

BUTTE STEWARDSHIP MARKING GUIDE and LAYOUT NOTES

Revised August 22, 2012

Thinning DxD

Unit	Designated Species	Designated DBH Limits (min – max inches)	Designated DSH Limits (min –max inches)	DxD Spacing (ft)
10	Douglas-fir	5.0 – 20.0	7.0 – 24.0	13
11	Douglas-fir	5.0 – 20.0	7.0 – 24.0	15
12	Douglas-fir	5.0 – 20.0	7.0 – 24.0	16
13	Douglas-fir	5.0 – 20.0	7.0 – 24.0	14
14	Douglas-fir	5.0 – 20.0	7.0 – 24.0	15
15	Douglas-fir	5.0 – 20.0	7.0 – 24.0	13
24	Douglas-fir	5.0 – 20.0	7.0 – 24.0	15
25	Douglas-fir	5.0 – 20.0	7.0 – 24.0	17
26	Douglas-fir	5.0 – 20.0	7.0 – 24.0	14
27	Douglas-fir	5.0 – 20.0	7.0 – 24.0	15
29	Douglas-fir	5.0 – 20.0	7.0 – 24.0	16
30	Douglas-fir	5.0 – 20.0	7.0 – 24.0	15
31	Douglas-fir	5.0 – 20.0	7.0 – 24.0	16
32	Douglas-fir	5.0 – 20.0	7.0 – 24.0	14
33	Douglas-fir	5.0 – 20.0	7.0 – 24.0	15

**Sawlog 7.0”+ dbh, Biomass 5.0-7.0” dbh

Designated Species – These are species to be removed if they are within the diameter limits. All other tree species are to be left, as are all trees outside of the diameter limits (except on landings and temporary roads).

DBH – Diameter Breast Height is 4.5 feet on the uphill side.

DSH – Diameter Stump Height is 6.0 inches on the uphill side.

DxD Spacing – Diameter by Description Spacing is the minimum spacing to be left between designated tree species within diameter limits. Measured slope distance between the closest edges of the trees at stump height.

The body of the harvest unit (not including no-cut areas, and gaps,) will be thinned via Designation by Description (DxD) that uses spacing, diameter limits, and designated cut species.

Thinning is from below, leaving the largest diameter designated tree species and removing all the smaller diameter, designated tree species, which are closer than the minimum spacing.

All designated species above and below the diameter limits and all non-designated species regardless of size are not considered in the spacing. They are “ghost” trees.

Any trees painted for leave or with boundary tags are considered for spacing.

No-Cut Areas, Created Gaps, and Heavy Thin Patches

Unit	Stand Ac	Riparian & Botany Buffer Ac	Unit Ac	Within Unit No-Cut	Created Gaps and Very Heavy Thin Patches	
				# of ¼ Ac Skips	# of ¼ Ac Gaps	# of 2 Ac Patches
10	60	1	59	20	8	2
11	34	2	32	5	13	-
12	54	14	40	4	16	-
13	44	21	23	-	9	-
14	25	12	13	-	4	-
15	39	11	28	3	4	1
24	93	24	70	7	16	-
25	39	9	30	3	10	-
26	32	14	18	2	6	-
27	49	16	33	3	3	1
29	60	29	30	3	12	-
30	35	25	10	1	4	-
31	42	15	27	3	10	-
32	43	7	36	4	12	-
33	50	12	38	4	12	-

Within Unit No-Cut

These are no-cut areas (skips) of ¼ acre each. They are designated by a center tree with **single band of orange**. From center tree, a radius of 59 ft provides a ¼ acre skip. These skips should be dispersed within the body of the unit, and away from landings and temporary roads. These skips may be aggregated where necessary to remove inoperable ground, or just to fit within the unit boundary. *Other means of designating an equal acreage (e.g. one acre no-cut tagged area) for a better fit would be OK, especially for Unit 10*

Created Gaps

Within the gaps, remove all designated tree species within the diameter limits (see Thinning DxD) and leave all non-designated tree species and all trees outside of the diameter limits. Designate gaps by marking a center tree with **single band of pink**. From center tree, a radius of 59 ft provides a ¼ acre gap.

Gaps are to be distributed evenly across the upland portion of the cutting unit. For Units 12, 14, 24, and 15 gaps may also be distributed across the cut portion of the Riparian Reserve (220 ft), but must be at least 100 feet away from stream channels or wetlands.

Very Heavy Thin Patches

Designate 2 acre LTM subunits the body of unit, at least 220 feet away from streams or wetlands. Shape may be circular or square. Designate for leave 50 trees within each heavy thin

patch. Designate with a **two, slanted, vertical stripes of pink**. Minor species preferred for leave. OK to mark leave trees in clumps of up to 5 trees each, distributed across patch.

Riparian No-Cut Buffers (Unit acres to reflect these withdrawals)

Use ArcMap shapefiles with field measurements to exclude riparian no-cut areas from harvest unit boundary where possible.

Unit 10

- No-cut buffer of 60 feet for the intermittent stream to the east.

Unit 11

- No-cut buffer of 60 feet for the intermittent stream to the east.

Unit 12

- No-cut buffer of 60 feet for the perennial stream to the west.
- No cut buffer of 60 feet for the intermittent stream to the south.

Unit 13

- No-cut buffer of 60 feet for the perennial stream to the east.
- No-cut buffer of 60 feet for the perennial stream to the south.

Unit 14

- No-cut buffer of 60 feet for the perennial stream to the west.
- No-cut buffer of 60 feet from the intermittent streams within the unit.

Unit 15

- No-cut buffer of 100 feet for perennial stream to the north.
- No-cut buffer of 60 feet from the perennial stream to the west.
- No-cut buffer of 60 feet for the spring to the south.

Unit 24

- No-cut buffer of 100 feet for the fish-bearing perennial streams to the east. Also exclude where all hardwoods.
- No-cut buffer of 60 feet for the wetlands within unit.
- No-cut buffer of 15 feet for the draw to the south.

Unit 25

- No-cut buffer of 60 feet for the perennial stream to the west. Also exclude slopes in excess of 35% adjacent stream.

Unit 26

- No-cut buffer of 100 feet for the fish-bearing perennial stream to the west.

Unit 27

- No-cut buffer of 100 feet for the fish-bearing perennial stream to the west.

Unit 29

- No-cut buffer of 60 feet for the perennial stream running west and south.

Unit 30

- No-cut buffer of 60 feet for the wetlands within unit.
- No-cut buffer of 60 feet for the wetlands to the southeast of unit. Also exclude areas of low conifer stocking and hardwoods (see unit shape file).

Unit 32

- No-cut buffer of 60 feet for the wetlands to the southwest.

Unit 33

- No-cut buffer of 60 feet for the wetlands within unit.

Botany No-Cut Buffers (Unit acres above to reflect these withdrawals. If within cut unit, may reduce number of skips)

These botany buffer may be excluded from unit boundary or flagged and tagged as “No-Cut Area.” They may also fit within some riparian no-cut buffers. Refer to botany shape files.

Unit 10

- No-cut buffer of 80 foot radius centered on *Tetraphis geniculata* and *Unea Longissima* occurrences (~0.5 acre each).

Unit 12

- No-cut buffer of 80 foot radius centered on *Tetraphis geniculata* and *Unea Longissima* occurrences (~0.5 acre each).

Unit 13

- No-cut buffer of 80 foot radius centered on *Tetraphis geniculata* and *Unea Longissima* occurrences (~ 0.5 acres each).

Unit 14

- No-cut buffer of 100 foot radius centered on *Peltigera pacifica* occurrences (~ 0.7 acres each).

Unit 15

- No-cut buffer of 80 foot radius centered on *Tetraphis geniculata* and *Unea Longissima* occurrences (~ 0.5 acres each).
- No-cut buffer of 100 foot radius centered on *Peltigera pacifica* occurrences (~ 0.7 acres each).
- No-cut buffer of 120 foot radius centered on *Dendroscopula intricatulum*, *Nephroma bellum*, and *Pseudocyphellaria rainierensis* occurrences (~ 1.0 acres each)..

Unit 24

- No-cut buffer of 80 foot radius centered on *Tetraphis geniculata* and *Unea Longissima* occurrences (~ 0.5 acres each).

Unit 27

- No-cut buffer of 80 foot radius centered on *Tetraphis geniculata* and *Unea Longissima* occurrences (~ 0.5 acres each).

Unit 29

- No-cut buffer of 80 foot radius centered on *Tetraphis geniculata* and *Unea Longissima* occurrences (~ 0.5 acres each).

Unit 30

- No-cut buffer of 80 foot radius centered on *Tetraphis geniculata* and *Unea Longissima* occurrences (~ 0.5 acres each).
- No-cut buffer of 120 foot radius centered on *Dendroica caerulea intricatulum*, *Nephroma bellum*, and *Pseudocypbellaria rainierensis* occurrences (~ 1.0 acres each).

Unit 31

- No-cut buffer of 80 foot radius centered on *Tetraphis geniculata* and *Unea Longissima* occurrences (~ 0.5 acres each).
- No-cut buffer of 120 foot radius centered on *Dendroica caerulea intricatulum*, *Nephroma bellum*, and *Pseudocypbellaria rainierensis* occurrences (~ 1.0 acres each).

Other Layout Notes

Unit 10 and 11: Shared boundary is barely discernible by vegetation; precise location is not necessary. Silver fir is a designated cut species in both units. Eastern boundaries of both units abut younger plantations.

Unit 11 and 12: Shared boundary is barely discernible by vegetation; precise location is not necessary. May use road for boundary

Unit 12: Southwest quarter of unit is skyline. Landing access is via temp road that reuses major skid road coming off Road 93 that skirts the head of the perennial stream. Field validate skyline settings prior to boundary layout.

Unit 13: Limitation to the south is slope (and no-cut stream buffer). Keep within unit that which can be ground based logged back to temp road.

Unit 14: Temp road crossing of both internal intermittent stream and draw permitted; locate on previous skid roads. Old-growth to the north requires a 50 ft no-cut buffer.

Unit 26: Eastern fringe of stand is excluded due to slope and soil instability. Keep within unit that which can be ground based logged back to temp road.

Unit 29: Requires location of a new temporary road from existing temp to Unit 30 (near its junction with Road 9310-050). This new temporary road is outside of the Unit 29. Within unit is will follow an existing skid road to access skyline landing in middle of the unit. Skyline profiles need field validation.

Unit 30: Exclude the southeast part of stand with low conifer stocking, hardwoods, and multiple wetlands (see unit shape file).

Unit 31: Old-growth to the north requires a 50 ft no-cut buffer. Unit is a mix of ground based log and skyline. Plateau to the northwest is unaccessible and to be excluded. East third of stand requires skyline log from multiple landings of internal temporary road. May also need to skyline steep slopes coming off of plateau. Confirm all logging system reaches prior to boundary layout.