

APPENDIX A. PROPOSED ACTION TREATMENTS AND SILVICULTURAL SUMMARY



The following is a table of stands in the project area. It includes information/descriptions on current and target conditions. Please see the project record and/or individual specialists' reports for more detailed information.

To assist the reader in understanding this table, the following descriptions of actions and definitions are being provided.

Intermediate Harvest

The following treatments are designed to enhance growth, quality, vigor, and composition of the stand after establishment or regeneration and prior to final harvest (manipulating existing stand).

- **Thinning:** Cutting to reduce stand density of trees to improve growth, enhance forest health, or recover potential mortality. This method is used in young stands merchantable to accelerate diameter growth & improve form. A target basal area(BA)/ac of 50-100 square feet is generally prescribed depending on species, tree size, site, etc. This includes commercial thinning.
- **Precommercial thinning:** Felling in an immature stand to accelerate diameter growth and improve average form of trees that remain; typically in sapling to pole-sized stands, often to a spacing objective. Target trees per acre (TPA) is generally 200-300 depending on species, tree size, site, etc.
- **Improvement Harvest:** Harvest done in a stand pole-sized or larger, to improve composition & quality by removing less desirable trees. In Cabin Gulch, target densities are generally 40-100 BA/ac.
- **Liberation Cut:** A release treatment made in a stand not past the sapling stage in order to free favored trees from competition of older, overtopping trees. Target basal area is < 20 sq. ft. BA/ac because trees retained are small.
- **SDI Research Thinning:** Thinning to a variety of densities (creating a mosaic) based on stand density index to see how Douglas-fir beetle (DFB) responds. Average resulting BA/ac will be 80 sq. feet per acre.

Regeneration Harvest

The following treatments are harvest procedures by which a new age class is created (single-aged or two-aged). The existing stand is replaced. Regeneration harvests include:

- **Clearcut:** Most overstory trees are removed. When advance regen is present, the term is *overstory removal*. In a *clearcut with reserves* (some trees retained for reasons other than regen), a 2-aged stand is created. Target density is minimal (0, or if reserves, 5-20 BA/ac).
- **Seedtree:** Most trees are removed except those needed to provide seed for regeneration. Reserves may be left as described above (2-aged stand) but generally the seed trees are removed in a future harvest. Target density is minimal (5-20 BA/ac).
- **Group Shelterwood:** In a shelterwood, all trees are removed except those needed to provide seed AND shelter for regeneration. A *group shelterwood* is when shelter trees are left in a clumpy distribution. Reserves may be left as above (2 aged stand) but generally the shelter trees are removed in a future harvest. Target density is minimal (20-40 BA/ac).

Prescribed Burning/Fuels Treatment

Fire is used as a treatment tool designed to accomplish a variety of goals, primarily to reduce existing ground and ladder fuels, as well as those created by logging slash. Prescribed burning treatments include:

- **Slashing:** Cutting small diameter trees (generally < 6" dbh) mechanically or with chainsaws. Slashing is used to reduce ladder fuels to lower crown fire potential; to create sufficient surface fuels to carry a prescribed fire; and/or to add fuels to meet woody debris goals for nutrient cycling.
- **Pile/Burn:** Generally follows slashing or harvest where slash disposal is needed but broadcast burning is not feasible or desirable. Residual slash and debris is placed into piles and burned after slash has cured, when burning conditions are favorable. Target amounts of slash may be left un-piled to meet woody debris & nutrient cycling goals.
- **Jackpot Burn:** Burning focused on concentrations of slash, generally after harvest or slashing. Jackpot may involve burning loose piles or areas of slash where fuels are not generally continuous and/or overstory mortality not a concern (as in a natural opening). A minimal amount of large tree (> 6" dbh) mortality may occur as a result of the activity.
- **Underburn (following intermediate harvest):** The primary purpose is to reduce residual slash, logging debris and ladder fuels. It is a low intensity burn where direct mortality <5%, indirect mortality <5%, and <1/4 acre group mortality occurs in overstory residual trees. The objectives are to reduce ladder fuels (trees generally under 6" diameter), reduce fine woody debris (<3" diameter), reduce duff fuel loadings while minimizing exposure of mineral soil (<10%), & retain most coarse woody debris (>3" diameter) for nutrient cycling and wildlife habitat.
- **Site Prep burn (following regeneration harvest):** The goal is to reduce residual logging slash and prepare the site for regeneration. It is a low to moderate intensity fire where direct & indirect mortality of leave trees is <5% (reserve, shelter, or seed trees left are minimal and a high priority to protect). The goals are to reduce fine woody debris (<3" diameter), reduce duff fuel loadings, expose 5-25% mineral soil, & retain most coarse woody debris (>3" diameter) for nutrient cycling, seedling microsites, and wildlife habitat. Additional objectives include generating heat to open serotinous cones and reducing competing vegetation. Units targeting whitebark pine regeneration will have mixed severity effects; units targeting other species will have low severity effects.
- **Low Severity Burn (no harvest):** Fire is used as a tool to achieve stand objectives with limited mortality fire effects. The purpose is to reduce ladder fuels and reduce overstory tree density to a minor extent. Slashing as needed would occur to limit intensity and create a fuelbed. Direct mortality <5%, indirect mortality <10%, & <1 acre mortality patches may occur in the overstory. Objectives include reducing fine woody debris (<3" diameter), reducing duff fuel loading while minimizing exposure of soil (<10%), & retaining most coarse woody debris (>3" diameter) for nutrient cycling. An additional purpose is the re-introduction of fire to the ecosystem.
- **Mixed Severity (no harvest):** Fire alone is used as a tool to achieve stand objectives with mixed mortality fire effects. The purpose is to reduce ladder fuels and overstory tree density – heterogeneity in structure is desired. Overall mature tree mortality is generally 30-50%, occurring in patches. Mortality patch size & distribution are dictated by stand & burning conditions. Patches will generally not exceed 5 -10 acres in large units (>50 acres) or 20% of the unit size in units < 50 acres. Slashing would occur as needed to create a fuelbed for burning and reduce ladder fuels. Natural openings would be favored by eliminating small tree encroachment. Other objectives include reduction of fine woody debris (<3 in. diameter) and duff fuel loadings. Limited amounts of mineral soil would be exposed (5-25%). Up to 30% of coarse woody debris (>3 in. diameter) may be consumed but the remainder would be retained for nutrient cycling and wildlife habitat.
- **Sage/Grass Burn:** Burning areas that are generally non-forested (excluding conifer & juniper encroachment) with mixed severity. Approximately 50% of the area contains sagebrush. The objectives are to burn up to 50% of the sagebrush component and most of the grass component. Burning should result in a mosaic of conditions, approximately

75% grass and 25% live sagebrush. Slashing of small diameter trees would occur as needed to create a fuelbed and eliminate conifer & juniper encroachment (generally < 6" dbh). Goals are to create a variety of sagebrush age classes as they re-colonize the areas, stimulate forb & graminoid growth, re-establish parks, and eliminate encroachment. Current mineral soil exposure is variable due to the rocky nature of ridge areas; exposure following treatment would be <30%.

- **Research Low/Mixed Severity Burn:** This treatment is applied for research purposes and contains unique specifications. Unit 10 is a proposed burn in a previously thinned area; treatment will generally follow low severity guidelines. Unit 13 is un-harvested and will generally follow mixed severity guidelines. Per the research plan, there would be 3 treatments per unit – spring burn, fall burn, and control to compare beetle colonization. In Unit 10 <5% mortality would occur in trees >14" and <15% mortality in trees 9-13" dbh. In Unit 13, 10-15% mortality would occur in trees >14" DBH and <30% in trees 9 to 13" dbh. In both units about 60 to 80 basal area would be retained. If research goals become infeasible, the guidelines for low and mixed severity burns will be applied.

In addition, the following abbreviations can be found in the table:

CC% - percent canopy closure
TPA – trees per acre
OS – overstory
US – understory

Regeneration

Var – variable
NRG – natural regeneration
N – no regeneration desired

Logging System (LS)

T – tractor logging
H – helicopter logging
S – skyline/cable logging
N/A – no logging (hand treat)

Vegetative Species

DF – Douglas-fir
LP – lodgepole pine
PP – ponderosa pine
JUN – juniper
WBP – whitebark pine
SAF – subalpine fir
AS – aspen
ES – Engelmann spruce
PF – limber pine

Insects

MPB - mountain pine beetle
DFB – Douglas-fir beetle
WSBW – western spruce budworm

Cabin Gulch Alternative Treatments and Silvicultural Summary

Unit	Treatment Type	Alt.	Acres	Log Sys	Est. Trees per Acre	Target Avg Trees per Acre	Current Canopy Closure %	Target Canopy Closure %	Current Condition	Target Condition & Treatment Description	Regen
1	Intermediate Harvest	2,4	291	T	250 OS, 20 US	100-200	55	vary	Well-stocked mature DF w/ relics; LP & MPB present.	Thin to variety of densities. TPA varies 37-890, BA 34-130.	Var
		3	233								
2	Intermediate Harvest	2,3,4	8	N/A	800-1000	300	75	20-40	15' DF/LP plantation, patchy density	Open growing DF/LP plantation	N
3	Intermediate Harvest	2,3,4	269	S	250 OS, 350 US	150	60	20-40	Mature dense DF stand w/ minor LP, PP, Junip components. Ladder fuels in areas.	Reduced ladder fuels, retain PP; promote vigor & health in DF.	N
4	Prescribed Fire	2,3,4	175	N/A	300 OS, 100 US	200	60-80	40-50	Mature DF w/ PP; steep w/ ladder fuels	Slashing as needed. Protect PP. Promote incidental aspen.	N
5	Prescribed fire	2,4	36	N/A	patchy 300 OS	patchy 100	60	50	Sage/grassland w/ juniper, DF encroach. DF forest patches.	Slash encroachment & ladder fuels. Mosaic burn 75% of area.	N
		3	26								
6	Prescribed fire	2,3,4	21	N/A	patchy 400 OS	patchy 200	80	60	Sage/grassland w/ juniper, DF encroach. DF forest patches.	Slash encroachment & ladder fuels. Mosaic burn 75% of area.	N
7	Intermediate Harvest	2,4	133	H	250 OS, 300 US	75-200	55	20-40	Mature DF w/ ladder fuels & relics.	Reduce stocking, ladder fuels. Slash as needed to burn.	N
		3	34								
8	Intermediate Harvest	2,4	64	H	200 OS, 400 US	200	60	20-40	Scabby DF w/ PP, lots of brushy ladder fuels	Remove ladder fuels, reduce stocking.	N
		3	53								
9	Prescribed fire	2,4	18	N/A	100 OS, 400 US	0-100	variable 0-60	variable 0-40	Ridgetop w/ openings & conifers; ladder fuels encroaching	Slash as needed; 80% mortality in openings. Reduce stocking forested patches.	N
		3	17								
10	Prescribed Fire	2,4	151	N/A	100 OS, 0-800 US	100	40	30-40	Mature DF w/ some LP patches, already thinned	Underburn low mortality, cause bole scorch in residual trees	N
		3	43								

Unit	Treatment Type	Alt.	Acres	Log Sys	Est. Trees per Acre	Target Avg Trees per Acre	Current Canopy Closure %	Target Canopy Closure %	Current Condition	Target Condition & Treatment Description	Regen
11	Intermediate Harvest	2,4	12	N/A	800	300	90	40	20' tall LP w/ smaller DF, very dense	Open growing LP & DF poles	N
12	Intermediate Harvest	2,4	23	N/A	800	300	90	40	20' tall LP w/ smaller DF, very dense. DF NRG coming in.	Open growing LP & DF poles. Cut down LP seed trees w/ DMT.	N
13	Prescribed Fire	2,3,4	11	N/A	150 OS, 0-600 US	75-150	40	20-40	DF, some relics, patchy ladder fuels.	Underburn low mortality, cause bole scorch. Slash ladder fuels.	N
14	Intermediate Harvest	2,3,4	16	T	400 OS	75-200	50	20-40	Ridgetop mature DF w/ some LP a few relics, clumpy regen.	Open stand, remove MPB, restore natural openings.	N
15	Intermediate Harvest	2,3,4	12	S	400 OS	75-200	50	20-40	Clumpy mature DF w/ some LP a few relics, clumpy regen.	Open stand, remove MPB.	N
16	Regeneration Harvest	2,3,4	12	S	450 OS	40-75	50	5-20	Mature LP w/ DF, evenaged, DF seedlings	Remove LP; leave DF shelter & advance regen	N
17	Intermediate Harvest	2,3,4	12	T	75-400 OS	75-150	50	20-40	Clumpy mature DF w/ LP, DF relics, light fuels, no ladder fuels	Remove infested LP; reduce stocking.	N
18	Intermediate Harvest	2,3,4	4	S	200	75-150	50	20-40	Mature clumpy DF; light fuels, no ladder fuels	Reduce stocking	N
19	Regen Harvest	2,4	64	S	400 OS, 200 US	0-20	60	0-5	Even-aged LP w/ DF, some advance regen.	Retain islands of DF for structure (20% in patches).	NRG
21	Intermediate Harvest	2,4	83	T	350 OS, clumps US	75-200	50	20-40	Mature DF, even-aged. Some natural openings. Juniper and ladder fuels.	Maintain openings; reduce stocking; reduce ladder fuels.	N
23	Prescribed Fire	2,4	59	N/A	350 OS, 100 US	200	50	30-40	Patchy multistoried DF w/ juniper and encroachment in meadows.	Slash as needed, burn targeting encroachment & ladder fuels, thin OS a bit.	N
		3	40								
24a	Prescribed Fire	2,4	22	N/A	125 OS, 250 US	75-125	50	20-40	DF forest w/ ladder fuels, juniper, relics.	Open stand a little, reduce ladder fuels.	N

Unit	Treatment Type	Alt.	Acres	Log Sys	Est. Trees per Acre	Target Avg Trees per Acre	Curernt Canopy Closure %	Target Canopy Closure %	Current Condition	Target Condition & Treatment Description	Regen
24f	Prescribed Fire	2,4	11	N/A	100-200	75-150	50	20-40	DF/PP, heavily forested w/ some openings	Open stand a little, reduce fuels, promote PP	N
		3	1								
24g	Prescribed Fire	2,4	19	N/A	25-100	0-75	25	5-20	Open ridges.	Maintain grassland.	N
		3	12								
24h	Prescribed Fire	2,4	9	N/A	25-100	0-75	25	5-20	Open ridges.	Maintain grassland.	N
		3	7								
24i	Prescribed Fire	2,3,4	16	N/A	100-200	75-150	50	20-40	Heavily forested w/ DF & PP.	Open stand a little, reduce fuels, promote PP	N
24j	Prescribed Fire	2,3,4	18	N/A	0-25	0-25	0-5	0-5	Open meadow.	Maintain grassland.	N
32	Intermediate Harvest	2,4	13	T	200 OS, trace US	100-175	50	20-40	2-storied even-aged young mature DF stand, no ladder fuels.	Reduce stocking to improve vigor & growth.	N
33	Intermediate Harvest	2,4	16	S	100-200 OS, 75 US	75-150	50	20-40	Young, mature DF in clumpy distribution, brushy and some fuels.	Reduce stocking to improve vigor; slash ladder fuels.	N
34a	Regen Harvest	2,3,4	26	T	450	20-50	50-60	5-10	W lobe of original 34; LP with bugs and DF advance NRG, a few DF relics.	Remove LP, keep DF seed trees & advance regen; regenerate stand	NRG
34b	Intermediate Harvest	2,4	37	T	200-300	75-200	50-60	20-40	E lobe of original 34; clumpy dense DF with relics & clumps of saplings. Fresh DFB.	Thin DF, reduce fuels, and promote future OG.	N
		3	28								
34c	Intermediate Harvest	2,3,4	2	T	150 OS, 100 US	75-150	50-60	20-40	Clumpy DF, no relics, heavy CWD in places, pockets of smaller trees & seedlings.	Thin DF, reduce fuels, and promote future OG.	N
35	Intermediate Harvest	2,4	16	S	100-350 OS, trace US	75-200	50-60	20-40	Mature DF w/ a few relics & juniper.	Reduce stocking, retain relics.	N

Unit	Treatment Type	Alt.	Acres	Log Sys	Est. Trees per Acre	Target Avg Trees per Acre	Current Canopy Closure %	Target Canopy Closure %	Current Condition	Target Condition & Treatment Description	Regen
36a	Intermediate Harvest	2,4	66	H	300 OS, 20 US	75-200	50-60	20-40	Mature DF w/ some LP, some relics, light fuels.	Reduce stocking, remove LP with bugs, retain relics.	N
36b	Intermediate Harvest	2,4	15	H	300 OS, 20 US	75-200	50-60	20-40	Mature DF w/ some LP, some relics, light fuels.	Reduce stocking, remove LP with bugs, retain relics.	N
37	Intermediate Harvest	2,4	37	T	400	100-200	50	20-40	Young mature DF stand with patches of LP w/ MPB; some advance regen	Remove most of the LP, thin DF if needed, allow for regen in gaps from LP removal.	NRG in gaps
38a	Intermediate Harvest	2,4	47	S	300-500 OS	100-200	70-90	20-40	Extremely dense, small mature DF.	Open stands, retain relics, reduce fuels	N
		3	31								
38b	Intermediate Harvest	2,4	82	S	75-500 OS, patchy US	50-200	50-80	20-40	Variable DF dominated stand w/ patches LP, high CWD in places.	Open stand, retain relics, reduce fuels.	N
39	Prescribed Fire	2,3,4	10	N/A	0-200	0-100	0-60	0-40	50% nonforested, dry ridge; DF, LP, & juniper encroaching; relics	Slash encroachment. Mosaic burn 75% of area. Leave relics.	N
40a	Regeneration Harvest	2,3,4	26	T	200 OS, 100 US	0-20 OS, 30 US	60	0-15	LP w/ MPB, some DF, understory of LP/DF/SAF. WBP seedlings.	Remove most LP, leave DF. Slash 2nd layer LP/DF/SAF & promote WBP. No burn.	NRG
40b	Regeneration Harvest	3	102	T	200 OS, 30 US	0-20 OS, 30 US	60	0-15	LP w/MPB, some DF, understory of LP/DF/SAF. WBP seedlings.	Remove most LP, leave DF. Slash 2 nd layer LP/DF/SAF & promote WBP. No burn.	NRG
41	Prescribed Fire	2,3,4	26	N/A	0 - 200 OS, up to 200 US	0-200	0-70	0-60	Open sage/krumholtz limber/WB meadows w/ encroachment & LP/WB/DF forested areas w/ relics & WB advance regen.	Slash encroachment. Mosaic burn 75%. Slash small trees in forest, protect WB & advance regen. Salvage LP if possible.	N

Unit	Treatment Type	Alt.	Acres	Log Sys	Est. Trees per Acre	Target Avg Trees per Acre	Current Canopy Closure %	Target Canopy Closure %	Current Condition	Target Condition & Treatment Description	Regen
42a	Regeneration Harvest	2,3,4	9	T	100-200 OS, 200 US	0-20 OS	60	0-15	LP w/ bugs & SAF w/ a few DF. WB saplings in US along w/ LP and SAF.	Salvage LP in winter to protect WB advance NRG. Slash around WB. 20% overstory retained in patches (reserves).	NRG
42b	Regeneration Harvest	3	18	T	100-200 OS, 200 US	0-20 OS	60	0-15	LP w/ bugs & SAF w/ a few DF. WB saplings in US along w/ LP and SAF.	Salvage LP in winter to protect WB advance NRG. Slash around WB. 20% overstory retained in patches (reserves).	NRG
43	Intermediate Harvest	2,3,4	47	T	300 OS, 0-20 US	75-200	60	20-40	Mature DF w/ relics, smaller DF cohort, patches LP dom. w/ bugs. Seedlings present.	Open stand, retain relics, remove LP w/ bugs, allow regen in gaps. Could be future OG.	N
44	Intermediate Harvest	2,3,4	5	S	300 OS, 50 US	75-150	60	20-40	Mature DF/LP stand w/ lots of MPB & a few relics. Abundant DF/LP saplings & seedlings.	Open stand, retain relics, remove infested trees.	N
45	Intermediate Harvest	2,4	36	S	200 OS, 100 US	75-200	50	20-40	Dry DF stand w/ some LP, PP, & aspen. Relics. Patches regen & juniper. Scabby harsh site.	Open stand, retain relics, slash ladder fuels; promote PP & aspen. Could be future OG.	N
46a	Intermediate Harvest	2,4	88	T	250 OS, up to 150 US	75-200	60	20-40	W lobe of original 46; DF dominated, more open, trace PP, relics	Reduce stocking, retain relics, promote PP & aspen where occur.	N
46b	Intermediate Harvest	2,4	39	T	150-200 OS, 150 US	75-150	60	20-40	E lobe of original 46; LP dominated w/ MPB, some ladder fuels, no relics.	Reduce stocking, remove infested LP.	N
47	Intermediate Harvest	2,4	8	S	300 OS, 200 US	75-200	60	20-40	Mature DF/LP with bugs, heavy CWD, seedlings in patches.	Remove infested LP, leave most DF, slash ladder fuels, jackpot some fuels.	N

Unit	Treatment Type	Alt.	Acres	Log Sys	Est. Trees per Acre	Target Avg Trees per Acre	Current Canopy Closure %	Target Canopy Closure %	Current Condition	Target Condition & Treatment Description	Regen
48	Intermediate Harvest	2,4	5	T	250 OS, 100 US	75-150	35	20-30	Young LP/DF stand heavily infested w/ MPB; some DF relics	Remove infested LP. Slash ladder fuels near overstory; leave some saplings in gaps.	N
49	Regeneration Harvest	2,4	64	T	300-400	0-20	60	<10	LP/SAF with minor amounts WB; heavy MPB; SAF/LP seedlings. Some meadows.	Remove infested LP, most of OS. Leave WB. Establish new cohort.	NRG or PLANT
50	Regeneration Harvest	2,4	19	S	300-400	0-20	60	<10	LP/SAF with minor amounts WB; heavy MPB; SAF/LP seedlings. Some meadows.	Remove infested LP, most of OS. Leave WB. Establish new cohort.	NRG or PLANT
51	Regeneration Harvest	2,4	47	T	300-500	0-20	60	<10	LP/SAF with dense advance regen; some MPB; some WB advance regen.	Remove most of overstory. Slash LP/SAF advance regen & jackpot burn; try to protect WB advance regen & establish more.	NRG or PLANT
		3	21								
54	Intermediate Harvest	2,3,4	5	S	300 OS, 0-400 US	75-200	60	20-40	Mature clumpy DF/LP w/ a little SAF. SAF regen present. DF relics.	Remove infested LP; reduce stocking, could be future DF OG. Slash submerch & burn.	N
55	Regeneration Harvest	2,3,4	86	T	200-300 OS, patchy US	0-50	60	<10	Mature LP dominated stand w/ some DF and SAF. Pockets of SAF regen.	Remove infested LP overstory. Leave DF as shelter/seed trees. Burn & est. DF/LP regen.	NRG
56	Prescribed Fire	2,3,4	4	N/A	0-100 patches	0-75 patches	<10	0	Open grassland w/ DF encroaching. Dead WB & declining aspen at edges.	Slash encroachment at edges. Mosaic burn 75% of area. Promote WB & aspen.	N
57	Prescribed Fire	2,3,4	6	N/A	0-100 patches	0-75 patches	<10	0	Open grassland w/ DF encroaching; forested patches of WB/limber/LP/DF.	Slash encroachment at edges. Mosaic burn 75% of area.	N
58	Intermediate Harvest	2,3,4	8	S	100-400	75-200	30	10-25	Patchy DF/LP stand w/ aspen	Thin to favor aspen, remove infested LP; distribution will be clumpy	N

Unit	Treatment Type	Alt.	Acres	Log Sys	Est. Trees per Acre	Target Avg Trees per Acre	Current Canopy Closure %	Target Canopy Closure %	Current Condition	Target Condition & Treatment Description	Regen
59	Intermediate Harvest	2,4	40	T	150 OS, 100-200 US	75-150	30	10-25	Open wet DF/LP stand w/ MPB and aspen.	Thin to favor aspen, remove infested LP distribution will be clumpy	N
61	Intermediate Harvest	2,3,4	97	T	400	75-200	60	20-40	Mature DF/LP stand, patchy in composition & size classes.	Remove infested LP; thin OS, reduce fuels	N
63	Intermediate Harvest	2,4	23	T	200-350 OS, 50 US	75-200	60	20-40	Very homogeneous mature DF/LP w/ MPB, no relics	Remove infested LP; thin DF and could increase growth, maybe future OG.	N
64a	Intermediate Harvest	2,3,4	8	T	200 OS, 5 US	75-150	50	30-40	W lobe of original 64; clumpy mature DF, fairly young, a few relics.	Reduce stocking, improve vigor/growth.	N
64b	Regen Harvest	2,3,4	7	T	400 OS, 75 US	20	50	0-5	E lobe of original 64; LP w/ MPB, advance regen present.	Salvage MPB-killed LP from E lobe, keep advance regen & DF OS.	NRG
66	Intermediate Harvest	2,3,4	6	S	250 OS; 20 US	75-150	50	20-40	Patchy DF 2-aged stand w/ juniper & patches of regen.	Reduce stocking, slash ladder fuels, burn.	N
67	Intermediate Harvest	2,3,4	47	T	200-400	75-200	50	20-40	Mature DF & mixed conifer stand, some ladder fuels, MPB.	Promote species diversity (PP, limber). Remove infested LP. Reduce stocking, ladder fuels.	N
68	Intermediate Harvest	2,3,4	60	S	250 OS, trace US	75-200	50	20-40	Mature DF w/ some LP (has MPB); some ladder fuels, juniper, relics	Remove infested LP/salvage. Commercial thin DF.	N
69a	Intermediate Harvest	2,3,4	38	H	400	75-200	60	20-40	W side dense DF w/ relics, no ladder fuels.	Thin W side, underburn.	N
69b	Intermediate Harvest	2,3,4	12	H	300	75-200	50	20-40	E side LP/DF stand w/ bugs & DF seedlings.	Remove infested LP, leave DF component.	N

Unit	Treatment Type	Alt.	Acres	Log Sys	Est. Trees per Acre	Target Avg Trees per Acre	Current Canopy Closure %	Target Canopy Closure %	Current Condition	Target Condition & Treatment Description	Regen
70	Intermediate Harvest	2,3,4	33	N/A	0-100 OS, 0-600 US	0-350	30	10-15	Old clearcut w/ LP poles (600 tpa) w/ open meadows, aspen patches	Precommercial thin favoring aspen. Burn ONLY meadow (<5 acres). Could girdle snags.	N
71	Intermediate Harvest	2,3,4	25	S	350	75-200	50	20-40	Mature DF w/ dead LP component, no ladder fuels.	Reduce stocking, maybe salvage LP.	N
72	Intermediate Harvest	2,3,4	125	T	150-300 OS; 50 US	75-200	50	20-40	Dense mature DF, brushy, juniper ladder fuels, a few relics, a few LP w/ MPB.	Thin DF O/S; slash ladder fuels. Protect relics. Burn w/ minimal OS mortality.	N
73	Intermediate Harvest	2,3,4	43	S	200 OS, 100 US	75-150	50	20-40	Mature DF with some ladder fuels, patches of regen.	Reduce stocking, reduce fuels.	N
74	Intermediate Harvest	2,3,4	26	H	200 OS, 150 US	75-150	50	20-40	Mature DF w/ minor LP component (has MPB). Juniper ladder fuels, relics.	Reduce stocking, remove infested LP, slash & burn to reduce fuels.	N
75	Intermediate Harvest	2,4	64	H	200-400	75-200	50	20-40	Variable DF/LP stand; patchy species composition. MPB. DF relics.	Remove most LP (infested). Thin dense DF areas. Regen in pure LP areas.	N
		3	4								
76	Intermediate Harvest	2,4	71	T	100-300 OS, 0-200 US	75-200	50	20-40	N part past harvest, like Unit 10, fairly open DF. S part no past harvest, more dense, ladder fuels.	Thinning, slashing juniper, low intensity underburn to reduce fuels. Could be future OG.	N
77	Intermediate Harvest	2,4	74	S	100-300 OS, 0-200 US	75-200	50	20-40	Mature DF, partially past harvest, dense, some relics, patches of juniper & DF regen	Reduce stocking, slash ladder fuels, low intensity burn.	N
77a	Intermediate Harvest	3	9	H	100-300 OS, 0-200 US	75-200	50	20-40	Mature DF, partially past harvest, dense, some relics, patches of juniper & DF regen	Reduce stocking, slash ladder fuels, low intensity burn.	N

Unit	Treatment Type	Alt.	Acres	Log Sys	Est. Trees per Acre	Target Avg Trees per Acre	Curernt Canopy Closure %	Target Canopy Closure %	Current Condition	Target Condition & Treatment Description	Regen
77b	Intermediate Harvest	3	14	H	100-300 OS, 0-200 US	75-200	50	20-40	Mature DF, partially past harvest, dense, some relics, patches of juniper & DF regen	Reduce stocking, slash ladder fuels, low intensity burn.	N
78	Intermediate Harvest	2,3,4	33	H	75-200 OS, 100 US	50-150	40	15-35	Mature DF w/ openings, juniper understory, brushy, no relics.	Minimal reduction of stocking, slash juniper, underburn.	N
79	Intermediate Harvest	2,3,4	8	N/A	1000	200	75	25-35	Plantation, LP 12' tall, DF 10' tall, also some DF NRG.	Precommercial thin to 15x15 spacing	N
80	Intermediate Harvest	2,3,4	37	T	500	200	50	25-35	LP regeneration 30-40' tall, dense	Precommercial thin to 80 BA/ac average	N