

Templeman Integrated Resource Contract Report

I. Location

The project area is 1,607 acres in size and is located in sections 7, 12, 13, and 24, T.63N., R.1E., and section 18 T.63N., R.2E., Boise Meridian, Boundary County, Idaho. The timber stand atlas compartment numbers are 733, 738, and 741, on the Bonners Ferry Ranger District, Idaho Panhandle National Forests. Harvest is planned on 1,041 acres. The project lies in the Templeman and Meadow Creek drainages. The project area is located approximately 10 miles north of Bonners Ferry, accessed by US 95, Camp Nine Road 397 and County Road 36.

II. Relationship to the Environmental Document and Other Uses

This project has been prepared under the direction of the Templeman Healthy Forests Restoration Act Project (HFRA) Environmental Assessment and Decision Notice. It was approved by the Forest Supervisor on April 24, 2008. The purpose of the project is reducing excessive forest fuels, including dead, dying, down timber and live ladder and crown fuels, in order to reduce fire intensity of future fires. This project focused primarily on the wildland urban interface (WUI). Alternative 2 was chosen to best meet management objectives.

Units 1, 2, 4, 5, 6, and 7 lie in Forest Plan Management Area 1 (TIMBR) – Provide for the long-term growth and production of commercially valuable wood products on those lands that are suitable for timber production.

Most of unit 3 and 4a lie in Forest Plan Management Area 4 (TMEKW) – Provide winter forage to support existing and projected big game populations through scheduled timber harvest and permanent forage areas.

- A. Private Land/Right-of-Way:** Private land surrounds most of the project area. Private boundaries are marked with signs and blazed trees, with some old barb wire fence in units 2 and 3, as indicated on the contract area map. Private improvements and land lines will be protected under the project. No new right-of-way is needed to access the contract area.
- B. Threatened, Endangered, (T&E) and Sensitive Species:** No T&E species requiring protection have been found in the contract area. There is a sensitive plant site adjacent to unit 5 that has been omitted from the cutting unit. If any Goshawk nests are found during project implementation they will be protected under this contract.

- C. Wetlands/Streamside Habitats:** There are several wet areas throughout the contract area, as well as Templeman Lake with some wetlands surrounding the lake. No-harvest & no equipment buffer zones for lakes (300 feet), streams (50-150 feet), wetlands (50 feet) and other riparian habitat have been included in the layout of harvest units, utilizing INFISH standards and other site-specific recommendations.
- D. Special Uses, Mining Claims, Range Allotments:** There are none in the project area.
- E. Noxious Weeds:** Logging operations in all units, except for unit 7, will be restricted to the winter months to help minimize the risk of further soil compaction and encroachment of noxious weeds that surround the project area. Equipment used for logging and road reconstruction will be required to be cleaned in all units prior to being allowed on the project area.
- F. Cultural Resources and Recreation:** A cultural resource site was found adjacent to unit 4a. This old log flume has been protected by omitting it from the cutting unit, requiring an equipment exclusion zone, and directional felling of trees away from the site. There are no public recreation sites in the project area.
- G. Wildlife:** Cutting units have been designed to retain large-diameter live trees and also dead trees over 16 inches in diameter, especially ponderosa pine, western larch, whitepine and Douglas-fir. These live residual trees will be managed for snag recruitment trees to increase the number of 20-inch-plus diameter snags in the future. Cutting these large relic trees and snags will be avoided as much as possible when planning temporary road and skid trail/corridor locations. It is recommended that where grapple piling is prescribed for fuel reduction, leave an average of one slash pile per acre unburned to provide habitat for small forest animals (e.g. snowshoe hares). To maintain wildlife habitat, aspen, birch trees, and cedar swales with cedar trees >12" dbh shall not be harvested. Large diameter snags (greater than 16 inches diameter) and hardwoods that are felled for safety reasons will remain on site, to provide for large woody debris recruitment and long-term site productivity
- H. Soils:** Existing skid trails and landings will be utilized where appropriate, in order to maintain current soil compaction levels. For units 1, 2, 3, and 4, no new skid trails or landings shall be allowed. All skid trails utilized will be waterbarred and seeded as needed, upon completion of the project. Downed woody retention levels will be maintained at the lowest recommended levels due to concern for fire risk. For the moist forest habitat types, in Units 1, 2, 5 and 6, Graham et al (1994) recommend retaining 17-33 tons/acre of downed woody material greater than three inches in diameter. For the drier habitat types associated with Units 3, 4, 4a, and 7, the recommended retention level is 5-15 tons/acre.

I. Visuals: The use of leave-tree marking has been minimized to maintain a natural appearing residual timber stand, as much as possible. Landings will be located away from the county road and from the private property boundary along the west edge of Unit 3. After the completion of harvest-related activities, the visual quality in the area should be enhanced.

J. Other: No Roadless Areas and no allocated Old Growth stands will be entered or affected.

III. Timber Volumes

This project was cruised in the summer of 2005, except for unit 7 which was cruised in the spring of 2008, using variable plot cruising methods. A 40 BAF was used for all units, except for unit 4 and 7, which were cruised with a 20 BAF.

Cutting unit acreage was determined with GPS, except for unit 7 which was determined using GIS.

This is a weight scale contract with a designed sale error of 20%. Refer to Templemental, cruise number 70597, run on 04-14-2008. The INGY 2 point volume equations were used with a 5.6" top diameter for sawtimber and a 2.5" top diameter for non-sawtimber. The sawtimber sale-as-a-whole error was 16.04 % at the 95% confidence level, based on net volume, and can be found in Table DS1. Strata errors < 50% were attained for all strata (not including the biomass thin unit 7, strata 1). Table UC 5 was used for sawtimber and non-sawtimber volumes. Table R101 was used for appraisal group statistics. Table UC11 was used to determine the number of trees. Non-sawtimber (topwood and small trees) are mandatory products. The overall sale conversion factor is .4950 mbf/ccf. The overall weight conversion factor is 3.38 ton/ccf (6.82 ton/mbf). The following table summarizes contract acreage and estimated timber volumes by species, logging system, and unit:

Volumes (CCF)

Unit	Acre	AF	C	DF	GF	H	L	LP	PP	S	Sawlog Total	Non-Saw	Sale Total	Sale Tons
1	47	5	61	23	98	144	51	156			538	221	759	2,521
2	44	5	57	21	92	135	47	146			503	207	710	2,360
3	143			1,424							1,424	256	1,680	5,654
4	263			1,238	190		42		120		1,590	177	1,767	6,129
4a	50			498							498	89	587	1,977
5	199	23	257	96	415	610	214	661			2,276	938	3,214	10,674
6	26	3	34	13	54	80	28	86			298	123	421	1,395
7	269			36				238		16	290	1,287	1,577	5,458
Total	1,041	36	409	3,349	849	969	382	1,287	120	16	7,417	3,298	10,715	
MBF		21	178	1,651	442	482	187	627	60	6	3,654	1,649	5,303	
Tons											25,341	10,827		36,168

IV. Marking Plan

All cutting unit boundaries have been marked on three sides of cutting unit boundary trees with streaks of blue paint extending from near ground level to a height of 6 feet or more, and blue stump marks. The middle streak faces the cutting unit. Where a cutting unit is adjacent to a road, the road is the boundary and no paint was used. Fell trees away from cutting unit boundaries.

Old harvest units in the project area were marked when our Forest used a different paint scheme (blue painted trees were leave trees) so to avoid confusion we have continued with the same old paint scheme on this contract.

Units 1, 2, 4a, and 5 are Commercial Thinnings with a Sanitation Salvage, units 3, and 4 are Group Selections with Commercial Thinnings, and unit 6 is a Shelterwood harvest treatment. Unit 7 is a Biomass Thinning, being accomplished under a Stewardship Project K-G.9#, which will include harvesting some small sawlogs and non-sawtimber.

Unit 1 - Species Designation (SD): All GF, LP and H meeting utilization standards are designated for cutting. All AF, C, DF, L, PP, S < 12" dbh (14" stump diameter) meeting utilization standards are designated for cutting.

Unit 2 - Species Designation (SD): All GF, LP and H meeting utilization standards are designated for cutting. All AF, C, DF, L, PP, S < 10" dbh (12" stump diameter) meeting utilization standards are designated for cutting, except for trees designated to be left standing marked with blue paint.

Unit 3 - Species Designation (SD): All GF, LP and H meeting utilization standards are designated for cutting. All AF, C, DF, L, S < 15" dbh (18" stump diameter) meeting utilization standards are designated for cutting.

Unit 4 - Species Designation (SD): All GF, LP, and H meeting utilization standards are designated for cutting. All AF, DF, L, PP, S < 15" dbh (18" stump diameter) meeting utilization standards are designated for cutting. All C < 12" dbh (14" stump diameter) meeting utilization standards are designated for cutting.

Unit 4a - Species Designation (SD): All GF, LP, H, and C meeting utilization standards are designated for cutting. All AF, DF, L, PP, S < 15" dbh (18" stump diameter) meeting utilization standards are designated for cutting.

Unit 5 - Species Designation (SD): All GF and LP meeting utilization standards are designated for cutting. All AF, C, DF, H, L, PP, S < 10" dbh (12" stump diameter) meeting utilization standards are designated for cutting.

Unit 6 - Species Designation (SD): All GF and H meeting utilization standards are designated for cutting, except for trees designated for leave with blue paint. All AF, C, DF, L, LP, PP, S < 12" dbh (14" stump diameter) meeting utilization standards are designated for cutting.

V. Logging Plan

A. General:

Units 1, 2, 3, 4, 5, and 6 will use tractor skidding (ground-based logging systems i.e. skidders and hand-felling or mechanical harvesting equipment) and unit 4a will require a skyline yarding system (single-span). Unit 7 will be thinned using a small-scale harvesting system as a stewardship project.

Logging operations in all units *except unit 7* will be restricted to the winter months and will require operating equipment on at least 18 inches of settled snow, or 12 inches of settled snow with a slash mat, or a 24" snow layer, or four inches of frozen ground, to help minimize the risk of further soil compaction as well as reducing the encroachment of noxious weeds. Existing skid trails and landings will be utilized, with an existing slash mat where appropriate, in order to maintain current soil compaction levels. For units 1, 2, 3, and 4 no new skid trails or landings shall be allowed. In units 5 and 6, where terrain is conducive, skid trails shall be at least 100 feet apart and where skid trails are excavated they shall be recontoured after logging.

There is an old existing unclassified road in unit 5 below road 397 that crosses Templeman Creek. If used to log unit 5 it needs to be closed after contractor's use with woody debris and seeded & waterbarred, as needed. In addition, any old existing skid trail that converges onto an open road, if used, shall be closed with woody debris, seeded, and waterbarred by the contractor.

No hauling on weekends or holidays from the project area, to avoid conflicts with local residents.

Fell trees away from cutting unit boundaries. Leave dead trees > 16.0" dbh and hardwoods standing, except for safety reasons, for wildlife habitat and for large woody debris recruitment.

Unit 4a shall be logged prior to unit 4; or identify trees to leave adequate stumps for guy trees, if unit 4 is logged first. Log the southern part of unit 5 concurrently with unit 4; or construct a fireline between the units.

Protect private improvements, survey monuments, existing plantations, the arch site, sensitive plants, stream courses, the lake, and other riparian habitats/wet areas. Do not harvest aspen or birch for pulp.

Protect the research plots in unit 7. Ten one acre plots scattered throughout the unit are marked out of the cutting unit. These control plots require no touch buffers in order to study soil nutrient recycling.

B. Sawtimber Characteristics:

	Tractor	Skyline	Log Forwarder	Total/Ave.
Net Volume (CCF)	6,629	498	290	7,417
Net Cut Vol/Ac (CCF)	9.2	10.1	1.1	8.4
Total Acres	722	50	269	1,041
Total Trees	56,614	3,357	9,878	69,849
Percentage by Volume	89%	7%	4%	100%
Ave. External Yard Distance	1,250'	500'	1,475	
Ave. DBH	9.9	11.1	7.7	9.7

C. Skyline: Due to a lack of tail trees at the bottom of the unit, mobile tailholds will be needed to log unit 4a. An allowance will be made for an excavator for 15 days. Existing corridors will be used.

VI. Transportation System

A. Average haul route to project center:

Road Name	Road Number	Mileage
Templeman Lake	397C	2.0
Eagle	397A	1.5
Camp Nine	397*	3.5
US Highway 95	US95	4.2
US Highway 2	US2	5.7
Mill Road	C83	0.5
Total		17.4

*Note: The first 0.3 miles on road 397 is maintained by the county.

B. Road construction or reconstruction:

Road Number	Road Name	Type of Work	Road Mileage
397	Camp Nine	Reconstruction	1.45
397A	Eagle	Reconstruction	2.50
397C	Templeman Lake	Reconstruction	2.50
397D	National	Reconstruction	1.82
940	West Templeman	Reconstruction	0.88
941	East Templeman	Reconstruction	1.00
Total			10.15

C. Temporary roads: A temporary road will need to be constructed to access the southern portion of unit 4a, for skyline yarding (0.2 miles). Two existing unclassified roads (treated as temporary roads under the contract) will be needed to access landings for units 3 and 5 (0.5 miles). The new temporary road in unit 4a and the existing temp road into unit 5 shall be obliterated by the contractor after use, including seeding/fertilizing, waterbarring, and covering with slash to prevent off-road vehicle use, as necessary. Other existing temp roads will be obliterated under a stewardship project.

D. Road maintenance: Purchaser shall be responsible for recurrent maintenance, and a deposit will be collected for surface replacement and vegetative brushing.

An allowance will be made for snowplowing: Estimate 2 plowings/month & 1 winging/month for 2 months/season and 2 seasons. Estimate 12.6 miles on all Forest Service roads in the haul route, including the temporary roads:

8 plowings x \$ 80.32/hr (grader & operator) x 12.6 mi / 3 mi/hr = \$ 2,699
 4 wingings x \$ 90.01/hr (dozer & operator) x 12.6 mi / 1 mi/hr = \$ 4,537
 Total Cost = \$ 7,236/7417 ccf = \$.98/ccf

VII. Erosion Control

A.General:Application shall be during the period from May 1 to June 15, and/or September 1 to September 30. Seed shall be applied evenly at the rate of 20 pounds per acre (dry site mix) and 200 pounds per acre of fertilizer type: 16N – 16P – 16K or 10N – 16P – 10K.

Landings and skid trails/corridors shall be seeded, fertilized, and if needed waterbarred or covered with slash/logs to reduce runoff and for stabilization. Temporary road erosion control work is included in the decommissioning cost:

Area to Seed	Acres
Landing	7
Skid trail/corridor	5
Total	12

B. Standard Dry Site Mix:

SPECIES	PLS LBS/AC
Slender wheatgrass "Pryor" or "Revenue" (<i>Elymus trachycaulus</i> ssp. <i>trachycaulus</i>)	6.0
Hard fescue "Durar" (<i>Festuca brevipila</i> , synonym: <i>Festuca ovina</i> var. <i>duriuscula</i>)	5.0
Streambank wheatgrass "Sodar" (<i>Elymus lanceolatus</i> ssp. <i>psammophilus</i>)	3.0
Annual rye (<i>Lolium multiflorum</i>)	2.0
Canby bluegrass "Canbar" (<i>Poa canbyi</i>)	4.0
TOTAL	20.0

Acceptable substitutes:

Big bluegrass "Sherman" (*Poa ampla*) @ 4 PLS LBS/AC for Canby bluegrass

C. Costs:

Seed: 20 lbs/ac x 12 acres x \$1.68/lb	= \$ 403
Fertilizer: 200 lbs/ac x 12 acres x \$.16/lb	= \$ 384
Labor: 12 ac x 1/3 manday/ac x \$ 212/manday	= \$ 848
Transportation: 35 mi/trip x \$.30 /mile x 2 trips	= \$ 21
Total Erosion control needs	= \$1,656
Cost/CCF	= \$.22/ccf

VIII. Sale Area Improvement

A. Reforestation:

Newly created openings in units 3 and 4 will need planting. Estimate openings to be 2-5 acres in size at scattered locations throughout the area, and planted with a tree species mix consisting of 80% ponderosa pine and 20% larch on about a 12x12 foot spacing. All of the shelterwood unit 6 will be planted with a species mix of 50% white pine and 50% larch on about a 10 x10 foot spacing. Preplant surveys and 4 stocking surveys each are planned. (66 acres each activity).

IX. Hazard Reduction and Site Preparation

Slash created during the treatment that isn't needed to remain on site for soil productivity purposes will be piled and burned, or underburned in all units within approximately one year following harvest.

A. Purchaser requirements: Unit 7 will be accomplished as a stewardship project.

- Limb and lop sawlogs in the woods, in all units except where WTY (1038 acres).
- Whole tree yard (WTY) unit 3 (3 acres below road 940).
- Fell Damaged Residuals in units 1, 2, and 5 (290 ac).
- Site Prep Slashing (& Grapple Piling) Unit 6 (26 acres each).
- Construct fireline to facilitate underburning in units 3, 4, and 4a (2 miles).
- Pile all landing slash (7 acres).

B. Forest Service requirements: Natural fuels in cutting units will be treated with WFHF funding, using basically a 50:50 split with BD funding in cutting units.

- Underburn units 3, 4, and 4a (208 acres).
- Burn grapple piles (134 acres).
- Burn all landing piles (7 acres).

Leave an average one to three slash piles per acre unburned for small forest animal habitat. For units 1, 2, 5, and 6 piling equipment must stay on existing skid trails.

C. Stewardship Projects: The remaining slash treatment of activity fuels will be accomplished as stewardship projects under K-G.9#. Slashing shall be done prior to grapple piling, preferably concurrently or in the first season following logging, in the fall to reduce noxious weed spread. Piling shall occur after slashing, as much as possible when ground conditions and access allow. For units 1, 2, 5, and 6, slash piling equipment shall stay on existing skid trails, operate on slash mats where possible, and stay on slopes not to exceed 35%.

An alternative slash disposal method for units 1, 2, and 5 will be to remove and utilize slash in excess to down woody requirements following at least one wetting season, in lieu of slash piling and burning. This option will be considered as an evaluation factor in bid proposals.

Item Number	Mandatory Items Work Activity Description
1	Temp Road/Skid Trail Obliterations in Units 3, 4
2	Biomass Thinning Unit 7

Item Number	Optional Items Work Activity Description
3	Skid Trail Decompaction in Units 1, 2
4	Slashing Trails and Concentrations in Units 1, 2, 3 (part), 5
5	Machine Slash Piling Trails and Concentrations in Units 1, 2, 3 (part), 5
6	Slashing Units 3 (part), 4, 4a
7	Leave Tree Protection in Units 3 (part), 4, 4a

X. Other Provisions

A. Period of contract:

- 1. Normal operating season:**
 -December 15 to February 28 for units 1, 2, 3, 4, 4a, 5, and 6.
 -June 1 to October 31 for unit 7.
- 2. Termination date:** October 31, 2013.
- 3. Road Completion Date:** October 31, 2009.

B. Purchaser fire liability:

Total number of personnel/crew	12
Number of hours/day	12
Total hours/crew day	144
Hourly rate AD-3 firefighter	\$13.24
Average daily cost	1,907
Average fire length	5 days
Purchaser obligation for fire operation	9,533
Rounded up to the nearest \$100	9,600

XI. Notification of Forest Practices

X	Harvest of forest tree species.
X	Road construction associated with harvesting trees.
X	Reforestation.
	Use of chemicals or fertilizers for the purpose of growing or managing trees.
X	Slashing or use of prescribed fire resulting from harvest or other management activities.
	Site specific BMP's.
X	Lake present.
	Class 1 stream present.
	Steep slopes.
	Unstable or erodible soils present.
	Stream crossings anticipated.

XII. Sale Objective Code

Purpose	Activity	Percentage
TC -- Timber Commodity Purpose	01 -- Timber Purpose	100