Family Particle Size Control Section

Particle Size Control Section Upper and Lower Depths:

Note – These guidelines are a simplification of the information provided in the Keys to Soil Taxonomy. If you have a unique case or concern, please read the full PSCS section in the Keys (Ch. 17).

1) If you **DO NOT** have an argillic horizon:
    a. The upper depth is 25 cm except if there is an Ap that is deeper than 25 cm. If there is an Ap deeper than 25 cm, then the upper depth is the bottom of the Ap.
    b. The lower depth is 100 cm except the particle size control section cannot include any of the following:
        i. Bedrock (R)
        ii. Saprolite (Cr)
        iii. Fragipan
        iv. Densic horizons (d)

        If there is one of these horizons within 100 cm, then the lower depth is the top of this (or these) horizons.

2) If you **DO** have an argillic horizon (that is not a part of a fragipan):
    a. The particle size control section upper and lower depths are the top 50 cm of the argillic.
    b. If the argillic is less than 50 cm, then the particle size control section is the entire argillic horizon.
    c. Do not include any of the fragipan (if present) in the particle size control section.

3) If there is a **root limiting layer within 36 cm** of the mineral soil surface, the particle size control section is the soil surface (0 cm) to the root limiting layer.

Family Particle-Size Classes

Once you have determined the PSCS, you can now determine the particle-size class.

1) Rock fragments are > 35% volume
    a. All textures are sands and loamy sands • **sandy-skeletal**
    b. Clay average is > 35% • **clayey-skeletal**
    c. Clay average is < 35% • **loamy-skeletal**

2) All textures are sand and loamy sands • **sandy**

3) Lithic contact within 50 cm of surface or 50 cm or more loamy fine sand or coarser over argillic (arenic, grossarenic)
    a. Clay average is > 35% • **clayey**
    b. Clay average is < 35% • **loamy**

4) Rock fragments are < 35% volume
    a. Clay average is > 60%
        i. Ultisol • **clayey**
        ii. Other • **very fine**
    b. Clay average is > 35%
        i. Ultisol • **clayey**
        ii. Other • **fine**
    c. Clay average is < 35%
        i. Clay average is > 18%
            1. Sand average is > 15% • **fine-loamy**
            2. Sand average is < 15% • **fine-silty**
        ii. Clay average is < 18%
            1. Sand average is > 15% • **coarse-loamy**
            2. Sand average is < 15% • **coarse-silty**

Note – for 2 parent materials, there are 2 particle size control sections and classes.