

## ASPEN BROWSE SURVEY METHODS

1. Use Form\_Aspen\_Regeneration[4] for this survey.
2. Walk the length of the stand: Count your paces as you go. Along with estimating the length, walking the stand gives you an opportunity to visually assess the stand, any heterogeneity within the stand and its species composition before the quantitative assessment begins.
3. Divide the stand into thirds: At the end of the stand divide the paces by three, then pace that number of steps back across the stand, placing tagging when you reach your allotted steps. Do this twice more. The last tag should be where you began.
4. Select transect locations: Using a random number table select three number that are less than 1/3 the length of the stand. Pace off the random number beyond each flagging marker and lay a 100' transect tape out perpendicular to the length axis of the stand. For the first transect lay the tape out from the right edge of the stand inward. For the second transect lay the tape out in the middle of the stand and for the third lay it on the left edge of the stand inward.
5. Walk along each belt transect: Starting at the down slope end, record each aspen and each conifer (to species) within 3' on each side of the transect tape (6' wide belt transect).
  - a. Count every aspen stem present. Many times aspen sprout in clumps but each stem is counted if a connection to another stem is not seen. Connections are found either by digging away a little soil around the base, or by moving each stem individually. If the movement of one stem does not cause any others in the clump to move, count it as a separate stem. If it does cause movement of another stem count both the stems as one aspen.
6. Record the height of aspen/conifer Place the range pole on the upslope side of the aspen/conifer. Indicate which one-foot increment on the range pole that the tallest leader lies within. Do not lift the tallest leader to place it against the range pole, instead note the height of its natural droop or position. The measurement will be 1 foot for all plants between 1-2', 2 for plants between 2-3', ect. If the plant is >6', indicate that with a "7".
7. Aspen >6' tall: measure diameter at breast height (DBH).
8. Aspen 0'-6' tall: measure browse/damage condition of the tallest leader and all sub-leaders within 6" of the tallest leader. For aspen, sub-leaders are branches that are primarily growing vertically or adding height to the plant. Do not count branches that are horizontal or growing from leaders.
  - a. Unbrowsed leader (0): No damage, tip of leader intact and leaves from this year are present.

- b. Browsed leader (1): Stems and or branches lack a terminal bud and end bluntly.
  - c. Frost (4): Terminal bud/leaves on leader turned blackish due to a frost after the leader had leafed out.
  - d. Dead Leader (7): Terminal bud on leader still intact, but leader does not have leaves from this year.
9. Conifers >6' tall: measure DBH.
10. Conifers 0'-6' tall: measure height but not browse/damage condition.
11. If a plant is dead: Measure the height but not browse/damage condition.
12. Other damage: For plants that are have: stem wound, branches stripped, aspen stem mortality, browsing plus branches stripped, insects, snow break, disease, or rodents, record the appropriate whole plant damage code.
13. Dominant vegetation: Record the dominant plant species present within the stand. Photograph and take samples of unidentified plants for later identification.
14. Stand description: Record a general description of the stand, including nearby prominent nearby features (to assist relocating the stand) and a qualitative description of the status of the aspen stand. Note the presence or sign of any vertebrate animals, especially beaver, livestock and native ungulates.
15. Photos: Photograph the site, including along each of the three belt transects and representative photos of the survey area.
16. Sketch a map of the stand: Walk the width of the stand then create a brief sketch. See Aspen\_Stand\_Map\_and\_Notes[2] for details on the information to include in the sketch.