

IDAHO PANHANDLE NATIONAL FORESTS

2450
Commercial Sales - Proposed

04-2420-01

STARS # 07101

PRICHARD-MURRAY TIMBER SALE REPORT
AND
APPRAISAL

DISTRICT

SUPERVISOR'S OFFICE

Prepared _____
By

Reviewed for Advertisement

Date _____

By

Date

Reviewed _____
By

Date _____

Reviewed _____
By

Date _____

I hereby certify that this sale meets
the requirements of Secretary's
Regulation 36 CFR 223.30.

Staff Officer, Timber

Date

Prichard-Murray Timber Sale Report

I. Location

The sale area is broken into three separate areas totaling 2312 acres in size and is located in sections 1,2, 12, T49N, R4E, sections 15, 18, 20-23, 26-29, T50N R4E, sections 12-14, 23-25, T50N, R3E, Boise Meridian, Shoshone County, Idaho. The timber stand atlas compartment numbers are 153, 182, 183, 192, and 197 Coeur d'Alene River Ranger District, Idaho Panhandle National Forests. Harvest is planned on 292 acres. The sale area is located in the North Fork Coeur d'Alene River and the Prichard Creek Drainage.

II. Relationship to the Environmental Document and Other Uses

This sale is prepared under the direction of the Prichard-Murray Resource Area Environmental Analysis, approved by the Forest Supervisor on October 22, 2007. The purpose of this sale is to respond to goals and objectives of the National Fire Plan and Shoshone County Fire Mitigation plan with hazardous fuels reduction and stand improvement activities. The towns of Prichard and Murray have been identified as being at high risk from wildfire, therefore this project is designed to reduce this threat. This sale lies in Forest Plan Management Area 1 and 4. The direction for Management Area 1 is timber production while providing for protection of other resources. Management Area 4 consists of lands designated for timber production within big game winter range.

The Prichard Murray Environmental Analysis considered three alternatives. Alternative 1 is the no action alternative. Alternative 2 was designed to specifically target stands that were identified by the Shoshone County Fire Mitigation Working Group which included treatment in designated old-growth stands. Alternative 3, the preferred alternative, is the same as alternative 2 without treatment of the old-growth stands. Proposed timber harvest for Alternative 3 included 47 acres of shelterwood, 256 acres of commercial thinning, and 242 acres of combination commercial thinning and regeneration harvest. Final unit layout resulted in 191 acres of commercial thinning and 148 acres of shelterwood harvesting. There is an additional 3 acres associated with right-of-way clearing. The number of acres proposed was reduced after further field reconnaissance and final layout of the cutting units. Commercial viability and species composition reduced the thinning acres. In an attempt to increase "salability", units 19, 24, 25, 27, and 28 were dropped, reducing the amount of helicopter yarding.

A. Relationship to Private Land/Rights-of-Way: The sale area boundaries are located adjacent to the towns of Prichard, Murray, and additional private property. Cutting units 22, 23, 29, 33, 34, and 41 are adjacent to private property. The access to FR 942 is via FH9UC through private property which will require a temporary road use permit.

B. Threatened, Endangered and Sensitive Species: Currently no threatened or endangered species have been known to inhabit or have been observed in the Prichard-Murray Resource Area. Some sensitive plants have been observed in the resource area, but impacts have been avoided through sale layout. For sensitive animal species some activities may impact individuals or habitat, but not likely to trend toward federal listing or loss of viability. Snags will be retained to meet the Northern Region Snag Management Protocol. All roads closed to the public that are opened, constructed or reconstructed for the project would be closed with a gate or barrier during project activities. Temporary roads will be

recontoured following harvesting activities. Protection measures will still be added to C6.24# of the timber sale contract in the event that a TES Species is encountered during harvesting operations.

C. Wetlands/Streamside Habitats: Streamside buffers were implemented along stream channels within the sale area per Inland Native Fish standards meeting Riparian Management Objectives. There are no harvest units located within any Riparian Habitat Conservation Areas. Any discovered wetlands, seeps, bogs, elk wallows and springs less than one acre in size will be protected with a 100 foot no activity buffer. Site specific BMP's will be utilized. Spot gravelling will be required at all stream crossings, rolling dips, and in any wet areas.

D. Special Uses, Mining Claims, Range Allotments: There are currently no active mining claims, special use permits, or range allotments within the timber sale area. There is a powerline adjacent to unit 1 through 23.

E. Noxious Weeds: All roads used for implementation of harvest activities will be treated for noxious weeds by the purchaser, both prior to and after project completion. An allowance will be made in the appraisal for the purchaser. To prevent infestations of new noxious weeds the purchaser will be required to wash off-road equipment prior to moving into the sale area in accordance with C6.531 of the timber sale contract.

F. Cultural Resources: No known cultural resource sites of historical significance will be impacted by sale activities. The timber sale contract will contain B6.24/C6.24# which will provide protection in the event that a new site is discovered.

G. Soils: Yarding would not remove tops from site, only log-length yarding will be allowed in harvest units to further improve nutrient recycling. Skid trails will be established at approximately 100-foot spacing.

H. Old Growth: No harvest treatments will occur in allocated old growth stands.

I. Roadless: The Rookie portion of the sale area lies adjacent to the Trouble Creek Roadless Area. No activities with the timber sale will occur within the Roadless Area.

J. Misc: The sale area has Avista powerlines running through it and adjacent to some of the cutting units. Per this situation, Avista has requested to be in attendance during the pre-work meeting with the purchaser. The scheduling of the pre-work meeting is contingent upon an Avista representative being available.

III. Timber Volumes

The sale was marked and cruised during the summer of 2007. The cutting units were cruised using the sample tree method and the system road reconstruction right-of-way was also cruised using the sample tree method. The cruise number is 03163, the run date is 07/31/2007, and the sample error is 3%. The cruise was re-run on 01/24/2008 after dropping units 19, 24, 25, 27, & 28. This sale was designed as a weight scaled sale. The sale will be offered as a weight scaled sale with an appraised value greater than \$95,000. FS Standards require the sale error to be 20% or less.

The following table summarizes sale acreage, and estimated timber volumes by species, and logging system by unit:

Volumes are in CCF

Unit	Acres	GF	LP	H	DF	L	WP	PP	C	Saw	Rwd	Total	Logging System
1	24	108	82		459	1				650	21	671	Sky
2	6	230			72	2	1			305	5	310	Trac
3	5	75			70	1				146	4	150	Sky
4	8	260	1	2	45	1	1		3	313	8	321	Sky
5	7	34			155	6				195	8	203	Sky
6	11	110	1	7	124	9	1		4	256	11	267	Sky
7	14	114	4	21	224	1			1	365	11	376	Sky
8	3	42	2		44					88	2	90	Trac
9	4	64	3		73					140	4	144	Sky
10	3	20			15					35	1	36	Trac
11	8	58	118	9	95	6			2	288	10	298	Sky
12	2	25	22		12	1				60	3	63	Trac
13	4	90	6	3	72	1	5		3	180	4	184	Sky
14	1	15	10	2	17	1				45	3	48	Trac
15	5	70	6	25	78	10			5	194	10	204	Sky
16	3	16	4		70	2			1	93	3	96	Sky
17	2	16	3	3	17	8			2	49	3	52	Cable
18	6	77	37	3	56	20			2	195	7	202	Trac
20	3	24	2	1	93	3				123	3	126	Trac
21	4	44	5	11	49	2			1	112	4	116	Sky
22	4	56	7	89	18	10	1		7	188	14	202	Trac
23	5	96	6	33	37	13	1		1	187	8	195	Sky
26	6	38			63		47			148	5	153	Sky
29	12	87			59		13			159	5	164	Sky
30	10	11	3	168	5	7	15		12	221	22	243	Trac
31	5	48	9	5	39	7			11	119	10	129	Sky
32	17	332	19	77	110	11	13		46	608	28	636	Sky
33	22	209	26	108	78	12	33		60	526	29	555	Sky
34	6	72	5		74	20	10		16	197	14	211	Trac
35	8	67		2	126	5	1		24	225	11	236	Heli
36	11	143	51	53	46	13	4		14	324	15	339	Heli
37	10	125	3	135	43	13	60		14	393	18	411	Heli
38	4	39	1	53	7	2	25		5	132	8	140	Heli
39	6	38	5	89	7	11	23		5	178	11	189	Heli
40	25	133	82	296	44	29	40		18	642	36	678	Heli
41	6	32		86	6	10	42		6	182	10	192	Heli
42	9	52	84	82	49	28	15		6	316	17	333	Heli
ROW	3	21			35	8	1	4	2	71	3	74	Trac
Total	292	3091	607	1363	2686	274	352	4	271	8648	389	9037	
MBF		1710	386	712	1387	143	189	2	121	4650	269	4919	
Ton		9351	1674	4493	8352	873	1032	14	619	26408	1084	27,492	

The following is a list of conversion factors for CCF/MBF by species: C 0.45, DF 0.52, GF 0.56, L 0.53, LP 0.52, H 0.52, PP 0.50, S 0.5, WP 0.53.

This sale will be offered on a weight scale basis. The following sawlog weight factors were used for this sale in lbs/cubic foot: DF-60, L-62, GF-58, LP-55, H-61, WP-55, PP-67, C-43. This resulted in a conversion factor of 3.06 tons per ccf for the sale as a whole including roundwood.

IV. Marking Plan

This sale contains 37 harvest units and one specified road reconstruction corridor. Units 4, 6, 8-12, 14, 16, 26, 29, 36 and 40 are individual cut tree marked (CTM). Cut trees are designated with a **BLUE** bole stripe and **BLUE** stump mark. Units 1-3, 5, 7, 13, 15, 17, 18, 20-23, 30-35, 37-39, 41, and 42 are Leave Tree Marked (LTM) units. Leave trees are designated with an **ORANGE** bole stripe and an **ORANGE** stump mark. The road right-of-way is cut tree marked with **BLUE** bole stripes and **BLUE** stump marks. The cutting unit boundaries are designated by **ORANGE** three stripes on the side of trees facing into the cutting unit and an **ORANGE** stump mark.

V. Logging Plan

The sale is designed to utilize helicopter (units 35-42), skyline (units 1, 3-7, 9, 11, 13, 15, 16, 21, 23, 26, 29, 31-33), cable (unit 17) and tractor (unit 2, 8, 10, 12, 14, 18, 20, 22, 30, 34) harvesting systems. In order to facilitate helicopter logging, the construction of one helicopter landing will be required. The average weighted horizontal yarding distance is 500'. The average flight distance for helicopter yarding is 1500'. The skyline units have an average yarding distance of 800'. Units 5 and 9 will both require intermediate supports. Unit 17 will require downhill cable yarding with an average distance of 250'. An allowance in the appraisal will be made for the installation of 13 artificial tipping plates. Units 5, 6, 13, 21, and 29 will require guy-wire anchors to facilitate skyline yarding. Unit 5 will require 3 sets, unit 6 will require 1 set, unit 13 will require 1 set, 21 will require 2 sets, and 29 will require 6 sets. All hauling will be prohibited on weekends and holidays. Logging operations will be prohibited in units 30-34 during weekends and holidays as they are adjacent to an open county road. Trail 151 will be closed to the public during the weekdays. Helicopter yarding will be restricted to Mondays through Saturdays, and prohibited on Sundays. Helicopter flight paths over Trail 151, while logs are being yarded, will be prohibited on weekends and holidays. Flag persons will be required during felling and yarding operations in units 31-33 along county road 605 (Kings Pass) (12 days). Flag persons will be required along FR208 and unit 30 during felling operations (3 days). Provision C6.4 limits the width of skidding tractors to 105 inches, unless otherwise agreed, to eliminate the use of D6 or D8 cats. Skidders up to 120 inches will be approved provided equipment is wider to reduce ground pressures and skidding can be done without undue damage to residual timber.

VI. Transportation System

The timber sale contract will specify 6.4 miles of light road reconditioning and 1.8 miles of system road reconstruction. Units 22 and 23 will require 600 feet of temporary road construction and Unit 11 will require 300 feet of temporary road construction. The sale will also require the construction of one helicopter landing. Forty-eight percent of the sale volume will be hauled down the 942 road to FH 9. Two percent of the sale volume will be hauled down the 208 road to FH 9. Eight percent of the sale volume will be hauled out on 978 to FH 9. Forty two percent will be hauled down the the 605 to FH 9. 100% of the sale volume will be hauled down FH 9 to I-90 west to Coeur d'Alene, Idaho.

Specified Road Reconstruction:

Road Number	Road Name	Type of Work	Road Mileage
6003	King Pass	R	0.97
208B	River Road Spur	R	0.15

978	Bobtail Cutoff	R	0.66
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VII. Erosion Control

Purchaser will be required to seed and fertilize landings.

Application shall be during the period March 1 to June 15 and September 1 to November 15. Seed shall be applied evenly at the rate of 19 pounds per acre.

<u>Species</u>	<u>Seed quantity</u>	<u>lbs/acre</u>	<u>cost/acre*</u>
Sheep fescue 'Durar'	\$2.20	5	\$11.00
Slender wheatgrass 'Pryor'	\$1.50	3	\$4.50
Mountain brome 'Bromar'	\$1.25	5	\$6.25
Annual rye	\$0.60	4	\$2.4
Alsike Clover	\$0.90	2	\$1.80
Total		19	\$25.95

*quote from Rainier Seed Specialists in Davenport, WA 7/2007

Acres to seed: 8 x \$25.95/ac = \$207.60
 Labor for Seeding: 22 hours @ \$26.48/hr = \$582.56

Total Seed and Labor cost: = \$790.16

Seed shall be applied by the Dry method. Fertilizer shall be applied at a rate of 200 pounds per acre in one application by the Dry method and have a chemical analysis as listed below:

<u>Nutrient</u>	<u>Percent</u>
Nitrogen, N	16
Phosphorous, P205	16
Potassium, K	16

Fertilizer cost = \$379 per ton (quote from Cenex, Dalton Gardens 7/2007)
 200 lbs per acre x 8 acres = 1600 lbs.
 1600 lbs (0.8 tons) x \$379/ton = \$303.20
 Labor for fertilizing: 22 hrs @ \$26.48/hour = \$582.56

Total fertilizer and labor cost = \$885.76
 Total cost for seeding and fertilizing = \$1675.92
 Seeding and fertilizer – Cost/CCF: \$1675.92/8648 CCF = \$0.19/CCF

Transportation costs:
 Waterbars:

Total Erosion Control needs: \$1675.92
Cost/CCF:\$0.19

VIII. Sale Area Improvement - Reforestation

Essential

Pretreatment Exam for Reforestation	123 Acres x \$ 43.61/Acre = \$ 5,364.00
Pretreatment Exam for Reforestation	70 Acres x \$ 43.52/Acre = \$ 3,046.00
Full Planting without Concurrent Site Prep	123 Acres x \$863.25/Acre = \$106,180.00
Stocking surveys (3 /acre planted)	123 Acres x \$143.93/Acre = \$ 17,703.00
Replant	51 Acres x \$829.89/Acre = \$ 42,324.00

Non-Essential

Ecosystem Burn	75 Acres x \$ 250.55/Acre = \$ 18,791.00
Fuelbreak	22 Acres x \$2,453.75/Acre = \$ 53,983.00

IX. Hazard Reduction

The sequence of activities and activity costs are attached. Costs are generated through the FACTS program.

Purchaser requirements:

Purchaser will be required to lop and scatter slash in all harvest units. Purchaser will be required to construct fireline on Units 1-3, 5, 7-9, 11, 13, 15-18, 20-22, 26, 29, 32, 35, 38 as shown on the map. Some of the firelines do not follow exact unit boundaries, but tie adjacent units and/or ecosystem burns together to shorten the amount of fireline needed and to lessen disturbance. Refer to the map for exact fireline locations. Snagging will be required within 100 feet of the fireline inside the unit and within 20 feet outside the unit, except when line is adjacent to other ownerships. This occurs on the north and west sides of Unit 22. The entire fuelbreak for Unit 22 should be 12 feet wide, rather than the standard 8 feet, and the fireline also needs to be 3 ft wide. This needs to be done to protect the private land from escaped fire. An extra 50% allowance should be made in the appraisal to account for the cost of the wider fuelbreak and fireline.

Grapple piling in units in the King's Ridge area (36, 37, 39, 40, 41, and 42) should be given an extra 25% allowance due to limited access and the likelihood of transporting fuel a significant distance. Grapple piling will be required on slopes less than 45%; there may be small portions of the units that exceed this slope. These portions of the units will not be required to be piled.

Lop and Scatter Activity Fuels	289 Acres x \$ 53.06/Acre = \$15,334.34
Pile Slash at Landings	8 Acres x \$707.83/Acre = \$ 5,662.64
Fire Line Construction (hand)	6.32 miles x \$10,696.98/mile = \$69,330.27
Fire Line Construction (hand 50%)	0.30 miles x \$10,696.98/mile = \$3,290.99 x 1.50 = \$4,936.49
Grapple Pile	44 Acres x \$281.22/Acres = \$12,373.68
Grapple Pile (25%)	67 Acres x \$281.22/Acres = \$18,841.74 x 1.25 = \$23,552.18
Perimeter Snagging	82 Acres x \$26.53/Acre = <u>\$2,175.46</u> = 133,365.06/8648 = 15.42/CCF

Forest Service requirements:

Under Burn Units	125 Acres x \$851.19/Acre = \$106,398.75
Burn Slash at Landings	8 Acres x \$192.75/Acre = \$1,542.00
Burn Slash at Landings	114 Acres x \$196.61/Acre = \$22,413.54
Fire line Construction	0.7 miles x \$17,194.32/mile = \$12,036.02
Jackpot Burning	43 Acres x \$469.09/Acre = \$20,170.87
Leave Tree Protection	52 Acres x \$156.59/Acre = \$8,142.68
Handpiling	5 Acres x \$1915.60/Acre = \$9,578.00
Fireline Construction	0.1 Miles x \$17,538.21/Mile = \$1,753.82
	=\$182,035.68/8648 = 21.05/CCF

X. Other Provisions

A. Period of contract:

1. Normal operating season: June 1 thru October 31.
2. Termination date: December 31, 2012
3. Road Completion Date: 10/31/2008

B. Purchaser Fire Liability:

1. Personnel and Equipment

Number Required	Item	Personnel
6	Sawyer	6
1	Yarder	3
1	Skidder	1
4	Truck drivers	4
1	Loader	2

2. Cost Calculations

Total number of personnel	16
Number of hours per day	12
Total hours per crew day	192
Hourly rate for AD-3 firefighter	\$ 13.24
Average daily cost	\$2,542.08
Average fire length	5 days
Purchaser obligation for operation fire	\$12,710.40
Rounded up to nearest \$100	\$12,800.00

3. Other unique requirements:

XI. Notification of Forest Practices

(Check appropriate box)

<input checked="" type="checkbox"/>	Harvest of forest tree species.
<input checked="" type="checkbox"/>	Road construction associated with harvesting of trees.
<input checked="" type="checkbox"/>	Reforestation.

	Use of chemicals or fertilizers for the purpose of growing or managing forest tree species..
x	Slashing or use of fire resulting from harvest or other management activities.
	Site specific BMP's
	Lake Present?
x	Class I stream present?
x	Steep Slopes?
	Unstable or erodible soils present?
	Sream crossings anticipated?

XII. Sale Objective Code

PURPOSE	ACTIVITY	PERCENTAGE
FS	10	100

VALID PURPOSE CODES:

- TC -- Timber Commodity Purpose
- FS -- Forest Stewardship Purpose
- PP -- Personal Use

VALID ACTIVITY CODES:

- TC** 01 -- Timber Purpose
- FS** 10 -- Forest and Ecosystem Health
- FS 20 -- Recreation/Visual/Cultural Resource Enhancements
- FS 30 -- Wildlife Habitat Management
- FS 40 -- Fisheries Habitat Management and Watershed Improvement
- FS 50 -- T&E Species Habitat Management
- FS 60 -- Range Resource Enhancements
- FS 70 -- Non-Timber Products
- FS 90 -- Other
- PP** 80 -- Personal Use Products