional road closures of 22 miles. We find this road closure and obliteration spread to be unacceptable. Alternative 5, while being presented as necessary for Bull Trout recovery by the Forest Service, is based on a road density metric the credibility of which is uncertain. This Alternative 5 is, in our opinion, a roadless area plan and not suited to a general forest area. We think that sets a bad precedent. While we agree that some roads do need to be obliterated, this goal is accomplished in Alternative 2. Alternative 2 was developed after much study and input by a Payette Forest Coalition committee formed specifically to address the issue of roads. Alternative 2 satisfied and had consensus of all the members of the Coalition. It is the opinion of our chapter that the Forest Service needs to respect the community input and move forward with Alternative 2. Adopting any other alternative would put the Forest Service in the position of pressuring industry and the counties into a predetermined decision-a decision made by the Forest Service. This letter will confirm the Heartland Chapter of Backcountry Horsemen of Idaho's support of Alternative 2 with the modifications	Thank you for your comments

	Concerns	Forest Service Response
	as stated above.	
	Hells Canyon Preservation Council, David Mildrexler	
180	**Fuels Reduction Projects** HCPC carefully evaluates projects that propose vegetation management actions that aim to restore forest structure toward a more historical and resilient stand composition and density and to return natural disturbance to the landscape such as the Mill Creek-Council Mountain Landscape Restoration Project against the following criteria: • Fuels reduction thinning applied only in ecologically appropriate dry ponderosa pine and limited pine intermixed with Douglas fir plant association group forests. This is the only fire-regime where we can honestly say that fire suppression has outlasted the range of the fire return interval and therefore stand structure is outside of a historical condition. These projects should be ecologically constrained by elevation and by site-based evidence of nonlethal surface fire on a short return interval. • Protect all trees with old growth characteristics regardless of their diameter (DBH). Old growth characteristics include thick bark, colored bark, flat top, asymmetrical growth, large braches, dead tops, etc. • A compelling ecological need that is clearly identifiable and warrants the proposed action. Returning stands to the HRV should not be used as a justification for landscape-scale commercial thinning. This would clearly be counterproductive to true restoration. • Previously logged sites. Lower-elevation forests that have not experienced the same logging and road-building regime as other federal lands are relatively rare and have a high value for conserving biodiversity. Restoration using fire alone is generally appropriate in unlogged stands. • Holistic landscape management, with an awareness of effect of restoration activities on wildlife species, non-native species, soil and soil processes, and insect and disease risks. • Utilize existing roads as temporary roads for removing and hauling wood products. Eliminate unneeded roads. No construction of new	The Restoration stand treatments are designed to increase tree vigor by reducing stand densities and to increase resilience to disturbance by increasing seral species, such as ponderosa pine, western larch, and Douglas-fir. Fuel loads would be reduced through harvesting and prescribed fire. These treatments are needed in the nonlethal and mixed1 fire regimes because stand densities, species composition, and fuel loads have changed because of fire exclusion. The majority of treatments in the grand fir habitat types would occur where a predominately mixed1 fire regime occurred historically and ponderosa pine is a common seral species. About 4% of the harvest treatments in Alternative 3 (300 acres) would occur in the mixed2 fire regime. In Alternatives 2 and 5, about 6% of the harvest treatments (285 acres) would occur in the mixed2 fire regime. In Alternative 4, about 3% of the harvest treatments (130 acres) would occur in the mixed2 fire regime. Treatments in mixed2 fire regime stands would generally occur where they are interspersed with stands in nonlethal and mixed1 fire regimes. Certain tree species with old growth characteristics are considered legacy trees. Legacy trees, as described in the WCS DEIS are older ponderosa pine and western larch that survived past fires. Legacy trees would be protected during harvest and prescribed burning operations. Other older, large diameter trees would be retained based on species preference, tree vigor, and density reduction needs. Large diameter trees with stem damage or stem decay would be retained for wildlife habitat. All current large tree stands would be retained as large tree stands. The difference between existing and desired conditions as described in Chapter 1 of the DEIS is the compelling need for proposed treatments. Part of the purpose of the Proposed Action is, “To restore forest stands to the HRV as described in Appendix A of the Forest Plan and improve habitat for wildlife species such as the

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	temporary roads. Successful forest restoration strategies must take into account the specific ecology of forests as well as the history of land management activities in a particular place (Crist et al. 2009). Inappropriate application of restoration treatments on a landscape may lead to failed restoration efforts (DellaSalla et al. 2003).	white-headed woodpecker." In the action alternatives, large blocks of stands primarily composed of vigorous seral trees would be designated for treatment to return stands to the HRV. Large blocks of stands that lack a preponderance of vigorous seral trees would be left untreated. These untreated blocks would provide habitat for wildlife species that prefer denser stand conditions. The planned arrangement of large blocks of treated and untreated stands can be visualized by comparing the Alternative 1 map (existing condition) to the action alternative maps. The treatments would create a mosaic of densities within the treated stands and enhance the diverse spatial patterns within the Project area. Using fire alone to restore stands to the HRV is a viable treatment; however, using harvest treatments followed by prescribed burning would allow for better control of which trees are retained and the size of the openings. The minimum number of Burn Only treatments is in Alternative 3 (1,591 acres); the maximum number of Burn Only treatments is in Alternatives 2 and 5 (3,204 acres). A comparison of the effects of Burn Only treatments versus harvest and burn treatments is included in section 3.2, Vegetation Resources, in the FEIS. In stands categorized as Open Seral Burn Only, density reduction in overstory trees is not needed—overstory densities are at desired levels. Ladder fuel and surface fuel reductions are needed. In these stands, fire alone is the preferred treatment. In stands categorized as Restoration Stand Burn Only density reduction in overstory trees is needed. However, access for harvest treatments is not practical for these stands. Therefore, fire alone has been proposed to reduce densities, fuel ladders, and surface fuels. The preferred treatment in these stands would be to reduce densities with a harvest treatment, and then apply prescribed fire post-harvest. Using harvest equipment would allow for better control of which trees are retained. In stands categorized as Reserve Stand Burn Only there is a need to create openings where regeneration can be established. The preferred treatment in these stands would be to create openings with a harvest operation. Using harvest equipment would allow for better control of which trees are retained and the size of the

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		openings. Burn only treatments would achieve this objective, but with less control. Wildlife species, non-native plant species, soil and soil processes, and insect and disease risks have been considered in the analysis. Temporary roads, new road construction, and road decommissioning have been considered in the analysis. The specific ecology of the forest stands as well as the history of land management activities have been considered in the analysis.
181	Cross-checking the Mill Creek-Council Mountain Landscape Restoration Project with the above criteria illustrates a high level of variation between the alternatives, with some alternatives being much more consistent with scientifically driven dry forest restoration objectives than others. HCPC recognizes the importance of a wide range of alternatives that respond to public comment and we acknowledge the Forest Service's efforts to develop this project through a collaborative effort involving numerous stakeholders. Because this is a landscape restoration project, we hope the Forest will now focus in on the alternative that best achieves scientifically based restoration objectives. Of the alternatives considered, HCPC strongly urges adoption of alternative 4 with modifications. Alternative 4 best strikes the balance between fuels reduction needs, restoration of dry forests, and protection of natural resources that will benefit the broadest array of wildlife species. Specifically, alternative 4 is the only alternative that recognizes that moist grand fir types are not outside of their historic range of variability with regards to historical fire suppression and therefore do not warrant fuels reduction, that reducing closed canopy forests will negatively impact many species that are dependent on closed canopy forest type and conditions, and that road density affects wildlife security for elk and leads to other impacts on natural resources. In fact these factors are all supported by the scientific data making alternative 4 the alternative that is most congruent with the best available science. Moreover, due to the better protection of closed canopy forests and reduction of road	See response to comment #180 for a discussion of treating stands in grand fir types and mixed severity fire regimes. Alternative 4 excludes treatments in large tree, high and moderate canopy closure stands in PVG 6. Leaving these stands untreated would benefit some wildlife species. However, treating these stands would move forested conditions in the Project area towards the HRV. Canopy closure changes are analyzed in the FEIS. The decision of which alternative to implement will consider this analysis. Road density changes are analyzed in the FEIS. The decision on which alternative to implement will consider this analysis. For discussion on wildlife corridors see comment #193.

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	densities, alternative 4 will most likely best protect old growth forests and wildlife connective corridors throughout the project area. Protecting wildlife connective corridors is widely regarded as the best way to prepare for climate change. The remainder of these comments will outline the scientific support for alternative 4-modified.	
182	**Major Issues** **2. Purpose and Need is Inherently Limited to the Warm/Dry Forests and Threatens Degradation to Moist Forest Types** The Mill Creek-Council Mountain Landscape Restoration Project Purpose and Need is to "To restore forest stands toward the HRV as described in Appendix A of the Forest Plan and improve habitat for wildlife species such as the white-headed woodpecker" (S-1). The contributions to economic vitality, that are also part of the purpose and need, should flow from ecologically appropriate restoration. In other words, these goals should not run counter to one another. The Purpose and Need states that the specific purpose of the project is directed toward forests that are outside their historical range of variability. Therefore, if the project includes treatments in forests that are not outside of their historical range of variability for pre-fire suppression conditions, species composition, structural diversity, stocking densities, fuel loads, etc. these forests are being subjected to a management approach that does not mimic the characteristic natural disturbance regime and is outside the scope of the Purpose and Need. It is scientifically well documented that active forest restoration treatments must be consistent with the natural disturbance regime of a forested landscape (Brown et al. 2004; Noss et al. 2006; Crist et al. 2009) or significant degradation of the forest, such as loss of resiliency and biodiveristy, homogenization of forest structure, reduced canopy cover and increased fire risk, increased risk of insect epidemics, degraded wildlife value, and degraded soil and watershed values can occur (Rieman and Clayton 1997; Lindenmayer et al, 2009). Alternative 4 is the only alternative that distinguishes moist mixed conifer stands characterized by a variable fire severity model where old growth Grand fir is characteristic. The distinction between dry	See response to comment #180 for a discussion on treating stands in grand fir types and mixed severity fire regimes. Alternative 4 excludes treatments in large tree, high and moderate canopy closure stands in PVG 6. Leaving these stands untreated would benefit some wildlife species. However, treating these stands would move forested conditions in the Project area towards the HRV. See Table 3-1, Fire Regime Descriptions, in the FEIS for details on historical fire return intervals, fire intensities, and vegetation patterns. The proposed Restoration and Reserve stand treatments would move forested conditions in the Project area towards conditions similar to those that were created by nonlethal and mixed1 fire regimes as described in Table 3-1. PVG 6 includes cool, moist grand fir habitat types. This group is found at elevations ranging from 3,400 to 6,500 feet and represents moister environments in the grand fir zone. Ponderosa pine is common at the drier extremes of the group and lodgepole pine occurs in colder areas. Western larch may also be present as an early seral species. Historical fire regimes were mixed, ranging from mixed1 to mixed2. Where ponderosa pine was maintained as a common seral species, it appears that fires were more often characteristic of the mixed1 fire regime. In other areas where western larch, Douglas-fir, or lodgepole pines were maintained as seral species, mixed2 fire may have been more common. This difference within PVG 6 reflects a split described by Crane and Fischer (1986) of the grand fir habitat types into warm, dry and cool, moist subgroups.

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	and moist forest types is critical to forest restoration efforts because this is the starting point for accurately determining conditions that are outside the historic range of variability. Grouping dry and moist forest types together and claiming that these forests historically displayed low to moderate severity fire is wrong. High intensity stand replacement fire is a critical and historically characteristic component of the variable severity fire regime as has been documented in moist mixed conifer forests in the Blue Mountains (Heyerdahl et al. 2001). Even for the ponderosa pine-Douglas fir forests, the Forest Service needs to recognize the modern view of the low-severity model in the topographically complex regions of the interior western U.S. (Baker et al. 2007). It is well documented that the dominant fire regime of the inland Pacific Northwest is the variable severity fire regime. The Purpose and Need is not suitable for portions of the project area characterized by the variable severity fire regime. **2. For moist grand fir forests the Purpose and Need is not based on best available science and is therefore scientifically controversial** ….This statement vividly illustrates why it is so critically important to correctly distinguish between forests characterized by a low severity fire regime and forest types characterized by a variable severity fire regime. What is appropriate for one type is not appropriate for the other and peer reviewed science clearly states that the complexity created by variability in fire regimes defies a one-sized fits all management prescription (Noss et al. 2006). With the exception of alternative 4, the Purpose and Need for the Mill Creek-Council Mountain Landscape Restoration Project aims to restore pre-fire suppression historical conditions in moist mixed conifer forest types, whereas the best available science finds these actions are unwarranted. Science shows little evidence for the widespread existence of open park-like or savanna conditions in the interior Pacific Northwest (Hessburg et al. 2007) demonstrating the critical importance of constraining the fuels reduction treatments to the right biophysical environment. …Natural disturbance regimes cannot be imposed on the wrong biophysical environment. Obviously this would no longer constitute a natural functioning disturbance regime. The Forest Service must	See response to comment #180 for acres of treatment in the mixed2 fire regime.

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	recognize key science that clearly illustrates the great importance of high severity fire to wildlife (Hutto et al. 2008) and forest successional development (Swanson et al. 2010) with important implications for biodiversity conservation.	
183	There are three major ways in which logging in moist forests threatens to increase the risk of fire. First, science overwhelmingly concludes that logging mature and large, fire resistant trees does not reduce the risk of fire and actually can contribute to more intense fires (Brown et al 2004; Carey and Schumann, 2003; Noss et al, 2006; Rhodes, 2007; Hanson and Odion, 2006; Raymond and Peterson, 2005). Even partial removal of the canopy can result in hotter, drier, and windier conditions and increased growth of "flashy fuels" such as grasses that promote more ignitions and rapid fire spread. Even where low severity fires were historically common, active thinning of small stems, and retention of old live trees is recommended (Noss et al 2006). Brown et al. (2004) recommend using passive approaches and active approaches to remove the "larger understory trees that are less likely to be safely thinned with fire." Variable density thinning is also recommended in the low-severity fire regime as well as care taken to retain some patches of young pine trees in an approximation of historic patterns (Brown et al. 2004 citing Allen et al. 2002). Allen et al. (2002) states that restoration should be aimed at resetting ecosystem trends toward an envelope of "natural variability." They caution that "<u>impatience, overreaction to crown fire risks, extractive economics, or hubris could lead to widespread application of highly intrusive treatments that may further damage forest ecosystems</u>." Second, scientific research has repeatedly concluded that thinning is not needed, effective, nor ecologically beneficial in moist mixed-conifer forest to prevent fire, does not mimic the complex natural fire regime (Noss et al, 2006; Rhodes, 2007) and threatens to increase fire risk (Lindenmayer et al. 2009) (see third point of Cobbler II scientist letter). The moist, mixed forest type is fragile and vulnerable to the chronic negative impacts of industrial commercial logging. Mature and old-growth moist mixed conifer stands have dense, moist interiors and little wind, which inhibit the spread of wildfire (Lindenmayer et al. 2009; Morrison and Smith, 2005;	See response to comment #180 for discussion on treating stands in grand fir types and mixed severity fire regimes. Treating stands in the mixed1 fire regime would move forested conditions in the Project area towards the HRV. Restoration treatments are designed to maintain large tree size class stands and to move stands towards old-forest habitat conditions. No old-forest habitat conditions have been identified within PVGs 1–6 in the analysis area. The proposed restoration treatments are designed to move forest structure towards HRV conditions. Fires burning under conditions similar to historical conditions are expected to have effects similar to historical fires. Thinning in the restoration treatments would result in variable densities due to the variable conditions within these stands. Large seral tree species and trees with characteristics suitable for wildlife habitat would be favored for retention. See response to comment #180 for acres of treatment in the mixed2 fire regime.

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	Rhodes, 2007). Large fires are climatically driven and fuels reduction treatments can be insignificant to prevent fire spread under these conditions. However, the post-fire habitat is significantly degraded by the logging that happens in the name of fuels reduction prior to the fire.	
184	Third, the Mill Creek-Council Mountain Landscape Restoration Project aims to create more open conditions at the landscape level through fuels reduction, proposes new road construction, and temporary road building, potentially increasing ease of access throughout the project area. There is a positive relationship between access and human caused fire starts.	Increased human access could increase fire starts; however, the proposed treatments would reduce fuel loads. Figure 3-1 on page 3-34 of the DEIS depicts fire history from 1957–2010. The majority of these fires have been caused by lighting.
185	**3. Critically Important Comprehensive Science Review on Moist Forest Logging** A review paper recently published in Conservation Letters entitled: **Effects of logging on fire regimes in moist forests** (Lindenmayer et al. 2009) focuses primarily on logging in relatively moist forests where fires naturally occur at a lower frequency relative to dry forests, such as within the moist forests with mixed severity regimes within the Mill Creek-Council Mountain Landscape Restoration Project (manuscript attached here). This manuscript represents a through a review of over 650 articles, many of which are referenced in these comments. ….Lindenmayer et al. (2009) identifies at least five interrelated ways that logging could influence wildfire frequency, extent and/or severity, each being extremely relevant to the moist grand fir types in the project area. **1. Changes in Microclimate**: The removal of trees by logging creates canopy openings and this in turn alters microclimatic conditions, especially increased drying of understory vegetation and the forest floor (Ray et al. 2005; Miller et al. 2007). As with the influence of forest edges (Harper et al. 2005), microclimate effects (including fuel drying) associated with forest harvesting can be expected to be greatest where the unmodified forest is moist.	See response to Comments #180, #182, and #183.
186	**2. Changes in stand structure and plant species composition**: [Logging] changes not only alter microclimatic conditions as described above, but also can change stocking densities and	See response to Comments #180, #182, and #183.

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	patterns of trees, inter crown spacing, and other forest attributes such as plant species composition. Research in western North America indicates that logging related alterations in stand structure can increase both the risk of occurrence and severity of subsequent wildfires through changes in fuel types and conditions (Thompson et al. 2007).	
187	**3. Changes in fuel characteristics**: Logging can alter fire regimes by changing the amount, type, and moisture content of fuels (Perry 1994; Weatherspoon & Skinner 1995; Thompson et al. 2007; Krawchuk & Cumming 2009). Large quantities of logging slash created by harvesting operations can sustain fires for longer than fuels in unlogged forest and also harbor fires when conditions are not suitable to facilitate flaming combustion or the spread of fire (Cochrane & Schulze 1999).	See response to Comments #180, #182, and #183. Logging slash would be treated with a combination of removing biomass, burning remaining slash at landing piles, and prescribed burning. Excavator piling and burning may also be used in Reserve (regeneration) stands.
188	**4. Change in ignition points**: The road networks required for logging operations create an increased number of ignition points for wildfires. A substantial increase in ignitions and fire frequency in Russian boreal forests (Achard et al. 2006) has been attributed, in part, to roads built for logging and mining (Dienes 2004; Bradshaw et al. 2009). In Canadian mixedwood boreal forests, fire initiation following lightning strikes is more likely to occur in harvested areas because of increased fine fuels resulting from logging slash and this effect can remain for 10–30 years following logging (Krawchuk & Cumming 2009).	Increased access could increase human fire starts. The fine fuels generated by logging operations would be reduced during post-harvest treatments as described in response to comment #187.
189	**5. Change in the spatial pattern of stands**: Logging operations change natural patterns of spatial juxtaposition of different kinds of forests stands (i.e., patterns of landscape heterogeneity) (Franklin & Forman 1987). This, in turn, can change spatial contagion in the spread of wildfire through landscapes (Whelan 1995; Bradshaw et al. 2009) with some areas traditionally characterized by an absence of fire becoming more susceptible to being burned by fires that spread from adjacent, more flammable, logged areas (Holdsworth & Uhl 1997; Perry 1998; Nepstad et al. 1999; Malhi et al. 2009). Similarly, forest edges created by logging and by logging roads can become sites for fire incursions into adjacent forests (Cochrane & Laurance 2002).	The proposed restoration treatments are designed to move forest structure and spatial patterns towards HRV conditions. Wildfire behavior, post-implementation of this project, would be expected to have similar behavior and effects to those that occurred before conditions became departed from those within the HRV.

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190	**4. Historical Range of Variability** ….An example where HRV may not be a good management target is for multi-storied mature forests. In an analysis of the upper Grande Ronde Basin, Wales (2007) states that “Because wildlife habitat of large-diameter trees takes a long time to develop, extra efforts to conserve existing large tree forests in the short term may be needed as continued loss may occur due to harvest on private lands, wildfire, and insect activity." Large wildfire activity is increasing across the western U.S. due to increased spring and summer temperatures and longer wildfire seasons (Westerling et al. 2006). The largest increases were found in mid-elevation forests in the Northern Rockies. This trend is expected to continue. Wales et al. (2007) cautions that active management approaches that reduce closed canopy forests could overshoot reductions in NRV levels. …Alternative 4 is the only alternative that takes the cautionary approach described by Wales et al. (2007) and protects moist grand fir habitat types from logging.	See response to Comments #180, #182, #183, and #189.
191	**5. Old Growth Forests: Best Available Science Does Not Support Commercial Logging in Previously Unlogged Forests** …***Protect and Restore*** All of the remaining old growth forests need to be protected and restoration efforts in dry forests should be firmly based on the best available science with no compromise. Restoration of the remaining old growth forests should not have to make money, or financially hold up other parts of a timber sale project. Restoration of remaining unlogged lower-elevation sites should focus on the reintroduction of fire and protection from activities that may cause degradation or loss of existing old growth. 1) Evaluate passive opportunities for introducing fire without any mechanical treatment. 2) Use the minimal amount of mechanical treatment needed to safely reintroduce fire. This will typically include trees mostly in the 3-8” in DBH range and no larger than 12” DBH. Only hand crews should be permitted to enter existing old growth and previously unlogged forests. …*Old growth forests and recreation* Part of the Purpose and Need is to improve recreational	The Forest identifies old-forest conditions as opposed to old growth (see Forest Plan Appendix A and the WCS DEIS Appendix E). The restoration treatments are designed to maintain large tree size class stands and to move stands towards old-forest conditions. Based on field surveys, no old-forest conditions have been identified within PVGs 1-6 in the analysis area. Proposed stand treatments are not based on generating revenue. These treatments are designed to restore stands to HRV conditions. Any revenue generated would be used to implement other restoration treatments. Using fire alone to restore stands to the HRV is a viable treatment; however, using harvest treatments followed by prescribed burning would allow for better control of which trees are retained and the size of the openings. The minimum number of Burn Only treatments is in Alternative 3 (1,591 acres); the maximum number of Burn Only treatments is in Alternatives 2 and 5 (3,204 acres). A comparison of the effects of Burn Only treatments versus harvest and burn treatments is included in section 3.2, Vegetation Resources, in the

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	opportunities. Old growth forests provide important social and cultural values to many people and are an irreplaceable part of the recreational experience to many people. The Forest Service must not overlook the well-verified fact that people like to hunt, view wildlife, and just be in old growth forest. The public has been calling on the Forest Service to protect our old growth forests for decades.	FEIS.
192	**6. Transportation** [*sic*] **system** In the proposed action 8.2 miles of existing unauthorized road would be added to the Forest Service System and put into Level 1 maintenance. Approximately 6.1 miles of temporary roads would be built to access harvest units in the proposed action. These roads would be obliterated following harvest. There would also be 9.8 miles of unauthorized roads utilized and decommissioned (obliterated) after harvest operations. 19.3 miles of existing unauthorized roads would be decommissioned. *Temporary road building* The irreparable damage from the construction of temporary road has been documented in considerable detail with empirical data (e.g., Espinosa et al., 1997). Federal land management practices that justify construction of temporary roads to carry out restoration projects are recipes for continued soil and watershed degradation. There is nothing temporary about the ecological impacts of these roads. It has been thoroughly documented that the impacts of temporary road construction are permanent, even with decommissioning (e.g., Beschta et al., 2004; Karr et al., 2004). Such long-term damage has been acknowledged by the USFS (Rhodes, 2007). The use of temporary roads are far from a break-even provision concerning the achievement of ecological restoration objectives, with projects generally resulting in more environmental harm than benefit. Please see the section entitled “Prohibiting New Road Construction” on page 963 of Beschta et al. 2004. Additionally the re-opening of closed or unclassified roads for access, and then re-closure following treatment activities has very serious ecological impacts. Extensive and intensive road reconstruction greatly increase road impacts on watershed systems, as documented, very graphically, in Karr et al (2004).	Constructing short sections of temporary road is needed to access log landings which are often better placed a short distance from existing roads. The alternative to temporary roads is often long skid trails to landings with many passes, which can create as much compaction as temporary roads due to the high number of passes. Temporary roads can also allow for more logical placement of landings, which could mean locating a landing away from a busy road or outside an RCA, doing less soil excavation to build the landing, or putting a landing in a place where biomass can be more easily processed. The construction of longer sections of temporary road may be needed to access harvest units with no current road access. These roads would be located away from sensitive landtypes and, where possible, would avoid stream crossings. Temporary roads would be obliterated and rehabilitated following use. See Table 2-11, in the FEIS for project design features and mitigation measures relating to temporary roads. Road reconstruction does result in soil disturbance, but sedimentation is minimized through project design features, such as gravelling stream crossings and installing drainage features (see Table 2-11, Project Design Features and Mitigation Measures, in the FEIS). Closing these roads after Project activities, either to a Level I status or long-term closure, will ensure that roads are stable and erosion is minimized through the use of project design features such as waterbarring, outsloping, removal of culverts, and mulching or seeding of exposed cut and fill slopes. The BOISED sediment model shows that, with these treatments, these closed roads will contribute little-to-no sediment 2 years after treatment and will remain stable

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	Reconstruction impacts are extremely significant because the elevated sedimentation they cause is already ubiquitous water quality problem throughout the West and a major cause of the loss of aquatic biodiversity. When will forestry actions be required to work within the existing road system because the "gig is up," just as it was for old growth logging. We simply can't keep facilitating more road building and mechanical treatment across these watersheds that supply ecosystem services such as water quality and quantity that are damaged by industrial equipment. Furthermore, the risk of invasive weed spread alone questions any temporary road building. HCPC urges for the dropping of all temporary roads, and no new road construction.	(although complete mitigation of the risk of erosion due to the more extreme precipitation events is not achieved as long as a prism is on the landscape). See BOISED output files in the Project record and the table of BOISED results in section 3.5, Watershed Resources, in the FEIS. Introduced plants can increase with ground disturbance and new road construction. Therefore, the Forest will inventory and treat prior to and after Project implementation. If noxious weed infestations that pose potential concerns are found near project sites, precautions will be taken to avoid further spread in the Forest. See section 1.10.4 Noxious Weeds in the FEIS for a discussion of noxious weed conditions and effects.
193	**7. Wildlife Corridors and Ecological Connectivity Is Top Priority** …One of our top concerns is to ensure that wildlife connectivity is protected in the project area. As you likely know, for many of our native wildlife species, survival depends on movement – whether it be day-to-day movements, seasonal migration, gene flow, dispersal of offspring to new homes, recolonizing an area after a local extirpation, or the shift of a species' geographic range in response to changing climate conditions. For most animals and plants, all of these types of movement require a well-connected natural landscape. See Western Governors' Association's, Wildlife Corridors Initiative (June 2008 report), p.2. There is abundant scientific evidence that loss of habitat connectivity has profound negative impacts on fish, wildlife and plant populations. Id. At 3 (*citing* Wilcove et al. 1998, Crooks and Sanjayan 2006). Alarmingly, habitat loss and fragmentation is a cause of decline for about 83% of U.S. species that are becoming more rare. Id. At 4 (*citing* NatureServe and TNC 2000). Climate change is accelerating and increasing connectivity is widely recognized as one of the best adaptation measures managers can take. This vital role that habitat connectivity plays in ensuring long-term species' viability and the disastrous effects of habitat fragmentation has inspired a growing call to action to address these issues through big-picture collaborative efforts. A primary example is the Western Governors' Association's (WGA)	The Project design was based on two major principles. First, stand conditions in large blocks were identified that fit the physical characteristics necessary to appropriately apply mechanical and/or prescribed fire treatments to move the stands toward a restored condition that was within the HRV for that site. These restored conditions are expected to improve habitat connectivity and corridors for wildlife species in Family 1, such as white-headed woodpeckers. Second, the IDT identified large blocks of interconnected stands to provide habitat conditions for wildlife species that require denser habitat than required by Family 1 species. These include Family 2 species, such as pileated woodpeckers and flammulated owls, and Family 5 species, such as elk. These large blocks of habitat were identified to remain untreated. Although the Forest has limited information on movement corridors in the Project area, landscape features that typically provide conditions for wildlife movements, such as riparian corridors, ridge tops, saddles, and forested stringers, were considered in the Project design. The Forest believes that this approach allows for both restoration of appropriate sites (the Blue stands on the Project maps), which happen to fit source habitat needs for Habitat Family 1 wildlife species, such as the white-headed woodpecker and the stands that

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	recent adoption of Policy Resolution 07-01 (adopted February 27, 2007), Protecting Wildlife Migration Corridors and Crucial Habitat in the West and preparation of the Wildlife Corridors Initiative (June 2008 report). …*Recommendations:* • We strongly urge the Forest Service to examine wildlife connectivity needs in the project area. The Council Mountain IRA is clearly a large core habitat area and movement to and from the roadless area should be consciously planned for. • All roadless areas lands adjacent to the Council Mountain IRA that are not within the political boundary should be protected as part of this core habitat area. • All other roadless areas such as uninventoried roadless areas and any areas with potential wilderness quality should be protected. • Please consider the functionality of riparian areas as wildlife corridors. While not all species would be covered by this approach, the project area does have a complex aquatic system. These areas are likely natural wildlife corridors where extra large buffers or some other approach would help plan for day to day wildlife movement and dispersal needs. Ensuring a high level of landscape connectivity is also one of the best climate change adaptation strategies as many species are predicted to shift elevational ranges, and the aquatic system interconnects a large elevational gradient. Please see the news release for a very recent study that concludes that climate change, insect attacks, diseases and fire will cause many tree species across the Northwest to migrate, decline or even die out over the next few centuries (http://news.umt.edu/2011/11/110311tree.aspx). The last line of the press release states that "One of the best approaches to plan for an uncertain future, the researchers said, is to maintain "connective corridors" as much as possible so that trees can naturally migrate to new areas in a changing future and not be stopped by artificial boundaries." This is a good reminder that we are planning for connectivity of the plant community as well as wildlife. • Please consider the wildlife connectivity not just within the project area, but also to the larger landscape including across I-95. We strongly encourage the Forest Service to engage in conversation with the Idaho Department of Transportation regarding hotspot	are not being treated (mostly Red stands on the Project maps) provide for wildlife species in Families 2, 3, 5, and 12. The Council Mountain IRA is recognized as an important site for many reasons. The IRA is an integral part of the Project area management scheme. No harvest activities will occur within the IRA and harvest activities are minimal along the border of the IRA. Prescribed burning is proposed on about 150 acres in the action alternatives within the IRA for restoration purposes. The IRA also provides a link between two LAUs, providing isolated, but not quality lynx habitat, because of the minor tree cover in much of the IRA. The area surrounding the Council Mountain IRA is currently in MPC 5.2 and management direction allows harvest treatments. The areas are not in recommended wilderness and have an existing road network over most of the area. The action alternatives include a component of road decommissioning in the areas adjacent to the IRA. Riparian zones are extremely important to wildlife, not only providing water but a denser layer of vegetative cover for travel, breeding, feeding, and denning. All of the aquatic management strategies applied in the Project provide additional benefits to many wildlife species. The wildlife habitat connectivity issue is important to the Forest as well. The Forest has contributed to the ongoing efforts of the federal and State agencies to compile information on wildlife crossing areas. The Forest participated in the Wildlife Corridors Initiative in Idaho. This information has already been compiled for the U.S. Highway 95 corridor, with several important crossing sites identified and signed. As more information becomes available from agency and public sources, the Forest will coordinate with the appropriate agencies to foster secure, interconnected habitat corridors for wildlife on the Forest. See response to comment #238 for a discussion on climate change.

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	areas where wildlife are being struck along the highway. We should start to think proactively about wildlife crossing structures, overpasses or underpasses that could ameliorate wildlife mortality and reduce collisions, thereby increasing public safety along this stretch of highway.	
194	**Conclusions** To best meet the stated Purpose and Need of the Mill Creek–Council Mountain Landscape Restoration Project, the Forest Service should select alternative 4 –modified. Alternative 4 best strikes the balance between fuels reduction needs, restoration of dry forests, and protection of natural resources such as moist forests that will benefit the broadest array of wildlife species. Alternative 4 is the only alternative that recognizes that moist grand fir types are not outside of their historic range of variability with regards to historical fire suppression and therefore do not warrant fuels reduction, that reducing closed canopy forests will negatively impact many species that are dependent on this closed canopy forest type and conditions, and that road density affects wildlife security for elk and leads to other impacts on natural resources. We also advocate for protection of all old growth and previously unlogged forests from any fuels reduction treatments, for careful planning near the Council Mountain IRA that protects all roadless forests, eliminates temporary road building and new road construction, protects wildlife habitat and wildlife corridors, protect watersheds and fisheries habitat, and consciously plans to minimize invasive weed spread. We urge the Forest Service to incorporate these recommendations into Alternative 4, which provides a far better approach than the other alternatives due to its emphasis on protecting moist forests and associated species in addition to restoring dry forests and associated species habitat.	Thank you for your comments.
	Idaho Conservation League, Jon Robison	
195	As a member of the Payette Forest Coalition, we support the goals the collaborative group has submitted to the Forest Service. We understand that the Forest Service translated these goals into Alternative 2. The Coalition also directed the Forest Service to	Thank you for your comments.

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	review our recommendations for consistency with the Forest Plan and objectives for wildlife and fisheries as part of the NEPA process. Both the Aquatic Conservation Strategy and the Watershed Condition Framework have prioritized the East Fork of the Weiser River for restoration. The Idaho Conservation League was pleased to see that the Forest Service was able to keep our original recommendations intact while finding additional opportunities to improve habitat for fish and wildlife. We support Alternative 5 because it is consistent with our original recommendations and increases the benefits for wildlife, which is the main goal of this project. We are concerned, however, that streams are still Functioning at Unacceptable Risk and we believe that more watershed restoration is still needed as part of this project or in the immediate future.	
196	**Bull trout and Watershed Condition Indicators** We support the improved watershed conditions in the East Fork Weiser River watershed that Alternative 5 would accomplish, but are concerned that this action still leaves the watershed Functioning at Unacceptable Risk. As part of the ICBEMP analysis, road densities were categorized as: very low, 0.02 – 0.1 mi/mi2; low, 0.1 – 0.7 mi/mi2; moderate, 0.7 – 1.7 mi/mi2; high, 1.7 – 4.7 mi/mi2; and extremely high, 4.7 + mi/mi2.1 Using these road density categories, Lee et al. found that non-anadromous salmonids such as bull trout and westslope cutthroat are less likely to be found in watersheds with moderate to high road densities or are less likely to exist as strong populations compared to low or very low road densities. The current density is 5.7 mi/mi2 and the density following implementation of Alternative 5 is 4.3 mi/mi2. Bull trout guidelines recommend road densities at 1.1 miles per square mile or less. While this density may not be possible given the other uses in the watershed such as timber and recreation, we encourage the Forest Service to work with interested parties to find other ways to move streams toward a Properly Functioning Condition. We support relocating needed roads out of sensitive areas, including rerouting Dewey Creek Road and Joker Creek Road. It appears that sections of Forest the East Fork Weiser River road (Road 50172) may also be able to be closed where other roads, such as 50487 and 50904,	Through field surveys and interdisciplinary analysis of a roads network needed to accommodate public travel and resource management, roads were identified that were a) having a detrimental ecological impact on SWRA resources within the Project area, b) important for wildlife security, and c) not needed for future management or high value for public use. These roads were prioritized for decommissioning with emphasis in the upper East Fork Weiser River (bull trout habitat). Alternative 5 would result in measurable decrease in road miles in the East Fork Weiser River subwatershed. Approximately 6 miles of roads would be graveled in all action alternatives, including Forest Service Road 50165, which accesses bull trout habitat. The Forest will also gravel the contributing area of stream crossings on FS System road reconstruction and this would result in a decrease in sedimentation at stream crossings. Alternative 5 also proposes 6 miles of gravelling in addition to the 6 miles in Alternatives 2-4. See the FEIS, Watershed Resources and Fisheries Resources, sections 3.5 and 3.6.

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	provide alternative access. The Forest Service should, at the very least, target for very low or low road densities as categorized in ICBEMP within the RHCAs of streams where bull trout persist. Where roads are to remain within the RHCAs, the Forest Service should consider applying gravel to road surfaces to reduce sediment delivery. We also support the improvement of all the proposed road-stream crossings for Alternative 5.	
197	**Road decommissioning** We support retaining a network of roads for vegetation management activities now and into the future, but because of the negative issues related to roads, a Roads Analysis should be used to ensure this network is the minimal needed. We support rehabilitating unneeded roads so that hydrologic functions are restored and wildlife security is increased. In particular, we support the obliteration of 40.5 miles of existing unauthorized roads, the obliteration of 14.9 miles of system roads, and the conversion of 1.0 miles of currently open roads to seasonal closures. We recommend removing all culverts from unneeded roads and laying slash across the initial stretch of road to discourage illegal motorized use. We recognize that if some roads have already revegetated, it may be acceptable in certain circumstances to not conduct additional obliteration activities. Where roads are closed, we recommend working with user groups and the County on education and enforcement activities for the public. Because of the great public interest in this issue, we recommend that the Forest Service rate all roads in the area on a scale of importance for transportation and timber management and also on a scale of resource impacts such as proximity to stream or tons of sediment produced each year. In addition, it would be helpful to see the proposed method of decommissioning for each road proposed for obliteration, ranging from leaving the road intact and gating to recontouring and revegetating the road. This way, each road that is proposed for decommissioning can be evaluated in terms of benefits, resource benefits, and rehabilitation strategy.	See response to comment #26 for a discussion of the TAP. Identifying the minimum road system is a separate process that focuses on identifying the minimum road (and trail) system needed for current and future management and has the ultimate goal of reducing the miles of FS System road to reduce maintenance costs. The minimum road system identified through travel analysis is used to inform travel management decisions. Identifying the minimum road system is not a NEPA decision. A description of proposed treatments for all roads proposed for decommissioning is provided in Chapter 2 of the FEIS as well as the Glossary. By definition, obliteration includes restoring the road prism to, as completely as possible, the natural contours of the hillslope and completely decompacting the soil. Treatment for roads identified to facilitate grazing permit implementation is also described in the FEIS in section 2.3.2.1.
198	**Wildlife habitat** Vegetation treatments designed to open up stands for white headed woodpeckers will decrease security cover for elk as well as habitat for pileated woodpeckers, habitat for flammulated owls, and nesting	Vegetation treatments were designed to first move the stand toward the HRV for that particular site. In stands that are predominantly large diameter ponderosa pine at lower elevations, wildlife species in Family 1, such as the white-headed woodpecker, should benefit

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	habitat for goshawks. To help compensate for this decreased security, we support the decrease in road densities proposed in Alternative 5 but are concerned that these may not be sufficiently protective. The Forest Service should consult with Idaho Department of Fish and Game to ensure that sufficient cover is retained or that road densities are decreased sufficiently to provide security for wildlife. We also recommend pre-treatment surveys for raptors such as Great Gray Owls and Northern Goshawks. The presence of a goshawk nest may require establishing a 30-acre “no impact” buffer around nests: “No adverse management activities should occur at any time in suitable nest areas.” (Management recommendations for the northern goshawk in the southwestern United States. Reynolds, Richard T.; Graham, Russell T.; Reiser, M. Hildegard 1992. Gen. Tech. Rep. RM-217, Ft. Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 90 p. While some vegetation management may be beneficial to raptors, the prescription and timing of these activities may need to be carefully restricted. According to Reynolds, et al., all management activities in the Post Fledging Family Area should be limited to the period from October to February. Vegetation management should be designed to maintain or promote habitat requirements for Nest Areas, Post Fledging Family Areas and Foraging Areas.	most from the restoration treatments, including mechanical thinning and/or prescribed fire. In regard to wildlife security, historically, these stands would not have provided effective security from human hunters or animal predators due to their open condition. Following restoration treatment, such stands would provide security from hunting mortality not by tree density, but by being far removed from roads, particularly roads accessible by vehicles. In a more open tree distribution, security from hunting mortality would require multiple elk sight distances to be effective. As noted in your comment, alternatives that reduce road densities would improve elk security. Prior to restoration treatment, these stands may be used by species that prefer denser large tree stands, such as pileated woodpeckers. However, once the stands are treated, pileated woodpeckers would be less likely to use these stands in their more open condition. In most cases, the restoration treatment in ponderosa pine stands would provide better habitat conditions in the long term for flammulated owls. Although goshawks will nest in these stands, the Southwest Guidelines (Reynolds et al. 1992) suggest that restoration treatments are important to overall goshawk population survival by preventing uncharacteristic wildfires and providing habitat components that are appropriate for the site. The Southwest Guidelines support restoration treatments, even in the nest stands, when designed appropriately and with the application of appropriate timing restrictions (March 1 through September 30) on human activities in the nest stand, PFA, and Territory. The Forest Plan includes direction to protect important habitats and nest sites for a variety of species, including goshawks and great gray owls. Pre-treatment surveys have been conducted for these species and will continue until treatments are implemented. Management direction and project design features will be followed to provide the appropriate protection of wildlife habitats and individuals.
199	**Alternatives 4 and 5** The Forest Service developed Alternative 4 to address the concerns	Thank you for your comment, the Responsible Official will decide which alternative or combination of alternatives best meets the

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	about vegetation manipulation activities within Reserve Stands that were highlighted for wildlife. We suggest combining Alternatives 4 and 5 which would be the most protective of both terrestrial wildlife and aquatic wildlife while still allowing significant restoration activities in less sensitive areas.	Purpose and Need of the Project.
200	**Snags and Large Diameter Trees** We support the goal of opening up certain stands for white headed woodpeckers, but want to ensure that sufficient stands remain that serve has habitat for pileated woodpeckers and as security habitat for elk. We recommend developing a silvicultural prescription that retains large-diameter trees, as this forest structure is underrepresented on the Council Ranger District. Much of the current research on snags and snag retention (e.g. Hutto, 2006) points to the inadequacy of current snag management guidelines. Most snag management guidelines have converged on 6-7 snags/ha. However, applying uniform snag retention across a variable landscape is not appropriate for wildlife species. The habitat needs for these species cannot be met in a timber plantation with uniform snag, bole, and crown spacing. Accordingly, snag densities should reflect the variability across the landscape that is illustrated by the different PVGs occurring in the project area. Snag densities should vary, roughly according to a normal statistical distribution. The majority of snag densities across the project area should fall within 1-2 standard deviations of the mean snag densities required for white-headed woodpecker or flammulated owl as found in current research. If there is a lack of snags in the project area, the need is highlighted to recruit additional snags over time. Diameter limits or other directives should be considered to retain trees of a certain size or greater (> 24”). In some cases, this may imply that the target crown spacing is not achieved. Particularly large specimens of trees to be selected against such as grand fir (>30” dbh) should also be retained, especially in areas where the large tree component is underrepresented. Breaking up the continuity of fuels in a mosaic pattern, as opposed to uniform spacing, will still achieve the objective of reducing crown fire potential. Provided that there are “clumps” at the very least,	The Project design that is common to all action alternatives sets aside areas that are dominated by Reserve stands for elk and pileated woodpecker habitat. Compare the Alternative 1 map to the action alternative maps in Appendix 8. See also response to comment #193. All large tree size class stands would be maintained as large tree size class stands. Legacy trees would not be cut. Large diameter, vigorous trees would be favored for retention. Large diameter trees with damage and deformities would be retained for wildlife habitat. Treatments would be designed to move stands towards old-forest habitat conditions. Generally, all snags would be retained during harvest operations. However, snags that are considered a safety hazard and snags in skyline corridors would be felled. See the response to Comment #261 for estimates on the number of snags that would be felled for safety reasons and within skyline corridors. During the prescribed fire operations, some trees would be killed or damaged, which would increase the number of snags. A mosaic pattern would be created in most harvest units due to existing stand conditions. The trees that would be favored for retention generally exist in a mosaic with less vigorous trees and tree species not desired for retention. Where openings are created, due to a lack of desirable trees to retain, clumps of less desirable trees would be left.

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	breaking up the continuity of fuels will accomplish the same objective through diameter limits that uniform crown spacing would achieve. The difference is that a more naturally appearing and accommodating landscape will be left behind that better supports the needs of natural ecosystems and wildlife.	
201	Mistletoe treatments If mistletoe is encountered, the Forest Service should consider isolating groups of infected trees that provide important habitat while removing mistletoe infected trees in other areas. Another option is to girdle large-diameter (>18") instead of felling them in order to retain large tree structure. We also recommend that wildlife biologists should be involved with tree marking and treatment prescriptions. With the exception of white pine blister rust, insect infestations and diseases are often natural elements of an ecosystem that offer many benefits to wildlife such as woodpeckers and other cavity nesters. Mistletoe, for example, is a native parasitic plant that creates dense brooms which are beneficial as wildlife cover: While dwarf mistletoe has traditionally been viewed as a forest pest because of reducing in timber volume, we suggest that in areas where management goals are not strictly focused on timber production, control of dwarf mistletoe may not be justified, practical, or even desirable. Our data suggest that dwarf mistletoes may have positive influences on wildlife habitat….Consequently, we suggest that eradication efforts be reconsidered given that dwarf mistletoes have been a part of these forest ecosystems for thousands, and possibly millions, of years. Additionally, trees that survive insect infestation are important in strengthening the population with disease resistant trees. We understand the desire to mitigate the effects of disease and insect outbreaks, particularly where ladder fuels are a concern, but we suggest retaining a range of both healthy and infested trees to promote a diversity of habitat and wildlife species.	Dwarf mistletoe-infected trees would be discriminated against in areas where stand densities are too high. In these areas, the more severely infected trees would be a priority for removal. In most cases, trees with low-severity infections would be retained in areas where densities do not need to be reduced. Openings would be created where the majority of the trees are infected with dwarf mistletoe. To provide wildlife habitat, clumps of severely infected trees would be left where they are isolated from other trees. In areas where trees have been planted or would be planted for this Project, the preferred method for dwarf mistletoe control would be to girdle nearby infected trees, which would provide additional snag habitat for wildlife. Stand density reduction decreases damage from many forest insects. Trees that have been killed by insects would be retained for wildlife habitat during harvest operations.
202	**Fuel reduction** We support the creation and maintenance of a shaded fuelbreak in the Wildland Urban Interface. The silvicultural prescriptions for the project should be designed to compliment any natural fuel breaks in	Thank you for your comment. The ideas stated will be considered when developing the silvicultural prescription(s) and project design for the shaded fuelbreak.

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	the local landscape. Instead of utilizing the same prescription throughout the project areas, we suggest using a mosaic approach that would result in a more naturally appearing landscape consistent with the potential vegetation groups at each soil type, aspect, and elevation. For example, on southerly slopes formerly dominated by ponderosa pine, the Forest Service could design a prescription for park-like swaths of trees. The clumping or connectivity of these stands should increase with the distance from any structures, roads and facilities. While completely separating crowns might be advisable next to structures, farther away the prescription should separate tree crowns on three sides in order to provide more ecological value. As the distance from the wildland urban interface increases, the prescription should call for more clumping of trees.	A mosaic pattern would be created in most harvest units due to existing stand conditions. The trees that would be favored for retention generally exist in a mosaic with less vigorous trees and tree species not desired for retention. Where openings might be created due to a lack of desirable trees to retain, clumps of less desirable trees would be left.
203	**Local Firewood and Biomass** We support the utilization of slash piles from restoration activities for biomass in the Council School or for firewood supplies. In order to facilitate firewood gathering in a sustainable manner, the Forest Service should separate usable firewood from any excess slash piles. Before any areas are opened for firewood gathering, the Forest Service should clearly mark trees and snags important for wildlife habitat. Some similar marking has already been done along riparian areas along the East Fork of the Weiser River.	Logging slash would be utilized where practical as biomass fuel. Material that is not suitable for sawlogs could also be utilized as pulpwood, fencing material, or firewood. Where practical, firewood would be kept separate from slash piles to allow the public to remove it.
204	**Prescribed Fire** Another important aspect of this project is the use of prescribed fire to complement the treatments with a more natural management tool. The Forest Service should consider expanding the use of prescribed fire in the proposed action to address understory fuels and more holistically treat the project area. As part of the logging treatments, slash should be lopped and scattered on site. The slash should be left for 1 to 2 years to return nutrients back to the soil and maintain site productivity. After this period of time, the Forest Service should then utilize prescribed fire to treat the understory fuels. Where slash levels would present an unacceptable fuel risk, we recommend whole tree yarding to landings. Usable material for firewood should be stacked separately for use by the public.	Many of these ideas are incorporated into the Project design. Some of the slash that is created would be left onsite to rehabilitate skid trails or as the result of incidental breakage when moving material to landings. Public firewood availability will be considered where practical.

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205	**Aspen** If there are any aspen trees in the project area, we recommend considering removing or girdling encroaching conifers, consistent with the diameter recommendations above. We also recommend considering using prescribed burning or jackpot burning of encroaching conifers to help stimulate aspen regeneration.	Removing encroaching conifers and using fire to stimulate aspen regeneration are included in the Project design features.
206	**Restoration opportunities** Given the previous timber management activities in the area, there may be additional opportunities for restoration. Specifically, the Forest Service should assess conditions such as any other high-risk, low use roads and landings that are candidates for rehabilitation, undersized culverts that should be replaced or pulled, and noxious weed treatments.	Given treatment priorities and in consideration of public comment during scoping and the collaborative process, it was determined that the level of treatment for existing roads and landings within the Project area was achievable and realistic while also providing restoration benefits. Alternative 5 would provide the most benefit to soil, water, and wildlife resources in proposed road treatments. Roads and landing sites will be inventoried and treated prior to project implementation. If weed infestations are detected, special precautions will be taken during project implementation to reduce the risk of spread. Weed treatments will also occur when determined necessary following harvest and prescribed burning. See Table 2-11, Project Design Features and Mitigation Measures, in the FEIS.
207	**Soils** New road construction and skid trails should be designed and managed to reduce impacts to soils. Where possible, we recommend that the Forest Service require any ground hauling over sufficient snow and frozen roads.	New roads and skid trails would be designed and managed to reduce impacts to soils. Winter logging would not be required. Other project design features and mitigation measures are expected to protect the soil resource. Please see Project Design Feature #30, Table 2-11 in the FEIS.
208	**Noxious Weeds** We also recommend taking proactive steps to prevent the introduction of noxious weeds and taking aggressive steps to control or eliminate existing noxious weed infestations. Before implementation of these projects, the Forest Service should ensure that all equipment has been thoroughly washed to remove noxious weed seeds and debris that might result in the introduction of such species on public lands.	The Forest agrees with your comment and is actively trying to control and eliminate existing weed infestations. Prior to and after project implementation, the Forest will inventory and treat weed sites located within the Project area. Forest Service contract specifications require equipment to be washed prior to entering the Project area and when moving from an area containing weeds to another in the contract area. See Table 2-11, Project Design Features and Mitigation Measures in the FEIS.
209	**Council Mountain Inventoried Roadless Area** We appreciate the assessment that no treatments are needed within the Council Mountain Inventoried Roadless Area.	While most of the Council Mountain IRA does not include proposed treatments, there are selected stands in the action alternatives that would receive prescribed burning only (see section 1.10.8 in the FEIS). The area is approximately 150 acres in Alternatives 2 through

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		5 (see section 2.3.2.1 in the FEIS).
210	**Monitoring** The Forest Service should monitor water quality in East Fork of Mill Creek before, during, and after project implementation as a pilot project to determine the effectiveness of the treatments and road decommissioning for reducing sediment delivery. Depending upon the success of this project for reducing sediment loads, this project could serve to adjust or apply similar efforts elsewhere on the Payette where similar forest types and geologic characteristics occur.	Monitoring major tributaries in the Project area via stream surveys is already underway, with sites on Dewey Creek and the East Fork Weiser River. These sites will be monitored in the future as well, with sediment (presence of fine sediment) one of the variables tracked. Monitoring the East Fork Mill Creek will not be a priority, since once it leaves the Forest, it becomes part of a ditch system and is not well-connected to the Weiser River.
211	**Maps** We appreciate the maps included in the DEIS and the extensive classification of the different types of road management.	Thank you for your comment.
212	**Working with the Payette Forest Coalition** All these comments are intended to be consistent with the recommendations of the Payette Forest Coalition, from which the Action Alternatives were developed. Because one of the primary goals of the Idaho Conservation League is to protect habitat for fish and wildlife, we are focusing on potential areas for further improvement for this project, where consistent with the Coalition's original recommendations. Because the primary goal of this project is to improve habitat for fish and wildlife, we appreciate the fact that the Forest Service has been able to find more opportunities for habitat restoration while staying consistent with the Coalition's original recommendations and we encourage the Forest Service to do even more where possible. We hope the Forest Service will continue to work with the Payette Forest Coalition throughout this process and address any concerns over these additional wildlife habitat improvements.	Thank you for your comment.
	Idaho Recreation Council, Sandra Mitchell	
213	From our limited view of this project at this time it appears to be generally positive for the land and economy of the region. We would like to express our support for accommodating traditional multiple use recreation and access to the area, both winter and summer. On one particular aspect of the DEIS, we urge you to approve	Thank you for your comments.

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	construction of a restroom at the intersection identified as Five Corners. That would be a welcome facility, especially for the snowmobiling community recreating on West Mountain.	
	The Lands Council, Jeff Juel & Alliance for the Wild Rockies, Michael Garrity	
214	We begin these comments by voicing our support for those proposed actions included in the action alternatives that would accomplish the highest restoration priorities of the 51,975 acres in the project area, those that would reduce the ecological and economic impacts of the existing road system. However, we believe the Forest Service (FS) can and should now be proposing more such restoration actions in the project area, while avoiding those aspects of the action alternatives that would increase the impacts of roads and degrade wildlife habitat for a host of management indicator species (MIS) and threatened, endangered, and sensitive (TES) species.	Thank you for your comments.
215	Most of our concerns over FS implementation of the Payette National Forest's draft Wildlife Conservation Strategy (WCS) are given substance by this proposed Mill Creek-Council Mountain Landscape Restoration Project. We expressed those concerns in our April 19, 2011 comments on the Draft Environmental Impact Statement for the Forest Plan Amendments Proposed to Facilitate Implementation of the 2011 Plan-Scale Wildlife Conservation Strategy - Phase 1 Forested Biological Community (WCS DEIS). The Mill Creek-Council Mountain DEIS makes numerous references to the fact that this project would adopt and implement the Wildlife Conservation Strategy. Our April 19, 2011 comments on the WCS DEIS quite appropriately apply to the Mill Creek-Council Mountain DEIS and are therefore included within these comments because they essentially ARE comments on the project DEIS. For convenient reference those earlier comments are preserved in their exact original wording in dark blue text within these comments.	The WCS DEIS has not amended the Forest Plan at this time, so it was not used as Forest Plan direction. However the Forest has chosen to design this project's treatments and mitigations to be consistent with the scientific analyses on which the WCS DEIS is based. See section 1.4.1.6 in the FEIS for a discussion of the WCS DEIS and its relationship to the Project. Your comment letter on the WCS DEIS contains numerous excerpts from a variety of authors working in different locations and with different objectives. While the Forest does not dispute disclosures in the cited documents, neither do we categorically agree with the findings or recommendations in the literature referenced. In the case of the WCS DEIS and the Project analyses, the authors used the most recent and applicable literature available. As evidenced by excerpts provided in your letter on the WCS DEIS analysis, an abundance of literature is available on the subject of ecosystem restoration, HRV, and related topics; often with different findings depending on the specific site characteristics, research methodology and/or objectives, and/or disturbance event. Which is why, in part, site-specific analyses are completed. As part of the Project site-specific analysis, the resource experts assigned to the Project

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		determined the most appropriate scientific literature/information for the Project area and situation. The FEIS provides references where appropriate.
216	As the DEIS indicates, the project area features an extremely high road density, much of it put in place to log over 9000 acres of national forest land over the past 50 years. "(R)oads are one of the major causes of degraded soil, water, riparian, and aquatic WCIs within the Project area." (DEIS at 3-114.) This has put aquatic resources such as the threatened bull trout at "Unacceptable Risk" (Id) and results in "marginal" elk habitat (3-68). Our primary concern about this project is that, instead of taking advantage of the analysis resources now being used to design a restoration plan that would rehabilitate much of the problem, it instead takes an "incremental" approach that would still result in an extremely high road density with its accompanying risks and adverse effects: "The indirect effects of implementing any of the action alternatives would produce a slight long-term reduction in sediment inputs to the Project area; slightly improve sediment, flow hydrology, and road density/location watershed condition indicators over the long term…" (3-119). "Overall, watershed condition indices, including water quality, road density, and proximity of roads to water (RCA condition and risk), would remain the same at Functioning at Risk and Functioning at Unacceptable Risk in each subwatershed." (3-126.) Thus, the DEIS fails to include an adequate range of alternatives that includes taking steps that would result in actually meeting forest plan objectives and have a much greater chance of restoring bull trout populations to natural levels and distribution, and provide a higher quality elk hunting experience.	Road densities are one WCI used to assess the condition and function of a watershed. Through field surveys and interdisciplinary analysis of a roads network needed to accommodate public travel and resource management, roads were identified that were a) having a detrimental ecological impact on SWRA resources within the Project area, b) important for wildlife security, and c) not needed for future management or high value for public use. These roads were prioritized, with emphasis in the upper East Fork Weiser River (bull trout habitat) for decommissioning; Alternative 5 emphasizes watershed restoration in bull trout habitat within the Project area and represents an improvement over existing conditions. The range of alternatives are addressed in the FEIS (section 2.2) and Forest Plan goals and objectives relating to the Project are discussed in section 1.4. As mentioned above, many wildlife species benefit from the appropriate management of aquatic resources and road density. Alternative 5 provides the best mix of management for aquatic and wildlife resources. Alternative 5 was developed in response to the high priority ACS East Fork Weiser River watershed and Management Direction identified in the Forest Plan (Appendix B and Objectives 0318, 0322, and 0323, page III-131). Additional seasonal closures in Alternative 4 propose an additional benefit for wildlife security.
217	As a result of some road system features, damage from a storm event this past June further degraded bull trout and other aquatic habitat, and the outcome of the repairs is still uncertain. How much did those repairs cost? We've noted from past experience that typically, funding for such rehabilitation comes from FEMA, thus insulating the Forest Service from the budgetary impacts of poor management. The DEIS does not clearly indicate if the failed culverts were because of poor design specifications (size, placement, etc.) or due to inadequate annual maintenance.	Repairs have been begun on storm damaged roads within the Project area and will largely be completed over the summer and fall of 2012. DSRs, repair specifications, and costs for repairs are available upon request from the Forest Supervisor's Office. The FEIS addresses the replacement of culverts proposed with the Project and the rationale for each. Two culverts washed out in the Mill Creek drainage are included in the flood repair. Both were considered undersized and are being

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		replaced with larger culverts. No large culverts were washed out in the East Fork Weiser River drainage. A bridge in the lower section of the river wash washed out due to channel scouring the abutments. The major road damage in the East Fork was the result of stream bank cutting into road beds and the washed out bridge. The bridge will be replaced by one with a longer span. Repairing plugged culverts and smaller washouts and cleaning debris deposited on road beds was done in summer 2010 by the Forest's road maintenance program and was included in annual maintenance costs. Refer to the response to comment #18 for more information.
218	Would the action alternatives eliminate ALL watershed risks due to poorly designed or installed road features in the watershed cumulative effects analysis area? (Other than annual maintenance shortfalls, which of course a project like this cannot rehabilitate.) Would the action alternatives avoid or remove roads from all "landslide prone areas" (3-119)?	FS System roads are always at some risk of failure or malfunction from natural events like flood or fire. This project aims to reduce the risk associated with many roads, such as poor location (adjacent to stream), undersized culverts, or poorly-drained surfaces through measures such as relocation, culvert replacement or removal, and surfacing. There would still be risk associated with remaining roads. The Project would not remove roads from all areas mapped or modeled as landslide prone. In addressing watershed effects, treatment of high and moderate priority roads (as identified by the IDT) was emphasized in the action alternatives. The West Side of the Forest was inventoried for landslides in 1998 after the New Year's 1997 storm. The inventory included areas within the Project analysis area. The inventory found that out of 483 landslides in the inventory 11% were road related. The results from the inventory concluded that, "The low percentage of road related landslides is likely a result of road construction avoiding high hazard areas and the basalt colluviums being favorable material for constructing stable roads" (Dixon and Wasniewski 1998). No road construction would occur in landslide prone areas.
219	The DEIS does not detail all of the restoration needs from the Transportation Analysis Process. So, it appears that none of the alternatives embody a comprehensive restoration plan for the project area. The Forest Service is supposed to be using travel analysis (FSH 7709.55, Ch. 20) to inform decisions related to identification of the minimum road system needed for safe and	Identifying the minimum road system is a separate process that focuses on identifying the minimum road (and trail) system needed for current and future management and has the ultimate goal of reducing the miles of FS System road to reduce maintenance costs. The minimum road system identified through travel analysis is used to inform travel management decisions. Identifying the minimum

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	efficient travel and for administration, utilization, and protection of NFS lands per 36 CFR 212.5(b)(1) and to inform decisions related to the designation of roads, trails, and areas for motor vehicle use per 36 CFR 212.51. The DEIS does not even broach the subject of what would be the minimum road system needed in this project area. Constructing and improving drainage structures on Forest roads is an ongoing effort to reduce road-related stream sediment delivery. (USDA Forest Service 2010t.) Although BMPs are practices that reduce the effects of roads to the watershed, it is not a static condition. Ecological processes, traffic and other factors degrade features such as ditches, culverts, and surface water deflectors. Maintaining BMP standards for roads requires ongoing maintenance. Continual monitoring and maintenance on open roads reduces risks of sediment delivery to important water resources. (Id.) Landscape-specific restoration plans must consider long-term maintenance needs. The DEIS does not describe a minimum road system, one that there is anticipated funding for adequate maintenance, and how the funding would be obtained.	road system is not a NEPA decision. See response to comment #26 for a discussion of the TAP.
220	The action alternatives include varying mileage of “Long-term Closure of Roads.” (2-12.) Post-project, would all of these roads be hydrologically neutral and thus not need future maintenance to prevent blow-outs, erosion, or channeling of surface water? If so, and if the roads had closures that would be very unlikely to be accessed, the DEIS should disclose the total road densities per watershed identifying the density of those effectively closed and hydrologically neutralized “Long-term closed roads.”	Thank you for your comment. Long-term closure treatments are designed to allow for a road to be retained for future management in a relatively maintenance-free state and restore, to some degree, ecological function to the road via restored stream crossings and more effective drainage of surface water from the road prism. However, this treatment does not eliminate all risk of future erosion or failure.
221	The action alternatives would “add 14.7 miles of unauthorized roads to the Forest Service System. These roads generally have a road prism or portion of road prism in place and are overgrown from years of natural establishment… .” How much of this 14.7 miles are essentially hydrologically neutral at this time? These and other action alternative features seem destined to adversely impact aquatic conditions including bull trout critical habitat.	These roads are planned for survey prior to implementation. Any existing resource impacts will be mitigated at that time using best management practices. Following use, the roads will be put into long-term closure.
222	The DEIS at 3-126 states that: (C)onditions in the East Fork Weiser River subwatershed would improve under Alternative 5. The Road Density WCI would remain	Appendix B of the Forest Plan states that road densities greater than 1.7 miles per square mile with many roads within RCAs are "functioning at unacceptable risk”. Current conditions in the East

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	Functioning at Unacceptable Risk, but a measureable decrease in road density would occur. While RCA Conditions, Channel Conditions, and Flow/Hydrology are all expected to measurably improve in the East Fork Weiser River subwatershed, quantifying or estimating whether or not the WCIs would move from one WCI category to another is difficult (i.e., from Functioning at Unacceptable Risk to Functioning at Risk) over the long term. This states that improved conditions would be "measurable" yet at the same time that it is saying that such measures cannot be used to show improved WCIs. This does not instill confidence in the FS's ability to measure, or in the value of WCIs for analysis purposes.	Fork Weiser River subwatershed indicate that there are approximately 185 miles of roads with about 46 miles within RCAs (Table 3-44, FEIS). Although the Project decommissions (obliterates) approximately 65 miles of roads in Alternative 5, road densities will measurably improve but will not reach levels that would move the WCI into the 'functioning at risk' category as defined by the Forest Plan. Conditions resulting from watershed improvement activities implemented with this project will be monitored and reported on through the monitoring plans and surveys associated with Project activities as well as resource-specific program monitoring (e.g. fisheries monitoring). See also Appendix 4, Monitoring, in the FEIS for monitoring plans.
223	The DEIS does not disclose sufficient data on Project Area roads, ditches, and culverts for the decision maker and public to determine if there are point sources of pollution for which Clean Water Act permits are necessary.	Congress included a provision in the 2012 Fiscal Year Omnibus Appropriations Bill declaring that, at least until the end of fiscal year 2012, stormwater runoff from forest roads and other silvicultural activities will not be subject to NPDES permitting requirements.
224	The DEIS does not disclose the likelihood of all road restoration actions being completed in a timely manner, not awaiting some uncertain sources of funding.	The Responsible Official will make a decision on the actions that are reasonably expected to be funded for project time horizon based on historical and projected funding levels. Actions documented in the ROD would be expected to be implemented within an approximate 10-year period.
225	The DEIS states, "Any decommissioned (obliterated) roads would be designated for dispersed recreation opportunities within 100 feet of an open Forest Service System road if no resource concerns are identified." We are strongly opposed to such a provision, given the likelihood of motorized travel occurring beyond the 100 feet, and with little to no law enforcement actions affecting the situation. The PNF is already aware of plenty of other "resource concerns" that would be invoked, such as loss of snags due to firewood cutting, further invasion of noxious weeds, continued compaction of soils to a total soil resource commitment (TSRC) condition whereas merely detrimental disturbance (DD) would be considered, etc.	The Travel Plan authorizes travel up to 300 feet from an open system road for the purposes of dispersed camping. Travel off an open system road may be authorized for fuelwood gathering. Roads identified for obliteration, if left intact at the entrance, would provide a place for forest users to camp. Use is not expected to increase beyond what is legally allowed by the Travel Plan. These segments are already included in the Project analysis for TSRC and road density. Only segments identified as suitable for dispersed use with no specific resource concerns and within compliance with the Travel Plan would be considered for retention during obliteration implementation (see section 2.3.2.1 in the FEIS). Barriers would be in place to dissuade any type of motorized use on the obliterated roads.

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226	We are also concerned that the environmental impacts of temporarily opening closed system roads for firewood access also results in cumulative effects on many resources that are not disclosed in this DEIS.	Appendix 3, Cumulative Effects, of the FEIS includes the Firewood Roads 2010 and 2011 projects. The proposal for the 2012 Firewood Roads analysis has not yet been determined, however one road has been submitted as a candidate for 2012, which is FS System Road 51371 in the Hall Ridge area. The effects of the road management proposed in the 2012 Firewood Roads analysis will be analyzed when the proposal has been developed.
227	INFISH was based upon science that supported the default buffers that Forest Plan amendment utilized. We are opposed to allowing logging in Riparian Conservation Areas (RCAs) or within the distance that default INFISH buffers generally protected from logging. What is the best science that the DEIS relies upon in allowing such logging (pp. 2-10, 11)?	Revision of the Forest Plan in 2003 eliminated the Forest's requirements to comply with INFISH. The Forest Plan does have default RCA delineations (e.g., buffer widths) similar to those of INFISH, but it also allows a step-down delineation process whereby RCAs can be delineated based on field data, primarily stand characteristics and floodplain width, which allows delineations of RCA widths to be smaller than the default values. The science behind the step-down process is well described in the Forest Plan. The Forest has selected Option 2 in the step down process for an RCA associated with a forested stream, this being a delineation of two site potential tree heights (appropriate to the treated stands) for perennial streams with this project. Prior to any implementation of RCA treatments, the Forest will revisit selected stands to verify that the correct delineations have been assigned and will conduct additional studies to verify that the smaller (one site potential tree height) delineation for intermittent streams is associated only with streams that do not provide seasonal spawning and rearing habitat. The Forest Plan does not preclude management actions in RCAs, rather it anticipates actions be taken in RCAs if they are regarded as not functioning appropriately; the Purpose and Need for this Project includes restoring appropriate vegetation conditions and includes treatments in RCAs. The most specific Forest Plan standard addressing this issue is SWST10, which states that "[t]rees or snags that are felled within RCAs must be left unless determined not to be necessary for achieving soil, water, riparian, and aquatic desired conditions. Felled trees or snags left in RCAs shall be left intact unless resource protection (e.g., the risk of insect infestation is unacceptable) or public safety requires bucking them into smaller pieces." Fish habitat surveys have indicated that instream large

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		woody debris is generally at acceptable levels and thinning is not expected to significantly reduce the potential for future large wood recruitment. In addition, stream temperatures are generally appropriate to the landscape and resident fish species and unlikely to be affected by the proposed treatments because of their small size, topography, aspect, etc. RCA does not inherently mean riparian zone; the 240- and 120-foot widths for perennial/intermittent streams providing seasonal rearing and spawning habitat and intermittent streams, respectively, are derived from direction in the Forest Plan as described above. In this project, areas located within RCAs but outside of riparian vegetation may be thinned on a site-specific basis to achieve desired conditions; areas to be thinned are composed of upland vegetation similar or identical to that of the adjacent stand just outside the RCA boundary. The desired state of these stands post-treatment is that they resemble desired conditions described for that particular PVG in Appendix A of the Forest Plan. See section 2.3.2.1, and Appendix 6 of the FEIS and the Water Resources Specialist Report for further information. The outer portions of these RCAs are the only candidates for thinning; in a 240-foot RCA, only the outer 120 feet is a candidate for thinning. In a 120-foot (intermittent) RCA, only the outer 90 feet is a candidate. The inner 120 feet of the perennial streams and intermittent streams providing seasonal rearing and spawning habitat and the inner 30 feet of intermittent streams within RCAs, respectively, would be left untreated to provide a buffer between activity and the stream and to ensure no riparian vegetation was mechanically disturbed.
228	It is impossible for our groups to support a management regime that is open-ended as far as logging intact native forest, yet isn't based on an ecological prioritization of restoration needs. Thus the DEIS invokes serious wildlife concerns as detailed in our comments on the WCS DEIS.	The Project FEIS is based on the science used in the WCS DEIS. The WCS DEIS proposes areas on the Forest with the highest priorities for restoration of vegetation and wildlife habitat. The Project occurs in one of those high priority areas. In addition, the need for restoration treatments is discussed in the Project FEIS. The effects to wildlife from the proposed treatments are analyzed in the FEIS and Wildlife Specialist Report.

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229	The DEIS at 1-7 states: Burns et al. (2005) evaluated bull trout viability and trend on the Forest and concluded that bull trout viability is low in the Weiser River drainage with a long-term declining trend on the West Zone of the Forest. Although bull trout are distributed throughout the Forest, the East Fork Weiser River bull trout local population (including East Fork Weiser River and Dewey Creek) is the only local population within the Project area. The bull trout population in the East Fork Weiser River is isolated from other local populations in the Weiser River subbasin (Zurstadt and Burns 2007). Given this situation, the DEIS's later statement to the effect that considering cumulative effects with the no-action alternative, the local population would be maintained is not a reasonable conclusion.	The DEIS states that Alternative 1 would maintain the current trend of the local population, which would be declining.
230	The DEIS implies that livestock permittees would be allowed to use motorized vehicles on otherwise restricted roads, but does not disclose the environmental impacts of such use.	Permittee access is authorized in the annual operating plans in accordance with permit administration. Cumulative effects of permitted use are considered in the cumulative effects analysis for affected resources.
231	"Actual sediment yields for individual years may vary from modeled values by an order of magnitude… ." (3-116.) This implies the error or inaccuracy of BOISED sediment yield estimates may be expressed in powers of 10. This demonstrates why the values displayed in Table 3-34 should be bound by confidence intervals. It would also impart more meaning if separate columns in that table convert those percentages/ranges into a range of estimated tons of sediment over natural. Another problem with the display of Table 3-34 is that it lumps the effects of all project activities together, making it impossible to tell which project activities would lead to the most sediment yield. Elsewhere the DEIS states that the watershed rehabilitation actions such as culvert removal create a large portion of the sediment, and this in fact results in the "likely to adversely affect" bull trout for ONLY alternative 5. BOISED sediment yield estimates would be far more useful if separate columns were created for restoration activities—which our groups support almost without reservation—and other actions such as new roads, logging, and old/unauthorized road clearing for logging, a lot of which we may not support. That	BOISED is best used as a comparative tool between alternatives. Outputs should be used in conjunction with consideration of the specific project's design features and mitigation measures (see Appendix 5 of the FEIS for BOISED modeling assumptions). According to the BOISED "User's Guide and Program Documentation", geomorphic threshold is defined as "the point at which (stream) channel equilibrium is observably altered as evidenced by accelerated deposition of bed materials, loss of channel capacity, and changes in substrate size distribution" and the sediment routing component (or coefficient) is defined as "the relationship of watershed area to the amount of sediment routed…" (Reinig et al 1991). It is noted that neither of these components of the model should be used on the Forest as field-verified data supporting and tailoring them to the Forest itself is lacking.

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	such BOISED separate outputs could be broken down is suggested at Appendix 5, pp. 2-3. What is the “geomorphic threshold” and the “sediment routing component” of BOISED (Appx. 5-2)?	
232	Our groups support Wilderness designation for the Council Mountain Inventoried Roadless Area, as proposed in the Northern Rockies Ecosystem Protection Act, recently re-introduced into Congress. It appears from the map that uninventoried roadless areas exist adjacent to the IRA and may be valuable as future wilderness. The DEIS does not analyze effects on these unroaded areas, and this includes logging proposed in unroaded areas adjacent to the IRA boundary.	The area surrounding the Council Mountain IRA is currently in MPC 5.2 and management direction allows harvest treatments. These areas are not in currently proposed wilderness and have an existing road network over most of the area. The action alternatives include road decommissioning in the areas adjacent to the IRA.
233	The WCS DEIS proposed action alternatives represent some positive movement towards ecological sustainability. Specifically: • The proposal to de-emphasize timber production in favor of restoring natural habitats over 247,000 acres would be a significant step towards assuring viability of all native wildlife species. • Utilization of scientifically accepted conservation concepts such as the “six general conservation principles” (WCS DEIS at 5, 41, 55, 157) to guide planning and management on the Payette National Forest (PNF). • Recognizing the need to sustain large dead wood such as snags and down woody debris well-distributed across the forest. However, there is much ambiguity in the proposed Wildlife Conservation Strategy (WCS) and the Revised Forest Plan (RFP). The outcome could be impressive, if sound restoration principles and priorities are followed closely, or as bad as forest management at its worst, if logging agendas and the industrial mind-set dominate project analysis and decision making as it has historically. And so in the next few years with the Mill Creek-Council Mountain project, there could be as much as 8,654 acres logged—which is over 95% of the total acreage the FS has managed to log in this landscape over the past 50 years alone. This management strategy is consistent with too many “restoration”	The Forest appreciates that you recognize that the WCS DEIS promotes ecological sustainability. The Project is consistent with current Forest Plan direction while also using the science behind the WCS DEIS, including the six conservation principles and restoration of the HRV for vegetation and wildlife habitat. It is notable, but not entirely unexpected, that no old-forest habitat conditions have been identified within the Project area. Old-Forest habitat conditions as defined in the WCS DEIS are rare. This does not mean that habitats for some MIS and TES species are rare. Many of our sensitive species are classified in a group called Family 2. Species in this family, such as pileated woodpeckers, great gray owls, and flammulated owls, use large tree forests with moderate canopy covers. The site-specific analysis conducted for this project found more habitats for Family 2 species than originally anticipated based on the analysis for the WCS DEIS. The Project area contains more large tree stands in higher densities than expected. For more information refer to the wildlife analysis in section 3.4 of the FEIS.

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	projects on federal lands across the region. The Revised Forest Plan (RFP) sets no limit to how much intact native forest could be logged to fund other restoration objectives in projects. This is problematic as even the PNF admits, essentially, that there is little or no habitat to spare for MIS and TES species that rely heavily upon old-growth habitat. For the project area it is quite notable that "no old-forest habitat conditions have been identified within the Project area" (2-5).	
234	Moving 247,000 acres to a restoration emphasis under the RFP could be an ecological boon, but that entirely depends upon how "restoration" is defined. There continue to be far too many instances of logging for commodity production being couched as "restoration" in this bioregion. Even reallocation to "unsuitable" would not guarantee significantly better management practices, given the Forest Service's vast history of implementing industrial logging projects in "unsuitable" acres. The false distinction between the three alternatives has been recognized by the federal courts. Since the Forest Service has a financial interest in choosing management schemes that sell logs, and since the agency has a clear record of using whatever reasons it can drum up to justify commercial logging for allegedly ecological purposes—whether an area is "suitable" or not—there is really no meaningful range of alternatives in this WCS DEIS. This is no better illustrated than at p. 25: Restoration treatments in many locations under MPC 5.1 are expensive and can generate large quantities of tree stems and branches that accumulate as undesirable fuel if they are not recycled. Some of this material may be of high value and could more than offset the cost of transporting it to a mill (Fiedler et al. 1999). Other uses, such as pulpwood, fuelwood, and biomass might pay part of its removal cost. Although economic considerations are not primary drivers of a restoration strategy, they may be used to help identify the most efficient way to carry out treatments consistent with management constraints on available resources, budgets, and time. The DEIS does not say how much WCS "unsuitable" would be logged with this proposal, however it does say that "Over 99% of the proposed activities would occur in MPC 5.1 (Restoration and	As described in the DEIS, the proposed action and the other action alternatives would work towards restoration of the area through harvest, or cutting with lop and scatter, of commercial and non-commercial trees, the use of prescribed fire, and watershed restoration. The restoration treatments would move vegetation in the Project area closer to the desired HRV conditions. Other uses of the material generated in the restoration treatments, such as utilization as pulpwood, fuelwood, and biomass, have been considered in the analysis. All proposed harvest treatments are on lands classified as suitable for timber management. There are prescribed fire treatments proposed in forest stands classified as unsuitable for timber management.

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	Maintenance Emphasis within Forested Landscapes); MPC 5.2 (Commodity Production Emphasis within Forested Landscapes); and MPC 6.1 (Restoration and Maintenance Emphasis within Shrubland and Grassland Landscapes).” (DEIS at 1-9, 10.)	
235	The WCS proposes some rather alarming exemptions: Under the Proposed Action, activities within the WUI designed to reduce hazardous fuels that unacceptably increase wildfire risks to residential developments and public health and safety are exempt from proposed Forest-wide standards concerning retention of large-tree stands, old-forest habitat, and large snags. (WCS DEIS at 20.) The following exemption is proposed for Forest-wide standards WIST10 and WIST11: This standard shall not apply to activities that an authorized official determines are needed for the protection of life and property during an emergency event; to reasonably address other human health and safety concerns; to meet hazardous fuel reduction objectives within WUIs; or to allow reserved or outstanding rights, tribal rights, or statutes from being reasonably exercised or complied with. (WCS DEIS at 35.) The Forest Service has already exercised such exemptions without such provisions in forest plans, using regulations relating to appeals and the Healthy Forest Restoration Act. The agency has a very poor track record of sticking to its stated ecological goals and principles in the context of actions that just happen to produce wood products for sale. The exemptions as proposed are not needed, and have no place in a scientifically sound wildlife conservation strategy. In order to implement the WCS and RFP, and minimize risk, we urge the PNF utilize restoration principles found in Montana Forest Restoration Committee (2007) and DellaSala et al., 2003. The Montana Forest Restoration Committee (2007) defines **restoration** as “The intentional process which initiates the recovery of an altered ecosystem to a state of ecological integrity.” In turn, ecological integrity is defined as “The quality of a natural unmanaged or managed ecosystem in which the **ecological processes are sustained**, with genetic, species and ecosystem diversity assured for the future. An ecosystem has integrity when it is deemed	The WCS DEIS proposes some changes in Forest Plan direction, including some exemptions. One proposed guideline (WIGU20) states, “Where possible, projects should be designed to meet both hazardous fuel reduction and wildlife habitat conservation / restoration objectives….” The Project as designed would meet wildlife objectives in the WUI. But it is important to note that neither the new Forest Plan direction, nor any associated exemption, has been adopted at this time. WUI treatments in the Project are designed to manage within the HRV for vegetation and wildlife habitats. Treatments in the WUI would retain large tree stands. These stands would be treated to reduce ground fuels, ladder fuels, and overstory tree densities while retaining the large tree stand characteristics. There are no old-forest habitat conditions in the WUI. Large snags in the WUI would generally be retained. Large snags that pose a safety hazard during harvest or prescribed burning operations would be felled. The WCS DEIS and the Project are targeted at restoring functioning ecosystems and natural processes. The science used in the WCS DEIS and in the Project analyses acknowledges the need to incorporate ecological processes as defined by the six conservation principles. The Project attempts to reintroduce the natural process of fire across approximately 20,000 acres. The need to mimic natural patch and pattern was considered when determining the location of harvest units in relation to each other and to unharvested areas. Your letter mentions wildfire has affected 800,000 acres which was considered in the WCS DEIS, but is pertinent to the Project only in that very few acres have burned in this landscape. This project

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	characteristic for its natural region, including the composition and abundance of native species and biological communities, rates of change and supporting processes." (Emphasis added.) We note therein restoration is correctly defined as sustaining ecological, or natural, **processes** which in turn are the creators of the historical range of conditions that have sustained wildlife down through the millennia. The WCS DEIS definition of "restoration" erroneously prioritizes "Management actions or decisions taken to restore the desired conditions…" but nothing therein mentions natural, ecological processes as the fundamental creators of these conditions. Stated another way: the WCS and RFP focuses far too much on achieving certain structural components such as certain amounts, species, and sizes of trees and snags, but not enough on the **natural processes that have defined the ecological integrity** of these ecosystems. "Since 2000, the Forest has experienced extensive wildfire, affecting more than 800,000 acres (35 percent) of lands within the Forest's administrative boundary." (WCS DEIS at 6.) The WCS DEIS missed a great opportunity where it failed to present an assessment of those 800,000 burned acres. Such an assessment should address: • The ecological damages accrued by firefighting. (See Ingalsbee, 2004.) • The ecologically restorative effects created by the fires on the affected areas. • Any ecologically damaging effects of those fires, which this WCS DEIS claims creates the need to address allegedly overly dense forest so that such effects are avoided in the future.	seeks to reintroduce fire where it would have occurred more frequently, but it was not deemed desirable at this time to attempt to reintroduce fire into lethal severity fire regime forests. The current Forest Plan, the proposed WCS DEIS amendment, and the Project analysis recognize that it is neither possible nor desirable to restore the historical role of fire or historical conditions everywhere. In some cases, stand-replacing fire, which is historical in some ecosystems, may not be desirable. Stand-replacing wildfire is particularly undesirable in places such as the WUI (USDA Forest Service 2003b, p. III-38). The 2003 Forest Plan recognizes the need to monitor restoration outcomes as essential for determining the effectiveness of restoration activities (USDA Forest Service 2003b, Chapter 4, Monitoring and Evaluation). The Forest Plan restoration strategies have been and will continue to be implemented through an adaptive management approach. The Project includes monitoring to assess how implementation achieves the restoration objectives reflected in the alternatives (FEIS, Appendix 4). The results of the monitoring conducted in the Project area will contribute to the Forest's assessment of the level of success in achieving Forest Plan desired condition through Project implementation.
236	At p. 75 the WCS DEIS cites Forman and Godron (1986) in describing landscape ecology as the study of structure, function, and change. Similarly, Noss (2001) conceptualizes the basic components of the ecosystem: Ecosystems have three basic components: **composition, structure, and function**. Together, they define biodiversity and ecological integrity and provide the foundation on which standards for a sustainable human relationship with the earth might be crafted. Noss goes on to define those basic components:	Your summary of landscape ecology and the basic components of an ecosystem are discussed on the WCS DEIS and were considered in the design of the Project. The Forest disagrees that the WCS DEIS and the Project "overlooked" maintenance of critical processes. Ecosystem processes, functions, and landscape patch and pattern are integral to the concept of the HRV as described in the WCS DEIS. See also response to comments #235 and #237.

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	Composition includes the kinds of species present in an ecosystem and their relative abundances, as well as the composition of plant associations, floras and faunas, and habitats at broader scales. We might describe the composition of a forest, from individual stands to watersheds and regions. **Structure** is the architecture of the forest, which includes the vertical layering and shape of vegetation and its horizontal patchiness at several scales, from within stands (e.g., treefall gaps) to landscape patterns at coarser scales. Structure also includes the presence and abundance of such distinct structural elements as snags (standing dead trees) and downed logs in various size and decay classes. **Function** refers to the ecological processes that characterize the ecosystem. These processes are both biotic and abiotic, and include decomposition, nutrient cycling, disturbance, succession, seed dispersal, herbivory, predation, parasitism, pollination, and many others. Evolutionary processes, including mutation, gene flow, and natural selection, are also in the functional category. Maintaining critical **processes** (like Noss's "function") would be overlooked with the WCS's application of HRV. The WCS also fails to place enough emphasis on other components of the ecosystem such as spatial arrangement and sizes of mature and old-growth forest blocks, and soil conditions and land productivity. Noss (2001) believes, "If the thoughtfully identified critical components and **processes** of an ecosystem are sustained, there is a high probability that the ecosystem as a whole is sustained." (Emphasis added.) The Montana Forest Restoration Committee is a collaborative group that defines **restoration** as "The intentional process which initiates the recovery of an altered ecosystem to a state of **ecological integrity**." Ecological integrity is defined: The quality of a natural unmanaged or managed ecosystem in which the **ecological processes** are sustained, with genetic, species and ecosystem diversity assured for the future. An ecosystem has integrity when it is deemed characteristic for its natural region, including the composition and abundance of native species and biological communities, rates of change and supporting **processes**. (Montana Forest Restoration Committee 2007, emphasis added.)	

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237	Restoring forest landscapes for ecological **sustainability** should be an intertwined goal along with ecological integrity, especially for national forests. The Montana Forest Restoration Committee (2007) defines **sustainability** as: The ability of any enduring social or natural system to continue functioning into the indefinite future without being forced into decline through exhaustion of key resources. In a sustainable system, the demands placed upon the environment by people and commerce can be met without reducing the capacity of the environment for future generations. Essentially, it is recognized that economic security, community vitality, equity, quality of life, and commitment to the welfare of future generations depends upon maintaining and restoring ecological integrity. The WCS DEIS skews its definition of **sustainability**, as merely "The ability to maintain a desired condition or flow of benefits over time," likewise omitting any reference to "natural," the environment, future generations, or community vitality. Frissell and Bayles (1996) ask: Is the range of variability in ecosystems conditions really what we seek to emulate, or is it more important to **maintain in a broader sense the full pattern of states and successional trajectories** (Frissell et al., in press)? Strictly speaking, the range of variability is defined by extreme states that have occurred due to climatic or geologic events over long time spans. Nothings says these extreme states were favorable for water quality or aquatic biodiversity, and in fact such natural-historical extremes were probably no more favorable for these values than present-day extremes. From the point of view of many aquatic species, the range of natural variability at any one site would doubtless include local extirpation. At the scale of a large river basin, management could remain well within such natural extremes and we would still face severe degradation of natural resource and possible extinction of species (Rhodes et al., 1994). The missing element in this concept is the landscape-scale pattern of occurrence of extreme conditions, and patterns over space and time of recovery from such stressed states. How long did ecosystems spend in extreme states vs. intermediate or mean states? Were extremes chronologically correlated among adjacent basins, or did asynchrony of landscape disturbances provide for	See response to comments #235 and #236. The analysis for the WCS DEIS and the Project considered ecological integrity, as well as ecological sustainability. The intent of the Project is to provide goods and services along with implementing restoration actions that move the ecosystems in the Project area towards better sustainability and integrity, which may be accomplished by actions such as obliterating unauthorized roads or reintroducing fire across nearly half of the Project area. While extreme states can be part of the HRV, the intent is to avoid actions that lead to extreme changes because these are harder to predict and control, as noted in your comment. The WCS DEIS and the Project FEIS acknowledge that roads, recreation, commodity production, and other types of human uses affect wildlife and fisheries habitat and, therefore, need to be evaluated and addressed as part of a restoration strategy. Promoting ecologically sustainable uses is a key component of the Forest strategy and is reflected in the Project proposal and alternatives.

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	large-scale refugia for persistence and recolonization of native species? These are critical questions that are not well addressed under the concept of range of natural variability as it has been framed to date by managers. (Emphasis added.)	
238	The science on climate change supports the idea that national forest management emphasis should shift away from logging to carbon storage. All old-growth forest areas and previously unlogged forest areas should be preserved indefinitely for their carbon storage value. Forests that have been logged should be restored and allowed to convert to eventual old-growth condition. This type of management has the potential to double the current level of carbon storage in some regions. (Harmon et al., 2002; Harmon, 2001; Harmon et al., 1990; Homan et al., 2005; Solomon et al., 2007; Turner et al., 1995; Turner et al., 1997; Woodbury et al., 2007.) Kutsch et al. 2010 provide an integrated view of the current and emerging methods and concepts applied in soil carbon research. It contains a standardized protocol for measuring soil CO2 efflux, designed to improve future assessments of regional and global patterns of soil carbon dynamics. They state: Excluding carbonate rocks, soils represent the largest terrestrial stock of carbon, holding approximately 1,500 Pg (1015 g) C in the top metre. This is approximately twice the amount held in the atmosphere and thrice the amount held in terrestrial vegetation. Soils, and soil organic carbon in particular, currently receive much attention in terms of the role they can play in mitigating the effects of elevated atmospheric carbon dioxide (CO2) and associated global warming. Protecting soil carbon stocks and the process of soil carbon sequestration, or flux of carbon into the soil, have become integral parts of managing the global carbon balance. This has been mainly because many of the factors affecting the flow of carbon into and out of the soil are affected directly by **land-management practices**. (Emphasis added.) That leads to the following scientific discussion of the effect of "**land-management practices**, which the FS apparently does not want to pay attention to in its forest plan implementation because the latter is contributing to increased atmospheric CO2 and thus climate change. Van der Werf, et al.	The science on climate change and forest management is complex and many factors influence how forests act as either carbon sinks or carbon sources, as highlighted in the papers that you have cited. For example, Turner et al. (1995) indicate that for more accurate measurements in the carbon flux associated with National Forest management, stand-level carbon budgets that account for both living and non-living components within an age-class based system would be necessary for modeling national carbon budgets. In their paper, they discuss how carbon fluxes change in forest ecosystems through succession with changes associated in both live and dead components. These components are found both above and below the ground, further complicating assessment. Harmon et al. (1990) relay that harvesting old-growth forests for their forest products is not an effective carbon conservation strategy; however, Harmon (2001) adds that forests do not remove carbon from the atmosphere in perpetuity. The ability of an ecosystem to accumulate additional carbon reaches an equilibrium whereby the rate that new material can be added is equal to the rate at which it is lost through mortality, decomposition and fire (Harmon 2001). The pattern in secondary forests is even more complex and they continue stating that the assessment of carbon patterns will vary, depending upon the scale of the assessment and temporal variability within those scales. Keith et al. (2009) refute the notion of equilibrium of carbon flux in old-growth forests but further add that large carbon stocks can develop in a particular forest from a combination and interaction of environmental conditions, life history attributes, morphological characteristics of tree species, disturbance regimes, and land-use history. They add that conserving forests with large stocks of biomass from deforestation and degradation avoids significant carbon emissions to the atmosphere, irrespective of the source country, and should be among allowable mitigation activities. Similarly, management that allows restoration of a forest's carbon sequestration potential also should be recognized.

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	2009 state: (T)he maximum reduction in CO2 emissions from avoiding deforestation and forest degradation is probably about 12% of current total anthropogenic emissions (or 15% if peat degradation is included) - and that is assuming, unrealistically, that emissions from deforestation, forest degradation and peat degradation can be completely eliminated. ...reducing fossil fuel emissions remains the key element for stabilizing atmospheric CO2 concentrations. (E)fforts to mitigate emissions from tropical forests and peatlands, and maintain existing terrestrial carbon stocks, remain critical for the negotiation of a post-Kyoto agreement. Even our revised estimates represent substantial emissions ... Keith et al., 2009 state: Both net primary production and net ecosystem production in many old forest stands have been found to be positive; they were lower than the carbon fluxes in young and mature stands, but not significantly different from them. Northern Hemisphere forests up to 800 years old have been found to still function as a carbon sink. Carbon stocks can continue to accumulate in multiaged and mixed species stands because stem respiration rates decrease with increasing tree size, and continual turnover of leaves, roots, and woody material contribute to stable components of soil organic matter. There is a growing body of evidence that forest ecosystems do not necessarily reach an equilibrium between assimilation and respiration, but can continue to accumulate carbon in living biomass, coarse woody debris, and soils, and therefore may act as net carbon sinks for long periods. Hence, process-based models of forest growth and carbon cycling based on an assumption that stands are even-aged and carbon exchange reaches an equilibrium may underestimate productivity and carbon accumulation in some forest types. Conserving forests with large stocks of biomass from deforestation and degradation avoids significant carbon emissions to the atmosphere, Our insights into forest types and forest conditions that result in high biomass carbon density can be used to help identify priority areas for conservation and restoration. The global synthesis of site data (Fig. 3 and Table 2) indicated that the high carbon densities of evergreen temperate forests in the northwestern	This project is designed to maintain and restore desired conditions as described in the Forest Plan. These desired conditions are developed to lie within the HRV for forest components. The Forest uses several references in the document that support the notion that managing for forests within historical reference conditions offer a resiliency and resistance to future climatic changes (Fule et al. 2009; Noss 2001). This resiliency and resistance within historical ranges would also apply to carbon cycling in an ecosystem. As many of our ecosystems have deviated from historical ranges of conditions, so have their ecological processes and functions, which would include not only carbon cycling but other nutrient cycling, fire regimes, invasion by non-native species, etc. Our premise is to maintain and restore forests to the desired ranges and to restore ecosystem processes that may continue to function and evolve with future climatic perturbations. Although much literature points to the carbon sequestration functions of old-growth forests, there is an equal body of literature that points to not only slowing deforestation, but combining it with an increase in forestation and other management measures to improve forest ecosystem productivity and processes, which could conserve or sequester significant quantities of carbon (Millar et al. 2007, Keith et al. 2009, Van der Werf and Peterson, 2009, Malmsheimer et al. 2011). Van der Werf et al. (2009) discuss deforestation and forest degradation as contributing to atmospheric greenhouse gas emissions through the combustion of forest biomass and decomposition of remaining plant material and soil carbon. Their discussion revolves around deforestation and forest degradation, not forest with examples that primarily reference large-scale land conversion in tropical countries. They further conclude that on a global scale, the maximum reduction in CO_2 emissions from avoiding deforestation and forest degradation is probably about 12% of current total anthropogenic emissions (or 15% if peat degradation is included)—and that is assuming, unrealistically, that emissions from deforestation, forest degradation, and peat degradation can be completely eliminated. Therefore, reducing fossil fuel emissions remains the key element for stabilizing atmospheric CO_2 concentrations. Their article does not, however, address forest restoration.

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	United States, southern South America, New Zealand, and southeastern Australia should be recognized in forest biome classifications. Harmon, 2009 reviews, in terms as simple as possible, how the forest system stores carbon, the issues that need to be addressed when assessing any proposed action, and some common misconceptions that need to be avoided. He also reviews and assesses some of the more common proposals as well as his general scientific concerns about the forest system as a place to store carbon. The DEIS fails to disclose how each of the alternatives would affect carbon storage in the forest, including the soils. Hanson, 2010 states: Our forests are functioning as carbon sinks (net sequestration) where logging has been reduced or halted, and wildland fire helps maintain high productivity and carbon storage. Even large, intense fires consume less than 3% of the biomass in live trees, and carbon emissions from forest fires is only tiny fraction of the amount resulting from fossil fuel consumption (even these emissions are balanced by carbon uptake from forest growth and regeneration). "Thinning" operations for lumber or biofuels do not increase carbon storage but, rather, reduce it, and thinning designed to curb fires further threatens imperiled wildlife species that depend upon post-fire habitat. The DEIS does not include an analysis of the direct, indirect, and cumulative effects of the project that addresses the likely scenarios under current climate change predictions. This includes how stand regeneration has been and will be affected, and how wildlife species such as the wolverine which utilize habitat most dramatically affected by climate change.	It is expected that all alternatives would result in both carbon and greenhouse gas emissions and sequestration. However, because carbon and greenhouse gas emissions mix readily into the global atmosphere, it is not currently possible to determine any meaningful indirect effects of emissions from projects of this scale. Because this project is quite small, and the context of global atmospheric carbon dioxide and greenhouse gas emissions are integrated across the global atmosphere, it is not currently possible to conduct a quantitative analysis of actual climate change effects of individual or multiple projects. Nor is it possible to determine the cumulative effect of emissions from individual projects on global climate. Nor is it expected that such disclosure would provide a practical or meaningful effects analysis related to project decisions. Although no in-depth analysis will be completed for this project, the Project has been designed to restore conditions toward the desired conditions that lie within the HRV. Vegetative conditions that are within their HRV are thought to be more resilient to natural disturbance processes, such as wildfire and insect outbreaks. More resilient ecosystems have a greater potential to withstand the ecological stresses associated with climate change and help maintain long-term carbon sequestration capability in forests. Furthermore, as described in the Forest Plan, old-growth, late successional stage characteristics were important but not extensive on the historic landscape; however, the large tree component was common (Wisdom et al. 2000, Morgan and Parsons 2001) due to the disturbance regimes present in Central Idaho. This project seeks to restore the large tree component with the seral species that would have been more prevalent on the landscape, which will produce not only large trees that are better at carbon sequestration than smaller trees, but will also decrease the probability of uncharacteristic fires that release carbon to the atmosphere. Additionally, the desired conditions provide for snags and CWD to be left on the landscape, to continue ecosystem processes in the soil and below-ground components of the ecosystem. As stated in Littell et al. (2012), many National Forest management

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		priorities are consistent with adaptation to climate change and with promoting resilience to the effects of climate change. We believe the Forest Plan meets these criteria. However, as indicated by Millar et al. (2007) and Littell et al. (2012), adaptive management will provide the best general strategy for learning how to detect and manage the effects of climate change on forest ecosystems. The Forest Plan provides for an adaptive management framework through monitoring, which may indicate the direction that future management should take, including the work of ongoing science in the field of climate change.
239	The National Forest Management Act (NFMA) envisioned monitoring of population trends of indicator species as the way to assure viability of all native wildlife species. The PNF RFP contains a provision for monitoring population trends. However, given the failure of the PNF to carry out those same commitments under the original Forest Plan we are skeptical that the agency is actually going to carry out those stated population trend monitoring commitments. The PNF's failure at the conclusion of the RFP process to provide supportable baseline numbers of indicator or key species, or to clearly describe the numbers and distribution required to assure viability, lends to our doubts. Based upon the HRV focus of the WCS DEIS, it appears the PNF will be continuing to offer a habitat proxy as a substitute for population trend monitoring. But instead of designating certain well-distributed amounts of old growth, as was done in the original forest plan, the WCS proposes to utilize as its proxy the concept of "desired conditions" based upon "Historical Range of Variability" (HRV). Although this HRV approach has merit, there are significant scientific controversies regarding its application as a habitat proxy, which the WCS DEIS fails to address. The WCS DEIS exemplifies the danger of arbitrarily emphasizing some factors over others in its HRV focus, as Frissell and Bayles (1996) warn against: …The concept of range of natural variability also suffers from its failure to provide defensible criteria about **which factors ranges should be measured**. Proponents of the concept assume that a finite set of variables can be used to define the range of ecosystem	Since adoption of the 2003 revised Forest Plan, the Forest has annually monitored both MIS, as described in Chapter 4 of the Forest Plan. Annual MIS monitoring results are included in the Forest Plan monitoring record. These results were evaluated in the 5-year Forest Plan monitoring report issued in 2010. Forest Plan monitoring reports are available on the Forest website. Monitoring also has occurred across the Forest for a variety of high priority species, such as great gray owls, flammulated owls, and northern goshawks. A report of the results of 5 years of monitoring of four high priority bird species was issued in 2010. Most of your comments focus on the adequacy of the WCS DEIS. Analysis, monitoring, and the concept of the HRV and were addressed in responses to comments #160, #180, #189, 193, #215, #235 - 238, #242, #243, #245, #246 and #256. In addition, the Project emphasizes additional monitoring. Because this project was recently selected as a CFLRP, the Forest is expected to receive funds to continue, and expand on, necessary monitoring. We are working with the Rocky Mountain Research Station to investigate the effectiveness of our habitat restoration work on the target species—white-headed woodpecker. The HRV developed by Morgan and Parsons (2001) contained some extreme states, such as those described by Frissell and Boyles (1996). For example, in PVGs 1, 2, and 5, some tree size classes may not have been present across the landscape at some

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	behaviors, when ecological science strongly indicates many diverse factors can control and limit biota and natural resource productivity, often in complex, interacting, surprising, and species-specific and time-variant ways. **Any simple index for measuring the range of variation will likely exclude some physical and biotic dimensions important for the maintenance of ecological integrity and native species diversity**. (Emphasis added.) Dimensions that create significant adverse impacts on native species diversity the WCS does not address include roads, edge effects due to roads and logged openings, noxious weeds and other invasive species, livestock, compacted and otherwise productivity-deficient soil conditions, and many human-caused fires.	points in time, or they occurred predominately in a single tree size class. Because these extreme states did not meet the goal of providing the full range of biodiversity within the Forest (WCS DEIS), the desired conditions include a range and, therefore, would allow landscape conditions to be more spatially and temporally intermediate, as suggested by Frissell and Boyles (1996). Where appropriate, the Project FEIS addresses impacts to wildlife habitat from roads, historical logging, invasive species, livestock grazing, and wildfire. But it is important to note these impacts were addressed at the Forest scale in the WCS DEIS.
240	One of the biggest concerns about the noxious weed problem is that the long-term costs are never adequately disclosed or analyzed. The public is expected to continuously foot the bill for noxious weed treatments—the need for which increases yearly as the PNF implements the large-scale propagation of weeds via its WCS and RFP. There is no guarantee that funding needed for the current and proposed management direction will be supplied by Congress, no guarantee that this amount of money will effectively stem the growing tide of noxious weed invasions, no accurate analysis of the costs of the necessary post-treatment monitoring, and certainly no genuine analysis of the long-term costs beyond those incurred by site-specific weed control actions. The DEIS states that “Activities proposed under the Project are not anticipated to substantially cause or promote the introduction or spread of invasive species.” This is a highly misleading statement, given that there is scientific consensus that the cumulative effects of land disturbing and other human actions such as motorized travel greatly exacerbate the conditions for noxious weed spread. The WCS DEIS at p. 75 states: Vegetative condition is often the single most important component that determines how landscapes are used and the interactions between biological and physical resources. Conservation of biodiversity is important at all levels, including genetic, species, and ecosystem, and vegetation unites a large share of the components and processes that contribute to these levels.	Treating weeds does cost money and there is no guarantee that Congress will continue to fund those efforts. The Forest weed program will continue at a level consistent with annual funding. The Forest does not anticipate substantial spread of noxious weeds through the Project because the Forest will inventory and treat weed infestations prior to Project implementation. Care will be taken to address weeds in areas where known infestations occur. See Table 2-11, Project Design Features and Mitigation Measures in the FEIS, for PDFs that address weeds.

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241	We are compelled to point out that vegetative condition is directly related to soil productivity, which has been highly altered on the PNF by past management activities. We also note that the RFP, and thus the WCS, utilizes an untested proxy for maintaining soil productivity that allows up to 15% detrimentally disturbed soil conditions in "restored" vegetation treatment units, and in addition allows up to 5% total soil resource commitment (essentially permanently taking 5% of any given area from any productivity. (RFP at III-21.) Unfortunately, the allowance of so much cumulative soil disturbance is completely ignored in the WCS DEIS 's HRV assumptions. Yet another layer of untested proxy on assurance of wildlife viability. The DEIS definition of activity area is "The smallest logical land area where the effect that is being analyzed or monitored is expected to occur. The area may vary in size depending on the effect that is being analyzed or monitored, because some effects are quite localized and some occur across landscapes." What landscape level effects is the DEIS referring to? How do the varying soil productivity risks associated with each Landtype (5½ pages) translate to varying activity area analyses? What is the correlation between the amount of detrimental disturbance (DD) in each activity area to the amount of reduction in soil productivity in each of those activity areas? The DEIS states that activity areas were "inventoried" but that doesn't clearly indicate if there were field surveys of soil conditions. The DEIS lacks a table displaying all activity areas with cumulative DDs. Without measurements taken in activity areas, the DD estimates may not be reliable or accurate. "The Hall Fire, which burned approximately 1,800 acres in 2003 at moderate to high severity, likely resulted in DD in areas that were burned at high severity." What is the estimated acreage of DD that occurred from the Hall Fire and others that have occurred in the project area in recent decades? What is the estimate of total existing DD in the cumulative effects analysis area? The DEIS at 3-165 gives examples features that are considered to be part of the TSRC. Does the PNF keep an inventory of the acreage of such features? "Under Alternative 5, management activities would return a net 164.6 acres of TSRC to productivity (Table 3-45)" (DEIS at 3-170).	Thank you for your comment; the Forest Plan utilizes the DD and TSRC standards for project effects analysis. The reference to "landscape level effects" in the DEIS definition of activity area does not refer to specific effects in the context of definition, but rather uses the term as a means of illustrating why an activity area is defined and can change by resource in an effort to isolate the impacts of a specific management action. The definition does not reference any particular landscape level effects. The activity area for DD analysis in this project is the timber sale harvest unit, as this is the smallest logical land area in which the effect (here, soil disturbance) is being analyzed and monitored. The soil productivity risks associated with each landtype are used as a means of predicting how certain soils might react to proposed management: project design features and mitigations are designed to address concerns on all soil types included in proposed management activities (Table 2-11, Project Design Features and Mitigation Measures, in the FEIS). The Forest Plan defines DD and TSRC; these definitions can be found in the FEIS. There is a direct correlation between DD and TSRC and a reduction in soil productivity. Any identified DD would reduce soil productivity through compaction, displacement, puddling, or severe burning either singularly or in combination to the extent that any unit of DD would equate to an equal unit of soil productivity reduction. However, it is also important to note that this type of disturbance will recover naturally over the long term, through processes like freeze/thaw cycles, though the recovery time varies with the extent and severity of the disturbance. DD field surveys were completed for a subset of proposed units. For units not surveyed in the field, it was assumed that the Forest Plan standard of 15% DD was exceeded, and post-harvest restoration will require an improvement over existing DD through landing and skid trail reclamation (Table 2-11, Project Design Features and Mitigation Measures, in the FEIS). The Forest Plan does not require DD to be considered cumulatively within a project

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	Would this 164.6 acres be considered DD immediately post-project? In response to comments that criticized the arbitrary nature of the FS's use of 15% detrimental disturbance, the Forest Service cited its own expert on soil processes, Dr. Bob Powers of the Pacific Southwest Research Station: The Regional Soil Quality Standards (R-1 Supplement 2500-99-1) were revised in November 1999 (WCS DEIS, A-11 (FEIS Chapter 3). Manual direction recommends maintaining 85% of an activity area's soils at an acceptable productivity potential with respect to detrimental impacts - including the effects of compaction, displacement, rutting, severe burning, surface erosion, loss of surface organic matter, and soil mass movement. This recommendation is based on research indicating that a decline in productivity would have to be at least 15% to be detectable (Powers, 1990). (USDA Forest Service, 2007 c at F-24.) It is important to point out, however, that in the following comment, Dr. Powers is referring to separate and distinct thresholds when he talks about 15% **increases in bulk density**, which is a threshold of when soil compaction is considered to be detectable, and 15% **areal limit for detrimental disturbance**, which is the PNF threshold for how much of an activity area can be detrimentally disturbed (including compaction from temporary roads and heavy equipment, erosion resulting from increased runoff, puddling, displacement from skid trails, rutting, etc.). With that caveat, what Dr. Powers has to say in relation to the PNF's soil standard is quite revealing as quoted in Nesser, 2002: [T]he 15% standard for increases in bulk density originated as the point at which we could reliably measure significant changes, considering natural variability in bulk density… [A]pplying the ***15% areal limit*** for detrimental damage is not correct... [T]hat was never the intent of the 15% limit… and ***NFMA does not say that we can create up* to 15% *detrimental conditions***, it says basically that we cannot create significant or permanent impairment, period... (emphasis added) Nesser was at the time the Soil Scientist at the Northern Region. In order to comply with NEPA, an EIS must disclose the controversy it the agency fully recognizes surrounding its own use of standards for compliance with NFMA. Clearly, the cumulative biological impacts	area; the 15% maximum allowed by the Forest Plan pertains only to an activity area proposed for management (here, timber harvest) with a specific project. The Forest keeps an inventory of forest infrastructure (e.g., roads, campgrounds, gravel pits); this inventory is used in TSRC analysis for projects. The restoration of soil considered TSRC to a more productive and functioning state is a long-term objective. The immediate result of obliterating a road prism results in soil disturbance; however, this results in an immediately improved state over TSRC in the restoration of soil infiltration capacity, addition of organic matter, restoration of biological function, and increased soil stability. This is not necessarily considered DD; by definition, DD is created by compaction, displacement (horizontal), puddling, or severe burning. When a road is obliterated, as much topsoil as possible that was pushed into the fill slope during road construction is restored to its original position by distribution over the restored road prism, though vertical restoration is not possible and soil horizons are mixed. By obliterating roads, which is the treatment proposed for restoring the 163.5 acres of TSRC in Alternative 5, the Forest provides for a way to recover the TSRC ***over time***. These are not fully recovered immediately, but an immediate improvement over the existing condition is recognized in terms of soil-hydrologic function. Pulling the fill slope back onto a road, along with decompaction and recontouring, can return enough topsoil to be very effective in re-establishing native vegetation.

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	on logged old growth (or "old forest" or "large tree size class") due to essentially permanently impaired soils have never been disclosed.	
242	Tiedemann, et al., (2000) challenge simplistic use of the concept of HRV and question the notion that we can, or even should, try to replicate such conditions. "Nearly 100 years of fire exclusion, possible climate changes, and past management practices may have caused these communities to cross thresholds and to reside now in different steady states." Hayward, 1994 states: Despite increased interest in historical ecology, scientific understanding of the historic abundance and distribution of montane conifer forests in the western United States is not sufficient to indicate how current patterns compare to the past. In particular, knowledge of patterns in distribution and abundance of older age classes of these forests in not available. …Current efforts to put management impacts into a historic context seem to focus almost exclusively on what amounts to a snapshot of vegetation history—a documentation of forest conditions near the time when European settlers first began to impact forest structure. …The value of the historic information lies in the perspective it can provide on the potential variation… I do not believe that historical ecology, emphasizing static conditions in recent times, say 100 years ago, will provide the complete picture needed to place present conditions in a proper historic context. Conditions immediately prior to industrial development may have been extraordinary compared to the past 1,000 years or more. Using forest conditions in the 1800s as a baseline, then, could provide a false impression if the baseline is considered a goal to strove toward. The vast scientific uncertainty surrounding use of the HRV concept is why the Forest Service must make one of its top priorities to monitor key and indicator species' habitat trends, using the best scientific methodology available. The WCS DEIS states, "Substantial increases in tree densities and ladder fuels within stands, resulting in reduced habitat quality and increased risks for habitat loss from future uncharacteristic wildfire or insect events in the nonlethal and mixed1 fire regimes." (P. 8) Unfortunately, the Forest Service is completely unable to cite	The Forest Plan and the WCS DEIS use the HRV as an indicator of desired conditions. The Project DEIS analysis is based on the science in the Forest Plan and the WCS DEIS. As recognized in the WCS DEIS, scientists (e.g., Keane et al, 2009 and Noss 2001) offer alternate views regarding the validity of using an historical perspective for understanding current and future ecosystems. Also, the HRV developed by Morgan and Parsons (2001) and used in the Forest Plan and WCS DEIS is not a static snapshot of a time period in the 1800s; rather the HRV represents a dynamic time period of several hundred years, including pre- and post-little Ice Age. Because much of the theory of landscape restoration is by nature uncertain, the Forest has made monitoring key and indicator species one of our top priorities across the Forest in managed and unmanaged areas. The Forest monitoring protocols for MIS (white-headed and pileated woodpeckers) have been developed under the guidance of Dr. Saab, an expert on woodpeckers and songbirds with the Rocky Mountain Research Station. Diane Evans Mack, IDFG nongame biologist, has been an integral part of our monitoring of flammulated and great gray owls, among other species. Long-term monitoring of northern goshawks is also part of our strategy. To be effective, monitoring of population and habitat trends for most species transcends project boundaries, but both baseline and long-term monitoring sites for the species mentioned above occur in the Project area.

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	scientific data gathered from the Payette National Forest which would support this fundamental assumption underlying the WCS and the WCS DEIS's analyses.	
243	Another major concern is the uncertain commitment towards integration of natural processes, e.g., wildland fire, into the proposed management scheme. Achieving desired numbers of snags, large trees, etc. using mechanical or other unnatural means would result in unintended consequences such as deficiencies in interior forest, noxious weeds, and water quality and aquatic species degradation. Merely substituting logging, springtime prescribed fire, and fire suppression for the natural ecosystem **processes** invokes unknown landscape temporal and spatial cumulative effects. The outcome of the WCS and RFP would likely be further artificialization of the forest ecosystem, rather than more natural or sustainable conditions. Forest conditions maintained through repeated manipulation is not the same as maintaining ecosystem **processes** that naturally shaped the ecosystem and resulted in the diverse range of natural conditions. McClelland (undated) discusses snags, a habitat component the WCS addresses by retaining a few more while carrying out "restoration" logging. As he points out, snags **result from natural processes**: The snags per acre approach is not a long-term answer because it concentrates on **the products of ecosystem processes rather than <u>the processes themselves</u>**. It does not address the most critical issue—long-term perpetuation of diverse forest habitats, a mosaic pattern which includes stands of old-growth larch. **The processes that produce suitable habitat must be retained or reinstated by managers. Snags are the result of these processes** (fire, insects, disease, flooding, lightning, etc.). (Emphases added.) And Hutto, 1995 addresses "processes," referring to fire: Fire is such an important creator of the ecological variety in Rocky Mountain landscapes that the conservation of biological diversity [required by NFMA] is likely to be accomplished only through the conservation of fire **as a process**…Efforts to meet legal mandates to maintain biodiversity should, therefore, be directed toward	Part of the purpose of the Proposed Action is, "To restore forest stands to HRV as described in Appendix A of the Forest Plan and improve habitat for wildlife species such as the white-headed woodpecker." Large blocks of stands primarily composed of vigorous seral trees would be designated for treatment to return stands to the HRV. Large blocks of stands that lack a preponderance of vigorous seral trees would be left untreated. These untreated blocks would provide habitat for wildlife species that prefer denser stand conditions. The planned arrangement of large blocks of treated and untreated stands can be visualized by comparing the Alternative 1 map (existing condition) to the action alternative maps. The treatments would create a mosaic of densities within the treated stands and enhance the diverse spatial patterns within the Project area. Using fire alone to restore stands to the HRV is a viable treatment; however, using harvest treatments followed by prescribed burning would allow for better control of which trees are retained and the size of the openings. The minimum number of Burn Only treatments is in Alternative 3 (1,591 acres); the maximum number of Burn Only treatments is in Alternatives 2 and 5 (3,204 acres). Comparing the effects of Burn Only treatments with harvest and burn treatments to vegetation is included in section 3.2, Vegetation Resources, in the FEIS. In stands categorized as Open Seral Burn Only, density reduction in overstory trees is not needed—overstory densities are at desired levels. Ladder fuel and surface fuel reductions are needed. In these stands, fire alone is the preferred treatment. In stands categorized as Restoration Stand Burn Only density reduction in overstory trees is needed. However, access for harvest treatments is not practical for these stands. Therefore, fire alone has been proposed to reduce densities, fuel ladders, and surface fuels. The preferred treatment in these stands would be to reduce densities with a harvest treatment

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	maintaining processes like fire, which create the variety of vegetative cover types upon which the great variety of wildlife species depend. (Emphasis added.)	and then apply prescribed fire post-harvest. Using harvest equipment would allow for better control of which trees are retained. In stands categorized as Reserve Stand Burn Only there is a need to create openings where regeneration can be established. The preferred treatment in these stands would be to create openings with a harvest operation.
244	The Forest Service believes that a major cause of the deviation from HRV is the agency's fire suppression regime. This outdated "Smokey Bear" mindset perceives fire, windstorms, and native insects not as the vital natural processes they are, but rather as threats to the ecosystem. Unfortunately, the WCS DEIS's alternatives reveal an agency unable to transcend such an outdated worldview. The vegetation manipulations are largely designed to replace natural processes with mechanical "treatments" and "prescribed" fire, without any basis to assume that ecosystems can be maintained or restored by such artificial manipulations. The entire basis of the action alternatives proceeds mostly from assumptions that lack scientific credibility. "By reallocating MPC 5.2 acres to either MPC 5.1 under Alternative B or 3.2 under Alternative C, fire could be used as needed across all NFS lands to restore ecosystem processes and functions. The desired condition under MPCs 5.1 and 3.2 includes restoration of the historical role of fire…" (P. 42.) We fail to see in this WCS the type of strong standards that would motivate any manager away from fire suppression as the most likely action taken in most instances. Underlying much of the WCS DEIS and RFP is the assumption that management can manipulate and control nature to arrive at predicable outcomes. The failure of this outdated paradigm is quite evident from the lists of threatened and endangered species and damaged watersheds, the increased fire risk and out-of-whack ecosystems, the invasions of exotic species, and agency budgets strained to the breaking point trying to deal with the accrued damages. Unfortunately, with the failure of the PNF to submit its fire management/suppression policies to NEPA and scientific peer review, the pervasive tendency to all-out suppress most fires with	Thank you for your comments, these are directed at the WCS DEIS and the impacts of fire suppression, and outside the scope of this Project. Natural processes such as fire, insects, and disease are part of ecosystem function and integral to the concept of HRV, as discussed in the WCS DEIS. For a variety of reasons, the role of fire cannot be re-established simply by relying on wildfire. Active management, including the use of prescribed fire, is important to reestablishing and maintaining sustainable forest conditions in the nonlethal, mixed1, and mixed2 fire regimes. This concept is part of the purpose and need for the Project.

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	little regard to juxtaposition—however near or far from human-built structures—will continue. Thus, the cycle of fire suppression followed by fuel reduction (much of it commercial logging) to "emulate" fire followed by more fire suppression—the cycle will continue the present endless, downward spiral of ecosystem degradation that is merely hinted at with the WCS DEIS's acknowledgement that fire suppression damages ecosystems. Regarding the mismanagement of fire by this "manipulate and control" paradigm, Wuerthner (2006a) states: The industrial/anthropocentric perspective believes that humans can and must control processes such as fire. It also tends to believe that natural processes are mechanical and that they respond to human tinkering much like a machine. Ultimately, the industrial/anthropocentric perspective on wildfire negatively affects the health and well-being of the environment. At p. 207, the WCS DEIS recognizes: While certain management activities are able to emulate natural processes, they may not be able to elicit the same ecological responses. A greater diversity of spatial, temporal, and biotic responses can occur on the landscape by allowing natural events, in addition to management activities, to move restoration forward. Unfortunately, the range of alternatives in the WCS DEIS does not adequately consider how wildland fire use can be better incorporated into planning and decision making. We want the FS to be comfortable with unplanned wildland fires under specified weather conditions in sensible locations, so that the ecosystem benefits can be realized. Simply stated, at the time that responses to any given fire are contemplated, we want decision makers to have documented—for that specific fire area—the benefits of a process that helps create habitat conditions for wildlife, restores forest composition, recycles soil nutrients, creates large dead logs that fall into streams forming native fish habitat, as well as many others. That will provide the public, the news media, and politicians with a fully vetted set of justifications for managing with—rather than against—the native ecosystem process of fire. McRae et al. 2001 provide a scientific review summarizing empirical evidence that illustrates several significant differences between logging and wildfire—differences which the WCS DEIS fails to	

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	address. Also, Naficy et al. 2010 found a significant distinction between fire-excluded ponderosa pine forests of the northern Rocky Mountains logged prior to 1960 and paired fire-excluded, unlogged counterparts: We document that fire-excluded ponderosa pine forests of the northern Rocky Mountains logged prior to 1960 have much higher average stand density, greater homogeneity of stand structure, more standing dead trees and increased abundance of fire-intolerant trees than paired fire-excluded, unlogged counterparts. Notably, the magnitude of the interactive effect of fire exclusion and historical logging substantially exceeds the effects of fire exclusion alone. These differences suggest that historically logged sites are more prone to severe wildfires and insect outbreaks than unlogged, fire-excluded forests and should be considered a high priority for fuels reduction treatments. Furthermore, we propose that ponderosa pine forests with these distinct management histories likely require distinct restoration approaches. We also highlight potential long-term risks of mechanical stand manipulation in unlogged forests and emphasize the need for a long-term view of fuels management. The WCS DEIS and RFP fail to note the significant adverse effects on wildlife that fire suppression has caused—and would continue—under the WCS. As only one example of many species is the Lewis's woodpecker. Anderson, 2003 states: Fire suppression also is detrimental to these birds. Evidence suggests that large-scale burned forests may play a critical role in creating ephemeral habitats for Lewis's woodpeckers because burns create favorable habitat aspects including: snags, open space for foraging maneuvers, ground cover and associated arthropod prey, and reduced numbers of nest predators (Saab and Vierling 2001).	
245	Anderson, 2003 notes, “In the Columbia Basin …Lewis’s woodpecker habitat has declined more than 83% from historical levels…” The WCS does not consider the viability of this in its analyses, nor does the WCS DEIS designate another species as its proxy. Wisdom et al. 2000 developed an ecosystem management plan to define conservation issues important to the Lewis’s woodpecker. The WCS DEIS fails to adequately address the cumulative impact of fire and fire management on this and other	Thank you for your comments, these are directed at the WCS DEIS and generally not referenced specifically to this project. In fact, the WCS DEIS does address the viability of the Lewis’ woodpecker, a member of Family 1. Both the WCS DEIS and the Project FEIS, disclose effects to Family 1 through an analysis of effects to white-headed woodpecker (see FEIS, section 3.4.4.3). This species is a focal species for Family 1 and a Forest MIS. The WCS DEIS is focused on wildlife habitat needs. The ideal spatial pattern and size

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	wildlife species whose biology includes adaptation to these fire-sustained ecosystems. Frissell and Bayles (1996) reinforce a point about land managers' lack of humility: Most philosophies and approaches for ecosystem management put forward to date are limited (perhaps doomed) by **a failure to acknowledge and rationally address the overriding problems of uncertainty and ignorance about the mechanisms by which complex ecosystems respond to human actions**. They lack humility and historical perspective about science and about our past failures in management. **They still implicitly subscribe to the scientifically discredited illusion that humans are fully in control of an ecosystemic machine and can foresee and manipulate all the possible consequences of particular actions while deliberately altering the ecosystem to produce only predictable, optimized and socially desirable outputs**. Moreover, despite our well-demonstrated inability to prescribe and forge institutional arrangements capable of successfully implementing the principles and practice of integrated ecosystem management over a sustained time frame an at sufficiently large spatial scales, would-be ecosystem managers have neglected to acknowledge and critically analyze past institutional and policy failures. They say we need ecosystem management because public opinion has changed, neglecting the obvious point that public opinion has been shaped by the glowing promises of past managers and by their clear and spectacular failure to deliver on such promises. (Emphasis added.) The failure of this "Wildlife Conservation Strategy" to actually consider wildlife habitat needs is striking. Indeed, the WCS DEIS's analysis is divorced from the survival needs of key and indicator species. Whereas the "six general conservation principles" the WCS DEIS lists at four locations (pages 5, 41, 55, 157) fundamentally requires integration of **spatial arrangements and amounts** of habitat, in no way does the WCS DEIS demonstrate how and when the habitat arrangement resulting from the HRV approach will actually meet those important metrics for specific wildlife. **What those metrics are for each of the key and indicator species is not disclosed**.	of habitats is not well understood for many species. The basic premise of the Forest's management approach is that maintenance or restoration of the historical patterns of vegetation as defined by fire regimes (see "Spatial Patterns" section in the Forest Plan 2003 Appendix A and WCS DEIS Appendix A), will help meet the necessary spatial arrangements for wildlife species. The wildlife analysis in section 3.4 of the FEIS includes maps of species source habitat to visually display the spatial patterns of modeled habitat. There is much uncertainty and lack of understanding about the mechanisms by which ecosystems respond to human actions. For this reason, the concept of managing within a HRV provides a reasonable foundation. This concept acknowledges that humans have little control over an "ecosystemic machine" and the best approach is to manage within the cycles we can interpret (e.g., HRV) from "natural" (e.g., historical) processes and regimes. The WCS considers spatial arrangement of habitats by 5th HU code watersheds. Specific projects, depending on their scale, will address habitat at a finer scale.

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246	Similarly, the DEIS uses as a metric, "Tree Size Classes" (e.g., 3-6, 7, 8). It does not disclose how dense of trees per size range are needed to meet class criteria. In what scientific research of the biological needs of wildlife species that the PNF relies upon is this metric used? On what best scientific information regarding the biological needs of wildlife species indicates that a "desired condition" would include zero extent of canopy closure > 70% in Large Tree Size Class Stands? (3-8.) What is the scientific basis for the "desired condition" displayed in Table 3-6?	From page 3-6 of the Project DEIS: "Tree size class is determined by the size of the overstory trees. The average diameter of the trees in the overstory or uppermost tree layer determines the stand's tree size class. By definition, a canopy layer has a distinct break in height and must have a non-overlapping canopy closure of at least 10 percent." The analysis in the Project DEIS is based on Appendix A of the Forest Plan. The scientific basis for Appendix A of the Forest Plan is described in the EIS for the Forest Plan (USDA Forest Service 2003b). Tree size class and canopy cover are two important components of suitable habitat for many wildlife species. The two components are defined in the Project DEIS. Tree Size Class is defined on page 3-6; Canopy Closure is defined on page 3-8. The Vegetation Resources discussion (pages 3-3 through 3-28) provides a detailed description of these and other vegetation characteristics in the Project area at current condition and following each of the action alternatives. The desired conditions in the Forest Plan, Appendix A, are based on estimates of the HRV and are not meant to imply that the wildlife source habitat models and/or habitat use are restricted to these categories. For example, pg. 3-83 of the Project DEIS states the pileated woodpecker "will use forests that have moved outside of historical conditions, such a PVGs 2 and 5 when either is found with dense canopy cover," The WCS DEIS discusses this in depth in chapter 3 in the wildlife analysis. The development of the desired conditions noted in the Forest Plan is presented in detail in Chapter 3 of the Final EIS for the Forest Plan. A general discussion of desired condition and management direction to move the forest toward those conditions is presented in the Forest Plan, Appendix A, pages A-1 through A-17.
247	This problem is well-illustrated in the WCS DEIS's and RFP failure to consider primary habitat needs of the wolverine, which needs remote habitat particularly at high elevation and even in winter. Instead, the WCS proposes to monitor its extirpation for a decade or	Thank you for your comments, these are directed at the WCS DEIS and generally outside the scope of this project. For the record, effects to wolverine are disclosed in the WCS DEIS. Since the wolverine is a candidate species, effects to wolverine in the Project

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	so before maybe thinking of taking action. One of the best wildlife indicator species for older forests—and especially burned forests—is the black-backed woodpecker. The WCS DEIS fails to adequately consider quantitative loss of black-backed woodpecker habitat due to management activities. The neighboring Boise National Forest adopted this species as an MIS: The black-backed woodpecker has been selected as an MIS because it is dependent on fire landscapes and other large-scale forest disturbances (Nutt et al. 2009). It is an irruptive species, opportunistically foraging on outbreaks of wood-boring beetles following drastic changes in forest structure and composition resulting from fires or uncharacteristically high density forests (Dixon and Saab 2000). Dense, unburned, old forest with high levels of snags and down logs are also important habitat for this species, particularly for managing habitat over time in a well-distributed manner. These areas provide places for low levels of breeding birds but also provide opportunity for future disturbances, such as wildfire or insect and disease outbreaks (Dixon and Saab 2000; Hoyt and Hannon 2002; Hutto and Hanson 2009; Tremblay et al. 2009). Habitat that will support persistence of this species benefits other species dependent on forest systems that develop in the presence of fire and insect and disease disturbance processes. Black-backed woodpecker is a secondary consumer of terrestrial invertebrates and primary cavity nester. The species physically fragments standing and down logs by the nature of its foraging and nesting behavior (Marcot 1997; O'Neil et al. 2001). All of these activities are key ecological functions. Population levels of black-backed woodpeckers are often synchronous with insect outbreaks, and targeted feeding can control or depress such outbreaks (O'Neil et al. 2001). Key environmental correlates of this species are an association with medium size snags and live trees with heart rot. In addition, fire can be beneficial to this species by stimulating outbreaks of bark beetle, an important food source; black-backed woodpecker populations typically peak in the first 3–5 years after a fire. (Boise NF WCS DEIS at 235.) The WCS DEIS and RFP fails to adequately consider the habitat needs of the Sensitive fisher. It also does not consider quantitative	area were analyzed and disclosed in the Wildlife Specialist Report and Project Wildlife Biological Assessment. Due to interest expressed in public comments, such as this one, the effects to wolverine from the Protect were also displayed in the FEIS for the Project. Effects to fisher, a member of Family 2, were also addressed in the WCS DEIS and the Project analysis and displayed in the Project FEIS. You are correct about the association of the black-backed woodpecker with fire and insect outbreaks. The black-backed woodpecker was not proposed as a Forest MIS in the WCS DEIS because fire processes occur relatively "naturally" on the eastside of the Forest – allowing for extensive habitat for the species. With little active management planned, there was little need to add another MIS forest-wide. Additional MIS can be added to track effects at the project level, but this was determined to be unnecessary for the Project because the analysis discloses effects to other species that use similar habitats, in this case the MIS pileated woodpecker. The analysis also discloses effects to other species associated with fire and insect outbreak processes e.g., the three-toed woodpecker (a Forest Service Region 4 sensitive species). The effects to three-toed woodpeckers was originally confined to the Wildlife Specialist Report, but due to interest expressed in public comments, the analysis has been added to the FEIS.

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	loss of fisher habitat over time in forestwide, and fails to disclose population trends forestwide.	
248	The DEIS states that the Lynx Conservation Assessment and Strategy (LCAS) guides the PNF's lynx management, so we can assume it is identified as part of the PNF's "best scientific information" for insuring lynx viability. The DEIS fails to analyze and disclose that the LCAS identifies thinning of young conifer stands as a major adverse effect on Canada lynx foraging stands. The assumption that the extensive logging is at elevations below where lynx are expected is an overly general statement that doesn't justify the "no effect" conclusion.	As noted in the DEIS, page 3-97, the lynx analysis followed LCAS and Forest Plan direction for lynx management. You are correct in identifying that thinning in young conifer stands may be detrimental to lynx, because these sites often provide habitat for snowshoe hares, the major prey species for lynx. The proposed restoration treatments are not prescribed for young forest stands. Plantations within the Project area were identified by age classes of "0-10 years old", "Thinned within the past 10 years", "Pre-commercial Thin (PCT)", and "Older plantation - PCT/Biomass potential". During the Project analysis, we noted a discrepancy in PVG assignments in an area within the Northwest Council LAU, in the headwaters of the East Fork Weiser River. Several plantations in that area were classed as PVG 7 stands (part of source habitat for lynx) and some plantations were classed as PVG 6 (not part of lynx source habitat). District staff conducted a targeted field survey to confirm PVG assignments to all of the plantations in that area. Some PVG 7 plantations were corrected to PVG 6 and could receive the prescribed PCT or biomass treatment. Other PVG 7 plantations were confirmed as PVG 7. PCT is not allowed in plantations, unless the stand is mature enough to have trees that are self-pruning. At this growth stage, the dense tree canopy of the stand has typically shaded out most shrubs from the understory, thus degrading the site as a feeding site for snowshoe hares. These self-pruning stands would be candidates for PCT, to open the canopy and allow for shrub growth, thereby improving the stand for snowshoe hares, and providing prey for lynx. PCT would not be allowed in PVG 7 stands that are not self-pruning; therefore, approximately 150 acres of plantations were dropped from any thinning or harvest treatment as updated in section 2.3.2.1 of the FEIS, because they currently provide habitat for snowshoe hares. This correction in PVG assignments and the resulting drop of PCT treatment in the PVG 7 plantations also was documented in the Project Biological Assessment for Canada lynx. The Wildlife Cumulative Effects discussion states "no direct or

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		indirect effects are expected to Canada lynx, so cumulative effects would not be expected to occur." The ESA Effects Determination for Canada lynx is "NLAA." The proposed action may affect, but is Not Likely to Adversely Affect, the Canada lynx.
249	"The 2.7 miles of non-motorized trail would originate in the Mill Creek snowmobile parking area, which lies within the Mill Creek RCA. This portion of the trail already exists on the ground in the form of a user-created trail that fords the East Fork of Mill Creek and joins the ridge to the northwest (see Appendix 8, Maps 2 through 5)." (3-121.) Was this trail created by snowmobilers? The DEIS doesn't disclose the cumulative impacts of snowmobile (or really any off-road motorized travel) on wildlife.	The trail was created from combination of cattle trailing and recreational hiking. The snowmobile parking is used as an entry point for snowmobilers who generally use the groomed Mill Creek Road to access the Forest, hence no change to snowmobile use patterns are anticipated at this location. The effects of off-road travel by motorized vehicles in summer and winter was analyzed in the FEIS for the Forest Travel Management Plan. Decisions on summer travel were issued (i.e., USDA 2009a), but the decision on winter travel has been postponed as the FS works with partners to study the effects of winter recreation on wolverine. The Project addressed potential minor changes to snowmobile use due to timber harvest in the lynx portion of the wildlife analysis. Until better information is available, no cumulative changes to effects as disclosed in the Travel Plan FEIS are anticipated as part of the Project.
250	The WCS proposes to: Add a road guideline to MPC 5.1 and 6.1 describing how public motorized use would be managed when building new roads to implement vegetation restoration projects. Where these roads are not needed for long-term management, temporary roads should be used and decommissioned following the restoration activity. (P. 37.) However, in promulgating the 2001 Roadless Rule, the agency admitted that "The use of temporary roads may have the same long lasting and significant ecological effects as permanent roads, such as the introduction of nonnative vegetation and degradation of stream channels" (2001 Roadless Rule FEIS at 2-18). Since practically all FS vegetation management projects nowadays include utilization of "temporary" roads, what is needed is a programmatic limitation on the use of temporary roads, so their effects can be disclosed and appropriately limited.	Thank you for your comments, these are directed at the WCS DEIS and outside the scope of this project.

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251	This WCS and RFP has been prepared in response to litigation, in which the court in ISC v. Madrid stated that the Forest Service must consider the limited amount of old-growth habitat on the Payette National Forest, and institute a program of population trend monitoring of key wildlife species. We note that nothing in the WCS DEIS or RFP demonstrates specific responses to Judge Winmill's order. The DEIS states that "no old-forest habitat conditions have been identified within the Project area." (2-5.) The DEIS does not disclose to what degree this is due to past logging practices, which typically targeted stands containing the oldest and largest trees. Given this condition, we know that the project area does not provide habitat conditions that assure viability of many MIS and TES wildlife species. The PNF did not monitor population trends of old-growth MIS under the original forest plan, and still has insufficient monitoring data to assure that viability is being maintained. The RFP does not disclose the amount, distribution, and quality of habitat needed to assure viability, and because old growth is lacking in the project area this is why forest habitat that soonest will mature into old growth cannot be spared. The DEIS does not cite the results of monitoring or scientific studies that validate its assumptions that logging will "Conditions that would create old forest habitat would be promoted with the restoration treatments." (Id.) Does the PNF maintain an inventory of forest stands that meet "the Forest Plan desired conditions for species composition, spatial patterns, tree size class distribution, canopy closure, and snag numbers"? (2-6.) In fact, it appears that this WCS is attempting to dodge and merely define away the entire controversy. This is illustrated where the WCS and RFP simply drops any recognition of the important role that old growth plays in maintaining wildlife species viability. The WCS DEIS Glossary defines "old growth" as follows: Old growth is a defined set of forested vegetation conditions that reflect late-successional characteristics, including stand structure, stand size, species composition, snags and down logs, and decadence. **Minimum amounts of large trees, large snags, and coarse wood are typically required**. Definitions of old growth generally vary by forest type, depending on the disturbance regimes	On page E-25 in Volume 2 of the WCS DEIS, Table E-2 provides definitions for old-forest habitat for each PVG. The proposed restoration treatments are expected to move forest stands towards these conditions. A detailed explanation of why "old forest" is used and how it relates to "old growth" is included in the WCS DEIS, section 3.1.6, pages 72-75. Consistent with broader scale analyses supporting the ICBEMP, the more inclusive "old forest habitat" is a more appropriate analysis metric than "old growth" when assessing conditions and effects to forested habitats and associated species (Wisdom et al. 2000; Hann et al. 1997). Field inventories of forest stands have been conducted across the Forest using a variety of methods. For example, FIA and intensified forest-wide inventory data can be assessed to estimate the acres that meet the definition of old forest habitat, old growth, large tree stands, etc. However, for the Forest Plan strategy, a separate assessment of old growth from old forest habitat would serve no monitoring purpose nor support future adaptive management of the Forest Plan strategy, because as noted above, "old forest habitat" is a more appropriate analysis metric than "old growth." Old forest habitat is analyzed in the Project DEIS (pp. 3-53, 3-75 and 3-76). Old forest inventory data in the Project area is located in the Project files. The restoration treatments are designed to maintain large tree size class stands and to move stands towards old-forest habitat conditions. Although no old-forest habitat conditions have been identified within PVGs 1-6 in the analysis area, based on the amount and densities of medium and large tree forests in PVGs 2, 5, and 6; action alternatives are expected to accelerate the development of large tree and old forest conditions (pp. 3-16 to 3-27). Your statement that "the project area does not provide habitat conditions that assure viability of many MIS and TES wildlife species" is misapplied. Viability is ensured at the planning area (generally the area of the National Forest) or above. Effects to

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	that may be present. Also, within a given forest type, considerable variability can exist across the type's geographical range for specific ecological attributes that characterize late seral and climax stages of development. This variability among and within multiple (often 10-20) forest types makes old growth characteristics difficult to identify, monitor, and compare to desired vegetative conditions. (Emphasis added.) Note that old growth is defined by **minimum** amounts of habitat characteristics needed for the indicator and Sensitive species we are concerned about in this appeal. Contrastingly, the WCS DEIS Glossary's definition of "old forest" contrasts as follows: Old forest is a component of the Large Tree Size Class, with the following general characteristics: a variability in tree size **that includes old, large trees** with signs of decadence, **increasing numbers of snags and coarse woody debris**, canopy gaps, and understory patchiness. (Emphasis added.) Clearly, snags and coarse woody debris—defining characteristics of old growth and vital needs of the indicator and other species we are concerned about —only need to be vaguely "increasing" to meet "old forest" definition, whereas" to be "old growth" they must meet "minimum amounts" of snags and coarse woody debris.	individuals in the Project area are expected and disclosed in the wildlife analysis (section 3.4 of the FEIS and Wildlife Specialist Report), but not to the degree to cause a trend to federal listing or loss of viability. Habitat modeling and on-the-ground surveys support our assessment that the Project area does provide habitat for species associated with large tree and old forest conditions such as flammulated owls, northern goshawks, and pileated woodpeckers (see FEIS. Section 3.4). Monitoring associated with the Forest Plan and/or the Project is discussed in a number of places including the wildlife analysis in the FEIS (section 3.4), in project design features (Table 2-11), in response to comments #235, #239, and #242, in the monitoring appendix (Appendix 4, FEIS). Your statement that "The Forest Plan does not disclose the amount, distribution, and quality of habitat needed to assure viability," is not accurate. In fact the WCS DEIS provides an extensive analysis of this question based on the concept of the Historical Range of Variability (HRV). The need for the analysis and proposed Forest Plan amendments in the WCS DEIS were based in part on preliminary analyses that indicated the large tree size class was deficient in nearly all forest types (WCS DEIS, pg. 11) and led to the proposed standard: "management actions within large or medium-size class forested stands that have the species composition required to achieve old-forest habitat for the applicable PVG shall contribute to or not preclude restoration of old forest habitat." The FEIS and ROD for the WCS has not been completed, so this standard is not required to be met, but the Forest has decided that meeting the intent of this proposed direction is prudent based on the science (see Project Design Features, Table 2-11, FEIS). Snags and course woody debris are important components of old forest and are defined by a range of sizes and numbers (see WCS DEIS Appendix E). Project design features also ensure retention of snags and coarse woody debris.
252	Presumably the PNF wants to call species that are Sensitive or old-	The WCS DEIS provides a comprehensive review of the source

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	growth dependent simply as "large tree dependent" or “old forest” dependent without adequate consideration of the meaningful differences between those categories and old growth. Since there are significant differences, clearly the PNF cannot simply substitute the two new categories for "old-growth dependent" and assume that the viability of old-growth dependent species is assured. The Forest Service's own science illustrates the complete inadequacy of a viability standard which only requires 10% canopy closure, and a 20 inch diameter average of overstory trees: "**Fishers** prefer habitats with high canopy closure (**greater than 80 percent**) and avoid areas with low canopy closure (less than 50 percent). …" USDA Forest Service (1999a) at III-257. “Jones (1991) did not expect to find substantial fisher hunting use of plantations by fishers until canopy approached 80%...." Flathead National Forest Spotted Beetle Environmental Assessment at 3-62. "**American marten** prefer stands with **greater than 40 percent** canopy closure, and tend to avoid those stands with less than 30 percent closure. In addition to a closed canopy, marten require an abundance of large downed logs and snags." USDA Forest Service (1999a) at III-580, 581. Martens prefer forest stands with greater than 40% tree canopy closure and rarely venture more than 150 feet from forest cover, particularly in winter. USDA Forest Service, 1990. **Pileated Woodpeckers** "select nest trees in clumps of snags in stands with **at least 70 percent** canopy cover." USDA Forest Service (1999a) at III-258. Pileated Woodpeckers use nest trees with a **mean diameter breast height of 32.5 inches**. McClelland (1977). Another study in 1991 found the **average nest tree was almost 29 inches** diameter breast height. McClelland and McClelland, 1999. All of the following variables are necessary to determine suitability of habitat for the pileated woodpecker: Canopy cover in nesting stands; Canopy cover in feeding stands; Number of potential nesting trees >20” dbh per acre; Number of potential nesting trees >30” dbh per acre; Average DBH of potential nest trees larger than 20” dbh; Number of potential feeding sites per acre; Average diameter of potential feeding sites. USDA Forest Service, 1990. From a study of 90 active nest and roosts on the Flathead National Forest: "the **mean dbh of these trees is 30 inches**…A few nests are in trees 20 inches or even smaller, but the minimum	habitat needs of a full array of species represented by a Habitat Family. Focal species were identified to represent a subset of species assigned to a family. They serve as an “umbrella” under which numerous species, ecological functions, effects, and outcomes can be evaluated (Boise National Forest WCS FEIS Appendix 4, p. 36, 2010). All Forest sensitive species were assigned to the category of focal species. All of the species mentioned in comment #252 are either focal species for or members of Habitat Family 2 – a family that uses broad elevation, large tree and old forest habitats. The WCS DEIS and Project FEIS and/or Wildlife Specialist Report identified and analyzed the specific source habitat needs for focal species. The source habitat models for most of these species includes large tree stands with moderate to dense canopies, as supported by the habitat information in your comment. The existing and projected changes in habitat for MIS focal species, and sensitive species were disclosed in the Project FEIS. Treatments to restore more naturally open conditions in the appropriate forest stands will reduce canopy closures. These treatments are expected to reduce habitat for small numbers of individuals in Family 2, but are expected to benefit habitat for Family 1 species, such as the white-headed woodpecker, a MIS, sensitive species and focal species. These changes are disclosed and explained in the wildlife analysis in section 3.4 of the FEIS and in the Wildlife Specialist Report.

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	cannot be considered suitable in the long-term. Our only 2 samples of pileateds nesting in trees <20 inches dbh ended in nest failure… At the current time there are many 20 inch or smaller larch, yet few pileateds selected them. Pileateds select old/old growth because old/old growth provides habitat with a higher probability of successful nesting and long term survival. They are "programmed" to make that choice after centuries of evolving with old growth." (McClelland, 1985.) Pileated woodpeckers need nest trees that are "**21" dbh or greater**." Boise NF's Upper Muir Vegetation Management Project EA at 75. **Flammulated owl** nests occur "in old growth ponderosa pine/Douglas fir exhibiting two canopy levels and **averaging 55 percent** canopy closure" Payette National Forest Grade/Dukes Timber Sale Biological Evaluation at 3. **Goshawks** are often associated with a thick overstory cover and areas with a large number of large trees. For example, Hayward and Escano (1989) recommend an overstory canopy **between 75 and 80 percent**. According to the BE/BA for the Keystone Quartz EIS in the Beaverhead-Deerlodge NF, "Goshawks prefer vegetation structure that permits them to approach prey unseen and to use their flight maneuverability to advantage (Widen, 1989, Beier and Drennan 1997)…" **Black-backed Woodpeckers** need medium to large trees with moderate to high density stands. They rely on burned or insect-infested forests and the habitat degradation from the decline of large stands containing bark beetles and stand-replacing fires, as well as from the decline of snags and old forest, is the largest threat to black-backed woodpeckers. Boise NF's Upper Muir Vegetation Management Project EA at 104. **Boreal Owls** need "older, mature forest habitat" and the alteration of that type of habitat is "likely the largest threat to the species." Id. at 75. The PNF has already designated Sensitive species because populations or habitats are trending downward, or because little information is available on their populations or habitat trends. The primary purpose of the Sensitive species program is to conserve or restore habitat conditions to prevent them from needing to be listed under the Endangered Species Act (ESA). Considering that the	

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	populations/habitats of these species are already in jeopardy, the PNF is certainly failing to ensure the viability of these sensitive species by enacting standards which fail to ensure that their habitat needs (such as 40 – 80 percent canopy closure) will be met.	
253	The DEIS states: We identified 6 wildlife species from these 5 habitat families as focal species to evaluate for this project (Table 3-21). Eighteen other species of concern (i.e., sensitive species) not chosen as focal species were analyzed to the extent necessary to meet disclosure requirements, based on their status. These effects are disclosed in the Wildlife Specialist Report (Almack, forthcoming). (3-46, 47.) If the PNF is claiming that these "other species of concern" would not be affected by the project, it should disclose the analyses in the DEIS, not assume they will be addressed in some "forthcoming" report. The DEIS also does not explain the concept of focal species, and how it relates to insuring viability of all native wildlife species. ? How will the use of focal species relate to the MIS approach of the RFP? For the TES boreal owl, Canada lynx, Northern Idaho ground squirrel, fisher, great gray owl, northern goshawk, mountain quail, wolverine, gray wolf, peregrine falcon, Rocky Mountain bighorn sheep, spotted bat, Townsend's big-eared bat, greater sage grouse, Columbian sharp-tailed grouse, bald eagle, Columbia spotted frog, and yellow-billed cuckoo—which MIS does the DEIS's analysis use to represent each of those species? The DEIS does not define the term, "source habitat" that is used for wildlife species analyses. "(T)he habitat model cannot account for microsite conditions important to the species or the influence of roads on habitat quality." (3-61.) This raises the issue of the reliability of models. There has been no independent scientific peer review of any of the wildlife models utilized by the DEIS, rendering their use of unknown validity for the DEIS's purposes. For example for the Canada lynx the DEIS states, "While source habitat quantity does not appear to be a concern, source habitat quality changes in the source environment may be a limiting factor for this family." (3-64). The lack of any statement of confidence levels of the models in the DEIS means it is very difficult for the public to effectively comment on wildlife	As noted in the DEIS (on page 3-48), ESA-listed species, Intermountain (Region 4) sensitive species, Species of Special Interest, and migratory birds, are analyzed and disclosed in the DEIS to the degree necessary, based on the degree of effects and the concept of both MIS and focal species, which are disclosed in full in the DEIS. The Project DEIS also disclosed effects to listed wildlife species – the Canada lynx and northern Idaho ground squirrel. The concept of focal species is explained in the Wildlife Resources section of Chapter 3 in the DEIS (pages 3-51 through 3-108) and in the FEIS and is based on the science in the WCS DEIS (see response to comment #252 above). The wildlife analysis uses the focal species concept, using Habitat Families and associated focal species to analyze project effects to wildlife and provide a basis for discussion of the wildlife resources in the Project area. The Project analysis has not discarded the MIS concept of the Forest Plan (USDA 2003b) and effects to MIS wildlife species are also disclosed. In response to comments, the FEIS contains the analysis of effects to all sensitive species whose habitat may be affected to some degree by the action alternatives. This includes the three-toed woodpecker, boreal owl, great gray owl, fisher, and northern goshawk. All these sensitive species are members of Habitat Family 2. As stated in the DEIS, effects to these species were determined to be similar to, or less than, the focal and MIS species chosen to represent Family 2 – the pileated woodpecker. The one exception was the flammulated owl, which was disclosed in the DEIS. Effects to wolverine, a candidate species, are also disclosed in the BA and have been added to the Project FEIS, partly in response to comments, but also because the Forest choose to consult with the FWS on this candidate species.

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	analyses. At p. 3-54 the DEIS states: Fire exclusion and timber harvest have removed habitat and changed natural disturbance regimes, contributing to widespread, strong declines in Family 1 source habitat on the Forest and in the Project area. Past timber harvest removed large-diameter ponderosa pine and, coupled with fire suppression, resulted in higher ladder fuel levels in the understory and greater proportions of climax tree species (e.g., grand fir) compared with historical conditions. Open, large-tree, ponderosa pine source habitats are less common than historically occurred in the Project area. Past timber harvest activities also created a road network that persists today and facilitates removal of firewood from remnant standing and log habitat components in Family 1 habitat. Although this statement provides general information on the effects of past management actions in the project area, typical of most resource disclosures of cumulative effects in the DEIS this fails to provide enough specifics or quantitative metrics to lead to an understanding of the significance of those past actions. Nowhere in the WCS DEIS or RFP is there an inventory of existing old-growth habitat across the Payette National Forest. The Forest Service pretends that the existence of old-growth habitat is irrelevant. But old-growth habitat still exists in the PNF, and species are still dependent upon that habitat. In order to ensure the viability of those old-growth dependent species, the PNF must begin by inventorying existing old growth in the Forest.	The analyses mentioned above can be found in the FEIS from pages 3-42 through 3-158. The complete analysis of effects to wildlife is provided in the Wildlife Specialist Report (Almack 2012), including the Biological Evaluation (BE) and the Biological Assessment (BA). The Project will not treat habitat for mountain quail, peregrine falcon, Rocky Mountain bighorn sheep, spotted bat, Townsend's big-eared bat, greater sage grouse, Columbian sharp-tailed grouse, bald eagle, Columbia spotted frog, and yellow-billed cuckoo. Effects to gray wolves are linked to Rocky Mountain elk, but are also driven by hunting and depredation activities, as disclosed in the BE. The definition of focal species and Habitat Family are found in section 4.10 in the Glossary. The definition of source habitat was erroneously omitted from the DEIS Glossary. Source habitat is defined in the WCS DEIS as "those characteristics of macrovegetation (i.e., cover types and structural stages) that contribute to stationary or positive population growth for a species in a specified area and time (Wisdom et al. 2000)". This definition is included in the FEIS Glossary. Thank you for your comments about models. The Forest recognizes the inadequacies of models at times. For example, that is why the qualifying statement on page 3-61 of the DEIS about the flammulated owl habitat model is included, stating that "the estimate may be slightly inaccurate because the habitat model cannot account for microsite conditions important to the species or the influence of roads on habitat quality." The use of the term "model" in the DEIS refers to a set of standardized life history parameters that are used in the WCS DEIS and provide a basis for habitat analysis of a given wildlife species. There is no reference to these models as having some implied, or tested, statistical significance. Appropriate citations of research papers from refereed journals and agency reports provide those statistical analyses and the baseline information for the habitat models discussed in the DEIS. Some of these cited references, and the Forest Plan, provide the research and analyses of data

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		indicating the historical conditions that likely occurred in the area. As noted in the response to comment #251 above, the WCS DEIS (Section 3.1.6, pages 72-75) provides an excellent discussion of old forest and old growth. The Forest Plan (page A-21) provides a similar discussion. Recon surveys of each forested stand in the Project area identified some stands with one, or more, old forest characteristics, but no stand met all of the criteria for an old forest stand. The WCS DEIS (Table 3-42, pages 177, 178) shows approximately 23,330 acres of old forest currently exists on the west side of the Forest (Council and Weiser ranger districts). The same table shows a forest-wide total of approximately 130,770 acres of old forest
254	The WCS DEIS and RFP fails to describe the quantity and quality of habitat necessary to sustain the viability of focal, indicator, sensitive, and ESA-listed species and explain its methodology for measuring this habitat. The Ninth Circuit Court of Appeals has ruled that the FS "must both describe the quantity and quality of habitat that is necessary to sustain the viability of the species in question and explain its methodology for measuring this habitat." (Lands Council v. McNair). Here, the WCS DEIS and RFP fails to describe the quantity and quality of habitat necessary to sustain the viability of the species in question and it does not "explain its methodology for measuring this habitat." Moreover, the WCS and RFP relies heavily on the concept of "desired conditions," yet fail to define "desired conditions" in objective, measurable terms of habitat amounts, distribution, connectivity, and the natural processes that achieve these habitat parameters and population viability for these species. The DEIS at 1-27 states, "Noss (2001) … advocates that resilience and resistance are created by … maintaining keystone species at optimal, not just minimally viable, populations." Yanishevsky (1994) also pointed out the inadequacy of maintaining merely "minimum" amounts of habitat: (P)opulations of MIS should not be managed by using minimum habitat standards. MIS standards should take into account the known requirements of old-growth dependent and associated	The Forest disagrees that the WCS DEIS and Forest Plan fail to describe the quantity and quality of habitat necessary to sustain viability. See also response to comments #241, #251, #252. These documents do not prescribe or advocate minimum habitat standards. The Forest agrees with your quote of a Forest Service document that "viability is not merely a project area consideration, that the scale of analysis must be broader." We also agree with your quote of Ruggiero et al. 1994: "The disparity between the scale of a local management action (e.g., a timber sale) and the scale of the ecological response (e.g., species viability) is a fundamental problem in assessing population viability." It is just this disparity of scale that the WCS DEIS was designed to address. The WCS analysis provides a comprehensive analysis of the sustainability of wildlife species on the Forest based on the concept of HRV and in the context of expected management actions. In the case of the Project analysis, viability of sensitive species was addressed as required by the Biological Evaluation determination process, but the WCS DEIS and Forest Plan provide the broader analysis of viability that put the Project determinations in context. Additional information on this subject is provided in the wildlife

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	species as well as the enormous gaps in current knowledge of the long-term requirements of these species, and about old-growth ecosystems per se. … Another dangerous tendency of the Forest Service is to manage for habitat minimums, rather than a range about the mean. The use of minimum standards in complex biological systems in general is: Likely to create homogenous conditions …rather than a natural mosaic or range of habitats and presumably population conditions. Under the former condition the diversity, resilience and resistance to disturbance of all populations may be compromised …[increasing the potential] for regional extinction. (U.S.D.A. Forest Service 1993a). (M)inimal area required to sustain a group, minimal age of the trees used, and minimal populations sizes (puts species) at unjustifiable risk, allowing no margin of safety in the event of researcher error, climatic variation, or other factors (Jackson 1986). Conner (1979) indicates that cavity nesting birds may be threatened by management strategies based on minimums. The pileated woodpecker is of special concern. Most forest woodpeckers probably evolved in a relatively stable environment, in which natural selection favored individuals that use trees closest to the mean size (id.). Providing minimum or suboptimal conditions is likely to lead to low nesting success, gradually eliminating such species. (id.). Even if the arithmetic mean of a criteria (such as snag DBH) is used as a management standard, rather than the minimum value for that criteria, the consistent use of habitat components of average measure could pose risk to a species; because with a normal distribution, by definition, approximately one half of the individuals select habitat components larger than the mean. The mean diameter of pileated woodpecker nest trees in northwest Montana is 30 inches DBH (McClelland 1979 and 1989). The standard for “large” snag retention on most Forests in Region 1 is 20 inches DBH minimum. Of 106 pileated woodpecker nest trees, McClelland found only 12 nest trees (11 percent) less than or equal to 20 inches DBH (McClelland 1989). Clearly, a “large” snag standard of 20 inches DBH cannot ensure the long-term viability of pileated woodpeckers that need larger trees for nesting. Similar arguments have been presented for other pileated woodpecker minimum management	section of the FEIS.

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	requirements (see e.g., Caton 1992, Gross 1993) and other old-growth MIS, such as the pine marten and northern goshawk (see e.g., Johnson 1992, Noss 1992, Resources Limited/Five Valleys Audubon Society 1992, Soukkala 1992, Natural Resources Defense Council 1993). The WCS DEIS and Revised Forest Plan do not provide estimates of minimum viable population numbers, or even baseline numbers of Sensitive and management indicator species, nor do they clearly describe the numbers and distribution required to assure viability, in violation of NFMA. In their response to comments on the Dry Fork Vegetation and Recreation Restoration Project Environmental Assessment, Lewis & Clark National Forest, 2000, the Forest Service acknowledged that viability is not merely a project area consideration, that the scale of analysis must be broader: Ruggiero et al. 1994 provide guidance for reconciling the disparity between the geographic size of project analyses vs. the needs of species: “The disparity between the scale of a local management action (e.g., a timber sale) and the scale of the ecological response (e.g., species viability) is a fundamental problem in assessing population viability.” Both Ruggiero et al. 1994 and Lindenmayer et al. 1993 provide discussion on why population viability analysis is the best available tool assessing population viability, the latter providing examples of population viability analysis being used for several species of wildlife and one plant species. Lacy and Clark, 1993 provide an example of population viability analysis used to design a computer simulation of risk of extinction of the pine marten. In a scientific document prepared as a part of ICBEMP, Witmer et al. (1998) make recommendations which reinforce our comments about population dynamics, population viability analysis, and monitoring.	
255	Logging, roadbuilding and other disturbance would affect northern goshawk nesting, post-fledging family habitat, alternative nesting, foraging, competitors, prey and potential habitat, including areas far from cutting units. Research in the Kaibab National Forest found that goshawk populations decreased dramatically even after partial	The analysis of effects of the proposed alternatives on the northern goshawk is located in the Project Biological Evaluation and Wildlife Specialist Report. Partly in response to comments, that analysis is now summarized in the FEIS.

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	logging and even when large buffers around nests were provided (Crocker-Bedford, 1990). The FS's lack of analysis on goshawks ignores important scientific information on goshawk habitat requirements. Reynolds, et al. 1992 provide a basis for a northern goshawk conservation strategy that could be implemented if forestwide habitat considerations were to be truly taken into account. They suggest that it is essential to viability of goshawks that 20-50% of old growth within their nesting areas be maintained, yet nothing in the WCS DEIS or RFP seems to recognize that (also see Suring et al. 1993). Graham, et al. 1999, USDA Forest Service 2000b, Iverson et al. 1996, and Suring et al. 1993 are more examples of northern goshawk conservation strategies the FS might adopt for this Forest or Region, if emphasis was more appropriately placed on species conservation and insuring viability. USDA Forest Service 2000b recommends that forest opening greater than 50-60 acres be avoided in the vicinity of goshawks. At least five years of monitoring is necessary to allow for effective estimates of habitat quality (Id.). Research suggests that a localized distribution of 50% old growth should be maintained to allow for viability of goshawks (Suring et al. 1993). The scientific information provided in Center for Biological Diversity, 2004, also includes vital information on goshawks missing from the WCS DEIS and RFP. Goshawks are often associated with a thick overstory cover and areas with a large number of large trees. For example, Hayward and Escano (1989) recommend an overstory canopy between 75 and 80%. According to the BE/BA for the Keystone Quartz EIS in the Beaverhead NF, "Goshawks prefer vegetation structure that permits them to approach prey unseen and to use their flight maneuverability to advantage (Widen, 1989, Beier and Drennan 1997)…" Opening forests by logging will increase suitability of species as the red-tailed hawk, which competes with goshawks, as well as the great horned owl, a goshawk predator. The problems of habitat conversion from that of goshawk to red-tailed hawk has been reported by La Sorte et al., 2004 based on a study of over 120 goshawk territories.	Goshawk management in Region 4 of the Forest follows the guidelines in General Technical Report PNW-GTR-733 (Youtz et al. 2007), which supplements General Technical Report RM-217 (Reynolds et al. 1992). GTR 733 was intended to provide clarification of the implementation strategies for goshawk management designed to provide secure habitat for goshawks, while restoring the forests to conditions mimicking those of pre-European settlement. GTR 733 continues the use of the nest stand - Post-Fledging Family Area (PFA) - Foraging Area -Territory concept of goshawk management. PFAs are established around known nest sites. The PFA contains specific percentages of vegetation classes (Vegetation Structural Stages - VSS) in specific canopy coverages. PFAs must be at least 600 acres in size, including 6 nest stands of 30 acres each. Forest restoration treatments are allowed, even in nest stands (after the family group has left the PFA), in order to reduce the potential for uncharacteristic wildfires and to meet the appropriate mosaic of VSS class and canopy cover requirements. The USFS Region 3 Four Forests Restoration Initiative (4FRI) is a collaborative effort to restore Southwestern pine habitats. Henry Provencio (District Wildlife Biologist personal communication March 01, 2012), Project Leader for the 4FRI project, stated that the design of restoration treatments in goshawk habitat should be developed by the unit conducting the project. This allows for site-specific conditions and prescriptions to be considered, rather than forcing detailed guidelines on management units with often quite different forest conditions than those of the initial study. When asked about the appropriate size of the nest tree buffer, Provencio stated that this should be left to the local Wildlife Biologist to determine, based on local forest structure and management objectives. There are currently 12 known active goshawk nests in the Project area, resulting in seven mapped PFAs (see northern goshawk analysis provided in the FEIS, section 3.4.4.10, added partly in response to your comment). Planned activities within the PFAs, including the nest stands, will follow current Forest Plan direction and management guidelines (GTR 733).

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	Clough (2000) noted that in the absence of long-term monitoring data, a very conservative approach to allowing logging activities near active goshawk nest stands should be taken to ensure that goshawk distribution is not greatly altered. This indicates that the full 180-acre nest area management scheme recommended by Reynolds et al. (1992) should be used around any active goshawk nest on the Forest. Removal of any large trees in the 180-acre nesting area would contradict the Reynolds et al. (1992) guidelines. Greenwald et al., 2005 reviewed the current literature on goshawk habitat relationships applicable to the Northern Rockies. Nine of 12 studies demonstrated selection for stands with higher canopy closure, larger tree size, and greater numbers of large trees than found in random stands. Some notable statements and conclusions include: …Most studies found that goshawks avoided open areas and logged early-seral stands; none of the studies cited in this paper found selection for such features. …While some studies suffered from small sample sizes or relatively short sampling periods, the consistency of results demonstrates goshawk selection for late-successional forest structures (e.g., high canopy closure, large trees for forest type, canopy layering, abundant coarse woody debris) when using areas within their studied home ranges. … This is not to say that goshawks only forage or roost in mature stands, but rather that such stands are disproportionately selected. … (R)eviewed studies found goshawks avoided open areas, particularly logged open areas, and none found selection for openings. … The 5 studies correlating nest occupancy and productivity with habitat features consistently demonstrated a relationship between closed-canopied forests with large trees and goshawk occupancy. Occupancy rates were reduced by removing forest cover in the home range, which thereby resulted in reduced productivity because there were fewer active breeding territories. (Internal citations omitted.) Seeking to promote abundant populations of 14 prey species, Reynolds et al. (1992) recommend maintaining 20% of the landscape in grass–forb or seedling–sapling stage forest, 20% in	Monitoring to insure the correct implementation of the Project in relation to goshawk direction and guidance is included in Appendix 4 Monitoring of the FEIS. See also responses to comments #180, #182, #183, #193, #198, #215, #233, #236, #239, #242, #243, #247, #251-255.

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	young forest, 20% in mid-aged forest, and 40% in mature and old forests. Given the above findings that goshawks generally avoid open areas and early-seral forest, that logging reduces goshawk occupancy and productivity, and a lack of evidence that creating openings or young forest through logging benefits goshawks, these recommendations appear to lack support in research produced since 1992. Across most of the western United States, mature and old-forests have declined to much less than 40% of the landscape. Given these declines and the lack of information on the amounts of mature and old-forest goshawks require, we recommend protecting existing mature and old-forest characteristics and ensuring that such forests are allowed to develop in proportions similar to presettlement conditions. This can be accomplished by restricting cutting to small trees, and prohibiting large reductions in canopy closure. A similar proposal was recently adopted by Region 5 of the United States Forest Service for the Sierra Nevada. In sum, based on apparent inconsistencies between subsequent research and Reynolds et al. (1992), we recommend adaptation of the management guidelines to incorporate results of numerous studies conducted since 1992. (Internal citations omitted.) The issue of fragmentation must be considered with respect to goshawks. Other edge-adapted species may compete with the goshawk and displace the goshawk if inadequate amounts of interior forest habitat are available. Crocker-Bedford (1990) recommends that a foraging area of >5000 acres of dense forest, in which no logging is permitted, be designated for goshawks, with additional areas of 2500-5000 acres of more marginal habitat designated beyond this 5,000 acre foraging area. Habitat elements for fishers' natal and maternal dens are found in large diameter logs or snags, slated to be reduced by the logging. "Though the post-treatment stand condition would not be 'clear cuts', they would be fairly open and Jones (1991) did not expect to find substantial fisher hunting use of plantations by fishers until canopy approached 80% and 10-15 feet respectively (depending on snow depths)" (Flathead NF's Spotted Beetle EA, p. 3-62). The extensive logging, snag removal and other activities associated with the WCS "restoration" projects would negatively affect fisher habitat.	

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	Movement, denning, resting areas, genetic diversity, and other aspects of fisher life cycles and fisher survival could be impacted by such projects; the FS does not fully consider these elements or adequately mitigate their impacts. Regarding the black-backed woodpecker, Cherry (1997) states: The black-backed woodpecker appears to fill a niche that describes everything that foresters and fire fighters have attempted to eradicate. For about the last 50 years, disease and fire have been considered enemies of the 'healthy' forest and have been combated relatively successfully. We have recently (within the last 0 to 15 years) realized that disease and fire have their place on the landscape, but the landscape is badly out of balance with the fire suppression and insect and disease reduction activities (i.e. salvage logging) of the last 50 years. Therefore, the black-backed woodpecker is likely not to be abundant as it once was, and continued fire suppression and insect eradication is likely to cause further decline. The Region 1 black-backed woodpecker assessment (Hillis et al., 2003) notes that the black-backed woodpecker depends upon dead and dying trees: Black-backed woodpeckers occupy forested habitats that contain high densities of recently dead or dying trees that have been colonized by bark beetles and woodborer beetles (Buprestidae, Cerambycidae, and Scolytidae). These beetles and their larvae are most abundant within burned forests. In unburned forests, bark beetle and woodborer infested trees are found primarily in areas that have undergone natural disturbances, such as wind-throw, and within structurally diverse old-growth forests. (Internal citations omitted.) …Black-backed woodpeckers also occur in unburned landscapes Bull et al.1986, Goggans et al.1987, Bate 1995, Hoffman 1997, Weinhagen 1998, Steeger and Dulisse in press, Taylor unpublished data). Taylor's observations of black-backed woodpeckers in unburned forests in northern Idaho suggest that they may occur at substantially lower densities in unburned forests, but no rigorous comparisons between black-backed woodpecker densities in burned and unburned forests have been done. Hutto (1995) hypothesized that black-backed woodpeckers reproduce at source reproductive	

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	levels in burns, but may drop to sink reproductive levels in the intervening periods between large burns. Dolan (1998a,b) states in regards to impacts on the black-backed woodpecker due to fire suppression and post-fire logging states: It seems that we have a huge cumulative effects problem here, and that each salvage sale removes habitat that is already very limited. We are having trouble avoiding a “trend to federal listing” call for the BBWO in salvaging burns, unless comparable acres of fire-killed dead are being created through prescribed burns. The comments by other biologists attached to Dolan, 1998a,b reveal that the FS has yet to design a consistent, workable, scientifically defensible strategy to ensure viable populations of the black-backed woodpeckers. The fire suppression and “salvage” logging policies of the PNF are the biggest threat to black-backed woodpecker population viability on the Forest, unfortunately in failing to create a conservation strategy the cumulative impacts of the PNF’s ongoing fire suppression policy will remain unexamined. Lofroth (1997) found that wolverines use habitats as diverse as tundra and old-growth forest. Wolverines are also known to use mid- to low-elevation Douglas-fir forests in the winter (USDA Forest Service, 1993). The cumulative impacts of logging and road building on a species that depends upon remote, wild areas are ignored in this WCS DEIS and RFP. The flammulated, boreal owl and the great gray owl are species of concern that are sensitive to logging and other management activities. The PNF provides inadequate management strategies to insure their viability. See, for example, Hayward and Verner, 1994. Concerning the Sensitive great gray owl, Duncan and Hayward, 1994 state: No long-term, rigorous, or standardized data on regional or local breeding populations are available. In southeastern Idaho and northwestern Wyoming, 10 nests were in mid- to late-successional stages of Douglas-fir forests on flat land with herbaceous understory, which is the most abundant habitat available (Franklin 1987). In addition, clear-cut and natural meadows were associated with all 10 nests. More than 90% of sightings of this species in Idaho and Wyoming were in the lodgepole pine/Douglas-fir/aspen zone (Franklin 1987).	

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	In northeastern Oregon, all forest types sampled had nests, with 50% found in Douglas-fir/grand fir (*Abies grandis*) forest types, 29% in lodgepole pine/western larch, 15% in ponderosa pine/ Douglas-fir, and 7% in ponderosa pine (Bull and Henjum 1990).27 For the Sensitive fisher, riparian corridors provide import travel routes and prey patches for fisher. Jones (undated) provides an example of a conservation strategy for the fisher. Wright, et al. (1997) point out that habitat restoration for the flammulated owl must be carefully targeted to the correct habitat types. The FS can't simply cut and/or burn forest land and expect flammulated owls to start using it as habitat. Wright, et al. (1997) state: (W)e never detected Flammulated Owls in mesic old-growth ponderosa pine stands with a Vaccinium understory. Thus, within suitable landscapes, it may be most effective to conserve and restore stand structural characteristics within suitable habitat types (e.g., xeric ponderosa pine/ Douglas-fir stands in our study area), rather than within any stand containing ponderosa pine trees.	
256	The DEIS states, "This project would improve long-term habitat quality for the white-headed woodpecker and flammulated owl by thinning dense stands to create more open conditions and promote large tree forest structure development." (1-11.) What does "long term" mean? Under likely management scenarios, when would the habitat return to its currently overly dense conditions? For the three habitat parameters at the top of DEIS page 1-15, how much habitat in the project area and forestwide is "within the HRV" for white-headed woodpeckers? The DEIS uses an indicator, "Quantity (acres) and quality (old forest and snags, patch and pattern) of Family 1 white-headed woodpecker habitat restored to conditions within the HRV" yet fails to establish any need, based on biologically-established forestwide or project area objective quantities and distributions. Please provide a forestwide map of mature and old Ponderosa pine and mixed Ponderosa pine/Douglas-fir to show the extent of white-headed woodpecker habitat.	As noted in the DEIS Glossary on page 4-25, long-term is defined as "For environmental effects, greater than 15 years." The restoration management approach the Forest plans for this area includes future mechanical thinning and continued prescribed fire treatments, in order to continue moving the stands toward HRV and to maintain the desired tree size, canopy closure, species composition, and vegetation spatial patterns (DEIS Vegetation Resources section 3.2, page 3-27, 28; Fire and Fuels section 3.3, starting at page 3-33). The WCS DEIS provides the Forest-wide perspective of wildlife species habitat. The initial habitat discussion for Habitat Family 1 and the white-headed woodpecker is located in that document on pages 194-203. The map showing white-headed woodpecker habitat Forest-wide is on page 196. The need for restoration of white-headed woodpecker habitat is included in that discussion.

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	The DEIS does not disclose any ecological justification for why between 513 and 1,786 acres would be logged in large tree—high and moderate canopy closure stands in moist grand fir habitat types where the logging may adversely affect the ecological function of these stands. In recognition of this as a truly ecological issue, an appropriate range of action alternatives would start at zero.	The need for thinning of tree densities, as part of the restoration effort for this project, even in large-tree stands, is discussed throughout the DEIS, but especially in the Vegetation Resources, Fire and Fuels, and Wildlife Resources sections 3.2 and 3.4. This thinning activity, even in large-tree stands, along with the reintroduction of an active prescribed burning program, is the basis for the restoration project and is an accepted method for moving forests back to stand conditions at HRV. Alternative 1, No Action, provides the range of zero change. The No Action alternative would not restore any forested stands in the Project area; the objective of moving many of those stands to HRV would not be met; the objective of reintroducing fire to the ecosystem would not be met; and the objective of improving wildlife habitats would not be met.
257	The DEIS discloses that there is a grazing allotment in the project area, yet discloses absolutely no cumulative effects of grazing on any resource. As one example, the DEIS states that “The aspen stands in the Project area are in particular need of rejuvenation and regeneration.” Livestock potentially suppress regeneration of aspen clones.	Appendix 3 Cumulative Effects has been updated in the FEIS. Project Design Feature #48 has been included in the FEIS Table 2-11, Project Design Features and Mitigation Measures, to address the effects grazing and wildlife may have on aspen regeneration. Cumulative effects to the resources analyzed are discussed by resource in Chapter 3 of the FEIS.
258	This DEIS is written as if no other species but ponderosa pine and larch reached large, old (legacy?) status in the project area, which skews the analyses of fire, fuels, vegetation, and wildlife.	Legacy trees are described on pages A-15 and E-27 in Volume 2 of the WCS DEIS. Ponderosa pine and western larch are the two species included in these descriptions. Other tree species likely did grow large and old within the Project area.
259	And yet, “Using fire regimes to estimate the percentage of the forested area that was historically in more open, mature condition indicates that more dense mature stands occur in the analysis area than would have occurred in the past.” (3-11.). The DEIS fails to provide reliable, accurate data on forest conditions in the project area to justify the large-scale thinning in stands that contain ponderosa pine. None of the mature stands were categorized, more conservatively, as no-treatment areas: (S)tands that had been identified as ponderosa pine restoration priorities by the Idaho Department of Fish and Game Wildlife	The spatial pattern analysis was based on PVGs and the Forest Strata classifications. PVGs were used to determine historical fire regimes (see crosswalk on page A-11 of the Forest Plan). Strata classifications were used to determine canopy closure and tree size class. Most of the Reserve stands were categorized as no-treatment areas where they occur in large blocks. This is apparent if you compare the Alternative 1 map to the maps of the action alternatives.

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	Conservation and Restoration Project (Mehl and Haufler 2004) were reviewed and verified. This information was then used to place mature stands into one of three categories: Restoration, Reserve, and Open Seral Burn Only. (Emphasis added.) We note that description of the "Reserves Stand Treatments" suggests that "most of them would be reserved from treatment" (DEIS at 2-7). However, given the lack of any minimum acreage or percent of actual "reserves" in those units, that prescription leans ominously towards a large extent of 2-acre openings—especially because the resulting "average canopy closure would be below 25%." (2-8.) Moreover, the description of "Restoration" thinning includes the likelihood of a large extent of 2-acre openings, which is not considered in the analyses for fire, fuels, vegetation, noxious weeds, water quality and aquatic species, and terrestrial wildlife. What is the "best science" basis that justifies that these treatment prescriptions would even spatially resemble natural conditions?	The Reserve stands that are proposed for treatment would include creating openings of up to 2 acres in size. The Restoration stands would include some openings up to 2 acres in size where no vigorous ponderosa pine, western larch, or Douglas-fir is present. The Reserve Stands are stands where most of the trees are either climax species, low vigor, or have severe dwarf mistletoe infections. Creating openings to establish regeneration was considered the most appropriate treatment in these stands. The Restoration Stands are stands where most of the trees are vigorous seral species. Thinning these stands and creating some openings where low vigor or climax species trees occur was considered the appropriate treatment in these stands. The Restoration Stand treatments would resemble areas that had burned with low severity/mortality. The Reserve Stand treatments would resemble areas that had burned with mixed severity/mortality, and the large untreated blocks would resemble areas where fire had not occurred recently.
260	Whereas the PNF might interpret that scientific discussion as promoting large-scale logging as this DEIS proposes, the problem is that the PNF has not identified any area of "late-successional forest patch" that its treatments would isolate and therefore tend to sustain over time and natural processes. The DEIS simply does not adequately describe the spatial patchwork of forest types, stand ages, and patch sizes that characterized the reference landscape of the project area—all necessary preconditions for describing "desired conditions."	The Alternative 1 map displays the existing condition. Comparing this map to the maps of the action alternatives makes it apparent that large blocks of untreated areas have been included in the project design.
261	The DEIS fails to disclose and quantify predicted snag loss due to safety reasons (OSHA regulations) during logging operations as well as the snag loss expected because of skyline corridors and other methods of log removal.	Snag loss due to felling for safety reasons and to clear skyline corridors is difficult to estimate due to the random nature of snag occurrence. However, some rough estimates can be made. Most snag safety concerns occur near log landings. Each proposed harvest unit would have at least one log landing where hazardous snags may be felled. The Sale Administrator would need to approve the felling of these hazardous snags. Snags are generally not felled at all landings. An estimate of this snag loss can be made by assuming one landing for every 20 acres of harvest and the loss of

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		one snag per landing. With 5,000 acres of harvest, that estimate would be a loss of 250 snags. All trees are removed within skyline corridors which are approximately 10 to 15 feet in width. Skyline corridors are spaced an average of 150 feet apart. There would be up to 790 acres of skyline harvest units in this project. Approximately 1/10th of the area in skyline units would be in corridors, or about 80 acres. There are about seven 10 inch DBH and greater snags per acre in the Project area. Based on this estimation, about 560 snags would be lost in skyline corridors. The number of snags removed for safety reasons near landings and in skyline corridors would be minimal compared to the number of snags created through prescribed burning operations. Alternative 4 treats the least amount of acres. In this alternative approximately 7,000 acres of forest stands would be treated with prescribed fire either following harvest or with no harvest. If 1 to 5 trees per acre are killed during the burning operations, there would be 7,000 to 35,000 snags created. The distribution of the prescribed burn units across the Project area and the varied tree sizes within the stands affected would ensure that snags continue to be well distributed across the landscape in appropriate size classes.
262	The WCS and Mill Creek-Council Mountain project ignores the scientific information that treating vegetation in Finney and Cohen's (2003) Home Ignition Zone addresses the vast majority of risk to lives and homes. This is another reason why we fear that "restoration" under the WCS will be too much focused on replacing the **function** (the natural process) that wildland fire provides with logging and other mechanical vegetation manipulations that are purported to emulate the structural results of that natural process. This invokes the catch-22 scenario of a never-ending cycle of "fuel reduction" followed by fire suppression, necessitating later fuel reduction and more fire suppression… . The WCS DEIS and RFP fails to adequately disclose the economic and ecological costs of its	Thank you for your comment. The intent for this project is to return fire into the ecosystem and maintain it in a manner similar to the fire return interval for the potential vegetation type. Decisions are typically not valid for more than about ten years, so subsequent analysis would be undertaken for maintenance prescribed burning beyond the life of this project. Effects of fuels reduction in the WUI and restoration treatment effects to vegetation using prescribed burning are disclosed in section 3.2 and 3.3 in the FEIS. The suppression cost of recent fires is displayed in Table 3-15, Significant Fires in the Project Area from 1957 to 2010 and the cost of prescribed burning is analyzed by

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	proposed never-ending cycle of manipulate and control. The DEIS at 2-6 states that "Future underburns would be implemented every 10 to 20 years to maintain these stands in a desired condition." Where is the NEPA analysis of a fire plan that describes such a long-term management regime? Our groups would fully support proper fuel treatments located immediately adjacent to structures along private land/national forest boundaries. Such treatments are supported by the scientific community as the most efficient and effective means to protect the values located on those private lands. However the DEIS's analysis does not support the supposition that the project activities would adequately and significantly reduce the risk of fire within the fire/fuels cumulative effects analysis area, as explained next. The DEIS's brief analysis discusses fuel conditions only in the areas proposed for treatment, yet wildland fire operates beyond artificial ownership or other boundaries. In regards to the proper cumulative effects analysis area for fire risk, Finney and Cohen (2003) discuss the concept of a "fireshed involving a wide area around the community (for many miles that include areas that fires can come from)." In other words, for any given entity that would apparently have its risk of fire reduced by the proposed project (or affected cumulatively from past, ongoing, or foreseeable actions on land of all ownerships within this "fireshed")—just how effective would fuel reduction be? The DEIS fails to include a thorough discussion and detailed disclosure of the current fuel situation within the fireshed within and outside the proposed treatment units, making it impossible to make scientifically supportable and reasonable conclusions about the manner and degree to which most fire behavior would be changed by the project. The DEIS doesn't even include analyses on how structures on private lands would be differentially at risk due to fire behavior under the alternatives' scenarios. A major premise of the project is that the ecological impacts of fire suppression have been significant. The DEIS does not adequately consider the spatial and temporal ecological cumulative impacts of the PNF's fire suppression management regime for the area. Nor does the DEIS explore the economic implications of the FS's fire management.	alternative in section 3.9.4.2.

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	The proposed actions are a part of a wider, continuing fire suppression strategy, without consideration of sensible wildland fire use—elevating the odds for eventual extreme fire events that would be most destructive to the ecosystem and to human values. How much fuel treatment is enough? There is no standard, scientific or otherwise, to which the public can compare this proposed project (or the present conditions), in order to get a reasonable answer.	
263	Cohen and Butler (2005) specify the need to focus primarily on the Home Ignition Zone (HIZ). They state, "(W)e cannot mitigate a highly vulnerable HIZ with fuel reduction activities beyond the HIZ; a highly vulnerable HIZ remains highly vulnerable even when surrounded by a fuel break. …The high intensity wildfire has no direct flame effect on the building ignition potential outside the HIZ." Rhodes (2007) also states: Fuel treatments have been documented to be ineffective at reducing fire severity under some weather conditions. In some prevalent forest types, fuel treatments are highly unlikely to reduce fire severity or size. Some MFT practices can exacerbate fire severity… . Increases in fire severity add to the collateral damage to watersheds and aquatic resources caused by the treatments. …MFT cannot be assumed to eliminate higher-severity fire, nor can it be assumed that untreated areas will burn at high severity, if left untreated. In contrast, there is complete certainty that a single iteration of MFT cannot persistently reduce fuels and future fire severity. (Internal citations omitted.) Cohen and Butler (2005) explain the "life safety" concept, defining it as "…about preventing fatalities during an extreme wildfire that includes all reasonable options." The researchers focus on the need to treat fuels to establish safe areas in the event of extreme wildfire events, and treat fuels to reduce potential extreme case fire intensity along escape routes to these safe areas or well beyond the fire's danger zone. **Outside these safe areas, the escape routes, and the HIZ, these researchers indicate no need to focus on fuel reduction for life safety reasons**.	Thank you for your comment. The Forest believes that implementing the proposed restoration treatments would reduce the severity of unplanned ignitions and the risk of uncharacteristic wildfire. The WUI treatments were designed to reduce the risk of wildfire from an unplanned ignition that originates from private lands. The prescriptions in the WUI, both mechanical and using prescribed fire, do not differ then those outside the WUI except for the shaded fuelbreak described in section 2.3.2 in the FEIS. Certainly, actions taken by private landowners in the Home Ignition Zone would enhance protection to private structures.
264	The metric used by the DEIS, Fire Return Interval Departure (FRID) only uses averages, omitting the fact that a wide range of intervals is normal. Whereas a FRID that is something other than zero might	Thank you for your comment. The use of FRID reflects past suppression that has taken place over many decades and how that has influenced fire behavior by PVG in conjunction with fire regime.

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	well be in the normal range, the DEIS's only "desired" is zero, which is misleading. How was it determined that "The 2003 and 2007 fires burned with uncharacteristic severity and intensity" (3-33)? The DEIS does not disclose the metrics used to determine "Uncharacteristic wildland fire."	There is a range of intervals, but it is used as an indicator to compare the effects of no action to the action alternatives. The 2003/2007 fires were briefly described in how they burned within PVGs and the fire regimes that the PVGs are associated display how they may have burned with uncharacteristic severity. Uncharacteristic wildland fire is defined in section 3.3.5.3 in the FEIS and the metrics used for its determination relate to are the Fire and Fuels measurements listed in section 3.3.1.
265	The rationale for not considering a diameter limit on logging is nonsensical. You say you want more large diameter trees because the science shows they're relatively scarce on the landscape, but apparently you will accept no limitations on your discretion to cut them down. The Pacific Northwest Region of the Forest Service east of the Cascades has implemented a diameter limit for over 15 years (USDA Forest Service, 1995) that utilizes the HRV concept, and the Forest Service is NOT saying that approach "precludes restoration." Rather, vegetative restoration is highly integrated in that approach. The Boise National Forest nicely demonstrated it could set reasonable and flexible diameter limits with the recently approved White Flat Project on the Mountain Home Ranger District.	It was not necessary to set a diameter limit as the purpose of the Project is to maintain and promote large tree forest structure. Although no definitive diameter cap has been set, in general, large trees (i.e. – trees greater than 20" in diameter) especially early seral species will be retained unless there is a silvicultural need to remove a larger tree in a stand. Allowing for removal of all diameter classes allows silvicultural prescriptions to be developed on a site specific basis in order to best meet the purpose and need and project objectives.
266	Areas of the PNF that qualify under R-4's Hamilton definitions of "old growth" are much less in extent than the "old forest" or "large tree size class." They tend to be older, more diverse, and higher quality habitat for the species that depend upon old growth. All such habitat under the amended RFP would be open for logging, with no diameter or even age limits on the trees to be logged. We try to construct a logical scenario wherein stands of 500-year old trees would be strictly prohibited from logging under this WCS, and no ancient trees removed. We could not. The term, "Legacy Tree" is only vaguely defined in the DEIS.	This comment is primarily related to the WCS DEIS and is outside the scope of this document. Legacy trees are described in the WCS DEIS on pages A-15 and E-27 of Volume 2.
267	Similarly, "the desired conditions for wildlife habitat in the Forest Plan are to remain within, or move towards, conditions that fall within the HRV." (E-15, emphasis added.) Similar statements are found elsewhere in the WCS DEIS. What constitutes meaningful movement "toward" is for any manager to determine without a	The proposed vegetation treatments would move forest stands towards the desired conditions described in Appendix A of the Forest Plan. The magnitude of the treatments is described in section 2.3, Alternatives Considered in Detail, and the effects are described in Chapter 3 of the FEIS.

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	mechanism for public oversight. The Mill Creek-Council Mountain Landscape Restoration Project DEIS illustrates the fact that the RFP and WCS would accept tiny "incremental" improvements as being good management, and that there exists absolutely no plan for genuinely restoring the PNF in any reasonable time period.	
268	The WCS DEIS relies upon Fire Regime Condition Class to determine departure from reference conditions. As does the Mill Creek-Council Mountain Landscape Project DEIS: "Using fire regimes to estimate the percentage of the forested area that was historically in more open, mature condition indicates that more dense mature stands occur in the analysis area than would have occurred in the past." (3-11.). Rhodes, 2007 points out: One of the prime points of USGAO (2003) is that the current estimates of the area with adversely high fuel loads have questionable accuracy. The Fire Regime Condition Class method (Hann and Bunnell, 2001) is widely used to assess the potential for uncharacteristic fire posed by elevated fuel loads, if fire occurs. This method likely has very limited accuracy and tends to overestimate the risk of higher-severity fire posed by fuel loads, as documented by studies of recent fires (Odion and Hanson, 2006). Rhodes (2007) also states: Several of the biases …are embodied in the Fire Regime Condition Class (FRCC) approach (Hann and Bunnell, 2001), which is widely used to provide an index of the potential for uncharacteristically severe fire and fire regime alteration. The FRCC relies on of estimates of mean fire intervals, but does not require that they be estimated on the basis of site-specific historical data. It emphasizes fire scar data, but does not require its collection and analysis on a site-specific basis. The FRCC's analysis of departure from natural fire regimes also relies on estimates of how many estimated mean fire intervals may have been skipped. The method does not require identification and consideration of fire-free intervals in site-specific historic record. Notably, a recent study that examined the correlation of FRCC estimates of likely fire behavior with actual fire behavior in several large fires recently burning the Sierra Nevada in California concluded: "[Fire Regime] Condition Class was not able to predict patterns of high-severity fire. . . . Condition Class identified nearly all	Thank you for your comment. The text from page 3-11 refers to spatial patterns, not FRCC. FRCC is general tool used to describe fuels and applied broadly in this and many projects. The Forest uses tools such as FRCC to describe to the environmental conditions that currently exist. Large uncharacteristic wildfire events that have occurred within the last three decades in central Idaho have confirmed the departure from desired conditions on the Forest and its vulnerability to uncharacteristic wildfire events.

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	forests as being at high risk of burning with a dramatic increase in fire severity compared to past fires. Instead, we found that the forests under investigation were at low risk for burning at high-severity, especially when both spatial and temporal patterns of fire are considered." (Odion and Hanson, 2006.) These results corroborate that FRCC is biased toward overestimating the alteration of fire regimes and the likelihood of areas burning at uncharacteristically high severity if affected by fire. Therefore, in aggregate there is medium degree of certainty that the FRCC is biased toward overestimating departures from natural fire regimes and the propensity of forests to burn at higher severity when affected by fire.	
269	We are concerned that sufficient available data do not exist for valid HRV determination. The WCS DEIS states on p. 81: Historical Range of Variability Reference conditions for forested vegetation were established using the historical range of variability (HRV) based on the time period prior to Euro-American settlement (Morgan et al. 1994). Reference conditions provide an ecological basis from which to compare current conditions and management options. The HRV has become a common reference condition for assessing landscapes as it provides a context for understanding the conditions within which plants and animals evolved (Keane et al. 2009). Estimates of historical distribution of tree size classes are based on modeling conducted by Morgan and Parsons (2001) for PVGs in the Southern Idaho Batholith (Table 3-6). Morgan and Parsons (2001) did not determine canopy cover class (or other density measures) as part of the HRV modeling. Historical canopy cover class was approximated from other sources (Steele et al. 1981; Sloan 1998) (Table 3-7). The HRV estimates for canopy cover class presented in Table 3-7 vary from the HRV estimates in the 2003 FEIS (USDA Forest Service 2003b, p. 3-431, Table V-9) due to new information. HRV estimates for species composition were also developed by Morgan and Parsons (2001) and are displayed in Table 3-8. The WCS DEIS and Mill Creek-Council Mountain DEIS does not disclose the amount of error in any of its modeling methodologies, utilized to determine HRV, or fire risk, etc. This is another factor	The analysis in DEIS is based on Appendix A of the Forest Plan. The scientific basis for Appendix A of the Forest Plan is described in the FEIS for the Forest Plan. See also response to comments #242 and #243. For discussion of the analysis, monitoring, and concept concerning HRV, see also responses to comments #160, #180, #189, 193, #215, #235 - 238, #242, #243, #245, #246 and #256.

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	leading to significant doubt and controversy as to the appropriateness of the WCS and RFP's proposed wildlife viability proxy. In his ruling that determined the PNF was managing inconsistent with NFMA's viability provision, Judge Winmill noted that the PNF's proxy-on-45 proxy viability assurance already relied upon indirect estimates of habitat, and even "less direct" methods used by the FS added an unacceptable layer of uncertainty. NEPA documents such as this EIS must be judged as to the reliability of the data and modeling methodology used to support analyses. Huck (2000) states: The basic idea of reliability is summed up by the word consistency. Researchers can and do evaluate the reliability of their instruments from different perspectives, but the basic question that cuts across these various perspectives (and techniques) is always the same: "To what extent can we say the data are consistent?" **…(T)he notion of consistency is at the heart of the matter in each case**.	
270	Many sources cited in the WCS DEIS and Mill Creek-Council Mountain DEIS, including sources of habitat modeling, are not from the independent research arm of the agency. A scientist from the agency's research arm, Ruggiero, 2007 states: Independence and objectivity are key ingredients of scientific credibility, especially in research organizations that are part of a natural resource management agency like the Forest Service. Credibility, in turn, is essential to the utility of scientific information in socio-political processes.	The DEIS relies on best available science with the references listed in Chapter 4.
271	In sum, agency expert opinion in this WCS DEIS and Mill Creek-Council Mountain DEIS is not the same as "the **best** scientific information" available. Agency specialists have an acute 48 responsibility to thoroughly investigate the latest and best available science that pertains to their field of expertise, so as to best inform decisionmaking. We maintain (and the courts have agreed) that this evaluation of scientific information must include that science specifically referred to in input provided by the public or other agencies.	The DEIS relies on best available science with the references listed in Chapter 4.
272	The economic analysis should disclose the costs of NEPA analysis and project administration. Table 3-49 is misleading if it ignores such	The cost of the NEPA analysis was purposely excluded from Table 3-49 which shows implementation costs. The decision to do the

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	costs. Table 3-50 lacks clarity in that logging-related road costs are lumped together with road costs that would improve watershed and terrestrial habitat conditions regardless of logging. And it is also not clear if or how those tables reflect the fact that "Funding would be needed for implementing portions of the action alternatives not covered by the value of the commercial timber harvested." (3-188.)	NEPA analysis has already occurred and should not influence the selection of an alternative. Funding is expected to come from appropriated funds, including the recently secured Collaborative Forest Landscape Restoration Fund, receipts from stewardship contracts and partnerships. A large portion of the commercial logging component of the Project is designed to improve terrestrial habitat for species that favor open stands of large diameter trees, an important historical stand condition that has decreased.
	The Wilderness Society, John McCarthy	
273	As a participant in the PFC, I anticipated the DEIS would consider the coalition recommendations of March 2010 and then conduct an environmental analysis through the DEIS process to determine how to best meet the requirements of laws and regulations, while addressing the community interests represented by the PFC and other public participants. I find the DEIS followed that route in the preferred Alternative 5, to meet the legal and regulatory requirements and to meet the interests expressed by the PFC recommendations. Other members of the PFC have raised concerns about the additional miles of road recommended for decommissioning in Alt. 5, compared to the proposed action in Alt. 2. I appreciate the additional work and analysis done through the DEIS process to best implement the Payette Forest Plan. I see the additional road decommissioning proposed in Alt. 5 as a necessary and welcomed improvement to Alt. 2, to both increase wildlife security and to implement the Aquatic Conservation Strategy in the East Fork Weiser River watershed. Alt. 5 also meets the intention of conservation groups, such as TWS, participating in the PFC – to view PFC recommendations as framing a starting point for the DEIS process and it then becomes defined in the draft EIS. TWS supports Alt. 5, as providing more benefit for aquatic and terrestrial species.	Thank you for your comments.
274	The TWS letter of July 10, 2010 made this specific request: TWS also supports the effort the Forest Service is taking to improve watershed conditions and fisheries habitat – including the upgrade of culverts that are undersized and function as barriers for aquatic	Thank you for your comments.

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	species passage, road improvement, and the decommission of old roadbeds not needed for future management or public access to reduce levels of soils impacts and erosion problems. However, the Forest Service has yet to implement an analysis to identify which roads and culverts are a priority for improvement and decommissioning, and since the PFC did not address road decommissioning in their recommendations to the same extent as the vegetation restoration, the Forest Service must take the initiative. Since this area has an incredibly high road density, we ask that the Forest Service significantly reduce the road density within the project area. Again, I see Alt. 5 meeting the Payette Forest Plan requirements and it also better meets the interests for conservation in the project.	
275	In recent meetings the PFC has not reached consensus on the DEIS, for either Alt. 2 or Alt. 5, and it also did not evaluate Alt. 4. Some of the additional ideas from the TWS July 13, 2010, scoping letter and from the July 7, 2010 field trip with TWS and Council Ranger District staff were incorporated into Alt. 4. I now request the Alt. 4 treatments for vegetation be combined with the transportation program in Alt. 5, to decommission roads to improve watershed conditions. The two alternatives could be combined into a new alternative or it could supplement Alt. 4 to create a new Alt. 4A, or some other technique. I further suggest that the new, combined Alt. 4/5, alternative should be considered as the preferred alternative and it would likely be the preferred alternative for TWS and for overall project values for wildlife, watershed, economics and fuels.	Comment acknowledged. The Responsible Official will make a decision on alternative selection based on the analysis in the FEIS and the Project record which incorporates public comment.
276	If the newly formed PFC subcommittee on roads develops a proposal to modify the transportation plan to gain greater economic efficiency and social acceptance, the PFC may reconsider an opportunity to reach a consensus position on the DEIS. If the PFC then sends supplemental recommendations for the DEIS, acting through consensus, I anticipate TWS will join in the consensus approach. I also encourage the DEIS planners from the Forest Service to further refine and define the road decommissioning planned in the FEIS. Greater clarity on roads planned for obliteration and roads planned for closure with natural re-vegetation or scarification or other decommissioning techniques would be	The Forest Service received input from the PFC roads subcommittee in January 26, 2012. This input was considered as public comment received after the DEIS comment period. In response to the request to further refine and define the proposed road decommissioning, the FEIS was clarified in section 2.3.2 and in Table 2-11 to better describe road treatments as a means of achieving soil and water restoration.

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	welcomed and likely supported by TWS. The interest sought by TWS is to decommission unneeded and unauthorized roads to improve watershed conditions and to provide additional wildlife security, using appropriate, long-term decommissioning strategies.	
277	One request from TWS scoping letter of July 13, 2010 that I could not find addressed in the DEIS is the issue of replanting harvested stands. The vast DEIS may contain information on where planting of seedlings may or may not be proposed but I couldn't find it. Please specify if and how the issues on tree seedling planting may be addressed.	See discussion under Reserve Stand Treatments Harvest and Burn on pages 2-7 and 2-8 of the DEIS.
278	The proposed monitoring plan summary in Appendix 4, Table 1, is a necessary and welcomed commitment to understand the effectiveness for this project and how it can be applied to future projects. The monitoring plan summary sheets in Appendix 4 provide additional clarity on intended actions. I hope the FEIS will complete the monitoring plan summary sheets, especially for wildlife and fisheries.	Thank you for your comments, additional monitoring plans were included in the FEIS, Appendix 4. The monitoring requirements for wildlife include surveys to determine the effectiveness of the restoration treatments in moving toward HRV for selected species, and clearance surveys for Canada lynx, northern Idaho ground squirrel, and northern goshawks. Additional Fisheries monitoring plans were also included. Specific monitoring summary sheets are included in Appendix 4, Monitoring in the FEIS.
279	In discussions with the PFC members and the Forest Service staff a commitment has been made by the Payette Forest to complete all restoration work for the Mill Creek-Council Mountain project, including the watershed work, in timely manner. I hope to see reference of this commitment made in the Record of Decision, so it part of the decision document.	Comment acknowledged.
	Artley, Dick	
280	I am concerned that commercial timber removal, road construction and herbicide application will harm to the countless natural resources within the cutting units and aquatic resources many miles downstream from the cutting units. Justifying such harm because it's "short-term" is unacceptable. I will show that based on best science, commercial logging is not the action that should be taken to restore the natural resources in the Mill Creek–Council Mountain Landscape Restoration Project area.	The Forest Plan includes standards for each resource. This project complies with all applicable Forest Plan standards.
281	The attachments to these comments will include the views of over	The comment letter provided contains numerous excerpts from a

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	500 independent, unbiased Ph.D. biological scientists who describe the resource damage inflicted by commercial timber sale activities taken in any location, on any topography, at any elevation on any slope. Indeed, there is no location where a commercial timber sale could be implemented that's exempt from the resource damage described by these scientists. After reading the quotes in the attachments the Responsible Official should understand that the scientists intend for their professional views to apply to all commercial timber sales. One cannot find meaningful scientific literature that is site specific. It doesn't exist. This applies to the science literature contained in the References section of this NEPA document also.	variety of different authors in different locations and with different objectives. While we do not dispute disclosures in the cited documents, neither do we categorically agree with the findings or recommendations in the literature referenced. In the case of Forest Service prepared documents, it is assumed that the authors used the most recent and applicable literature given the location of their particular project area, the stand types and conditions at the time, and the direction and/or definitions in their Forest Plan(s). As highlighted by some of the excerpts you've provided, an abundance of literature and opinion are available on a variety of subjects, each with its own recommendations/findings depending upon the specific site characteristics, research methodology and/or objectives, and/or disturbance event. While general disagreement in the literature exists on many subjects, one common conclusion that can be drawn in almost all cases is that every site and every situation is different. This, in part, is why site-specific analyses are completed. As part of this site-specific analysis the resource experts assigned to the project have the responsibility to determine what the most appropriate scientific literature/information is that reflects the specific project area and situation. The EIS completed for this assessment lists cited references where appropriate and provides a list of references. Copies of literature referenced in the EIS are contained in the project's planning record and available upon request. The analysis presented in this document reflects management direction, findings, and conclusions in the Forest Plan and is based on the best available science.
282	**The DEIS Table for the Mill Creek–Council Mountain Landscape Restoration Project at Page 2-23 Indicates that 5,551 Acres of National Forest Land will be Commercially Logged** The majority of the American public does not want any timber harvest to occur in their national forests. Less than 5% of the wood fiber used in America comes from national forests. There is not a softwood shortage in America. Currently there is a surplus of raw material which drives the lumber market down. The decades-old claim by the Forest Service that a timber famine is eminent has not materialized.	The Project alternatives were developed with consideration for Forest Plan direction (DEIS pgs. 1-9 through 1– 13), input from the public expressing interest in the Project (DEIS p.1-16 – 1-17), collaboration with the PFC and internal analysis by the IDT. The PFC (DEIS p. 1-15 – 1-16) members "represent stakeholders from a broad range of outside interests, including the environmental community, timber industry, recreational groups, and State and County government."

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	The MULTIPLE-USE SUSTAINED-YIELD ACT OF 1960 (Public Law 86–517; Approved June 12, 1960) clearly directs the Forest Service to consider the health of all resources when designing projects: “SEC. 4. 16 U.S.C. 531À As used in this Act, the following terms shall have the following meanings: (a) ‘‘Multiple use’’ means: The management of all the various renewable surface resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.”	
283	**Comment:** The log extraction activities that will occur on the Mill Creek-Council Mountain Landscape Restoration Project will remove dead and dying material from the site and inhibit the recruitment of downed woody material as time progresses.	This project is designed to meet all CWD requirements of the Forest Plan. See Table 2-11, Project Design Features and Mitigation Measures in the FEIS and section 3.7, Soils Resources in the FEIS.
284	**Comment:** The log extraction activities that will occur on the Mill Creek-Council Mountain Landscape Restoration Project will increase the edge effect and increase sunlight into stands, resulting from reduced canopy cover associated with timber harvest. This will directly promote the population abundance, productivity and persistence of insects which cause mortality to trees of (Roland, 1993; Rothman and Roland, 1998; Kouki, McCullough and Marshall, 1997; Bellinger, Ravlin and McManus, 1989). This ecological damage cannot be mitigated nor can the damage be ignored by claiming it will not occur.	In the coniferous forests of the intermountain west, silvicultural treatments that reduce stand densities and make more resources available to trees, favor seral tree species, and open canopies enough to increase air circulation make forested stands more resistant to insect damage.
285	**Comment:** The log landings, temporary roads, skid trails and skyline chutes created for the Mill Creek-Council Mountain Landscape Restoration Project logging activities will be a source of	Table 2-11, Project Design Features and Mitigation Measures in the FEIS addresses potential for increased sediment from project activities.

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	sediment during precipitation events. The only way to prevent erosion from bare soil created by logging activities is to place sediment traps between all bare soil created and live water.	
286	**Comment:** The log extraction activities that will occur on the Mill Creek-Council Mountain Landscape Restoration Project will reduce the organic parent material (duff and woody residues) available for soil-formation processes. This ecological damage cannot be mitigated nor can the damage be ignored by claiming it will not occur.	The Forest Plan includes standards for each resource. This project complies with all applicable Forest Plan standards and guidelines for soils resources. See Table 2-11, Project Design Features and Mitigation Measures, and the section 3.7, Soils Resources in the FEIS.
287	**Comment:** The log extraction activities that will occur on the Mill Creek-Council Mountain Landscape Restoration Project will damage recreational opportunities and harms visual quality in the vicinity. This ecological damage cannot be mitigated nor can the damage be ignored by claiming it will not occur.	It is recognized that there is some disruption to recreational activities during logging operations, but mitigation measures are in place to curtail impacts by restricting log hauling during busy holiday weekends during the summer, and restricting winter hauling over groomed over-snow routes to certain routes and timing restrictions. See response to comment #80 for further discussion and in Table 2-11 in the FEIS, Project Design Features #56 and #57 for the log hauling project and snowmobile grooming coordination PDF. Visual quality objectives meet current Forest Plan VQOs identified in the Forest Plan. During actual operations, and two to three years preceding operations ending, there are recognized impacts to visuals until vegetation is able to be re-established.
288	**Comment:** The log extraction activities that will occur on the Mill Creek-Council Mountain Landscape Restoration Project will adversely affect hydrologic processes by reducing canopy interception and evapotranspiration. This ecological damage cannot be mitigated nor can the damage be ignored by claiming it will not occur.	The Forest Plan includes standards for each resource. This project complies with all applicable Forest Plan standards. Please see the Water Resources Specialist report in the Project record for a discussion on the effects analysis for water yield.
289	**Comment:** The log extraction activities that will occur on the Mill Creek-Council Mountain Landscape Restoration Project will decrease hydraulic conductivity and increases bulk density in forest soils after harvest. This ecological damage cannot be mitigated nor can the damage be ignored by claiming it will not occur.	The Forest Plan includes standards for each resource. This project complies with all applicable Forest Plan standards for the soil and water resource. Please see sections 3.5 and 3.7, Watershed Resources and Soils Resources, in the FEIS and the Watershed and Soils Specialist Reports for more detailed information.
290	**Comment:** The log extraction activities that will occur on the Mill Creek-Council Mountain Landscape Restoration Project will collapse some of the subsurface pipes, increasing local pore water pressure	The FEIS section 1.10.3, Other Concerns Evaluated, Table 2-11 Project Design Features and Mitigation Measures and section 3.7, Soils Resources, describe how landslide prone areas will be

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	which increases the chance of landslides. (Sidle, 1986) This ecological damage cannot be mitigated nor can the damage be ignored by claiming it will not occur.	addressed in the Project.
291	**Comment:** The log extraction activities that will occur on the Mill Creek-Council Mountain Landscape Restoration Project will remove material that harbors a myriad of organisms, from bacteria and actinomycetes to higher fungi. These organisms play an important role in the forest. This ecological damage cannot be mitigated nor can the damage be ignored by claiming it will not occur.	The Forest Plan includes standards for each resource. This project complies with all applicable Forest Plan standards for the soil and water resource, including provisions for long-term soil productivity. Please see sections 3.5 and 3.7, Watershed Resources and Soils Resources, in the FEIS and the Watershed and Soils Specialist Reports for more detailed information.
292	**Comment:** The log extraction activities that will occur on the Mill Creek-Council Mountain Landscape Restoration Project will remove dead and dying trees. This will eliminate the habitat required by bird species that feed on insects that attack living trees resulting in more frequent and larger insect outbreaks (Torgersen et al. 1990)	Dead trees (snags) and trees with damaged boles would be retained during harvest operations to provide wildlife habitat. The prescribed burning operations in the harvest units and in the Burn Only stands would kill and damage some trees. These damaged trees would eventually die. Snag numbers are expected to increase or be maintained at current levels with all of the action alternatives. See response to comment #261 for further discussion.
293	**Comment:** "However, the forest is worth much more living than dead. To believe that you must only recognize that money is not the only valuable thing on the planet. Forests make immeasurably valuable contributions to our wellbeing, from water filtration to clean air, from biodiversity to aesthetic delight." Source: The Timber Scam by Keith Wright 6/25/2000 http://www.jacksonprogressive.com/issues/misspolitics/timberscam.html	Thank you for your comment.
294	Please review Attachment #1. **Comment:** Given the damage to the natural resources caused by the timber sale clearly described in Attachment #1 this project does not reflect and is not consistent with "harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output."	See response to comment #281.

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295	**The DEIS Indicates there will be 6.4 Miles of System and 1.0 Miles of Temporary Road Construction Associated with this Timber Sale** Logging Roads are a Point Source for Pollution The 9th Circuit Court has ruled that stormwater runoff from logging roads is a point source for pollution discharge for which an NPDES permit is required. Source: An AP story published in the Missoulian newspaper, August 17, 2010. Link to Story: http://missoulian.com/news/state-and-regional/article_8bb35a5e-aa36-11df-bf09-001cc4c002e0.html **Comment:** The DEIS mentions nothing about the need to secure NPDES permits for the roads planned to be constructed for this timber sale. The text of this 9th Circuit Court opinion may be read at: http://crag.org/wp-content/uploads/2010/08/9th-Circuit-Clean-Water-Act-Forest-Roads-Decision1.pdf	See response to comment #295.
296	In spite of the clearly established long-term aquatic resource damage caused by forest road construction on slopes greater than 20%, the Responsible Official proposes to build roads to make log extraction possible for this timber sale. This member of the public has expressed his multiple concerns in the following comments. **Comment:** The map of the Mill Creek-Council Mountain Landscape Restoration Project sale area shows a road density that's so high that it will be impossible for the many natural resources in the vicinity to function properly.	Road related effects are disclosed in the affected resource areas in Chapter 3.
297	**Comment:** At the present time there is enough system road in the national forests of America to stretch to the moon and halfway back. No more should be constructed. The Forest Service has not taken action to reduce the road density. Constructing temporary roads is not the answer.	Thank you for your comment.
298	**Comment:** For decades the forest service has claimed that temporary roads are ecosystem benign because these roads will be obliterated after use. This would be true if the temporary roads were obliterated. Instead, the Responsible Official chooses to temporarily "decommission" the road. Any road left with a running surface is not	All temporary roads used in this project will be obliterated. See Table 2-11, Project Design Features and Mitigation Measures, for a description of road obliteration methods. Monitoring shows that these methods are effective at reestablishing ground cover restoring infiltration capacity, and essentially eliminating erosion and

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	temporary. Unless all new temporary roads are obliterated back to the natural angle of repose and all fills are returned to the cuts the temporary roads are hydrologically equivalent to system roads … except they have no surfacing. A few twigs and other vegetative material scattered on the road surface and drainage dips is not a substitute for surfacing and a ditch insofar as sediment reduction is concerned.	sedimentation (West Zone Monitoring 1999-2008, Nelson et al. 2010). These actions are consistent with Forest Plan standards.
299	**Comment:** The new road construction planned for the Mill Creek-Council Mountain Landscape Restoration Project will have compacted road surfaces which will generate overland flow during precipitation events. Much of this flow often enters the channel system, locally increasing peak flows.	The effects analysis of proposed new road construction for the soil and watershed resources can be found in sections 3.5 and 3.7, Watershed Resources and Soils Resources of the FEIS. There are also corresponding mitigations and project design features that address and offset these impacts; see also See Table 2-11, Project Design Features and Mitigation Measures. This project complies with Forest Plan direction for SWRA resources, which includes consideration of WCIs in Appendix B of the Forest Plan.
300	**Comment:** The new road construction planned for the Mill Creek-Council Mountain Landscape Restoration Project will fragment wildlife habitat. Forest road avoidance leads to underutilization of habitats that are otherwise high quality.	Carefully designed new road construction was proposed only where needed to meet current treatment needs and would also provide future access for stand treatments. This would be offset by road decommissioning to reduce road densities. There are corresponding mitigations and project design features that address and offset or reduce effects to wildlife; see Table 2-9, Comparison of Alternatives by Objective of the FEIS, which shows the miles of road reductions by alternative. Taken in context of the entire project design, the effects of roads to wildlife are decreased in all Action Alternatives although high road densities would remain in each subwatershed within the Project area. See also response to comments #159, #161, #163, #193, #198 and #216.
301	**Comment:** The new road construction planned for the Mill Creek-Council Mountain Landscape Restoration Project will alter animal behavior by causing changes in home ranges, movement, reproductive success, and escape response.	See the response to comment #300.
302	**Comment:** The new road construction planned for the Mill Creek-Council Mountain Landscape Restoration Project will divide large landscapes into smaller patches and convert interior habitat into edge habitat.	See the response to comment #300.

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303	**Comment:** The new road construction planned for the Mill Creek-Council Mountain Landscape Restoration Project will increase the isolation of populations or species which causes adverse wildlife genetic effects (i.e. inbreeding, depressed fertility/fecundity, and increased natal mortality) and decreased genetic diversity from genetic drift and bottlenecks.	See the response to comment #300.
304	**Comment:** The new road construction planned for the Mill Creek-Council Mountain Landscape Restoration Project will increase the likelihood of poaching, overhunting, overfishing, excessive trapping and passive harassment of animals.	Net road miles decrease in all of the Action Alternatives (Table 3-39 Road Activities by Alternative. See the response to comment #300.
305	**Comment:** The new road construction planned for the Mill Creek-Council Mountain Landscape Restoration Project will adversely alter the subsurface hydrology of the area. They road's slope-cuts and ditching is likely to intersect the water table and interrupt natural subsurface water movement.	The effects analysis of proposed new road construction for the soil and water resources can be found in Chapter 3 of the FEIS. There are also corresponding mitigations and project design features that address and offset these impacts; see also Table 2-11, Project Design Features and Mitigation Measures. This project complies with Forest Plan direction for SWRA resources, which includes considering WCIs in Appendix B of the Forest Plan.
306	**Comment:** The new road construction planned for the Mill Creek-Council Mountain Landscape Restoration Project will change the microclimate by altering temperature and moisture regimes. This adversely affects wildlife.	Net road miles decrease in all of the action Alternatives (Table 3-58, Road management by alternative in the FEIS). Road construction within RCAs varies by Alternative from 0.5 to 0.8 miles. Net road decommissioning within RCAs ranges from 11.0 to 20.6 miles by Alternative. This net decrease would offset potential negative effects from road construction within RCAs. See the response to comment #300.
307	**Final Road Construction Comment:** Chief Dombeck recognized the long-term ecological damage caused by forest road construction. To date, Responsible Officials have ignored Dr. Dombeck's prophetic wisdom quoted below. "Roads often cause serious ecological impacts. There are few more irreparable marks we can leave on the land than to build a road." Dr. Mike Dombeck, US Forest Service Chief Remarks to Forest Service employees and retirees at the University of Montana February 1998 Source: https://www.uwsp.edu/cnr/gem/Dombeck/MDSpeeches/CD%20COP	Thank you for your comment. When viewed in its entirety, the speech supports objectives of the Project.

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	Y/Chief%20Mike%20Dombeck%27s%20Remarks%20to%20Forest%20Service%20Employees%20and%20.htm	
308	Attachment #4 contains 54 statements by independent scientists that discuss the natural resources that are harmed (and some destroyed) by road-related work in the forest. This Responsible Official should eliminate the resource harm described in the opposing views. If this is not possible, then the roads should not be constructed. Thank you for responding honestly to these comments and not denying that ecosystem harm will could occur as a result of road construction sanctioned by the Responsible Official that will occur on the Mill Creek-Council Mountain Landscape Restoration Project. These honest responses will assist the public to understand the tradeoffs of timber harvest activities with the maintenance of ecological integrity.	See response to comment #281.
309	**Reasonable Alternatives Suggested by the Public must Always be Analyzed in Detail** The NEPA process requires the Responsible Official to analyze all reasonable alternatives in detail. The process then directs the Responsible Official to select an alternative to be implemented. This is not a difficult concept to understand. The Responsible Official shows his NEPA process misunderstandings on page 2-33 when he rejects reasonable alternatives in a few paragraphs that do not comply with his predetermined selection prior to scoping. To reject a citizen-generated alternative the Responsible Official must write a convincing reason why the alternative is unreasonable. This was not done. **Comment:** Apparently the Responsible Official chose not to analyze the citizen-generated alternatives in detail because he assumed they would not be selected. Developing a reasonable range of alternatives is essential to NEPA compliance.	Forest Service Handbook 1909.15 chapter 10 directs “The range of alternatives considered by the responsible official includes all reasonable alternatives to the proposed action that are analyzed in the document, as well as other alternatives eliminated from detailed study. Alternatives not considered in detail may include, but are not limited to, those that fail to meet the purpose and need, are technologically infeasible or illegal, or would result in unreasonable environmental harm.” “Because alternatives eliminated from detailed study are considered part of the range of alternatives, the project or case file should contain descriptions of the alternatives and the reasons for their elimination from detailed study.” Section 2.5 of the DEIS describes alternatives considered by eliminated from detailed study.

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	This DEIS indicates that alternatives suggested by the public owners of the Payette National Forest were not analyzed in detail. The DEIS at page 2-33 describes the following alternative(s) suggested by the public in their scoping comments that were rejected by the Responsible Official without analysis: "2.5 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED STUDY We considered four other alternatives to the proposed action but eliminated them from detailed analysis. These alternatives were suggested in internal and external scoping. Treat Reserve and Restoration Stands with Prescribed Burning Only This alternative was not considered in detail because treating using harvest where accessible allows for more control of species composition, spacing, and canopy closure. It is anticipated that as stands treated with harvest and maintenance burning move toward the HRV, the amount of harvest needed to maintain desired conditions will decrease. **Comment:** Not analyzing the citizen generated alternative shown above suggested by the owners of the Payette National Forest in detail because it does not " does not comply with NEPA. There is no analysis done to reject the alternative. How does the public know that harvest is more effective than burning. Perhaps the public wants a less effective alternative that has less adverse ecological impacts than logging. United States Forest Service decision-makers are employed to serve the American citizens. For a Responsible Official to reject the ideas of a citizen because "it's unlikely their suggested alternative will be selected" is the ultimate insult to people who pay their salary. Forest service line-officers should respect the public rather than giving the back of their hand. There is no law requiring this, but reasonable caring people don't infuriate their employers who provide the money to pay USFS employee salaries.	
310	**If the Responsible Official is interested in promoting economic stability for the Local Community Economy Proposing a Timber Sale is not the Way** Logging areas that are used by the public for recreation will harm	The socio-economic effects are disclosed in section 3.9 of the DEIS. The Forest will continue to operate the campgrounds throughout the Project area. Trails and dispersed camping areas will continue to be

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	the stability of local communities. The stability of local businesses actually suffers when recreationists choose to go elsewhere for their forest experiences. One purpose of the proposed action shown in the DEIS at page 1-13 states: "Provide a source of forest products for utilization to promote community stability." **Comment:** Even the Forest Service discloses that private profits from national forest recreation create jobs and economic community stability. "Recreation Contribution to Gross Domestic Product Recreation on national forestlands also results in a boost to local economies and the creation of jobs. The 2010 National Visitor Use Monitoring Report found that spending by recreation visitors in areas surrounding national forests amounts to nearly $13 billion each year. As visitor spending ripples through the U.S. economy, it contributes over $14 billion to GDP, and sustains a more than 224,000 full and part time jobs. Recreation is also one of the easiest and most natural ways to connect people to the outdoors. In FY 2012, the Forest Service will directly create jobs in by accelerating work to maintain, create, and repair recreational infrastructure including trails and campgrounds. This work aligns with the goals of the America's Great Outdoors initiative." (Pg. 12) Source: "Fiscal Year 2012 Budget Overview" USDA Forest Service Link to document: http://www.fs.fed.us/aboutus/budget/2012/justification/FY2012-USDA-Forest-Service-overview.pdf	open and available for use. Hunting and firewood collection will continue as will all other recreational pursuits within the Project area. It is recognized that there will be some impacts to the quality of the experience during harvest operations, but past history has shown us that recreational use continues to occur during operations, even with the inconvenience of harvesting along the roads.
311	**Comment:** Seldom does logging affect local employment. "Long-term trends in commodity-based industries are a factor in the changing conditions in rural areas, including increased efficiency in resource use, increased labor efficiency, and reduced labor requirements for resource-processing manufacturing. For example, as wood products manufacturing has grown more capital intensive, capital has been substituted for labor and jobs have been lost (Young and Newton 1980). Idaho sawmills produced the same amount of lumber (two billion board feet) in 1977 and 1999 (Western	The effects to jobs and income are disclosed in section 3.9, Economics/Socio-Economics in the FEIS.

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	Wood Products Association, annual). However there were 25% fewer mill workers in 1999 (13,410) than in 1977 (17,830). West-wide, the number of sawmills has declined since 1970, but the output per mill has increased (Figure 4-1)." (Pgs. 21-22) Source: Harris. Charles Ph.D. May 2003 "Forest Resource-Based Economic Development in Idaho: Analysis of Concepts, Resource Management Policies, and Community Effects" Report No. 22, Policy Analysis Group, U of I College of Natural Resources Link to document: http://www.cnrhome.uidaho.edu/documents/PAG%20Commun%20Report22.pdf?pid=104240&doc=1	
312	**Comment:** Nationally the profits made by private individuals involved in timber harvest are a small fraction of the $13 billion in private profits derived from recreational use of the national forest. All national surveys indicate that the recreating public dislikes logging in their national forests. **Comment:** Logging does not contribute to the economic stability of local communities and industries. It would return those communities to the boom and bust cycle of the timber industry. And it focuses on only one local industry—the timber industry—while ignoring the many other local industries. And it is unable to control the stability of the timber industry, as that industry is dependent upon national and global economic factors. The Mill Creek–Council Mountain Landscape Restoration project will harm tourism and a long list of other recreation-related businesses in the area.	Job and employment effects are disclosed in section 3.9, Economics/Socio-Economics in the FEIS.
313	**Comment:** The Mill Creek–Council Mountain Landscape Restoration project will harm the economic stability of local communities whose municipal drinking water systems will be degraded by increased sediment from logging because such a community will not attract new businesses. **Comment:** The Mill Creek–Council Mountain Landscape Restoration project will reduce the value of real estate in the community because the majority of people will not want to live there. **Last Comment:** Please examine Attachment #13. It contains	The watersheds affected by this project are not identified as municipal water supplies; see Appendix B of the Water Resources Specialist Report for the Federal Water Quality Consistency Checklist. The socio-economic effects are disclosed in section 3.9, Economics/Socio-Economics in the FEIS.

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	statistically significant evidence (rather than empirical data) showing that the general public abhors commercial logging in their national forests. If the Responsible Official has access to reliable, statistically significant data to the contrary, please cite it in the final EIS. Of course none exist.	
314	**The Responsible Official should not Propose a Timber Sale in order to Eliminate or Reduce Natural Disturbance Events that Benefit the Forest's Natural Resources** The DEIS at page 1-5 states: "Compared to historical conditions, vegetation in the Project area displays the following trends: Substantial increases in tree densities and ladder fuels within stands, resulting in reduced habitat quality and increased risk for habitat loss from future uncharacteristic wildfire or insect events in the nonlethal and mixed1 fire regimes" **Comment:** Attachment #8 describes how fire benefits the countless natural resources in the forest besides conifer tree species. The Responsible Official does not recognize this ecological fact. Decades ago the USFS adopted a policy to suppress all fires regardless of their proximity to the WUI. The beneficial effects if fire were eliminated by expensive, overly aggressive fire suppression in some cases. The reason the USFS places a higher priority on merchantable conifer tree species rather than the countless other natural resources in the forest is not difficult to determine. **Comment:** As Attachment #5 shows, insect activity is a beneficial natural disturbance event in the forest. Of course insects kill trees. A forest has countless other natural resources in addition to conifer trees. The Responsible Official does not recognize this ecological fact. **Comment:** The Responsible Official should not attempt to take action that negates the proper functioning of the forest's natural resources to generate corporate profit.	Attachments provided in the comment letter contain numerous excerpts from a variety of different authors in different locations and with different objectives. While we do not dispute disclosures in the cited documents, neither do we categorically agree with the findings or recommendations in the literature referenced. In the case of Forest Service prepared documents, it is assumed that the authors used the most recent and applicable literature given the location of their particular project area, the stand types and conditions at the time, and the direction and/or definitions in their Forest Plan(s). As highlighted by some of the excerpts you've provided, an abundance of literature and opinion are available on a variety of subjects, each with its own recommendations/findings depending upon the specific site characteristics, research methodology and/or objectives, and/or disturbance event. While general disagreement in the literature exists on many subjects, one common conclusion that can be drawn in almost all cases is that every site and every situation is different. This, in part, is why site-specific analyses are completed. As part of this site-specific analysis the resource experts assigned to the project have the responsibility to determine what the most appropriate scientific literature/information is that reflects the specific project area and situation. The EIS completed for this assessment lists cited references where appropriate and provides a list of references. Copies of literature referenced in the EIS are contained in the Project record and available upon request. The analysis presented in this document reflects management direction, findings, and conclusions in the Forest Plan and is based on science used in the WCS DEIS.
315	**Justifying natural resource harm caused by logging because it is short-term is an unjustified reason to propose to log the public land** **Comment:** The Responsible Official justifies the willful damage to	The temporal and spatial scale of environmental effects defined in section 3.1.5 and disclosed by resource in Chapter 3 of the DEIS. The National Environmental Policy Act requires this disclosure.

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	the following resources in the Mill Creek–Council Mountain Landscape Restoration project area because the damage will be "short term." There are no references cited to support the claim that "short term" resource damage is acceptable. • The DEIS indicates at page 3-59 that short term damage to pileated woodpecker habitat caused by logging is acceptable because the harm will be short term. • The DEIS indicates at page 3-91 that short term damage to flammulated owl habitat caused by logging is acceptable because the harm will be short term. • The DEIS indicates at page 3-125 that short term damage to aquatic resources caused by logging and road-generated sediment is acceptable because the harm will be short term. **Comment:** Short term harm to resources accumulates over time. The DEIS dies not analyze the cumulative effects of the short term harm of the past, the short-term harm inflicted on the natural resources with the Mill Creek–Council Mountain timber sale and the reasonably foreseeable natural resource short-term harm of the future.	The Forest Plan defines time scales for effects analysis, and provides direction for meeting management direction over different time scales (Forest Plan, III-4). The Watershed Resources and Fisheries Resources sections 3.5 and 3.6 of the FEIS discuss short-term impacts, as well as the long-term impacts and benefits relative to Forest Plan direction. The cumulative effects sections of Chapter 3 discuss past, current, and reasonably foreseeable future actions and effects.
316	**Proposing to Reduce Fuels in Areas Removed from the WUI Influence Zone Compromises the Health of the Forest Ecosystem and does not Reduce Wildfire Risk in the WUI** It's sad that so many Forest Service line-officers believe that commercial logging the public land is a cure-all for all forest issues … real and perceived. **Comment:** The scientific research papers cited in Attachment #8 describe how wildfire restores some natural resources in the forest. Fire comes from the sky during the hottest, driest parts of the year for a reason. This member of the public cannot understand why the Responsible Official chooses to ignore this science.	The DEIS discloses the effects to vegetation in section 3.2, Vegetation Resources, and the effects of fire in section 3.3, Fire and Fuels. The Project is designed to move toward desired conditions as directed in the Forest Plan and would utilize mechanical and prescribed fire treatments to meet these objectives.
317	**Any NEPA document with a P&N to "Reduce Wildland Fire Hazard" and Fails to Include a Cohen alternative clearly indicates that the Responsible Official chooses to ignore public safety in order to accumulate volume** Page 1-13 indicates that one purpose of the proposed action is: "To reduce wildland fire hazard in forested stands for resource	Thank you for your comment. Section 3.3, Fire and Fuels in the FEIS discloses the effects of reduced fire behavior indicators in the WUI. See also the response to comment #314.

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	protection and reduce risk in the Wildland-Urban Interface (WUI)" **Comment:** Most members of the public with homes located in the Wildland-Urban Interface (WUI) are unaware of the fire damage risk reduction research done by USFS employee Dr. Jack Cohen … and the USFS wants to keep it that way. Why? The science literature authored by Dr. Cohen's repeatedly indicates that fuels reduction does not reduce the risk of wildfire damage to structures located in the WUI.	
318	**Comment:** Tragically the Responsible Official does not mention the Cohen fire risk reduction methods in the DEIS. The USFS's standard response is that much of the action to implement Cohen's methods should take place near the home on private property and the USFS has no responsibility to take vegetation manipulation actions on private land. **Comment:** The Responsible Official must describe why an ineffective action funded by the taxpayers must be carried out in addition to implementing the Cohen methods. This will involve science literature citations that show significant risk reduction will occur when both fuels reduction and the Cohen methods are applied. If the Responsible Official is interested in learning the science of wildfire damage risk reduction please consult Attachment #11. **Comment:** A Ph.D. specialist in fire behavior and WUI modifications to reduce the risk of wildfire damage to homes makes multiple comments about the ineffectiveness of fuels reduction to reduce the risk of damage (see above). The Responsible Official ignores this science and instead chooses to be guided by the recommendations of a USFS employee with significantly less knowledge than Dr. Cohen and who stands to be personally rewarded by the agency for recommending a protection solution that generates volume.	See response to comment #314.
319	**The WUI Boundary shown on the Project Map is Inconsistent with and Defines a Larger Area than is Described by All Officially Recognized WUI Definitions** **Comment:** The Responsible Official has chosen to ignore the WUI definitions in Attachment #16 in order to maximize the fuels reduction logging area. **Comment:** The Responsible Official does not understand the	Thank you for your comment. The WUI Zone identified is based on the definitions in the HFRA 2003, The Healthy Forests Initiative and Healthy Forests Restoration Act Interim Field Guide 2004 and supported by the Adams County, Idaho, Wildland-Urban Interface Wildfire Mitigation Plan 2004, other literature cited in the Project record relevant to WUI and the professional expertise of the West Zone Fuels Management Specialist. The proposed management

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	meaning of WUI. A WUI is only 1 mile from private land with human structures that need protection should a wildfire occur. If the WUI is defined as being adjacent to all private land then the WUI would consist of a strip of land along the boundary of every national forest in America … hundreds of millions of acres. The maps must be redone when the DEIS is redistributed for public comment. The new maps should identify human structures within 1 mile of the Payette National Forest boundary and show the WUI boundary according to their location. **Comment:** The Responsible Official disagrees then the new DEIS should cite an official definition of the WUI that includes all private land … inhabited or not. **Comment:** The Responsible Official has chosen to ignore the WUI definitions in Attachment #16 in order to maximize the fuels reduction logging area.	actions are similar across the Project, inside or outside of the WUI with the addition of a shaded fuelbreak in the WUI as described in section 2.3.2 in the DEIS. While fuels reduction treatments are prioritized around structures, the WUI Zone that is defined in this project is a one-half mile zone adjacent to the Forest boundary. The zone does not include inholdings as there are no known structures on those lands.
320	**Legal Precedent Requires the Forest Service to Base their Proposed Projects on Best Science** A Federal Register notice and an opinion handed down in the Tenth Circuit Court of Appeals indicate that the Forest Service must base their projects on best science. Please see below. "The purpose of this interpretative rule is to clarify that, both for projects implementing plans and plan amendments, paragraph (a)'s mandate to use the best available science applies." Source: Federal Register / Vol. 69, No. 188, page 58056 Wednesday, September 29, 2004 Rules and Regulations http://www.fs.fed.us/r1//projects/plan_rule/intrpretative-rule.pdf "The 1982 forest planning regulations at 36 C.F.R. Part 219 were superseded in November 2000, when new regulations were promulgated. 65 Fed. Reg. 67,568 (Nov. 9, 2000). Under the transition provision of the 2000 regulations, the Forest Service was required to consider the "best available science" when implementing site-specific projects within a forest plan. 36 C.F.R. 219.35(a) (2001)." Source: The Ecology Center, Inc., v. United States Forest Service United States Court of Appeals, Tenth Circuit, June 29, 2006 An Appeal from the United States District Court for the District of Utah	The comment letter and Attachment #15 of the comment letter provided contains numerous excerpts from a variety of different authors in different locations and with different objectives. While we do not dispute disclosures in the cited documents, neither do we categorically agree with the findings or recommendations in the literature referenced. In the case of Forest Service prepared documents, it is assumed that the authors used the most recent and applicable literature given the location of their particular project area, the stand types and conditions at the time, and the direction and/or definitions in their Forest Plan(s). As highlighted by some of the excerpts you've provided, an abundance of literature and opinion are available on a variety of subjects, each with its own recommendations/findings depending upon the specific site characteristics, research methodology and/or objectives, and/or disturbance event. While general disagreement in the literature exists on many subjects, one common conclusion that can be drawn in almost all cases is that every site and every situation is different. This, in part, is why site-specific analyses are completed. As part of this site-specific analysis the resource experts assigned to the project have the responsibility to determine what the most appropriate scientific literature/information is that reflects the specific project area and situation. The EIS completed for this assessment

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	(D.C. No. 2:03-CV-589-TS) http://caselaw.lp.findlaw.com/scripts/getcase.pl?navby=search&case=/data2/circs/10th/054101.html Clearly the attachments to this comment letter constitute "best science." For decades Forest Service leaders have told the public that agency projects are based on and are consistent with best science. This is clearly indicated in the words of Forest Service leaders shown in Attachment #15. The information in the attachments is best science. **Comment:** The reason this science literature is not included in the References is because the Responsible Official included only the science literature that supports commercial timber sales.	lists cited references where appropriate and provides a list of references. Copies of literature referenced in the EIS are contained in the project's planning record and available upon request. The analysis presented in this document reflects management direction, findings, and conclusions in the Forest Plan and is based on the best available science
321	**Please do not Apply Herbicides Containing Glyphosate Anywhere Near (or in) the Sale Area for any Reason** The DEIS at page 1-21 states: Noxious weeds will continue to be controlled using integrated management approaches as analyzed and disclosed in the Payette National Forest Noxious Weed and Poisonous Plant Control Program Environmental Assessment and Decision Notice (USDA Forest Service 1987). These control measures are also incorporated into the Forest Plan (USDA Forest Service 2003b, pages III-35 through III-37), which is part of the annual weed control efforts on the local districts. Control methods include chemical, biological, cultural, or mechanical treatments, depending on the weed species present, cost of control, proximity to water, or other elements applicable to the site. The Payette National Forest Noxious Weed and Poisonous Plant Control Program Environmental Assessment and Decision Notice (USDA Forest Service 1987) reflects research that is 25 years-old. This herbicide approval EIS does not include the cites to over 1,000 research project conclusions that have been published since 1987. Also, the research for the 1987 Forest Service herbicide approval EISs was not done by agency scientists. The research was done by laboratories contracted and paid by the herbicide manufacturer. These research conclusions were then passed on to the Forest Service and formed the basis for the agency safety findings documented in 1987 EIS.	Treatments of invasive weeds are not part of the purpose and need of this project, but are included in project design features and mitigation measures. Invasive weed treatment is implemented under a separate decision. The Forest has a list of herbicides that they use based upon target species. Mechanical treatments and biological control are also implemented. For the pesticides commonly used by the Forest Service in its management activities, Human HERAs are prepared. In these documents, the process of risk assessment is used to quantitatively evaluate the probability (i.e. risk) that a pesticide use might pose harm to humans or other species in the environment. The HERA for glyphosate was completed in March 2011. The Forest has recently been approved to use Milestone which has been reviewed and registered under the Reduced Risk Pesticide Initiative of the Environmental Protection Agency. This unique designation is reserved for compounds that demonstrate lower risk to the environment and humans than marketplace standards. The uses of this herbicide will most likely replace the use of Aqua Neat which is the only glyphosate based herbicide currently used on the west zone of the Forest. In the event that Aqua Neat is used it will be used as specified on the label.

	Concerns	Forest Service Response
	By far the most dangerous herbicides contain glyphosate. The recent research of independent, unbiased Ph.D. scientists not affiliated with the US Forest Service or Monsanto Inc. reveals that even casual contact with glyphosate-containing herbicides causes the following maladies in birds, fish, and mammals (including human visitors to the forest): **Comment:** Exposure to herbicides that contain glyphosate causes non-Hodgkin's lymphoma. If herbicides that containing glyphosate are applied on the Mill Creek–Council Mountain Landscape Restoration Project there is no reason to believe it won't happen there. **Comment:** Exposure to herbicides that contain glyphosate causes human cell endocrine disruption. If herbicides that containing glyphosate are applied on the Mill Creek–Council Mountain Landscape Restoration Project there is no reason to believe it won't happen there. **Comment:** Exposure to herbicides that contain glyphosate causes skin tumors. If herbicides that containing glyphosate are applied on the Mill Creek–Council Mountain Landscape Restoration Project there is no reason to believe it won't happen there. **Comment:** Exposure to herbicides that contain glyphosate causes the death of liver cells. If herbicides that containing glyphosate are applied on the Mill Creek–Council Mountain Landscape Restoration Project there is no reason to believe it won't happen there. **Comment:** Exposure to herbicides that contain glyphosate causes chromosomal damage. If herbicides that containing glyphosate are applied on the Mill Creek–Council Mountain Landscape Restoration Project there is no reason to believe it won't happen there. **Comment:** Certainly, noxious weeds and non-native plants are a major problem. In the final EIS please explain to the Responsible Official does not refer to recent toxicology studies that were not includes in the dates Forest Service herbicide safety information. Please don't take a risk that might be lethal to human visitors to the national forest and wildlife. I ask that you take the safe alternative and use non-chemical methods to eradicate non-native vegetation. In situations that involve life and death cost should not be a factor.	
322	**Please Take Appropriate Action if any of the New Species**	Consultation is being completed with the US Fish and Wildlife

	Concerns	Forest Service Response
	Proposed for listing May Exist or have Habitat in, Near or Downstream from the Sale Area On September 11, 2011 a federal judge today approved a legal agreement between the Center for Biological Diversity and the U.S. Fish and Wildlife Service requiring the agency to make initial or final decisions on whether to add 757 imperiled plants and animals to the federal endangered species list by 2018. The following are proposed for listing: 26 birds, 31 mammals, 67 fish, 22 reptiles, 33 amphibians, 197 plants and 381 invertebrates.	Service on all required species. Biological Assessments were prepared on the potential effects to listed fish and wildlife species. The Wildlife BA also addressed the effects of the proposed activities on wolverine, a recently proposed candidate species.
323	**Comment:** To determine the correct actions to take when dealing with property owned by other people, a decision-maker should weigh the likely positive and negative effects of the proposed action. When the cumulative negative (or adverse) effects are greater than the cumulative positive effects, then the effects of the project as a whole are negative and the action should not be pursued. The effects should be calculated by the decision-maker according to how the property owners will feel based on their values and wishes. Attachment #13 shows that the general public does not want the natural resources in their forests harmed by development activities. Therefore, there must be some critical need for the decision-maker who is the caretaker of the public land to implement a timber sale opposed by the American citizens.	Cumulative effects to resources are disclosed in Chapter 3 of the FEIS. Public involvement is disclosed in section 1.8 of the FEIS.
324	**Comment:** Trees in a private industrial tree-farm are managed to provide profitable logs as soon as possible which means that the foresters that manage the tree farms take action is taken to cause the trees to grow to a large diameter as quickly as possible. These vigorous trees have successfully supplied the American public with the raw material for wood based products for many decades. National forests are not tree farms. The Organic Act and the Multiple Use Sustained Yield Act allow commercial timber harvests in national forests if the well-being of the forest is maintained. These laws do not allow commercial timber harvest if the water quality is harmed. Hundreds of scientific statements contained in the attachments and Chapter 3 of the DEIS both indicate that the non-conifer tree species natural resources in the sale area will be damaged.	Vegetation responses and effects are described in section 3.2 of the FEIS. The FEIS and the Water Resources Specialist report contain statements that this project complies with the Forest Plan and all applicable environmental laws and regulations, as well as analysis to support those conclusions.

	Concerns	Forest Service Response
325	**Comment:** Because the agency is dominated by a timber-extraction culture, Forest Service employees are taught to believe that if the merchantable conifer trees are manipulated (usually logged), the health of the countless other natural resources in the forest will also be improved. As the attachments show this is not true. This is sad.	Restoration treatments proposed in the Project are designed to improve vegetation including grass, shrub and forest types. The Project also includes watershed improvement treatments as described in the FEIS.
326	**Comment:** It is highly likely that the proposed timber harvest will damage other natural resources. For the natural resources that the Responsible Official determines might or could be degraded by the tree removal activities please describe the future restoration projects that will be necessary to return these resources to their pre-harvest health. Please be specific. This should identify 1) the type of restoration project, 2) the resources that will need restoration, 3) when the project will be implemented, and 4) how it will be funded.	Effects to resources from proposed treatments are disclosed in Chapter 3 of the FEIS. The restoration activities are detailed in Chapter 2 of the FEIS. The Project is expected to take approximately ten years to complete all the activities. Funding is expected to come from appropriated funds, including the recently secured Collaborative Forest Landscape Restoration Fund, receipts from stewardship contracts and partnerships.
327	**Comment:** Even with the low interest rates, the recession has caused an all-time low in new housing starts. The lumber market does not need the logs. The mill-yards are full of logs. They are not being cut until the market improves. There is no place to put the logs. Strangely enough, the Responsible Official still pursues the Mill Creek–Council Mountain Landscape Restoration timber sale in spite of the public opposition and the resource damage described in the DEIS. The public isn't being told the real reason that this timber sale is being proposed.	Vegetation treatments are proposed to move the existing vegetation toward desired conditions as described in the Forest Plan. Economic conditions would also be improved in the local communities as described in section 3.9 of the FEIS.
328	**Comment:** In order to take action that is consistent with Mr. Pinchot's ideals instilled the Forest Service a century ago the Responsible Official can only provide "The greatest good for the greatest number of people" by implementing everything in the Mill Creek–Council Mountain Landscape Restoration Project Proposed Action except commercial timber harvest, herbicide application and system or "temporary" road construction. So far, the Responsible Official appears to have dismissed what the public wants and needs.	Comment acknowledged. The Responsible Official will choose the alternative that he determines best meets the purpose and need of the project and is informed from the EIS analysis, including public involvement.
329	**Comment:** Since critical habitat for the Bull Trout which is listed under the ESA any willful actions by the Responsible Official to degrade this habitat will violate the ESA. This means culvert replacements/removals should occur but all temp and system road construction and logging related ground disturbance activities will generate sediment during precipitation events and violate the ESA.	The EIS discloses the effects of road construction on SWRA resources, as well as wildlife resources. The EIS indicates the range of 0.5 to 0.8 miles of road construction within RCAs would not measurably affect SWRA resources at the subwatershed scale. As required by the ESA, both Fisheries and Wildlife Biological Assessments were prepared and appropriate consultation with

	Concerns	Forest Service Response
	In addition there are other listed species that inhabit the area and the effect literature clearly indicates that the habitat for some will be harmed by logging.	USFWS conducted. Requirements as a result of consultation with the USFWS will be incorporated in the Record of Decision for the Project.
330	**Comment:** The Responsible Official proposes to implement the Mill Creek–Council Mountain Landscape Restoration timber sale based on the guidance contained in the literature cited in the references section of the DEIS. Most of this literature is authored by scientists employed by the USDA, thus it is biased toward the agency timber culture. The literature cited in the Attachments to this comment document contains over 350 separate research findings and scientific conclusions that describe the ecological damage caused by most commercial timber sales. Of the Responsible Official chooses to ignore the statements in the attachments because they are not specific to the Mill Creek–Council Mountain Landscape Restoration Project, then common sense and consistency dictate that all references in the References Section on page 4-8 to 4-16 must be omitted from the final EIS. If the Responsible Official decides to keep the References and includes them in the final EIS he should explain why the USFS can cite non-project-specific references and the public may not.	The comment letter provided contains numerous excerpts from a variety of different authors in different locations and with different objectives. While we do not dispute disclosures in the cited documents, neither do we categorically agree with the findings or recommendations in the literature referenced. In the case of Forest Service prepared documents, it is assumed that the authors used the most recent and applicable literature given the location of their particular project area, the stand types and conditions at the time, and the direction and/or definitions in their Forest Plan(s). As highlighted by some of the excerpts you've provided, an abundance of literature and opinion are available on a variety of subjects, each with its own recommendations/findings depending upon the specific site characteristics, research methodology and/or objectives, and/or disturbance event. While general disagreement in the literature exists on many subjects, one common conclusion that can be drawn in almost all cases is that every site and every situation is different. This, in part, is why site-specific analyses are completed. As part of this site-specific analysis the resource experts assigned to the project have the responsibility to determine what the most appropriate scientific literature/information is that reflects the specific project area and situation. The EIS completed for this assessment lists cited references where appropriate and provides a list of references. Copies of literature referenced in the EIS are contained in the project's planning record and available upon request. The analysis presented in this document reflects management direction, findings, and conclusions in the Forest Plan and is based on the best available science.
331	**Request:** Please significantly modify this DEIS by removing all the untruths, actions that degrade the environment and legal violations. Then reissue it for another 45-day public comment. It's impossible for the public to provide meaningful comments on a DEIS with so many flaws. Indeed, the only responsible and legal actions that should occur in the project are should be those that reduce sediment	Thank you for your comment.

	Concerns	Forest Service Response
	… not create it.	
	Becker, Al	
332	First off, it is unfortunate the untimely inclusion of Forest Service Preferred Alternative 5 in the DEIS after substantial time and effort made by the Payette Forest Coalition in developing the Proposed Action, Alternative 2. I understand this inclusion was due to a FS IDT oversight regarding Forest Plan Aquatic Conservation Strategy requirements for Bull Trout habitat in the East Fork of the Weiser River drainage. Albeit, identifying this oversight now is much better than later identification by a Proposed Action adversary. Never-the-less, this needs to be a **lesson learned by the Forest Service** in developing rapport with knowledge-based coalition members and supporters.	Comment acknowledged.
333	I strongly support the active vegetation management and use of prescribed burning to meet resource objectives in the Proposed Action. I also support decommissioning roads that are not needed for future vegetation management or recreational access purposes. However, I do support converting 'some' roads to accommodate ATV and/or foot and horse travel land uses. I am not familiar enough with this landscape area to recommend specifically which those 'some' are, with the exception of the Deseret Cabin area. I do support continuing ATV access on Trail #201 from Deseret Cabin Trailhead to the first stream crossing.	Thank you for your comments. ATV access is not currently designated on the 201 trail but FS System Road 50249 is open to all vehicles up to the junction with Trail #210. The status of these designations is not proposed to change with this project.
334	I have some further comments regarding the Deseret Cabin identified area. For clarification, Deseret Cabin Trailhead (as shown on the Forest Recreation map in the NW1/4 of Section 6) is not the same location as Deseret Cabin (shown in the NW1/4 of Section 7 on the MC-CM LRP maps). In the mid 1990's the Heartland Chapter of the Backcountry Horsemen of Idaho adopted several trails for maintenance in the SE portion of the MC-CM LRP area. This included limited development and establishment of the Deseret Cabin Trailhead (fire rings, hitching rails, trailer parking area, trail signs, etc.). We also agreed to reestablish and maintain the Deseret Cabin Cutoff Trail #202 (connects Tr. #201 with Tr. #205). The Trail #202 name and number was assigned by Payette Forest Recreation	The most recent decision (2009 Council and New Meadows Ranger Districts Snow-free Season Travel Management Record of Decision) does not designate trail #202 for any type of use, motorized or non-motorized because the access was not found to be necessary when weighed with the resource concerns of the trail. Currently the Back Country Horsemen have no trails under an AAT. The Forest would entertain working with this club to put them under a current AAT agreement.

	Concerns	Forest Service Response
	Staff (Jim Arp/Mike Stayton, Tim Cahill) at the time. HBCH adoption also included a trail related watershed restoration project on Trail #205 funded by a National Recreation Trails Grant with NEPA compliance. Apparently, Trail #202 was never formally included in the Forest Trail System and was overlooked during development of the current Forest Travel Plan. Therefore, it could not been included in current Adopt-a-Trail Agreements. I verbally inquired if it could be included in this Landscape Restoration Project environmental analysis and was told that it was not in the area being analyzed but it could be included in the Granite Creek NEPA project in the future. I contacted you about this and I believe you told me it would be awhile before the Granite Project would be done. Therefore, I have been 'on hold'. However, after looking at the maps with this DEIS, the majority of the Trail #202 is within Section 7 that is part of the Mill Creek-Council Mountain Landscape Restoration Project area! On March 11,2011 I met and talked to Mike Mullin in Weiser and provided him the maps I had and background information regarding Trail maintenance work and Trail #202 history with the HBCH. One map I provided him had Trail #202 specifically identified. I also provided him a copy of Council Acting District Ranger support for a vault toilet at the Deseret Cabin Trailhead (the PNF had applied for a Grant from the IDP&R to fund this, but was unsuccessful). The need for a vault toilet still exists at the Deseret Cabin Trailhead. I know the PFC has included this in their recommendations and I, likewise, support it included in the Proposed Action. I am pleased with the Payette National Forests efforts to effectively collaborate with the Payette Forest Coalition and help affirm successful outcomes as we've seen in Region One of the FS. A new way of doing business for effective public involvement.	
	Clovis, Greg	
335	I frequently recreate on West Mountain and I support the construction of a restroom at the location identified as Five Corners in the Mill Creek-Council Mountain Landscape Restoration Project DEIS. Please support the construction of a restroom at that location.	Comment acknowledged.

	Concerns	Forest Service Response
	Cutler, Mike	
336	I frequently recreate on West Mountain and support the construction of a restroom at the location identified as Five Corners in the Mill Creek-Council Mountain Landscape Restoration Project DEIS.	Comment acknowledged.
	Cutler, Sherry	
337	I frequently recreate on West Mountain and support the construction of a restroom at the location identified as Five Corners in the Mill Creek-Council Mountain Landscape Restoration Project DEIS.	Comment acknowledged.
	Downey, Karen	
338	I have personally witnessed road decommissioning as an associated rider. The roads I am speaking of had not been touched but rarely by 4-wheelers, or abused in any way. The soil was not eroding, the culverts were not causing any problems, yet the USFS in their infinite wisdom, decommissioned the road, causing – yup – erosion into the streams, endless weeds to crop up, and feed dug up. Even the small trees growing in the middle of the old log road were killed. This decommissioning of roads is a waste of USFS's time which could be better put to use trying to help the rest of the state with more pressing issues. Some of these issues included: Bug killed forests, burned forests. Some of which are the forests out of Warm Lake towards Big Creek areas. Areas where the tussock moth could be thwarted! Another project would be to clean up the Gray's Crk burn – why waste our Natural Resources? I could, and will if asked, add more comments. But to place my "VOTE" – I support you Leave the Mill CREEK AREA ALONE! There are so many projects that do need attention, you seem blinded by someone's stupid ideas. In closing, I believe all our resources need to be utilized to its fullest extent, as it takes years upon years to get a usable product after this one is blatantly destroyed.	The obliteration of roads as a means of restoring ecological function is supported by scientific documentation (Nelson et al 2010; Luce and Wemple 2001). There are specific short and long-term ecological objectives associated with restoring a road prism to natural contours. See the Watershed Resources, Fisheries Resources and Soils Resources sections 3.5, 3.6, and 3.7 of the FEIS for a more complete discussion on these objectives and road obliteration in general.
	Downey, Ken	
339	None of your Alternatives make any sense to me. In the 50's thru the 80's the Forest Service planted trees to replace those logged	The proposed treatments in plantations include: • Thinning with lopping and scattering of the cut trees

	Concerns	Forest Service Response
	you want to burn those plantations or biomass them. Why? You say you are unhappy with the young stands of pine. Where do you suppose the old growth comes from? This part of the Payette Nat. Forest is for the most part very healthy. I am in favor of logging the dead & dying and thinning heavy stands at no time would I consider burning any timber, or bio massing any plantations unless they need thinned. If Biomass is your target look at all the burns you have already had in the Payette. There is enough dead timber on Warren Wagon Rd the Road from Cascade to Yellow Pine then to Big Cr. Over Elk Summit to South Fk. Up to Warren and back to McCall to supply all biomass needs in the United States for the next 50 years. Waste Not Want Not	• Thinning with removal of the cut trees and use of these trees for biomass • And, in circumstances where thin, lop and scatter would leave hazardous amounts of fuel on the ground and removal of the cut trees is not practical – thinning the stands with prescribed fire. The objective with all of these proposed treatments is to thin the plantations to increase growth and vigor. The mature stands where Burn Only treatments are proposed are either open enough that thinning is not needed, or in areas where road access for harvest is not available. The prescribed fire proposed in the open stands is intended to reduce fuels. In the stands with no road access the prescribed fire is intended to reduce fuels and to thin the stands.
	Evans, Greg & Donna	
340	We are property owners in Donnelly and we frequently recreate on West Mountain. That includes snowmobiling in the winter/spring and hiking in the summer. We support the construction of a restroom at the location identified as Five Corners in the Mill Creek-Council Mountain Landscape Restoration Project DEIS.	Comment acknowledged.
	Fitch, David	
341	I frequently recreate on West Mountain and support the construction of a restroom at the location identified as Five Corners in the Mill Creek-Council Mountain Landscape Restoration Project DEIS.	Comment acknowledged.
	Freedman, Wayne	
342	1. As the Council School Board Chairman, I am concerned that this project was put together without any benefit to the local infrastructure that used to come to communities from such sales. As it stands now we get no benefit from the approximately 60% public lands that make up our district, the majority of which are national forest lands, to help our local communities to exist and survive. Why, if the timber harvested is in our district, is there no revenue generated to support local schools and government?	The Secure Rural Schools and Community Self-Determination Act and the 25% fund are National policy and regulation and beyond the scope of the Project EIS. The type of contracting used will be determined prior to implementation and will relate to national and regional Forest Service policy and direction. Additional discussion of Payment to counties was included in section 3.9.4.1in the FEIS.

	Concerns	Forest Service Response
343	2. As a member of the Adams County Natural Resources Committee, I have watched roads being decommissioned at an expense to the district that left a greater environmental impact after the decommissioning than leaving them in existence would have been and saving the cost of doing it. My understanding is that this project, which began as one that would generate a fiscal profit as well as benefit the forest, is now expected to result in a $2,500,000 deficit. Why spend money decommissioning roads that can be left alone and be available for future harvesting options?	The ecological objectives of obliterating a road are long-term and are discussed in the Watershed Resources and Soils Resources, sections 3.5 and 3.7 of the FEIS, and the effectiveness of these treatments is documented (Nelson et al. 2010). The road system in this project area was analyzed by the IDT and access for future management was addressed. This is documented in the Project record TAP, Transportation (section 3.8 of the FEIS), and Appendix 2 of the FEIS.
344	3. We proposed a trail system for ATV/UTV/Motorcycle users that would have benefited the forest by designating roads and trails for specific uses, giving people designated access to our forest and restricting unauthorized use, but it was drastically rejected in the travel plan and now you are planning to further curtail access to the forest that already exists, again economically impacting the communities in our area. Why can't we be partners for the good of the forest and our communities, rather than further isolating people from the beauty of our public lands?	The routes Adams County recommended for ATV use in travel planning are incorporated in open roads and trails with the exception of one road which has been decommissioned in a past project.
345	SPECIFIC RECOMMENDATIONS: 1. Road #51682 going south from Cold Spring Summit could be developed into a beautiful overlook for ATV/UTV travelers if a spur trail was built along the top of the ridge toward N. Fork Mill Cr. Spring [There is one already in existence that needs to be improved to be used]. This overlook would give a 360 degree view of Council Mtn. to the south, Long Valley [McCall and Payette Lakes to the east & north, and the Seven Devils and Eagle Cap wilderness areas to the north and west. This trail could be gated and closed off during the hunting seasons to protect big game. 2. Road #50166 near Squaw Flat the right hand fork [upper road] could be left in place and opened seasonally to give access to a trail head leading to Granite basin and again closed during hunting seasons. 3. Road #50165 provides a link between Dewey Creek and Deseret Cabin road that would make a good ATV/UTV loop with minimal impact yet excellent provide a real backcountry experience for visitors. Again close it during hunting seasons like it is now.	Comment #1: A section of this road is currently open to two-wheel motorized use. The portion not open to two-wheel motorized us terminates in an area that would encourage illegal off-road use into the Council Mountain Inventoried Roadless Area especially if the spur was constructed, so it was not considered as an ATV route in this project. Comment #2 refers to a road that is outside of the Project area. The road identified in Comment #3 is currently open to motorized use on a seasonal basis.

	Concerns	Forest Service Response
346	QUESTIONS: 1. Why not use the funds to decommission roads to instead designate a trail system in the Council Mountain Area for access that will not further harm the environment, yet give access to the beauty on our back doorstep, and bring people into our communities to help us thrive as good neighbors? 2. Why has Option 5 now become the recommended action when the advisory committee recommended Option2? I would like to request that I be given the right to give further input after the new road committee has met and come up with their recommendations. Also I would be willing to serve on any committees in the future that would give input on this project or travel decisions on the forest.	There is a network of existing two-wheel motorized/multiple use non-motorized trail network in the Council Mountain Area. The Project area also includes roads and trails open to ATV use. The Project also includes a proposal for a non-motorized 3.7 mile trail in the Mill Creek area as described in section 2.3.2.1 of the FEIS. Alternative 2 was the Proposed Action that is derived from the planning process. Alternatives to the Proposed Action are developed based on public and internal input. To be most helpful to complete the FEIS, it was asked that the Forest Service receive comments during the 45 day DEIS comment period, which ended December 12, 2011.
	Hamilton, Ron	
347	Thank you, for allowing me to review and comment on the draft Environmental Impact Statement for the Mill Creek-Council Mountain Landscape Restoration Project. I have also participated in the development of this project with the Rocky Mountain Elk Foundation (RMEF) sponsored Payette Forest Coalition (PFC). As a member of that coalition I support alternative two, which mirrored the PFC recommendations and prefer that alternative to be the agency's selected alternative. I could support some of the elements of alternative 5 to modify alternative 2 but with caveats that I will explain below. I firmly support the coalition and the collaborative process in the development of a management program for implementing a complex management program such as this landscape level restoration program, especially controversial programs. I hope to continue working in the PFC as we deal with the New Meadows project area.	Comment acknowledged.
347.1	At page 1-5, para. 1, there is a statement about fewer ponderosa pine and western larch than existed historically. There is no cited basis for this statement. The footnote has a citation for Huckaby, et al. 2003. that document relates to the Colorado Front Range and a variety of ponderosa pine (var. scopulorum) that responds to a very different intercontinental climatic situation. It also has a different inferred genetically controlled response to climate as validated by	See response to comment #16.

	Concerns	Forest Service Response
	G.E. Rehfedt in seed zoning studies that I participated in. In addition western larch are not present in the range and seem tied tightly to the climax area of certain true fir species, which can be validated in the larch symposium proceeding. J also have: similar problem with statements at page 2-5 using the Huckaby reference. On the same page as above, in the excerpt quoted, it would be appropriate to point out "chapparal" does not exist in these forested types, but Ceanothus velutinus was often referred to as chapparal because of its leave and growth characteristics.	Thank you for your comment, the FEIS has been updated.
348	At page 1-6, 2nd para., many things are vulnerable to future events such as the type of fire described including un-roaded, un-managed forests. Therefore, pointing to roads that had vegetation recovery is a straw-man developed to support your agency's predilection to obliterate roads hence access that might be used to manage the forests and reduce fire severity.	See response to comment #17.
349	At page 1_7, 1st para., after all the discussion there has not been any explanation of how frequent are the events such as the June 2010 rainfall volume and duration on a saturated soil at the end of the snowmelt period. Is it sufficiently frequent to consider design criteria changes or is something close to the 1 in 100 years?	See response to comment #18.
350	At page 1-8, 2nd para, 2nd bullet, while noxious weeds are not expanding and new invaders not present, there is no discussion how these species will respond to the new regimen and forest structural arrangement. These are introduced plants that may become significant problems with these changes.	See response to comment #19.
351	At page 1- 13, 1.5.2, there is a cite (Kimball and Stephenson 2010), this is a draft document out apparently for review by peers and others. How or why this strategy is being used or adapted in its draft form is unclear. This is especially true if it is a public policy document that has not completed the appropriate state government review and vetting steps. Unfortunately this is not the only problem with documents and their availability. Throughout the document there are citations to documents yet written by nearly every specialist on the ID team? How can a reviewer adequately review the data and reference resources if the write-up, with appropriate	See response to comment #20.

	Concerns	Forest Service Response
	bibliography, is not available? Lastly, I know that past court decisions considered this a fatal error for NEP A documents.	
352	At page 1-16; 1st para., the PFC's statement dealing with elk security and habitat enhancement isn't even paraphrased correctly. This is an element of some issue with some member of the PFC.	See response to comment #21.
353	At 1.10.1, as you pointed out there have been a number of federal actions throughout the area especially since the early 1970's. Prior to that time limited actions were occurring back to the 1930's. During the early history of the Payette, and its assimilated National Forests, an array of trails exist which provided people access through the National Forest. In many instances these trail routes were replaced by roads used to harvest timber or for other purposes. As they provided access and trial maintenance money was difficult to obtain the trails were abandoned or neglected by the agency. Now many of these roads that replaced trails are being scheduled for obliteration. This will reduce access to below historic levels. The Forest Service should assure that these trail routes remain when road obliteration is considered in the area. The roads often did not follow the exact trail location but accessed the same area. These roads that are planned for obliteration, should as a minimum, provide walking and horse-use access. Some of these trail-road conversions were identified by member of the PFC and maps were provided. The agency has an historical archive they can also reference.	See response to comment #6.
354	At page 2-6, Restoration Stand .... , I have raised the question while reviewing the Payette Wildlife Conservation Strategy during the comment period, other persons in the public continue to ask questions on the actual sequencing and time frames of treatment of these areas (inappropriately using the term stands), with, harvest entries and broadcast or area burning. The questions relate to the accommodation for obtaining regeneration and once established its protection, tending of developing trees and the treatments to reach the desired size and spacing. This is without explanation yet combining prescribed fire with area treatments is a complicated task that failed a number of aspiring managers. Many experienced forest managers and some prescribed fire personnel do not believe outcomes you predict are actually achievable. It appears the cost of	See response to comment #23.

	Concerns	Forest Service Response
	manpower and area preparations would be prohibitively expensive. This, what appears to be uneven-aged silviculture, needs substantial clarification about its execution. This is especially true since it is a substantial shift from previous existing management experience. The ability to accomplish it based on your forecasted "climate change" also needs substantial clarification. The '"trust me" approach is not an appropriate response because I simply do not.	
355	At page 2-6 thru 2-10, canopy closure is used as a metric standard for a number of forest restoration goals or standards. This is a very difficult standard to measure in the field or for anyone trying to verify accomplishment. A more appropriate measure would be basal area or between tree spacing by diameter class. An explanation in the appendix-would be appropriate so it can be tested by those people so inclined.	See response to comment #24.
356	At page 2-11 unauthorized roads, the problem with unauthorized roads is verification or validation of existence. The agency has to restrict any sort of treatments to the actually identified unauthorized roads. A roadbed is a specific, identifiable location; therefore treatments must be restricted to a previously identified location. Simply identifying another roadbed in the field not identified by GIS or mapping feature should not be decommissioned because the NEPA process has not been identified and applied to a verified location as required by the law. In other words do not overreach treatments. If roadbeds are sufficiently vegetated they present little problem, they have recovered as Congress expressed in the laws dealing with recovery of lands.	See response to comment #25.
357	At page 2-11 there is an inference that a TAP was prepared for this area. Does this process comply with the process required by Part A of the Travel Management Plan rule? Is this the public involvement process without specific disclosure?	See response to comment #26.
358	At page 2-11, the road to trail conversion process while discussed has no specifications and the monitoring discussion in the Appendix does not allude to a changed specification or process of accomplishment. This needs to change and the ability to verify and test the actual use must be developed. This should be mutually monitored with the interested or involved publics.	See response to comment #27.

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359	At page 2-14, dispersed recreation, the word “may” is used when discussing the potential development of dispersed recreation sites, turnouts, parking areas and passing areas on system roads with intersecting unauthorized roads. This should be a “will” consider statement making denial for political purposes, rather than environmental reasons very difficult. These short sections are an absolute non-problem and should not be any kind of environmental concern. Any environmental problems would have already been identified. The other beneficial effects are enhancements to recreation and public health and safety in using the authorized road.	See response to comment #28
360	At page 2-15, Deseret Cabin trailhead, I believe this discussion about recreation improvements missed the point and a location. The Donnelly Snowmobile Club offered to build and help provide maintenance of a toilet at the 5 Comers road intersection at the head of the East Fork. That was a proposal encompassing all alternatives. The Backcountry Horseman wanted a toilet at the Deseret Cabin trailhead, they did not offer any funding or maintenance support through agreement.	See response to comment #29.
361	At 2.3.2.3 Alternative 3, helicopter harvesting and associated new road construction in the identified PVG's should be an optional package that could be assigned to alternative 2 and 5 as a minimum. The agency is normally very conservative in their estimates or capability to operate on these kinds of areas. Using the option approach for treatments allows industry to make an economic choice.	See response to comment #30.
362	At page 2-37, NOGO, there appears to be statement about operation shut down and adjustments to contracts that I don't believe are within the authority of the Forest Supervisor or contracting officer. This should be written to conform to legal requirements.	The restrictions and adjustments described in this mitigation measure would be included in the timber sale or stewardship contracts.
363	At page 2-38 licks and wallows, it seems that the riparian management requirements provide sufficient wallow protection? Mineral licks associated with naturally minerals should be identified before sale implementation because they have unique wildlife interactions tied to them. Salt or other minerals placed by permittees should be coordination items handled by AOI's.	See response to comment #31.

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364	At page 2-40, culverts, there does not appear to be any need for permanent culverts to have AOP when they are not fishery streams. This greatly increases costs with little or no benefit.	See response to comment #32.
365	At page 2-40, obliteration of temporary roads, one of the terms used but not found in the glossary is “grubbed”. What is the process and how is it used or applied? Up to 80% ground-cover-is required, yet monitoring reports from other road obliterating projects on the Council District indicated such a high level is detrimental to long term recovery and stabilization by vegetation. Some reconciliation is needed.	See response to comment #33.
366	At page 2-40, closed system roads, statements about culverts here and in the Alternatives don't seem to agree, especially culvert removal. There also seems to be disagreement with Alternative statements and administrative use allowance.	See response to comment #34.
367	At page 2-41, tractor units, the statements need some clarification and explanation. There are a number of statements that are open-ended.	See response to comment #35.
368	At page 2-43, 2nd item, effective cover is not defined in the glossary or an appropriate reference provided.	See response to comment #36.
369	At page 2-44, CWD. if there is no CWD > 15” there is no discussion about alternatives or in-lieu of standards. This should not be a haul-in requirement.	See response to comment #37.
370	At page 2-45, reclaim. there are words missing in the statements or there are redundant statements.	See response to comment #38.
371	At page 2-47, Ips, it is just as important to impose operational constraints on all thinning operations as it is to commercial operations. Adjacency has little to do with susceptibility to the insect. It would seem important to make biomass and firewood more available for future utilization by requiring placement of tops, culls and other woods waste above a road unless the material is being used to control sediment.	See response to comment #39.
372	At 3.2.2 2nd para, there should be a citation about the historical forest structure of ponderosa pine and western larch.	See response to comment #40.

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373	At 3.2.5.2, PVG 6, the broad depiction in the write-up does little to describe or depict the generally mixed lethal fire regime of this group as it exists in the project area. The situations of its occurrence greatly influence how fires burn, both historically and current starts, the fires growth in size and severity. There is no discussion of how location and aspect as well as topography and interspersion of vegetation as well as soil situation also greatly influence the lethality. The weather characteristics that support such large fires are also important, but not alluded to. This needs a bit more explanation because the ability to limit prescribed fire's damaging effects is a major element in considering its application if it is the only allowed vegetation management action.	See response to comment #41.
374	At page 3-8 canopy closure, again the point is the difficulty in measuring as I previously stated. The aerial measure is acceptable for broad scale periodic assessments but its use in field applications is problematic.	Canopy closure can be estimated in the field based on trees per acre or average distance between crowns, when an average crown diameter is used. This method will be used during implementation and monitoring.
375	At page 3-25 species composition, there is need for some predictions by percentage range to depict the expected amount of ponderosa pine or western larch regeneration that will actually occur in the openings created. Establishing this as parameter will verify the reality of success or failure of the applied or prescribed treatments. This is very important since many of the retained large trees actually decline in frequency and volume seed production. It will also verify if the restriction of detrimental soil disturbance is influencing this recovery. Standards to monitor or evaluate against are important measure of the appropriateness of treatments.	See response to comment #42.
376	At 3.3.2, introduction, you cite Stephens et al., that indicates climate change will increasingly complicate fire management. All the while the agency is increasingly moving toward more prescribed fire with less mechanical treatments to aid in the preparing for the restorative fire prescriptions. The agency management changes do not seem to equivocate.	See response to comment #43.
377	At 3.3.3 scope ..., elk sedge is identified as (*Carex garberi*). Has the scientific name changed from (*Carex geyeri*)?	Comment acknowledged, the correct scientific name is *Carex geyeri* and the FEIS has been corrected.
378	At 3.3.7.2 fire behavior, where is alternative 5 in the predicted	See response to comment #44.

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	effects on fire behavior?	
379	At page 3-68, elk, there is much discussion and cited information as well as bibliography cites, yet few of these discuss the addition and the resulting change of behavior on elk from the re-introduced apex predator, the Grey Wolf. Everyone associated with elk currently, relates substantially changed habits, habitat use patterns and general behavior. Has the proposal considered these factors even using anecdotal experience? There is little discussion about how historical populations estimated under the historical range of variability are so different from the desires and population goals set by Idaho Fish and Game. Changes in management strategy, population goals, and associated economics seem to be overlooked in the document. Elk security may need redefining with wolves around because they seem to be moving adjacent to populations of humans as a survival strategy.	See response to comment #45.
380	At page 3-72, last para, mountain big sage rather than Sabe.	Comment acknowledged and changed in the FEIS.
381	At page 3-76, action alternatives, fuelwood harvest is an authorized activity by the Forest Service. For that reason the authorization to use roads no matter the type is a part of the authorization process. The comments in this document about fuelwood and access for it seem to verify the general lack of coordination in management actions. It also points to a problem that appears tied to issues raised and dismissed by the agency during Travel Management Planning.	See response to comment #46.
382	At page 3-83, cumulative effects, there is a statement that indicates the State of Idaho land managers are not on-board with the program that instigated the Forest Service's Wildlife Conservation Strategy. If this program is never going to be implemented on the large areas of State of Idaho Endowment lands then it should be made clear that the National Forest is a sole cooperator.	See response to comment #47.
383	At page 3-1 20 alternative 1, it seems appropriate to point out high intensity, short duration storms, as well as events such as the June 2010 storm would continue to occur and culvert and other road failures could be expected without some form of treatments.	See response to comment #48.
384	At page 3-121, short term effects, if prescribed burning emulates	See response to comment #49.

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	natural historic fire events and effects, shouldn't this sediment effect be part of the natural background in the BOISED model? Vegetation recovery and its influence are discussed but timing is never discussed to see if a successful treatment application, such as grass seeding, has an influence. I have a similar question about information on page 3-128.	
385	At pages 3-125 &126, alternative 5, there is considerable discussion about short spikes of in-stream sediment from road obliteration processes, yet many of the roads proposed for obliteration are generally occupied by vegetation and has trees occupying the road profile. These roads may be providing a minor source of sediment through isolated failures. However, road obliteration will assuredly provide a substantial spike in sediment. This definitely will be detrimental to a fish population currently at very low levels and I expect at high risk of extirpation. So the rationale to accomplish this large amount of road obliteration work in a short period, putting fish at high risk doesn't fit with my definition of enhancement.	See response to comment #50.
386	At page 3-166, 1st para, in discussing the Council Mtn. IRA the term “relic” road is used. Come on, how many more Forest Service invented road terms are you going to throw at people. Is the road authorized or not? This does illustrate how poorly drawn and defined all the IRA work was done by the agency in Idaho. Obviously these are NOT roadless areas, no matter how you describe or define the road.	The term “relic” doesn’t necessarily refer to a Forest Service definition but does describe the existing condition and in this case it is further described that they are two-wheel motorized trails which are authorized trails.
387	At page 3-171, CWD, same problem as previously discussed about CWD size and availability.	This project design feature does address areas where the large component (>15” diameter) is not available, stating that in these areas the contractor must “assure that CWD *trends* toward desired conditions are achieved”. This will be monitored by the timber sale administrator.
388	At 3.8.1 roads open to the public in the project area are expressed as a concern. However, rationale for that statement is not really expressed. This National Forest is the people's land; roads allow it to be used for a variety of purposes. The costs and concerns of both sides of the issue are not apparent here.	See response to comment #51.
389	At 3.8.2, Forest Plan direction. I disagree that the road network	See response to comment #52.

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	matches the level of management. In most cases, the agency has established that a desired level of authorized road is seven tenths of a mile per square mile and the objective for the agency personnel is to reach that goal. There was little evaluation of what the road mileage the resource managers would need to accomplish some defined level of management. To an even greater extent, there is no discussion of the limits of budget or other caveats that limit therefore define, land management capability. The Chief's policy dictates a reduction in road mileage regardless of the need or desire to accomplish needed management actions. You also pointed out that maintenance levels provide user safety. If that were a true statement of accomplishment then the recent Roads of Concern project would not have amounted to much of an issue. Timber management, including that which is accomplished for other resources, requires a long term accessible transportation commitment to perform recurring treatments. If that is not possible then management strategies must be changed dramatically as would fire management programs. It will certainly influence the public and its use of the Payette National Forest.	
390	At page 3-176, last sentence, what is trying to be said?	Future actions related to road management for public use would analyzed in future travel analysis, undergo NEPA analysis and be documented in future decisions.
391	At page 3-177, Table 3-47, it appears footnote 8 is attributed to the wrong elements, it should be road reconstruction.	See response to comment #53.
392	At page 3-178, last para, this paragraph appears to be an admission that the present Travel Management Plan philosophy will not work. Without a suitable test to find if the philosophy will, it appears that performing all the extra work to preclude use is an expenditure that should not be necessary.	See response to comment #54.
393	At page 3-185, the discussion about biomass and Adams County should be re-written to reflect the current planning proposal.	See response to comment #55.
394	At pages 3-185 &186, payments, There should be substantial differences in how funding, directly to Adams County, functions under Stewardship and Timber Sale contracts. It is also important to recognize that Secure Roads and Schools funding is a thing of the	See response to comment #56.

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	past for this project. It should also be discussed that alternatives and the way they are implemented has a direct effect to Adams County government.	
395	At page 3-186, Table 3-49, thinning by types need to be shown to reflect both cost and possible revenues. This reflects the cost of future management and possible outcomes.	See response to comment #57.
396	At 3.10.1, the under or non-stocked forest land areas following treatment, which should include prescribed burning effects, should be planted/reforested if the total is greater than 10 acres within 5 years. I believe this is what the NFMA intended to have occur.	See response to comment #58.
397	MISSING ITEM There should be accomplishment targets set for any prescribed bum by type of treatment. A level should be set that triggers a response for salvage harvest and reforestation. This sets a level of expected proficiency in performing the burn as well implementing a recovery and restoration standard if treatments do not meet those standards. Such a performance standard is necessary to evaluate the ability to apply prescribed fire and meet management expectations. By setting the standard the course of action the NEPA evaluation is completed to perform the recovery action when standards are exceeded.	See response to comment #59.
398	TO MAKE ALTERNATIVE 5 ACCEPT ABLE TO ME. Following the October and November 2011 meetings of the PFC it became obvious to me that coalition members would have had to been made aware much earlier of the Forest Plan Objectives established by WARS and the Aquatic Conservation Strategy relating to the East Fork·drainage. For me this would have allowed a more detailed assessment of all systems within that drainage ecosystem. It would have altered treatment areas and timing to account for road management scenarios and a critical look at specific fisheries enhancements while assessing the cost and short as well as long term benefits.	Comment acknowledged.
399	Alternative 5 would have to reflect needed stand area treatment for all red, green and blue areas that, to meet PVG restoration goals that would need treatment within the next 35 years. This would allow	See response to comment #62.

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	road decommissioning (not all obliteration) to occur with timber sale activity and reduce the re-entry treatment needs. This should provide some direct cost saving. The treatments would be aimed at reducing fire risk to legacy trees, as well as insect and disease control. I believe that more treatment of the red or PVG 6 areas in Cold Spring Creek should have occurred with the proposal also to reduce fire risk and enhance wildlife feeding/security areas. That fits with the re-routing of traffic and road closures proposed.	
400	While I support the obliteration of the identified system roads and developing and enhancing the alternate route I believe the entire program could have been supported by timber sales if treatments had been undertaken as I have described. My emphasis is on timber sale contractual actions paying for these activities instead of as currently proposed because of the exclusion of treatments in part of the East Fork. Stand alone culvert replacement, road obliteration and special treatments are far too expensive to consider for such a limited benefit.	See response to comment #63.
401	What I cannot support in the current Alternative 5 is the volume of non-riparian roads proposed for obliteration that will be needed for treatment in the near future. Access is an integral part of early stand management treatments to reduce cost or increase cost recovery. There also needs to be a much more selective use of decommissioning techniques. For example gates, erosion structures and blocking methods, along with under sized culvert removal should be considered. Roads to be obliterated should be those with limited vegetation recovery. It makes little economic or sediment production sense to obliterate roads with trees, brush and grass growing in the road bed so dense and so effective that it emulates the adjacent forest but with a road profile.	See response to comment #64.
402	It is also very hard to support a costly aquatic project that has a very limited capability to increase a population of bull trout in the East Fork. These isolated remnant populations are not a substantial contributor to recovery of bull trout. In fact the State of Idaho biologists question the rationale of the federal government for even listing the bull trout because of the currently good population levels throughout Idaho. Good science seems to be topped by politics and	See response to comment #65

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	the justice in the pocket legal system.	
	Ledgerwood, Joe, Marguet, Dennis, Seiber, Roger; Swann, Tawni; Cooper, Urie; Donnelly Snowmobile Club, John Jeffries, President, and Pfost, Darin	
403 404 411 413 414 415 427	These commenters all supported the proposal for the vault toilet in the Five corners area.	Restrooms are proposed for the Five Corners area and for Shingle Flat in Alternatives 3 through 5.
	Menichetti, Syl & Carolyn	
405	With regard to the above: Some of our property lies in Range 1 EBM, within Forest Service Boundaries, and thus we have an even greater interest in the Mill Cr -Council Mtn restoration project. We have been apprised that Alt. 5 is your preferred Alternative, and in most instances, we have no quarrel with that; however, beginning with the Spring Creek area north from the Snowmobile Parking area on Mill Cr Rd, mostly in Sec. 30, we would much prefer to see it under "Restoration Helicopter stands" as it is listed in Alt 3, rather than burn only, as in Alt. 5, for the reason that there is some remarkably wonderful timber in that area, which it would seem much preferable to utilize that, rather than burn it. Granted, that area definitely needs burned also to get rid of a great deal of impassable brush, after claiming the marketable timber. There is a part, in Sec. 30, immediately adjacent (right next to our fence!) designated for "Burn" only, and that will not be permissible unless you work closely with us, and have some serious logging equipment on our side first!! The remainder of the pine stands immediately adjacent to our property line which are labeled, in Alt 5, "Restoration Harvest & Burn" definitely meets with our approval: there again, the stands are too thick, the brush is too thick -impassable for anything other than bears, badgers and tree squirrels!!	Thank you for your comment, the Responsible Official will consider your suggestion.
406	Regarding Road Numbered 51385, which borders our property closely, and #51382 we would prefer be reclassified to 'seasonally' open, and gated at the junction with #51384, after the logging, etc.,	Thank you for your comment, the Responsible Official will consider your suggestion.

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	is completed.	
407	We are apprised that Dewey Creek Road is scheduled to be decommissioned, and although we think that foolish, still am sure we can all learn to live with that, if the Cold Springs-Cutoff Saddle road is at least marginally improved from its present condition. However, we see no reason whatever for 501980100;-501980200-501980820, 501980810, 501981600 and 518541010 to be classified anything other than 'Closed/ long term closure', since they have been totally non-used now except by beasts of the forest (not man) and are so overgrown one cannot even ride ones' horse through any of them. To spend the money for machinery and man hours necessary to 'decommission' those old, old travel way, whatever they were, seems utterly foolish, plus being an unjustifiable expenditure of Federal funds -especially when we have heard Forest Service personnel say over and over again that they have not 'sufficient funds' with which to do ----(whatever fits). The unjustifiability of that kind of expenditure is further enhanced by the fact that, since they are so grossly overgrown by exceedingly thick stands of not only brush, but young Ponderosa pines, the fact of destroying all that root system by mechanical means (which means 'leaving a big mess') would only make the 'erosion' exceedingly much worse from the decommissioning than it ever would be if those areas are just totally ignored, except as a part of the whole as in burning, or other methods of forest restoration. The same scenario exists with regard to #'s 501654000, 4100, 4200, and 51843-4; 515443000, 51545, 51544, 515462000,515444000, and 51550.	The obliteration of roads as a means of restoring ecological function is supported by scientific documentation (Nelson et al 2010; Luce and Wemple 2001). There are specific short and long-term ecological objectives associated with restoring a road prism to natural contours; even roads that have grown in with vegetation can continue to impact the watershed through impeding natural soil productivity and hydrologic function through compaction, and natural drainage patterns through alteration of subsurface and surface flow (Luce and Wemple 2001, Trombulak and Frissel 2000). See the Watershed Resources, Fisheries Resources and Soils Resources, sections 3.5, 3.6 and 3.7 of the FEIS, for a more complete discussion on these objectives and road obliteration in general.
	Council Mountain Cattle Association, Justin Mink, Jodie Mink	
408	1) Road #504870200 on Dewey Creek needs to be a two cow wide cattle trail after obliteration. This is for use of movement of livestock and wildlife along the fish fence exclosure. 2) Road #50487, Dewey Creek Road, if alternate 5 obliteration occurs, a two cow wide cattle trail; the distance of obliteration; will be needed for the movement of livestock, wildlife and maintenance of fish exclosure along this part of Dewey Creek. These cattle trails could be gated at the top and bottom of obliteration. Cattle would still	The Forest and affected permittees have reached an agreement for access along Forest Service Road 504870200; this agreement is documented in the field notes in the Project record. Current road obliteration objectives call for bringing road prisms back to the natural slope and blending them in with the surrounding landscape. Under these criteria livestock movement should not be precluded after the obliteration process. The Forest will continue to

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	be able to utilize this trail even with the gates, while allowing permit holder access to the exclosures.	consider and coordinate reasonable access for livestock permittees on a case by case basis.
409	3) 1.10.6 Prescribed fire Impacts to Livestock Permittees. In the DEIS, we would strongly recommend that the wording state: "Under normal circumstances of a prescribed burn, permittees will be allowed to graze these burn areas." In addition, all fence or other related costs (ie seed, weed eradication) will be at the cost of the forest service and all efforts will be made to continue grazing.	The DEIS does state that under normal circumstances prescribed fire will not require more than seasonal rest and each unit will be monitored to see if rest from livestock grazing is necessary. If needed, the method for providing rest will be implemented through the AOI and/or the grazing permit administration process. Over the past 3 years the west zone of the Forest has burned approximately 3,000 acres through prescribed fires. None of these have resulted in areas needing fenced or requiring rest from livestock grazing for more than one growing season. This point has been clarified in the FEIS in section 1.10.6 Prescribed Fire Impacts to Livestock Permittees. Seeding and weed control efforts will be at the cost of the Forest Service. If a prescribed fire burn area requires fencing and closure from livestock grazing for two growing seasons, available funding will determine if the Forest constructs the fence.
410	4) The Council Mountain Cattle Association would request that EIS document's monitoring process and plans need to reflect cow trials as a method. 5) The Livestock Industry is a major economic vitality of the communities adjacent to the Payette National Forest (1.6.2 Economics). 6) Elk Impact; see attached letter. 7) Any improvement maintained; such as fence, spring boxes, etc; by the Council Mountain Cattle Association that are harmed or destroyed will be the responsibility of the Forest Service. 8) Reroute roads need to be completed before old roads are obliterated. 9) Roads identified in this project for permittee use and or maintenance, need to be in writing and part of the AOI's for permittee's. 10) Road #50486 needs to be a two wide cattle trail after obliteration. 11) A weed management program and plan needs to be in place. Suggestion; burn and obliteration areas could be seeded back to compete against weed encroachment.	4) A monitoring plan for effectiveness of road obliteration with permittee coordination was included in Appendix 4 of the FEIS. 6) This letter from Mike Paradis, dated April 18, 1991, refers to managing elk population numbers which is the jurisdiction of the State of Idaho and outside the scope of this project. 7) Damage to range improvements is not expected with this project due to prescribed fire (Table 2-11, Project Design Features and Mitigation Measures in the FEIS) and timber sale contracts include protection measures. If damage occurs through project implementation the Forest will be obligated to maintain or rebuild damaged range improvements. However, that obligation will be funding dependent and will not be a substitute for lack of previous maintenance of range improvements. 8) To provide reasonable access to permittees re-routed roads will be constructed prior to obliteration when possible. 9) Obliterated roads that are converted into livestock trails and or access trails for project maintenance or salting will be authorized in the AOI. 10) Current road obliteration objectives call for bringing road prisms back to the natural slope and blending them in with the surrounding

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	12) As an association, we are not in favor of this project. We feel that the short term effects will turn into long term problems with road obliteration effecting wildlife habitat, weed control, and cattle and wildlife movement.	landscape. Under these criteria livestock movement should not be precluded after the obliteration process. The Forest will continue to consider and coordinate reasonable access for livestock permittees on a case by case basis. 11) The Project area will be inventoried for noxious weeds and treated prior to and after implementation. Obliterated roads will be seeded. See Table 2-11, Project Design Features and Mitigation Measures in the FEIS. Prescribed fires are typically not seeded because native vegetation generally responds well to fire and that is one of the objectives of burning. 12) Thank you for your comments. The No Action alternative would not meet the purpose and need of the Project.
	Schwartz, Edith	
412	I am not in favor of roadless areas. I think the general public should be able to camp, hike, fish, hunt, gather wood, etc on our "public" lands. Timber stands do need managed. They need to be logged/thinned from time to time. I am not in favor of "burn only". That is way too wasteful. I am adamantly opposed to burning in the Spring Creek area, next to our private land in Section 30. Either use 1) helicopters, 2) extend road # 51385 south to that area, or 3) haul logs down through the Schwartz/Menichetti property. I thought the meeting was presented well. But there was so much information one couldn't grasp it all at once.	Thank you for your comment, The Responsible Official will consider your suggestion.
	Yantis, Alvin, Jerry, & Nancy	
416	The overall idea of restoring our forest is a great idea. However there are areas in the Payette that have a higher restoration need, for example the Graze Creek burn area. Also the people doing the project would rather follow their own agenda rather than a historic view. The information gathered may not have been gathered without bias or may have been picked over to show false results. One of the main drivers is biomass. Without an economic plant, it should be dropped from the project. For soil structure it should be chipped and spread over the soil.	Thank you for your comments.

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417	With the reintroduction of fire, weed seeds will be spread. This project does not have an adequate weed program to handle the spread of listed weeds. These weeds will out compete and kill off native plants. Also any fencing being done due to these fires should be the projects responsibility.	Project areas will be inventoried and treated for noxious weeds prior to and after Project implementation. See table 2-11, Project Design Features and Mitigation Measures. Over the past 3 years the west zone of the Forest has burned approximately 3,000 acres through prescribed fires. None of these have resulted in areas needing fenced or requiring rest from livestock grazing for more than one growing season. Fencing of prescribed burns is not anticipated in this project. However, if necessary, fencing obligations by the Forest will be considered and will be funding dependent.
418.	There is no information to support elk historically being located in the project area. They should be removed from the project and replaced with a more native version, the deer. The purpose should state not to adversely affect economics already at work in the project area.	Although elk may have been present in the Weiser River watershed in the past, the current population of elk increased mainly from transplants about the time of World War II. The importance of elk to the recreational and economical aspects of Idaho life is well documented. The Forest Service is a national, regional, and local partner with the Rocky Mountain Elk Foundation and with the IDFG across the state. The Forest Plan identifies elk as the Species of Special Interest for the Forest and, as such, suggests specific habitat management guidance to support a viable population of elk, by managing habitat that allows IDFG to meet their elk management objectives. The Forest Plan also recognizes that, due to public and agency support, some species, referred to as desired non-native species, receive management consideration. If elk had never occurred here, they would still be identified as a desired non-native species. None of this discussion about elk diminishes the importance of managing habitat for deer or any other wildlife species known to exist on the Forest. Economic analysis is included in section 3.9, Economics/Socio-Economics.
419	There is a need to look at the positives of grazing. For economic vitality, reduction of wildland fire hazards, rebuilding soil structure, and others. Any damage done to improvements built or maintained by the permittees should be fixed at the projects expense. Any path used for the movement of cattle should not be adversely affected, for it	Livestock grazing is a major component of the local economic vitality and grazing can have positive effects on reducing fuel loads and improving soil structure. However, grazing impacts are not a driving force that will contribute to meeting this project's goals and objectives.

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	restricts use and dispersement needed to evenly reduce fuels.	Range improvements will be identified and protected within the Project area and loss or damage to them is not expected. See Table 2-11, Project Design Features and Mitigation Measures in the FEIS. If damage occurs through project implementation the Forest will be obligated to maintain or rebuild damaged range improvements. However, that obligation will be funding dependent and will not be a substitute for lack of previous maintenance of range improvements. The Forest has and will continue to work with the affected permittees to providing reasonable access and means for cattle movement and distribution throughout the Project area on a case by case basis.
420	Money from this project should be set aside for the responsibility of all fish fences on the project area. Roads being taken out should have greater effort put forth to stay on the map either as trails or other pathways to be used by the public. They should not take away access that leads to fences or private property. I do not support this project. There needs to be greater effort invested in involving adjacent communities and allowing them to have more say in what happens to their forest. Too many times projects like this one are forced upon locals, by those who have personal agendas. Short term fixes turn into long term problems.	Thank you for your comments. This project follows Forest Plan direction and the public involvement is discussed in section 1.8 of the FEIS. The No Action alternative would not meet the purpose and need of the Project.
	Idaho Forest Group, Mac Lefebvre	
421	As a member of the Payette Forest Coalition, I have pledged my support for Alternative 2. Recently, it came to our attention as a group that Alternative 2 may not fully address the Aquatic Conservation Strategy as not enough was being done to improve bull trout habitat in the East Fork Weiser watershed. IFG supports an economically responsible, selective approach in determining changes to the road network in this area. It is also important to recognize that a viable road network is retained for future forest management as well as other land uses. In general, we feel that these efforts should be concentrated on areas near or in RCA's and avoided on roads that are on ridgetops and have minimal impact on water quality. In addition, seasonal access restrictions and long	See response to comment #64.

	Concerns	Forest Service Response
	term closures should be considered to reduce impact, cost, increase elk security, and ensure that these roads are retained for future use. Pending the outcome of further discussion within the PFC, I will be providing additional comments on this subject in the near future.	
422	Based on Table 3-51, economic analysis for the project shows the cost of restoration activities exceeding the anticipated revenues from timber harvest under all alternatives. Understanding these are rough estimates and are subject to lumber markets, it is our opinion that discretion be used in maximizing the cost/benefit when selecting restoration activities, including prescribed fire and biomass opportunities. It is our hope that this project is at or near being self sustaining economically. Please consider the following questions: 1) This project relies heavily on burning to accomplish the objectives. Will $/ac costs be considered when prioritizing burn only stands? How will these be prioritized to maximize efficiency and cost/benefit? Given all of the variables associated with trying to burn on a landscape level including funding and weather, what is the plan to get it all accomplished in a fiscally responsible way? How will progress against goals (acres completed) be monitored? Will salvage logging be allowed where excessive mortality is caused by fire? 2) During a recent visit to the WUI in Grossen Canyon/Camp Cr, I noticed a wide variety of fuel loadings/types as well as aspect in the burn only stands, how will these be burned without jeapordizing private holdings in the area? How will the timing of the burning be implemented to meet the objective to each unique type? Was this landowner and other landowners contacted for access to these stands (where FS access wasn't viable) so they could be harvested prior to an underburn? Were temporary roads considered for logging access? Can this be reconsidered as a part of this NEPA? 3) In larger burn only stands that are highly departed from HRV as seen in Grossen Canyon, would long term objectives in retaining seral species and mimicking HRV be better accomplished through a	1) Scheduling the prescribed burning in Burn Only stands will be dependent on the progress in completing the harvest activities in areas where the two types of treatments are in close proximity. Most of the harvest units would be underburned after harvest as well. Large burn blocks would be the most efficient method of implementation. Prioritization would be based on cost efficiency on an area basis, cost versus resource benefit, and coordination with other aspects of project implementation. Monitoring of acres treated is part of our target reporting in the Forest Service. Salvage logging would require additional NEPA analysis. 2, 3) Pre-treatment in Burn Only stands to facilitate prescribed burning is part of the project design. Denser stands with heavy fuel loads may require more extensive pre-treatment than the more open stands with lighter fuel loads. Pre-treatment, utilizing the proposed shaded fuelbreak and timing of the prescribed burning will be used to provide protection to the adjacent private lands. Timing will be dependent on the "burn window" which could may be vary by vegetation type and require multiple burn operations. Blacklining may be used, which is the pre-burning of fuels adjacent to a control line before igniting a prescribed burn. Blacklining is usually done in heavy fuels adjacent to a control line during periods of low fire danger to reduce heat on holding crews and lessen chances for spotting across control line (National Wildfire Coordination Group 2011). No additional easements for this project have been secured for access by the Forest through private land and it wasn't identified in the scoping process. In the Grossen Canyon/Camp Creek area, the timbered slopes are generally above 45% which is not suitable for tractor logging. Existing roads are in the drainage bottom and creating a road network suitable for skyline harvest was not considered in detail due to the miles of road that would be required.

	Concerns	Forest Service Response
	mechanical harvest followed by an underburn? From an economic perspective, what is the cost with burn only, versus building/decommissioning a temporary road and selling the timber? Should burning be avoided on some of these stands to include these stands for harvest in the next NEPA if they are not going to be harvested with this NEPA?	Helicopter logging the Burn Only stands has been analyzed and is included in Alternative 3.
423	We appreciate the opportunity to comment on this project and feel that it, if implemented, represents a victory for the species it is designed to protect as well as the communities and users in the surrounding areas.	Thank you for your comments.
	House, Richard	
424	My name is Richard House and I own Lock-it-Mini-Storage which owns 130 acres of property up Mill Creek Rd. in the National Forest. The "Old Cascade Road" enters my property on its western border. This border is adjacent to National Forest property which also has the "Old Cascade Road" running through it. The Old Cascade Road was the only way I could access the southwestern part of my property with a vehicle. For this reason I am strictly opposed to bringing this historic road back to grade. I am talking about the portion of the road that goes from the snowmobile parking area across a culvert then along Mill Creek all the way to my property. I realize the road also crosses another private property owned by Jay Langer, so my concern is for the whole road including the part upstream from (east of) the Langer property.	This road is currently classified as “unauthorized” by the Payette National Forest Travel Plan and is not proposed to be added to the Forest Service System as it is not needed for future resource management. The regulations governing access across National Forest lands to private lands are found in the Code of Federal Regulations, 36 CFR 251.110. These regulations set forth the procedures by which landowners may apply for access across National Forest System lands, and the terms and conditions under which such authorizations shall be issued. Regulation and policy state that if there is existing access or the access can be reasonably accommodated on non-National Forest (NF) lands, then the authorized officer can deny request for additional use of NF land for access to private property. The Payette National Forest Supervisor signed a Decision authorizing access across NF land and to the northeast corner of your property on July 20, 2010.
	Idaho Department of Fish and Game, Scott Reinecker	
425	Our Department has reviewed the DEIS for the proposed Mill Creek – Council Mountain Landscape Restoration Project. This project is based on recommendations provided by the Payette Forest Coalition (PFC) to the Payette National Forest (PNF). Our	Thank you for your comment.

	Concerns	Forest Service Response
	Department participated in the PFC process, and as we said in our scoping response letter, we agree that the PFC recommendations are a good foundation from which to build the proposed project. We understand the paramount priority of this proposed project is to improve wildlife habitat for white-headed woodpeckers, by restoring forest stands to historical range of variability (i.e. restore large diameter ponderosa pine communities), and improve wildlife habitat for other species as appropriate. Both Alternatives 2 and 5 propose essentially the same vegetative treatments and substantially meet this goal for white-headed woodpecker habitat and restoring forest stands to historical range of variability. We understand that Alternative 5 is the preferred alternative.	
426	Restoration of white-headed woodpecker habitat is important to our agency; however, maintenance of effective elk habitat is equally important. Elk habitat effectiveness and security is influenced by amount and proximity of forage and cover components, adequacy of hiding and thermal cover, and open road densities. As hiding cover dissipates the influence of open roads on elk habitat effectiveness is magnified. The 50,000 acre project area is inherently open and the vegetation treatments in Alternative 2 (as well as alternatives 3 through 5) will result in a much more open forest condition. The project area is encompassed by Game Management Unit (GMU) 32A. Department data indicate that elk numbers in GMU 32A are at the low end of objective for cow elk and well below objective for bull and adult bull elk. Data from 2007 population surveys showed an estimated 706 cow elk in GMU 32A. Management objective is 700 – 1,100 cow elk. Data also showed an estimated 85 bull elk and 32 adult bull elk. Management objectives are 150 – 200 bull elk and 75 – 125 adult bull elk (IDFG 2011). High vulnerability of elk during hunting seasons has been identified by the Department as an issue impacting elk populations in and around GMU 32A. Openings created from past timber harvest have compounded elk vulnerability (IDFG 2011). In a letter dated April 19, 2011, the Department recommended to the	Thank you for providing the detailed information on appropriate elk management in your comment. The Forest agrees with your recognition of the conflict between managing the landscape for restoration attributes, which should benefit Habitat Family 1 species, and the need to maintain adequate habitat for other Habitat Families in the same area and at the same time. The initial project design included consideration of the WCS Conservation Principles, which include managing for large, interconnected blocks of habitat. We incorporated this strategy, specifically to provide habitat for elk and Habitat Family 2 species, such as pileated woodpeckers. The current Forest Plan does not provide a specific, required road density for wildlife management, in general, or for elk management, in particular. Appendix E of the Forest Plan suggests a road density approaching one mile of road per square mile of land, following the Hillis Paradigm, and provides a graph illustrating the drop in elk habitat effectiveness correlated to increased road density. The WCS DEIS does address the road density issue; generally open road densities greater than 1.7 miles of road per square mile are considered detrimental to many wildlife species. Although Alternative 5 addresses this issue with a more aggressive road obliteration design, the other action alternatives do not provide that same level of road density reduction. The road obliteration included in Alternative 5 is focused on the Upper East Fork Weiser River

	Concerns	Forest Service Response
	PNF that the Wildlife Conservation Strategy retain Appendix E of the PNF LRMP, Management Strategies to Address Elk Vulnerability to Mortality, Travel Management Impacts, and Security Needs. Our reasoning was based on the demonstrated relationship between elk vulnerability to hunter harvest, elk habitat effectiveness, cover, and roads and trails (Naylor et al. 2009, Rowland et al. 2004, McCorquodale et al. 2003, Unsworth et al. 1998). We continue to believe that elk habitat effectiveness is an issue that should be addressed in the planning process. Wildlife Guidelines WIGU08 and WIGU13 in the 2003 Payette National Forest Land and Resource Management Plan (LRMP) call for addressing big game habitat security needs. Appendix E in the LRMP recommends using the Hillis Paradigm (Hillis et al. 1991) to meet these guidelines. Using this strategy, the PNF would make sure to leave at least 30% of the project area in elk security habitat with adequate hiding and thermal cover components. Currently, only 16% of the project area is in security habitat and much of that is without adequate thermal and hiding cover. The goal of returning forested stands to the historical range of variability means opening the forest up and debasing these security areas further. Ways to mitigate this impact to elk could consist of creating more effective closures on unauthorized roads and placing system roads into long-term closures (such as Alternative 5); or reducing vegetative treatments within areas that already provide security habitat and closing more system roads seasonally (such as alternative 4) or a combination of both. Although the road rehabilitation package in Alternative 5 was designed primarily for bull trout, it also improves the number of elk security acres (net gain of 84 acres). Combining the benefits of the road treatment packages in both Alternatives would move the proposed project in a more favorable direction for mitigating the vegetation treatment effects on fish and wildlife habitat. We recommend refining this alternative to further mitigate impacts to elk habitat. Thank you for this opportunity to comment on the DEIS. If you have any questions regarding the Department's concerns please contact Jeff Rohlman at our McCall office (208-634-8137).	drainage, providing recovery support to bull trout Critical Habitat, but also includes the most decommissioning in the other subwatersheds of the action alternatives. All action alternatives require that after a closed system road is used for management activities, it would also be effectively closed and also include effectively closing roads known to have ineffective closures. Alternative 4 also includes 10 miles of open road that would be converted to open seasonally, thereby reducing elk vulnerability. The Forest desire for restoring the landscape to HRV includes a reduction of road density in the Project to mitigate road related effects and meet Forest Plan direction. Our best effort for elk management at this time, as you point out, would be for a blend of parts of multiple action alternatives, while still providing all of the other important aspects of the Project. Further reduction of the overall road density in the Project area may occur in the future, as restoration activities continue to move and maintain these forested stands toward HRV and improve watershed conditions. Future potential actions will be analyzed at the time they are proposed.

Comments from Federal, State, and Local Officials

OFFICE OF
BOARD OF COUNTY COMMISSIONERS
ADAMS COUNTY
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Received
12/12/11
Steve Penny

December 12, 2011

Payette National Forest
ATTN: Stephen Penny
800 West Lakeside Avenue
McCall, ID 83638

RE: Comments draft DEIS Mill Cr.-Council Mtn. Landscape Restoration Project

Dear Payette Forest Supervisor;

Thank you, for allowing the Adams County Board of Commissioners to review and comment on the draft Environmental Impact Statement for the Mill Creek-Council Mountain Landscape Restoration Project. Commissioner Paradis has also participated in the development of this project with the Rocky Mountain Elk Foundation (RMEF) sponsored Payette Forest Coalition (PFC). As a member of that coalition we support alternative two, which mirrored the PFC recommendations and prefer that alternative to be the agency's selected alternative. The commissioners could support some of the elements of alternative 5 to modify alternative 2 but with caveats that will be explained below. We firmly support the coalition and the collaborative process in the development of a management program for implementing a complex management program such as this landscape level restoration program, especially controversial programs. Mike Paradis hopes to continue working in the PFC as we deal with the New Meadows project area.

Our comments below are made to deal with information presented in the draft document that concerns us. Following these comments we will discuss what items of alternative 5 might be incorporated to enhance alternative 2 to a more acceptable Forest Service management program for the area.

CLARIFY, QUESTION, REFUTE
At page 1-5, para. 1, there is a statement about fewer ponderosa pine and western larch than existed historically. There is no cited basis for this statement. The footnote has a citation for Huckaby, et. al.2003. that document relates to the Colorado Front Range and a variety of ponderosa pine (var. scopulorum) that responds to a very different intercontinental climatic situation. In addition western larch are not present in the range

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and seem tied tightly to the climax area of certain true fir species, which can be validated in the larch symposium proceeding. We also have similar problem with statements at page 2-5 using Huckaby as a reference.

At page 1-6, 2nd para., many things are vulnerable to future events such as the type of fire described, including un-roaded, un-managed forests. Therefore, pointing to roads that had vegetation recovery is a straw-man developed to support the agency's predilection to obliterate roads. Therefore, access is eliminated that might be used to manage the forests and reduce fire severity. These elements plainly influence the health and welfare of the constituents of Adams County.

At page 1-7,1st para., after all the discussion there has not been any explanation of how frequent are the events such as the June 2010 rainfall volume and duration on a saturated soil at the end of the snowmelt period. Is it sufficiently frequent to consider design criteria changes or is something close to the 1 in 100 years? The County Roads Department has been dealing with the damage from the storm as such does not consider it a normal storm event.

At page 1-8, 2nd para, 2nd bullet, while noxious weeds are not expanding and new invaders not present, there is no discussion how these species will respond to the new regimen and forest structural arrangement. These are introduced plants that may become significant problems with these changes. The county wishes to continue to work with the Forest Service to assure that these sources of weeds are controlled or eradicated. Access for control is very difficult without access roads and ATV trails.

At page 1-13,1.5.2, there is a cite (Kimball and Stephenson 2010), this is a draft document out apparently for review by peers and others. How or why this strategy is being used or adapted in its review draft form is unclear. This is especially true if it is a public policy document that has not completed the appropriate state government review and vetting steps. Unfortunately this is not the only problem with documents and their availability. Through out the document there are citations to documents yet written by nearly every specialist on the ID team? How can a reviewer adequately review the data and reference resources if the write-up, with appropriate bibliography, is not available? Courts have typically ruled against proposed actions where plans or documents are available for public review.

At page 1-16, 1st para., the PFC's statement dealing with elk security and habitat enhancement isn't even paraphrased correctly. This is an element of some issue with some member of the PFC. Hunting and hunters provide a significant boost to our local economy.

At 1.10.1, as you pointed out there have been a number of federal actions throughout the area especially since the early 1970's. Those project activities during that time frame supported a much more vibrant economy in Adams County. Prior to that time limited actions were occurring back to the 1930's. During the early history of the Payette, and its

assimilated National Forests, an array of trails exist which provided people access through the National Forest. In many instances these trail routes were replaced by roads used to harvest timber or for other purposes. As they provided access and trail maintenance money was difficult to obtain the trails were abandoned or neglected by the agency. Now many of these roads that replaced trails are being scheduled for obliteration. This will reduce access to below historic levels. The Forest Service should assure that these trail routes remain when road obliteration is considered in the area. The roads often did not follow the exact trail location but accessed the same area. These roads that are planned for obliteration, should as a minimum, provide walking and horse-use access. Some of these trail-road conversions were identified by our Natural Resource Committee and also members of the PFC, maps were provided. The agency has an historical archive they can also reference in the Forest Supervisors office.

At page 2-6, Restoration Stand…., Members of our Natural Resources Committee that are silviculturists have raised the questions when they reviewed the Payette Wildlife Conservation Strategy during that comment period, as well as other constituents continue to ask questions on the actual sequencing and time frames of treatment of these areas (using the term stands), with, harvest entries and broadcast or area burning. The questions relate to the accommodation for obtaining regeneration and once it is established how that next crop is protected, the tending of any developing trees and the expected treatments to reach the desired size and spacing. This is without explanation yet combining prescribed fire with area treatments is a complicated task that failed a number of aspiring managers. Many of our experienced forest managers and some prescribed fire personnel do not believe outcomes you predict are actually achievable. It appears the cost of manpower and area preparations would be prohibitively expensive. This uneven-aged management activity needs substantial clarification about its execution. This is especially true since it is a substantial shift from previous existing management experience. The ability to accomplish it based on your forecasted "climate change" also needs substantial clarification. We are aware that this "restoration forest management" is expensive, requiring substantial investments with low levels of cost recovery. We are concerned about its actual financial capability to be implemented because of the financial situation in government. We obviously see a very direct effect on the County.

At page 2-6 thru 2-10, canopy closure is used as a metric standard for a number of forest restoration goals or standards. This is a very difficult standard to measure in the field or for anyone trying to verify accomplishment. A more appropriate measure would be basal area or between tree spacing by diameter class. An explanation in the appendix would be appropriate so it can be tested by those people so inclined. We have a similar problem with Appendix A of the Forest Plan referred to in this document.

At page 2-11 unauthorized roads, the problem with unauthorized roads is verification or validation of existence and documentation of problems or conditions. The agency has to restrict any sort of treatments to the actually identified unauthorized roads. A roadbed is a specific, identifiable location; therefore treatments must be restricted to a previously identified location. Simply identifying another roadbed in the field not identified by GIS or mapping feature should not be decommissioned because during the NEPA process X

had been identified. Treatments should only be applied to a verified location as required by the law. In other words do not overreach treatment locations. If roadbeds are; sufficiently vegetated, or are on nearly flat ground, or fit the appropriate soil or rock situations, they present little problem, they have recovered as Congress expressed in the laws dealing with recovery of lands.

At page 2-11 there is an inference that a TAP (transportation analysis process) was prepared for this area. Does this applied process comply with the process required by Part A of the Travel Management Plan rule? Is this the public involvement process without specific disclosure? We have been assured that County governments were going to be involved in this process, we apparently missed the meeting.

At page 2-11, the road to trail conversion process while discussed has no specifications and the monitoring discussion in this appendix; it also does not allude to a changed specification or process for on the ground accomplishment. This needs to change and the ability to verify and test the actual use must be developed. This should be mutually monitored with the interested or involved publics. The public in the county has great doubt about the benefits of obliterating vegetated roads to achieve a water quality goal regardless of the Chief's road closure policy.

At page 2-14, dispersed recreation, the word "may" is used when discussing the potential development of dispersed recreation sites, turnouts, parking areas and passing areas on system roads with intersecting unauthorized roads. This should be a "will" consider statement making denial for political purposes, rather than environmental reasons very difficult. These short sections are an absolute non-problem and should not be any kind of environmental concern. Any environmental problems would have all ready been identified. The other beneficial effects are enhancements to recreation and public health and safety in using the authorized road.

At page 2-15, Deseret Cabin trailhead, this discussion about recreation improvements missed the point about the facility need and a location. The Donnelly Snowmobile Club offered to build and help provide maintenance of a toilet at the 5 Corners road intersection at the head of the East Fork. That was a proposal encompassing all alternatives. The Backcountry Horseman wanted a toilet at the Deseret Cabin trailhead, they did not offer any funding or maintenance support through agreement. This area is a trailhead for horseman wanting to reach the Council Mountain roadless area and conduct weekend rides from that area.

At 2.3.2.3 Alternative 3, helicopter harvesting and associated new road construction in the identified PVG's should be an optional package that could be assigned to alternative 2 and 5 as a minimum. The agency is normally very conservative in their estimates or capability to operate on these kinds of areas. Using the option approach for treatments allows industry to make an economic choice. The Grays Creek fire salvage supports the fact that industry finds opportunity were the Forest Service does not. Being restrictive with seasonal operations could harm the potential use.

At page 2-38 licks and wallows, it seems that the riparian management requirements provide sufficient wallow protection? Mineral licks associated with naturally minerals should be identified before sale implementation because they have unique wildlife interactions tied to them. Salt or other minerals placed by permittees should be coordination items handled by AOI's.

At page 2-40, culverts, there does not appear to be any need for permanent culverts to have AOP when they are not fishery streams. This greatly increases costs with little or no benefit.

At page 2-40, obliteration of temporary roads, one of the terms used but not found in the glossary is "grubbed". What is the process and how is it used or applied? Up to 80% ground cover is required, yet monitoring reports from other road obliterating projects on the Council District indicated such a high level is detrimental to long term recovery and stabilization by vegetation. Some reconciliation is needed. The commissioners have asked many times that the Forest Service consider a range of treatments for road decommissioning, yet obliteration is the only treatment apparently being considered. We have also asked about grass seeding with effective seed and techniques but few are being used in our estimation.

At page 2-40, closed system roads, statements about culverts here and in the Alternatives don't seem to agree, especially culvert removal. There also seems to be disagreement with Alternative statements and administrative use allowance.

At page 2-41, tractor units, the statements need some clarification and explanation. There are a number of statements that are open-ended.

At page 2-43, 2nd item, effective cover is not defined in the glossary or an appropriate reference provided.

At page 2-44, CWD, if there is no CWD >15" there is no discussion about alternatives or in-lieu of standards. This should not be a haul-in requirement.

At page 2-45, reclaim, there are word missing in the statements or there are redundant statements.

At page 2-47, Ips, it is just as important to impose operational constraints on all thinning operations as it is to commercial operations. Adjacency has little to do with susceptibility to the insect. It would seem important to make biomass and firewood more available for future utilization by requiring placement of tops, culls and other woods waste above a road unless the material is being used to control sediment.

At 3.2.2 2nd para, there should be a citation about the historical forest structure of ponderosa pine and western larch.

At 3.2.5.2, PVG 6, the broad depiction in the write-up does little to describe or depict the generally mixed lethal fire regime of this group as it exists in the project area. The situations of its occurrence greatly influence how fires burn, both historically and current starts, as well as the fires growth in size and severity. There is no discussion of how location and aspect as well as topography and interspersion of vegetation as well as soil situation also greatly influence the lethality. The weather characteristics that support such large fires are also important, but not alluded to. This needs a bit more explanation because the ability to limit prescribed fire's damaging effects is a major element in considering its application if it is the only allowed vegetation management action. It would also seem appropriate to indicate how much reliance may be needed on mechanical treatments to actually achieve desired treatment outcomes.

At page 3-25 species composition, there is need for some predictions by percentage range to depict the expected amount of ponderosa pine or western larch regeneration that will actually occur in the openings created. Establishing this as a parameter will verify the reality of success or failure of the applied or prescribed treatments. This is very important since many of the retained large trees actually decline in frequency and volume seed production. It will also verify if the restriction of detrimental soil disturbance is influencing this recovery. Standards to monitor or evaluate against are important measure of the appropriateness of treatments.

At 3.3.2, introduction, you cite Stephens,et.al. that indicates climate change will increasingly complicate fire management. All the while the agency is increasingly moving toward more prescribed fire with less mechanical treatments to aid in the preparing for the restorative fire prescriptions. The agency management changes do not seem to equivocate.

At 3.3.7.2 fire behavior, where is alternative 5 in the predicted effects on fire behavior?

At page 3-68, elk, there is much discussion and cited information as well as bibliography cites, yet few of these discuss the addition and the resulting change of behavior on elk from the re-introduced apex predator, the Grey Wolf. Everyone associated with elk currently, relates substantially changed habits, habitat use patterns and general behavior. Has the proposal considered these factors even using anecdotal experience? There is little discussion about how historical populations estimated under the historical range of variability are so different from the desires and population goals set by Idaho Fish and Game. Changes in management strategy, population goals, and associated economics seem to be overlooked in the document. Elk security may need redefining with wolves around because they seem to be moving adjacent to populations of humans as a survival strategy.

At page 3-76, action alternatives, fuelwood harvest is an authorized activity by the Forest Service. For that reason the authorization to use roads no matter the type is a part of the authorization process. The comments in this document about fuelwood and access for it seem to verify the general lack of coordination in management actions. It also points to a

problem that appears tied to issues raised and dismissed by the agency during Travel Management Planning.

At page 3-83, cumulative effects, there is a statement that indicates the State of Idaho land managers are not on-board with the program that instigated the Forest Service's Wildlife Conservation Strategy. If this program is never going to be implemented on the large areas of State of Idaho Endowment lands then it should be made clear that the National Forest is a sole cooperator. It appears that the state law requiring maximizing financial returns from endowment lands would preclude maximizing woodpeckers and wildlife.

At page 3-120 alterative 1, it seems appropriate to point out high intensity, short duration storms, as well as events such as the June 2010 storm would continue to occur and culvert and other road failures could be expected without some form of treatments.

At page 3-121, short term effects, if prescribed burning emulates natural historic fire events and effects, shouldn't this sediment effect be part of the natural background in the BOISED model? Vegetation recovery and its influence are discussed but timing is never discussed to see if a successful treatment application, such as grass seeding, has an influence. We have a similar question about information on page 3-128.

At pages 3-125 &126, alternative 5, there is considerable discussion about short spikes of in-stream sediment from road obliteration processes, yet many of the roads proposed for obliteration are generally occupied by vegetation and has trees occupying the road profile. These roads may be providing a minor source of sediment through isolated failures. However, road obliteration will assuredly provide a substantial spike in sediment. This definitely will be detrimental to a fish population currently at very low levels and we suspect at high risk of extirpation. So the rationale to accomplish this large amount of road obliteration work in a short period, putting fish at high risk doesn't fit with our definition of enhancement.

At page 3-166, 1st para, in discussing the Council Mtn. IRA the term "relic" road is used. Come on, how many more Forest Service invented road terms are you going to throw at people. Is the road authorized or not? This does illustrate how poorly drawn and defined all the IRA work was done by the agency in Idaho. Obviously these are NOT roadless areas, no matter how you describe or define the road. This verifies the Commissioners concerns about this program and the lack of coordination with local governments when it was being put together.

At 3.8.1 roads open to the public in the project area are expressed as a concern. However, rationale for that statement is not really expressed. This National Forest is the people's land; roads allow it to be used for a variety of purposes. The costs and concerns of both sides of the issue are not apparent here.

At 3.8.2, Forest Plan direction. The road network present on the Forest appears to more closely match the level of management that is being applied. In most cases, the agency in

Forest Planning directives has established that a desired level of authorized road is .7miles per square mile and the objective for the agency personnel is to reach that goal. There was little evaluation of what the road mileage the resource managers would need to accomplish some defined level of management. To an even greater extent, there is no discussion of the limits of budget or other caveats that limit therefore define, land management capability. The Chief's policy dictates a reduction in road mileage regardless of the need or desire to accomplish needed management actions. You also pointed out that maintenance levels provide user safety. If that were a true statement of accomplishment then the recent Roads of Concern project would not have amounted to much of an issue. Timber management, including that which is accomplished for other resources, requires a long term reusable and accessible transportation commitment to perform recurring treatments. If that is not possible then management strategies must be changed dramatically as would fire management programs. It will certainly influence the public and its use of the Payette National Forest.

At page 3-177, Table 3-47, it appears footnote 8 is attributed to the wrong elements, it should be road reconstruction.

At page 3-178, last para, this paragraph appears to be an admission that the present Travel Management Plan philosophy will not work. Without a suitable test to find if the philosophy will, it appears that performing all the extra work to preclude use is an expenditure that should not be necessary. Maybe the preclusion philosophy should be tried on roads rather than the elimination philosophy.

At page 3-185, the discussion about biomass and Adams County should be re-written to reflect the current planning proposal. The Commission is still seeking technology and facility capable of utilizing biomass in some way. Newer technology is being sought which allows a host of carbon sources to be treated. We believe that biomass utilization is very desirable, reducing the smoke of burning waste materials in the woods.

At pages 3-185 &186, payments, There should be substantial differences in how funding, directly to Adams County, functions under Stewardship and Timber Sale contracts. It is also important to recognize that Secure Roads and Schools funding is a thing of the past for this project. It should also be discussed that alternatives and the way they are implemented has a direct effect to Adams County government. The shift in direct revenues to the county is a major consideration for the project as well as the ability of the project to create jobs and generate a secondary stream of revenue within the community. The discussion does not provide a very clear picture of this element.

At page 3-186, Table 3-49, thinning by types need to be shown to reflect both cost and possible revenues. This reflects the cost of other future management and possible outcomes.

At 3.10.1, the under or non-stocked forest land areas following treatment, which should include prescribed burned area effects, should be planted/reforested if the total is greater than 10 acres within 5 years. This is what the NFMA intended to have occur.

MISSING ITEM
There should be accomplishment targets set for any prescribed burn by type of treatment. A treatment burn level should be set that triggers a response for salvage harvest and reforestation. This sets a level of expected proficiency in performing the burn as well implementing a recovery and restoration standard if treatments do not meet those standards. Such a performance standard is necessary to evaluate the ability to apply prescribed fire and meet management expectations. By setting the standard the course of action the NEPA evaluation is completed to perform the recovery action when standards are exceeded. For example a burn prescription indicates that 10% of the burn area will have ½ acre opening created by burning standing groups of trees. When actually completed the area has 3 areas ranging from 5 to 10 acres with 80% of the live trees burned and dead or dying. The decision would be to implement salvage or set-up a fuel wood program to recover the dead trees and prepare for reforestation. The commission realizes that prescribed fire is not exact but recovery when errors occur should be part of a programs plan.

TO MAKE ALTERNATIVE 5 ACCEPTABLE.
Following the October, November and December 2011 meetings of the PFC it became obvious to the commissioners and our Natural Resources Committee participating members that coalition members would have had to been made aware much earlier of the Forest Plan Objectives established by WARS and the Aquatic Conservation Strategy relating to the East Fork drainage. For us this would have allowed a more detailed assessment of all systems within that drainage ecosystem. It would conceivably have altered treatment areas and timing to account for road management scenarios and a critical look at specific fisheries enhancements while assessing the cost and short as well as long term benefits.

The Roads sub-committee established by the PFC will probably aid in making more apparent our concerns since Commissioner Paradis is on that committee. That committee will hopefully establish some standards for assessing decommissioning activity as well as point out why we commissioners are so concerned about the impacts of road decommissioning. We hope the Forest Service will utilize that material. Our familiarity with Forest Service management decisions has indicated to us that while obliterating a road may be looked upon by some as a temporary exclusion, we historically have found that there is a permanence fixed to those Forest Service actions. We believe that it must be very clear that these actions are to correct a problem of some temporary immediacy and in the case of roads, access in the future, they will account for the watershed sediment problems through various means. It will NOT preclude road access in the future. Adams County in its law enforcement, search and rescue, access to and through the Forest has a very direct interest in roads and access management that we hope can be done collaborative with the Forest Service. Because of the formation of this PFC roads sub-committee at this late juncture, Adams County reserves the right to add additional comments toward this project after the official closure date of December 12. We have had verbal commitment from Greg Lesch and Bob Giles that this is acceptable.

Alternative 5 would have to reflect implementation of needed stand area treatment for all red, green and blue areas in the Cold Springs, Joker Creek and Upper East Fork that, to meet PVG restoration goals that would need treatment within the next 35 years. This would allow road decommissioning (not all obliteration) to occur with timber sale activity and reduce the re-entry treatment needs. This should provide some direct cost saving. The treatments would be aimed at reducing fire risk to legacy trees, as well as insect and disease control. More treatments of the red or PVG 6 areas in the identified areas should have occurred with the proposal, to reduce fire risk and enhance wildlife values in the future. That fits with the re-routing of traffic and road closures proposed.

While we support the obliteration of the identified system roads and developing and enhancing the alternate route we believe the entire program could have been supported by timber sales if treatments had been undertaken as we described. Our emphasis is on timber sale contractual actions paying for these activities instead of as currently proposed because of the exclusion of treatments in part of the East Fork. Stand alone culvert replacement, road obliteration and special treatments are far too expensive to consider for such a limited benefit.

What we can not support in the current Alternative 5 is the volume of non-riparian roads proposed for obliteration that will be needed for treatment in the near future. Access is an integral part of early stand management treatments to reduce costs or increase cost recovery. There also needs to be a much more selective use of decommissioning techniques. For example gates, erosion structures and blocking methods, along with under sized culvert removal should be considered. Roads to be obliterated should be those with limited vegetation recovery. It makes little economic or sediment production sense to obliterate roads with trees, brush and grass growing in the road bed so dense and so effective that it emulates the adjacent forest but with a road profile.

It is also very hard to support a costly aquatic project that has a very limited capability to increase a population of bull trout in the East Fork. These isolated remnant populations are not a substantial contributor to recovery of bull trout. In fact the State of Idaho biologists question the rationale of the federal government for even listing the bull trout because of the currently good population levels through out Idaho.

Because Congress has not reauthorized Secure Rural Schools, Adams County does not support using the stewardship method for projects because it does not provide 25% receipts for the local schools and county road departments. The Forest Service should administer sale contracts and conventional timber sales to provide the 25% receipts. One of the goals of the PFC is to 'support and enhance the economic viability of surrounding communities'. Stewardship projects do not achieve this.

The Forest Service should set a goal to have all activities finished within the project area within 5 years, instead of 10.

In each of the 4 timber sale areas, the Forest Service should put up 1 or 2 small sales of 250MBF to give smaller contractors a chance to bid on projects. This would be in line with the economic recommendations of the PFC.

Adams County has some real concerns about the negative balance of the entire project, estimated at -$2.5 million. Putting a project together like this is very irresponsible of the Forest Service to have to apply for that many appropriated dollars to finish the project. If additional revenue is required to accomplish the obliteration scheduled in Alt. 5, then enough timber needs to be harvested in the Cold Springs Creek, Dewey Creek, and upper East Fork areas to pay for it.

After careful review of the maps and an on site tour, Adams County has discovered that road 50165, commonly known as the Old Cascade Road, is slated for full scale obliteration at the lower portion that provides access to private property, and the upper portion in the upper Dewey Creek to Squaw Flat areas. This road is a RS 2477, and obliteration is unacceptable to the County. An adjacent road is that is being called road 165 is gated and listed as a seasonal closure on the travel map, but in reality, the gate has stayed closed for years, substantiated by the large tank trap located approximately 100 yards east of the gate. Adams County asserted these RS 2477 claims in 1995 and is willing to continue with the validation process to acquired jurisdiction if the obliteration option is chosen.

Although Adams County was granted cooperating agency status at the start of the project, there was very little contact from the team leader about upcoming meetings, meeting notes being shared, etc. The County was told that most meetings had been scheduled at the last minute. It would be our hope that that issue could be resolved in the future. In March of 2011, Adams County passed a resolution asserting coordination status from the Forest Service, and at this point no action has been forthcoming, although a meeting is scheduled with the Supervisor this month.

Additional specific comments will be made at a future date when the PFC roads sub-committee can make recommendations. Until that time, Adams County supports Alt. 2, as does the PFC. The Forest Service should follow the recommendations of the PFC.

As commissioners and citizens we hope to be able to work toward solutions in the future.

Adams County Board of Commissioners

Bill Brown

Mike Paradis

Joe Holmes

11

STATE OF IDAHO
DEPARTMENT OF ENVIRONMENTAL QUALITY
BOISE REGIONAL OFFICE
1445 North Orchard Street•Boise, ID 83706-2239•(208) 373-0550

DEQ Response to Request for Environmental Comment

Date:	*November 8, 2011*
Department Requesting Comments:	*United States Department of Agriculture, Payette National Forest*
Date Request Received:	*10/25/2011*
Applicant/Description:	*Review of the draft Environmental Impact Statement (DEIS) for the Mill Creek – Council Mountain Landscape Restoration Project on the Payette National Forest*

Thank you for the opportunity to respond to your request for comment. While DEQ does not review projects on a project-specific basis, we attempt to provide the best review of the information provided. DEQ encourages agencies to review and utilize the Idaho Environmental Guide to assist in addressing project-specific conditions that may apply. This guide can be found at http://www.deq.idaho.gov/ieg/.

The following information does not cover every aspect of this project; however, we have the following general comments to use as appropriate:

1. Air Quality

- *Please review IDAPA 58.01.01 for all rules on Air Quality, especially those regarding fugitive dust (58.01.01.651), trade waste burning (58.01.01.600-617), permits to construct (58.01.01.201), and odor control plans (58.01.01.776).*

  For questions, contact David Luft, Air Quality Manager, at 373-0550.

2. Wastewater and Reuse

- *DEQ recommends verifying that there is adequate sewer to serve this project prior to approval. Please contact the sewer provider for a capacity statement, declining balance report and willingness to serve this project.*

- *IDAPA 58.01.18 and IDAPA 58.01.17 are the sections of Idaho rules regarding wastewater and reuse. Please review these rules to determine whether this or future projects will require DEQ approval. All projects require preconstruction approval by DEQ including facilities planning, preliminary engineering reports, plans and specification and other documents unless they meet the provisions of Idaho Code §39-118.2.d. Reuse projects require separate permits as well. Also note that at the discretion of any city, county, quasi-municipal corporation or regulated public utility, projects that fall within this provision may be referred to DEQ for approval.*

- *DEQ recommends that projects be served by existing approved wastewater collection systems or a centralized community wastewater system whenever possible. Please contact DEQ to discuss potential for development of a community treatment system along with best management practices for communities to protect groundwater.*
- *DEQ recommends that cities and counties develop and use a comprehensive land use management plan which includes the impacts of present and future waste water management in this area. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.*

For questions, contact Todd Crutcher, Engineering Manager, at 373-0550.

3. Drinking Water

- *DEQ recommends verifying that there is adequate water to serve this project prior to approval. Please contact the water provider for a capacity statement, declining balance report and willingness to serve this project.*
- *IDAPA 58.01.08 is the section of Idaho rules regarding drinking water. Please review these rules to determine whether this or future projects will require DEQ approval including facilities planning, preliminary engineering reports, plans and specification and other documents. All projects require preconstruction approval by DEQ unless they meet the provisions of Idaho Code §39-118.2.d. Also note that at the discretion of any city, county, quasi-municipal corporation or regulated public utility, projects that fall within this provision may be referred to DEQ for approval*
- *If any private wells will be included in this project, we recommend that they be tested for total coliform bacteria, nitrate and nitrite prior to use and retested annually thereafter.*
- *DEQ recommends using an existing drinking water system whenever possible or construction of a new community drinking water system. Please contact DEQ to discuss this project and to explore options to both best serve the future residents of this development and provide for protection of groundwater resources.*
- *DEQ recommends cities and counties develop and use a comprehensive land use management plan which addresses the present and future needs of this area for adequate, safe, and sustainable drinking water. Please schedule a meeting with DEQ for further discussion and recommendations for plan development and implementation.*

For questions, contact DEQ Boise Regional Office at 373-0550.

4. Surface Water

- *If the project will involve de-watering of groundwater during excavation and discharge back into surface water a short term activity exemption (from this office) will be needed which describes treatment of the water from this process to prevent excessive sediment and turbidity from entering surface water.*
- *Please contact DEQ to determine whether this project will require a National Pollution Discharge Elimination System (NPDES) Permit.*
- *If this project is near a source of surface water, DEQ requests that projects incorporate construction best management practices to assist in the protection of Idaho's water resources. Additionally, please contact DEQ to determine whether this project is in an area with Total Maximum Daily Load stormwater permit conditions.*

- *The Idaho Stream Channel Protection Act requires a permit for most stream channel alterations. Please contact the Idaho Department of Water Resources for more information.*
- *The Federal Clean Water Act requires a permit for filling or dredging in waters of the United States. Please contact the US Army Corps of Engineers for more information regarding permits.*

For questions, contact Lance Holloway, Surface Water Manager, at 373-0550.

5. Hazardous Waste And Ground Water Contamination

- ***Hazardous Waste.*** *The types and number of requirements that must be complied with under the federal Resource Conservations and Recovery Act (RCRA) and the Idaho Rules and Standards for Hazardous Waste (IDAPA 58.01.05) are based on the quantity and type of waste generated. Every business in Idaho is required to track the volume of wastes generated, determine whether or not each type of waste is hazardous, and ensure that all wastes are properly disposed of according to federal, state, and local requirements.*

- *No trash or other solid waste should be buried, burned or otherwise disposed at the site. These disposal methods are regulated by various state regulations including Idaho's Solid Waste Management Regulations and Standards, Rules and Regulations for Hazardous Waste, and Rules and Regulations for the Prevention of Air Pollution.*

- ***Water Quality Standards.*** *Site activities must comply with the Idaho Water Quality Standards (IDAPA 58.01.02) regarding hazardous and deleterious materials storage, disposal, or accumulation adjacent to or in the immediate vicinity of state waters, and the clean up and reporting of oil filled electrical equipment, hazardous materials, used oil and petroleum releases.*

- ***Ground Water Contamination.*** *DEQ requests that this project comply with Idaho's Ground Water Quality Rules (IDAPA 58.01.11) which states that "No person shall cause or allow the release, spilling, leaking, emission, discharge, escape, leaching or disposal of a contaminant into the environment in a manner that causes a groundwater quality standard to be exceeded, injures a beneficial use of ground water, or is not in accordance with a permit, consent order or applicable best management practice, best available method or best practical method."*

For questions, contact Michael McCurdy, Waste & Remediation Manager, at 373-0550.

6. Additional Notes

- *If an underground storage tank is identified at the site, the site should be evaluated for underground tanks and potential contamination; please call DEQ at 373-0550 for assistance.*

- *If applicable to this project, DEQ recommends that Best Management Practices be implemented for any of the following conditions: wash water from cleaning vehicles, fertilizers and pesticides, animal facilities, composted waste, and ponds. Please contact DEQ for more information on any of these conditions.*

USDA, Payette National Forest
Page 4 of 4

- *We look forward to working with you in a proactive manner to address potential environmental impacts that may be within our regulatory authority. If you have any questions, please contact me, or any our technical staff at 208-373-0550.*

Sincerely,

Linda Clark

Linda Clark
Administrative Assistant 2
Boise Regional Office
(208) 373-0177

C: File #1707

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

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ECOSYSTEMS, TRIBAL AND
PUBLIC AFFAIRS

December 12, 2011

Keith Lannom, Forest Supervisor
Payette National Forest
800 West Lakeside Avenue
McCall, Idaho 83638

Re: Mill Creek – Council Mountain Landscape Restoration Project (EPA Project Number 10-038-AFS).

Dear Mr. Lannom:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the above referenced project on the Payette National Forest in Idaho. Our review was conducted in accordance with EPA responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act (CAA).

The DEIS analyzes the four action alternatives designed to restore the forest landscape within the 51,957 acre Mill Creek – Council Mountain project area. Proposed treatments would include restoration thinning; small regeneration treatments; prescribed burning; watershed improvements; hazard reduction in the wildland urban interface (WUI); biomass removal; and trail improvements. The preferred alternative is Alternative 5, which focuses on improving watershed conditions for bull trout in the upper portion of the East Fork Weiser River through road decommissioning and rerouting.

The EPA is supportive of the proposed management direction in Alternative 5. We believe Alternative 5 is the environmentally preferable alternative because it would reduce road-related impacts to water quality in a high priority watershed. We also appreciate the cautious and thoughtful approach the Forest Service has taken with regard to the Council Mountain Inventoried Roadless Area in all of the action alternatives.

Our review identified two areas of concern that we recommend addressing in the Final EIS (FEIS). The first relates to direction in the EIS for riparian zones. The document is not consistent in terms of how management direction is characterized. This leads to some confusion as to where thinning will be focused. Also unclear is the potential acreage to be treated within the riparian zone, and the desired state of those stands post-treatment. The document discusses desired upland stand characteristics post-treatment, but does not do the same for riparian stands. This is of particular importance given the downstream temperature impairment of the Weiser River.

Our second concern relates to roads. There is variation in how the data are presented on roads and road impacts. Of particular concern is the information related to road reconstruction. Miles of road to be reconstructed varies throughout the document, and it is not clear whether the analysis took an adequately conservative approach when analyzing for potential impacts, including percent over natural sediment impacts. Each of these concerns is detailed in our attached comments.

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Based on our review, we are rating the DEIS as EC-2 (Environmental Concerns – Insufficient Information). We appreciate the opportunity to review and comment on the DEIS, and I encourage you to contact me at (206) 553-1601 or by electronic mail at reichgott.christine@epa.gov, or you may contact Teresa Kubo of my staff at or (503) 326-2859 or by electronic mail at kubo.teresa@epa.gov with any questions about our comments.

Sincerely,

Eh Peterson for

Christine B. Reichgott, Manager
Environmental Review and Sediment Management Unit

2

U.S. Environmental Protection Agency
Review and Comments for the
Mill Creek – Council Mountain Landscape Restoration Project DEIS

Riparian Management

There appears to be some inconsistency within the DEIS with regard to management direction for riparian zones. Page 2-10 and Table 2-10 of the DEIS indicate that (on applicable stands) there would be harvest treatment "within the outer 120 feet of perennial streams and within the outer 90 feet of intermittent streams". On page 3-119 and in Appendix 6, however, it is stated that "no harvest would be allowed within a *minimum* of 30 feet of intermittent stream channels and 120 feet of perennial streams. From a review standpoint, it is unclear what is intended.

Recommendations:

- We recommend changing the wording on Page 2-10 and Table 2-10 to something that is more easily understood. Stating that there would be harvest "within the outer" 120 or 90 feet does not inherently make sense. Does this mean that harvest would be focused just inside the 120 or 90 foot buffer, or does this mean that harvest would be focused outside of the buffer? If the intent is to provide for harvest within 120 feet, that would seem to be inconsistent with the direction on page 3-119 and in Appendix 6.
- Similarly, it is unclear for intermittent streams whether the intent is to allow for thinning between 30 and 90 feet of the stream, or if the intent is to focus thinning outside of 90 feet.

We also note that while desired future conditions for upland stands (including canopy closure targets) are discussed within the DEIS, target conditions for riparian stands are not. The indicators selected to compare the effects of the various alternatives on soil, water, riparian and aquatic resources (SWRA) are road-centric. While valuable and easily measured, the road-based indicators do not capture potential impacts related to harvest. We would like to see a treatment-based indicator added to the indicators list (i.e. acres treated mechanically within the RCA). We also recommend inclusion of desired future conditions for riparian stands, a commitment to maintain effective stream shade, and a methodology for determining effective shade on a site specific basis prior to harvest. An example of a robust analysis of riparian impacts can be found in the Ogden Vegetation Management Project DEIS[1].

We raise these issues in light of the 2006 Weiser River Subbasin Temperature Total Maximum Daily Load[2]. That document presents loading analyses for the Weiser River as a whole and ten of its major tributaries, including the East Fork of the Weiser River. According to the TMDL, the East Fork is currently receiving an excess solar load and needs to achieve a 63% reduction in order to achieve loading capacity. We recognize that none of the other tributaries within the project area are included in the temperature TMDL. However, because water temperature in a segment of flowing water can be strongly influenced by the waters flowing into and mixing with it, we believe it is important to consider any potential source of heat loading within the watershed.

[1] http://a123.g.akamai.net/7/123/11558/abc123/forestservic.download.akamai.com/11558/www/nepa/64828_FSPLT2_053598.pdf
[2] http://www.deq.idaho.gov/media/450157-weiser_river_addendum_entire.pdf

3

Recommendations:

- We recommend inclusion of a treatment-based indicator under section 1.9.1.3, such as acres treated mechanically within the RCA.
- We recommend inclusion of desired future conditions for riparian stands, a commitment to maintain effective stream shade, and a methodology for determining effective shade on a site specific basis prior to harvest. These could be included in Appendix 6.
- We recommend that a discussion of the Weiser River Temperature TMDL (and the role of the East Fork Weiser River within that TMDL) be included in the FEIS.

Roads

There is a lot of variation in how the data are presented on roads and road impacts. The numbers are split, or lumped depending on the table. This makes review confusing and difficult. For example, Table 2-7, under the "Transportation" heading, indicates that there would be 1 mile of new temporary road under Alternative 5. Under the SWRA heading of the same table, miles of temporary road construction and reconstruction total 12.3 miles. In contrast to both of these numbers, Table 3-47 includes a figure of 74.6 miles of road reconstruction. We recommend that the FEIS employ consistent terminology, and present the figures in a consistent way so as to facilitate review. We also recommend that you clarify the difference between the road reconstruction figures in table 2-7 and table 3-47. Finally, we request clarification on which of these figures were assumed when running the BOISED model. If 12.3 miles of reconstruction were assumed for the purposes of impact analysis, we recommend that you provide rationale for not using 74.6 miles. If warranted, we recommend that you reanalyze potential sediment effects.

U.S. Environmental Protection Agency Rating System for
Draft Environmental Impact Statements
Definitions and Follow-Up Action*

Environmental Impact of the Action

LO – Lack of Objections
The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns
EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections
EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory
EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate
EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

5

United States Department of the Interior
OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
620 SW Main Street, Suite 201
Portland, Oregon 97205-3026

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Electronically Filed

December 12, 2011

Stephen Penny
Team Leader
Payette National Forest
800 West Lakeside Avenue
McCall, Idaho 83638

Dear Mr. Penny:

The Department of the Interior has reviewed the Draft Environmental Impact Statement for the Mill Creek-Council Mountain Landscape Restoration Project. The Department does not have any comments to offer.

We appreciate the opportunity to comment.

Sincerely,

Allison O'Brien
Regional Environmental Officer

IDAHO DEPARTMENT OF FISH AND GAME
SOUTHWEST REGION
MCCALL OFFICE
555 Deinhard Lane
McCall, Idaho 83638

C.L. "Butch" Otter / Governor
Virgil Moore / Director

December 12, 2011

Stephen Penny, Team Leader
Payette National Forest
800 West Lakeside Avenue
McCall, ID 83638

Re: Mill Creek – Council Mountain Landscape Restoration Project DEIS

Dear Steve:

Our Department has reviewed the DEIS for the proposed Mill Creek – Council Mountain Landscape Restoration Project. This project is based on recommendations provided by the Payette Forest Coalition (PFC) to the Payette National Forest (PNF). Our Department participated in the PFC process, and as we said in our scoping response letter, we agree that the PFC recommendations are a good foundation from which to build the proposed project.

We understand the paramount priority of this proposed project is to improve wildlife habitat for white-headed woodpeckers, by restoring forest stands to historical range of variability (i.e. restore large diameter ponderosa pine communities), and improve wildlife habitat for other species as appropriate. Both Alternatives 2 and 5 propose essentially the same vegetative treatments and substantially meet this goal for white-headed woodpecker habitat and restoring forest stands to historical range of variability. We understand that Alternative 5 is the preferred alternative.

Restoration of white-headed woodpecker habitat is important to our agency; however, maintenance of effective elk habitat is equally important. Elk habitat effectiveness and security is influenced by amount and proximity of forage and cover components, adequacy of hiding and thermal cover, and open road densities. As hiding cover dissipates the influence of open roads on elk habitat effectiveness is magnified. The 50,000 acre project area is inherently open and the vegetation treatments in Alternative 2 (as well as alternatives 3 through 5) will result in a much more open forest condition.

The project area is encompassed by Game Management Unit (GMU) 32A. Department data indicate that elk numbers in GMU 32A are at the low end of objective for cow elk and well below objective for bull and adult bull elk. Data from 2007 population surveys showed an estimated 706 cow elk in GMU 32A. Management objective is 700 – 1,100 cow elk. Data also showed an estimated 85 bull elk and 32 adult bull elk. Management objectives are 150 – 200 bull elk and 75 – 125 adult bull elk (IDFG 2011). High vulnerability of elk during hunting seasons has been identified by the Department as an issue impacting elk populations in and around GMU 32A. Openings created from past timber harvest have compounded elk vulnerability (IDFG 2011).

In a letter dated April 19, 2011, the Department recommended to the PNF that the Wildlife Conservation Strategy retain Appendix E of the PNF LRMP, Management Strategies to Address Elk Vulnerability to Mortality, Travel Management Impacts, and Security Needs. Our reasoning was based on the demonstrated relationship between elk vulnerability to hunter harvest, elk habitat effectiveness, cover, and roads and trails (Naylor et al. 2009, Rowland et al. 2004, McCorquodale et al. 2003, Unsworth et al. 1998). We continue to believe that elk habitat effectiveness is an issue that should be addressed in the planning process. Wildlife Guidelines WIGU08 and WIGU13 in the 2003 Payette National Forest Land and Resource Management Plan (LRMP) call for addressing big game habitat security needs. Appendix E in the LRMP recommends using the Hillis Paradigm (Hillis et al. 1991) to meet these guidelines. Using this strategy, the PNF would make sure to leave at least 30% of the project area in elk security habitat with adequate hiding and thermal cover components. Currently, only 16% of the project area is in security habitat and much of that is without adequate thermal and hiding cover. The goal of returning forested stands to the historical range of variability means opening the forest up and debasing these security areas further.

Ways to mitigate this impact to elk could consist of creating more effective closures on unauthorized roads and placing system roads into long-term closures (such as Alternative 5); or reducing vegetative treatments within areas that already provide security habitat and closing more system roads seasonally (such as alternative 4) or a combination of both. Although the road rehabilitation package in Alternative 5 was designed primarily for bull trout, it also improves the number of elk security acres (net gain of 84 acres). Combining the benefits of the road treatment packages in both Alternatives would move the proposed project in a more favorable direction for mitigating the vegetation treatment effects on fish and wildlife habitat. We recommend refining this alternative to further mitigate impacts to elk habitat.

Thank you for this opportunity to comment on the DEIS. If you have any questions regarding the Department's concerns please contact Jeff Rohlman at our McCall office (208-634-8137).

Sincerely,

Scott Reinecker
Southwest Regional Supervisor

SR:jr:rw
C: IDPR (J. Cook)
IDFG McCall Office (J. Rohlman); Nampa Office (R.Ward)

Literature Cited

Hillis, J.M., M.J. Thompson, J.E. Canfield, L.J. Lyon, C.L. Marcum, P.M. Dolan, and D.W. McCleery. 1991. Defining elk security: the Hillis Paradigm. In: A.G. Christensen, L.J. Lyon, and T.N. Lonner, editors. 1991. Proceedings of elk vulnerability – a symposium. Pp. 38-43. April 10-12, 1991, Montana State University, Bozeman, MT.

Idaho Department of Fish and Game (IDFG). 2011. Elk Progress Report. Project W-170-R-35, Study I, Job 1. Idaho Department of Fish and Game, Boise, USA.

McCorquodale, S.M., R. Wiseman, and C.L. Marcum. 2003. Survival and Harvest Vulnerability of Elk in the Cascade Range of Washington. Journal of Wildlife Management 67(2): 248-257.

Naylor, L.M., M.J. Wisdom, and R.G. Anthony. 2009. Behavioral Responses of North American Elk to Recreational Activity. Journal of Wildlife Management 73(3): 328-338.

Rowland, M.M., M.J. Wisdom, B.K. Johnson, and M.A. Penninger. 2004. Effects of Roads on Elk: Implications for Management in Forested Ecosystems. Transactions of the 69th North American Wildlife and Natural Resources Conference: 491-508.

Unsworth, J.W., L. Kuck, E.O. Garten, and B.R. Butterfield. 1998. Elk Habitat Selection on the Clearwater National Forest. Journal of Wildlife Management 62(4): 1255-1263.

C. L. "Butch" Otter
governor

Nancy C. Merrill
director

David M. Ricks
deputy director

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December 9, 2011

Stephen Penny, Project Leader
Payette National Forest
800 West Lakeside Ave.
McCall, ID 83638

RE: Mill Creek-Council Mountain Landscape Restoration Project DEIS

Dear Mr. Penny:

The Idaho Department of Parks and Recreation (IDPR) staff reviewed the Creek-Council Mountain Landscape Restoration Project Draft Environmental Impact Statement (DEIS). The Council Ranger District is proposing a variety of management activities in the Weiser River Watershed near Council Mountain.

The area is popular for dispersed recreation activities. The Council Mountain Inventoried Roadless Area has a trail system used by motorized and non-motorized visitors. The Mill Creek and Middle Fork Weiser River Roads are groomed snowmobile trails in the winter.

We previously commented on the project during the notice of intent comment period on June 28, 2010. We were concerned about the effects this project would have on groomed snowmobile trail opportunities, dispersed camping opportunities, and prescribed burning effects to trails.

Table 2-10 lists Project Design Features and Mitigation Measures starting on Page 2-35. In the Recreation and Visual Quality Measures on Page 2-48, the DEIS does not list any design features to protect groomed snowmobile trail opportunities.

The FEIS needs to incorporate a design feature to protect groomed snowmobile trail opportunities. The IDPR recommends not allowing timber harvest activities after December 15th as a design feature to project these opportunities.

The Recreation and Visual Quality Measures did not list any design features to project trails from prescribed burning. The IDPR recommends making sure all water control devices on the trails are cleaned out and operating before starting the prescribed burn. This action will help prevent the trails from rutting significantly.

The measures also have a design feature that would restrict log hauling during high periods of recreation use, such as the opening of big game hunting season. This design feature is too general. Log hauling should be restricted during weekends and holidays as well. Expanding these design feature to cover weekends and holidays would reduce recreation traffic and logging traffic interactions.

Chapter 2 discloses the range of alternatives. Alternative 5 is identified as the preferred alternative. Alternative 5 would focus on improving watershed conditions for bull trout in the upper portion of the East Fork Weiser River subwatershed by reducing road-related impacts to water quality.

Alternative 5 has the highest implementation costs of any of the alternatives. While this alternative might be desirable for the Payette National Forest, it may not have the funding to complete all the activities listed in this alternative.

Chapter 2 covers the transportation management starting on Page 2-11. Essentially the transportation management effects are pretty much the same across the range of alternatives for public access. The only roads that are being decommissioned are roads that are already closed to motorized access. Alternative 5 would reroute a road, using other roads, so essentially public access stays the same. With the construction of the non-motorized trail in Alternative 5, non-motorized access would be benefited.

In the Payette Travel Plan, the Forest justified abandoning several trails on Cuddy Mountain because of a lack of funding to maintain the trail system. Has trail maintenance funding increased? While we support construction of new trails, we are concerned about the long-term maintenance of the trail. We don't want to see another trail abandoned because the new trail was constructed.

Chapter 3 addresses the Affected Environment and Environmental Consequences. In our Notice of Intent response, we requested that recreation be addressed as an issue. The DEIS does not address recreation. Some recreation related information can be found in the transportation and socio economic sections.

With the potential effects to winter recreation, dispersed camp site improvements and effects as well as visual effects, recreation needs to be disclosed in the FEIS. How many dispersed camp sites would be improved across the range of alternatives? How will recreation trail opportunities change through the range of alternatives and how will the project impact winter recreation? These are all issues that need to be addressed in the FEIS.

We appreciate the opportunity to review the DEIS. If you or your staff has any questions about our comments, please contact me at (208) 514-2483.

Sincerely,

Jeff Cook, Outdoor Recreation Analyst
Recreation Bureau

Valley County Board of County Commissioners

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Stephen Penny
Payette National Forest
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Dec. 12, 2011

Re: DEIS Mill Creek-Council Mountain, Landscape Restoration Project

Dear Mr. Penny,

Please accept this document for comments from Valley County, Idaho.

Valley County has worked with the many agencies, organizations and individuals to help craft the recommendations through a collaborative process utilizing the Payette Forest Coalition.

Valley County supports the comments submitted by Adams County, Idaho on the DEIS Mill Creek-Council Mountain, Landscape Restoration Project. Attached with this document is the letter submitted by Adams County.

We appreciate the opportunity to comment and provide recommendations that impact our local economy.

Sincerely,

Gordon L. Cruickshank
Chairman, Valley County Commissioners

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