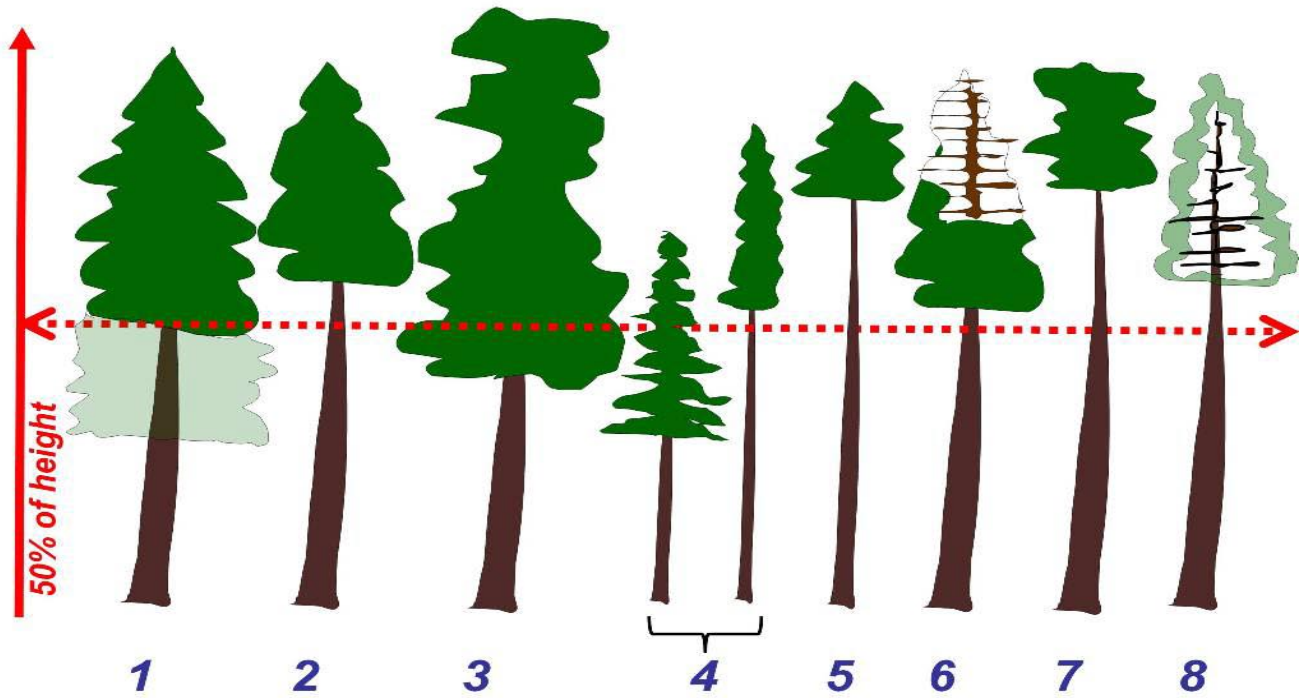


Forest Harvesting/Silviculture Worksheet

Tree Crown Class Vigor Rating



Estimate the % occupancy of dominant overstory tree species in management unit

- PP Ponderosa pine
- DF Douglas-fir
- LP Lodgepole pine
- WL Western Larch
- GF Grand fir
- ES Engelmann spruce
- WRC Western red cedar
- WH Western hemlock
- WP White pine
- SAF Subalpine fir
- PF Limber pine
- RMJ Rocky mtn. juniper
- QA Quaking aspen
- CW Cottonwood

| Species | % of Management Unit | Average Crown Rating |
|----------|----------------------|----------------------|
| 1. _____ | _____ | _____ |
| 2. _____ | _____ | _____ |
| 3. _____ | _____ | _____ |
| 4. _____ | _____ | _____ |
| 5. _____ | _____ | _____ |

% cover – occupancy of smaller diameter/understory species in management unit

| Species | Spacing | | | | % of forested area |
|----------|-----------------------|------|--------|--------|--------------------|
| 1. _____ | denser than overstory | same | sparse | clumpy | _____ |
| 2. _____ | denser than overstory | same | sparse | clumpy | _____ |
| 3. _____ | denser than overstory | same | sparse | clumpy | _____ |
| 4. _____ | denser than overstory | same | sparse | clumpy | _____ |

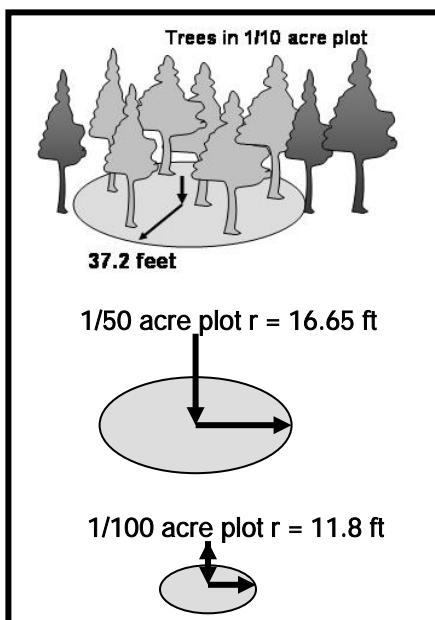
Tree growth rates – using an increment borer and diameter tape fill in the blanks

Large tree averages (based on 3 or more trees sampled per species)

| | | | | | | | |
|------------------------------------|--|--|--|------------------------------------|--|--|--|
| Species | | | | Species | | | |
| Stem Diameter 4.5 ft above soil | | | | Stem Diameter 4.5 ft above soil | | | |
| Age | | | | Age | | | |
| Rings/last 1 inch | | | | Rings/last 1 inch | | | |
| Fastest Growth Rings/inch | | | | Fastest Growth Rings/ inch | | | |
| Average Growth/last inch | | | | Average Growth/last inch | | | |
| Average Diameter | | | | Average Diameter | | | |
| Average Age | | | | Average Age | | | |

| | | | | | | | |
|------------------------------------|--|--|--|------------------------------------|--|--|--|
| Species | | | | Species | | | |
| Stem Diameter 4.5 ft above soil | | | | Stem Diameter 4.5 ft above soil | | | |
| Age | | | | Age | | | |
| Rings/last 1 inch | | | | Rings/last 1 inch | | | |
| Fastest Growth Rings/inch | | | | Fastest Growth Rings/ inch | | | |
| Average Growth/last inch | | | | Average Growth/last inch | | | |
| Average Diameter | | | | Average Diameter | | | |
| Average Age | | | | Average Age | | | |

Tree Density (For dense forest of mature trees choose smaller plot size that will include 5 to 10 trees)



| Spacing (feet) | Trees/acre |
|----------------|------------|
| 3x3 | 4,840 |
| 5x5 | 1,742 |
| 7x7 | 889 |
| 10x10 | 436 |
| 12x12 | 302 |
| 14x14 | 222 |
| 16x16 | 170 |
| 18x18 | 134 |
| 20x20 | 87 |
| 25x25 | 70 |
| 30x30 | 48 |
| 40x40 | 27 |

#Seedling/Sapling trees per 1/100 acre plot _____ x 100 = _____ seedlings per acre

Pole sized trees (5-9" DBH) per _____ acre plot _____ x _____ = _____ poles per acre
(choose plot size) (# of trees) (multiplier)

Large diameter trees (>9" DBH) per _____ acre plot _____ x _____ = _____ trees per acre
(choose plot size) (# of trees) (multiplier)

Site index - (Potential height growth rate)

Species _____ Age _____ Height _____ Site index (height/age) _____
Species _____ Age _____ Height _____ Site index (height/age) _____
Species _____ Age _____ Height _____ Site index (height/age) _____
Species _____ Age _____ Height _____ Site index (height/age) _____
Species _____ Age _____ Height _____ Site index (height/age) _____
Species _____ Age _____ Height _____ Site index (height/age) _____

Predominant stand tree structure (percent of the management unit)

Single canopy layer _____
Two canopy layers (Overstory + seedlings) _____
Three canopy (Overstory + poles, Poles + seedlings) _____



Insect and disease symptoms noted (list species and percent of the trees showing symptoms)

Bark beetle attack _____ Mistletoe/branch brooming _____
Excessive pitch streaming _____ Visible butt/root decay _____
Broken stems/windthrow _____ Stem galls (western gall rust) _____

Soil considerations (circle all that apply)

deep (>2 feet) shallow (<2 feet)

May have a mix of textures

rocky gravelly fine sandy clay well drained poorly drained

Other considerations: _____

Desired Future Forest Condition

Desired mature tree species (% of forested area) and expected longevity (maximum age you expect trees to reach before they die of natural causes or are harvested)

| Species | % of Forested Area | Age to harvest | |
|----------|--------------------|----------------|--|
| 1. _____ | _____ | _____ | PP Ponderosa pine DF Douglas-fir LP Lodgepole pine WL Larch GF Grand fir ES Engelmann spruce WRC W. Red cedar WH Western hemlock WP White pine SAF Sub-alpine fir LimP Limber pine RMJ rocky mtn. juniper QA Aspen |
| 2. _____ | _____ | _____ | |
| 3. _____ | _____ | _____ | |
| 4. _____ | _____ | _____ | |
| 5. _____ | _____ | _____ | |
| 6. _____ | _____ | _____ | |

Desired species to naturally regenerate _____

Desired species to plant _____

Bird's-eye view of desired forest tree spacing (check one)

Wild stand
 Evenly spaced
 Evenly spaced with openings
 Variable density spaced with openings

Some wildlife
 Maximizes growth
 Growth + regeneration
 Combination of all

Desired spacing (in feet) Large (>9"DBH) _____ (ft)
 Pole (5-8"DBH) _____ (ft) Seedling (<5"DBH) _____ (ft)
 Size and shape of openings _____

| Tree spacing (ft) | Trees/acre |
|-------------------|------------|
| 3x3 | 4,840 |
| 5x5 | 1,742 |
| 7x7 | 889 |
| 10x10 | 436 |
| 12x12 | 302 |
| 14x14 | 222 |
| 16x16 | 170 |
| 18x18 | 134 |
| 20x20 | 87 |
| 25x25 | 70 |
| 30x30 | 48 |
| -- -- | -- |

Desired structure: (circle)

