

SAD Survey Instructions
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The purpose of this survey is to record baseline data for aspen stands in areas where sudden aspen decline (SAD) is not occurring, as well as to identify any stands that are being affected by SAD.

The SAD Survey is designed to recognize potential symptoms of SAD as well as symptoms of general aspen decline and excessive browsing pressure. It is deliberately short (just 1 page printed double-sided) and does not require conducting transects. Moreover the SAD Survey does not require expertise in botany or forestry. If there are questions that go beyond your expertise, just leave these sections blank.

The SAD Survey is still in a preliminary stage. Anyone interested in taking on the survey as a project, or making revisions to it, should contact me; we'd be happy to hear ideas.

Instructions for conducting survey

This survey should be conducted at the center of the aspen stand. Because of foliage questions in the survey, it is best to conduct it after leaves have flushed and before they have fallen (late spring to early fall, depending on your location).

Answer the questions from what you know of the stand. Thus, if the stand is small enough that you are able to see/walk through the whole stand, answer the questions about the entire stand. If the stand is large, just answer the questions about what you can see from the center of the stand. Question 12 addresses the issue of whether the edge of the stand is different from the center.

Your contact information will be useful in case there is anything on the sheet that we cannot read or is otherwise unclear.

Use the Stand ID that makes sense for your organization. U.S. Forest Service should use a Forest Code and District Code, plus the Stand Code when possible.

Check the box or boxes for primary stand type that seem most fitting. If there is another stand type that you think would be more appropriate (e.g., snowpocket), you can write it in but please also check at least 1 of the 4 present boxes. Primary stand type is defined as follows (Shepperd et al. 2006): Mark slope if the aspen stand is found on a hill. Mark lithic if the aspen are found in or next to a talus or other rocky field. Mark meadow fringe if the aspen stand occurs on the edge of a meadow. Mark riparian if the aspen stand occurs in an area with permanent or seasonal standing or moving water.

Primary aspen form is to distinguish the more common tree form from the shrub-like krummholz form.

Questions:

- 1) Estimate the percentage of the canopy that shows recent crown loss, which is thinning of the foliage or branch dieback. The categories are 0-33%, 34-66%, and 66-100%.
- 2) Estimate the percentage of the canopy that has died and fallen. The categories are 0-33%, 34-66%, and 66-100%.
- 3) Estimate the percentage of the stand that has died and is still standing.
Then estimate the percentage of those dead and still standing trees that died recently. These trees can be distinguished by their white color since they will still have most of their bark. The categories are 0-33%, 34-66%, and 66-100%.
- 4) Estimate the size class for the majority (greater than 50%) of aspen that are standing and alive. The categories are less than 1 in (2.54 cm) dbh, 1-8 in (2.54-20.32 cm) dbh, and greater than 8 in (20.32 cm) dbh.
- 5) Estimate the size class for the majority (greater than 50%) of mortality that has occurred recently (indicated by their white color since they will still have most of their bark). The categories are less than 1 in (2.54 cm) dbh, 1-8 in (2.54-20.32 cm) dbh, and greater than 8 in (20.32 cm) dbh.
- 6) Compare the absolute number of young aspen of 1-5 in (2.54-12.7 cm) dbh in the stand with the absolute number of mature aspen trees (greater than 8 in/20.32 cm). For example, if you can see approximately 60 young aspen and 10 large mature aspen, answer “5x”. If you can see 2 young aspen and 17 mature aspen, answer “<1x”.
- 7) Compare the number of sprouts (less than 1 in/2.54 cm dbh) in the stand with the number of mature aspen trees (greater than 8 in/20.32 cm). For example, if you can see approximately 500 sprouts and 30 large aspen stems, answer “10x”. If you can see no or very few sprouts, answer “<1x”.
- 8) Estimate the percentage of sprouts (less than 1 in dbh) that show evidence of herbivory. Evidence includes any chewed leaves or stems. Also note if the herbivory appears light, moderate, or heavy. Thus, in an area with consistent but low density deer use, you might see one chewed leaf from 80% of sprouts. In this case, you should mark “76-99%” and “light”.
- 9) Describe the pathogen or insect damage that you see, including the species if you can identify them. Note any beaver damage observed.
- 10) Note any evidence of fire in the stand.
- 11) Note the presence of conifers, which part and portion they make up of the forest, and which species predominates, if you know.
- 12) Now walk to the edge of the stand and note whether sprouting is uniform across the stand. For example, in some stands there are more sprouts at one edge than other edges or in the center. Also note if there are patches of mortality in different parts of the stand.

Finally, there is a section to make notes if you run out of room on the form or have anything to add. If you can take pictures, they will help supplement this information, and will be much appreciated.



Comments, questions, or completed surveys/pictures?

Please contact Toni Lyn Morelli at 510-559-6424, tmorelli@fs.fed.us

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Sudden Aspen Decline (SAD) Survey

*****CONDUCT THIS SURVEY IN THE CENTER OF THE STAND DURING SPRING OR SUMMER*****

DATE: _____

Surveyor's Name: _____ Surveyor's Phone #: _____

Stand Center GPS Coordinates: _____ N _____ W units: _____

Stand ID: _____ Stand size: _____ ha

Environmental context: elevation: _____ m aspect: _____ ° slope: _____ %

Primary stand type: Slope Lithic Meadow Fringe Riparian

Primary aspen form: Upright tree Shrub

1. How much recent crown loss (thinning of the foliage and/or branch dieback) across the canopy?

<34% 34-66% >66%

2. What percentage of the stand is down and dead aspen?

<34% 34-66% >66%

3. What percentage of the stand is standing and dead aspen?

0-25% 26-50% 51-75% 76-100%

Do they appear recently dead (bark still intact)?

<34% 34-66% >67%

4. The majority (>50%) of live aspen is in which size class?

<1 inch dbh 1-8 inch dbh >8 inch dbh

5. The majority of current aspen mortality is located in which size classes?

<1 inch dbh 1-8 inch dbh >8 inch dbh

6. How many more young established aspen (1-5 inch dbh) are present than mature aspen (>8 inches)?

<1x 2x 5x >10x

7. How many more aspen sprouts (<1 inch dbh) are present than mature aspen (>8 inches)?

<1x 10x 100x 1000x

8. What percentage of sprouts (<1 inch dbh) show any evidence of ungulate (e.g., elk, deer, cattle, sheep) herbivory?

0-25% 26-50% 51-75% 76-100%

Is the sprout herbivory light moderate heavy

9. Is there evidence of pathogens or insect damage? Is there evidence of beaver damage? Describe.

10. Is there any evidence of past fire in the stand?

Yes No

11. What is the size of conifers within this stand?

no conifers conifers in understory mixed in canopy majority of canopy

Primarily which species of conifer? _____

12. Walk to the edges of the stand. Is sprouting uniform across the stand?

Yes No

Is mortality uniform across the stand?

Yes No

Explain: _____

