Percent Reduction Notes

More reduction examples and a full description of reduction methods can be viewed in Chapter 5 - Reduction Compilations of the *Cruise Compilation Manual*.

1. Double reductions are not permitted. A tree can only qualify for one reduction in a cruise compilation.

2. The STU (silviculture treatment unit) field is a mandatory entry if a timber type has more than one treatment unit.

3. When compiling a reduction, pre reduction and post reduction reports are required.

4. In cases where a walk-through of the area identifies a component of the stand selected for retention, such as veterans, that do not show up in the cruise plots, no other species or diameter class should be reduced to compensate for the inability to reduce that component (i.e. veterans).

5. Diameters are arranged into classes. For example a tree that is 50 cm at DBH is in a class that includes trees with diameters from 47.5 to 52.4. The Diameter Class table can be viewed in the Cruise Compilation Manual - Appendix 14.

6. When a range of stems per hectare are stated in the partial-cut prescription, the percent reduction input will be based on the average number of stems per hectare.

Scenario #1

Partial-cut Prescription

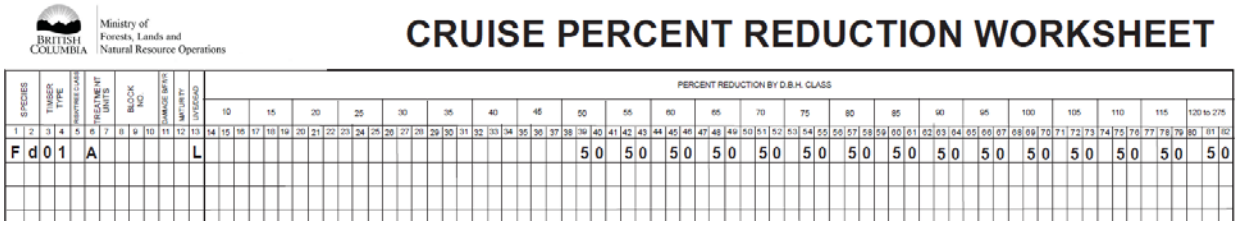
The prescription states to reserve 20 to 30 live Douglas fir trees per hectare from harvest. The trees must have a diameter at breast height (DBH) greater than or equal to the 50 cm class. The silviculture treatment unit (STU A) encompasses timber type 1 in a single block cutting permit with one timber type.

Percent Reduction Format

Since a range of stems per hectare are stated in the partial-cut prescription, the percent reduction input will be based on the average, which is (20 + 30)/2 = 25 stems per hectare.

The timber type 1, stand information (stems per hectare) must be reviewed in the stand and stock reports of the pre-reduction cruise compilation to determine the number of stems equal to or greater than the 50cm DBH class. Assuming there are 50 live Douglas fir stems per hectare in the 50 plus class or larger, 25sph want/50sph got = a 50% reduction (50% leave).

The percent reduction input will appear as follows:


BRITISH COLUMBIA
Ministry of Forests, Lands and Natural Resource Operations
CRUISE PERCENT REDUCTION WORKSHEET
SPECIES
TIMBER TYPE
TREATMENT UNITS
BLOCK NO.
PERCENT REDUCTION BY D.B.H. CLASS
F d 0 1 A L
50 50 50

Scenario #2

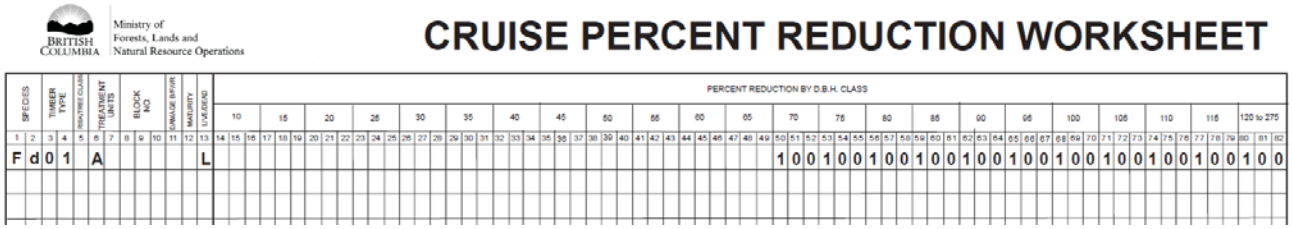
Partial-cut prescription

Reserve all of the live Douglas fir stems for a seed tree source in STU A larger than or equal to the 70 cm dbh class. The cruise has two blocks with timber types 1 and 2 in block 1. The treatment unit, STU A, encompasses block 1 and timber type 1.

Percent Reduction Format

There is no need to review the stand information (stems per hectare) in the stand and stock reports of the pre-reduction cruise compilation since all of the Douglas fir larger than or equal to the 70 cm class will be reserved.

The percent reduction input will appear as follows:



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CRUISE PERCENT REDUCTION WORKSHEET

| SPECIES | TIMBER TYPE | PRIORITIES CLASS | TREATMENT UNITS | BLOCK NO. | DAMAGE BRVR | MATURITY | LIVE/DEAD | PERCENT REDUCTION BY D.B.H. CLASS | | |

Scenario #4

Partial-cut Prescription

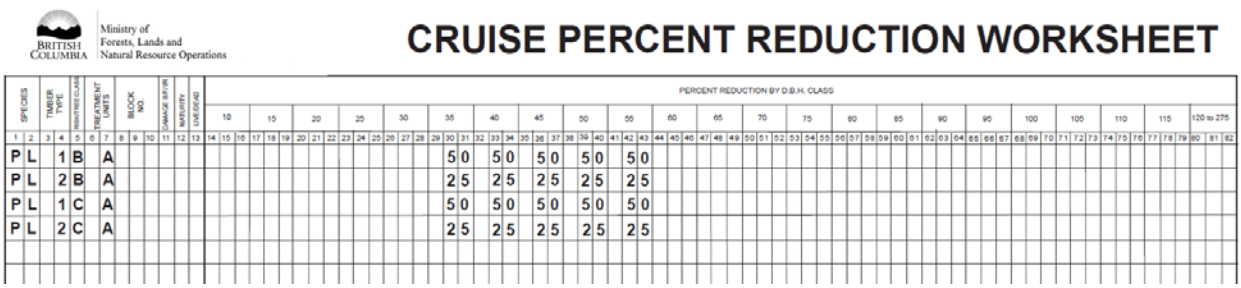
Reserve 2.5 m^2/ha of the basal area of all Lodgepole pine stems of good form and vigour in STU A that are between the 30 cm and 60 cm dbh classes. Good form and vigour is defined as trees that are in risk groups 1 or 2, (i.e. no conk or blind conk). The cruise has three blocks with timber types 1 and 2 in block 1, timber types 3 and 4 in block 2 and timber types 5 and 6 in block 3. STU A encompasses block 1.

Percent Reduction Format

The prescription is based on the basal area (square metres per hectare) reporting for Lodgepole pine in the stand and stock reports for timber types 1 and 2 of the pre-reduction cruise compilation. The timber type 1 basal area/ha for Pl in the 35 to 55 cm classes is 5 m^2/ha and for type 2 is 10 m^2/ha. The targeted post-reduction basal area for treatment unit A is 2.5 m^2/ha, therefore the reduction is;

Type 1 in STU A = 2.5/5.0 = 50%
Type 2 in STU A = 2.5/10.0 = 25%

The percent reduction input will appear as follows:



Scenario #5

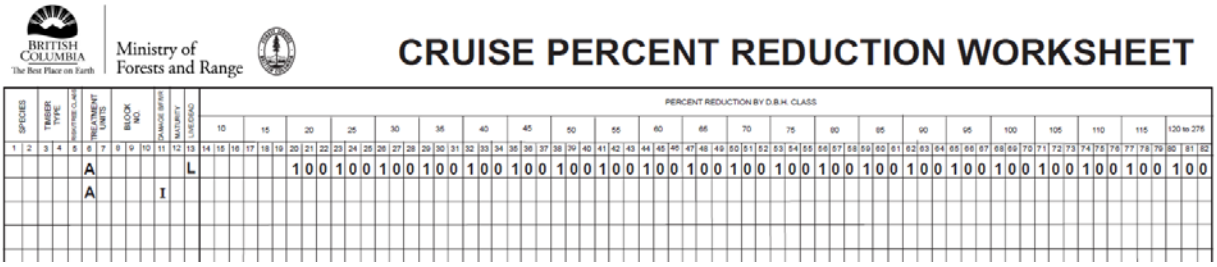
Partial-cut prescription

Harvest all of the dead trees and trees with beetle damage in the cutting authority. The cutting authority has two timber types in two blocks. STU A encompasses the whole cutting authority.

Percent Reduction Format

The prescription indicates that all of the live trees will be retained from harvest except for trees with beetle (insect) damage.

The percent reduction input will appear as follows:



Note that because all of the trees with the damage code will be cut no coding is required under the DBH classes.

Scenario #6

Partial-cut prescription

Harvest all Lodgepole pine trees in the cutting authority that are greater than or equal to the 50 cm diameter class. See percent reduction note #6.

Percent Reduction Format

Assuming that the cutting authority is a single 40.0 hectare block and there are Douglas fir, Lodgepole pine and Balsam trees in the block, then all Douglas fir and Balsam stems will be retained from harvest along with the Lodgepole pine trees up to and including the 45 cm class.

The percent reduction input will appear as follows:

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CRUISE PERCENT REDUCTION WORKSHEET

| SPECIES | | TIMBER TYPE | RISK/TREE CLASS | TREATMENT UNITS | | BLOCK NO. | | | DAMAGE SEVER | MATURITY | LIVE/DEAD | PERCENT REDUCTION BY D.B.H. CLASS | | |