# Soil Sampling Protocols for Long-term Soil Monitoring Study - 2017

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The 2017 sampling will incorporate genetic horizon sampling and bulk depth increment sampling, the same protocols as followed in the 2007 and 2012 sampling. The genetic horizon samples will be kept as reference samples and the bulk depth increment samples will be used for all analytical work.

**Genetic horizon samples** will be taken from the side of the pit that was described, using a knife, trowel, or other hand tools and will be collected into small clear polyethylene sterile bags (eg. sandwich bags), and labeled with a two-letter plot initial, subplot number, horizon label, and depth. Sample size will be generally sufficient to fill the small bags, but is somewhat dependent on the thickness and continuity of the described horizon.

**Bulk depth increment samples**, for all but the MM Forehead site, shall consist of **one gallon of material** from the following 4 layers and/or depths:

1. the Oi and/or Oe horizons, mixed together if both are present
2. the Oa and/or A horizons, mixed together if both are present
3. the upper 10 cm (4 inches) of the uppermost B horizon(s)
4. between the depths of 60 to 70 cm **below the ground surface**

For the **MM Forehead** site, bulk depth increment samples shall consist of one gallon of material from:

1. the Oi and/or Oe horizons, mixed together if both are present
2. the Oa and/or A horizons, mixed together if both are present
3. the upper 10 cm (4 inches) of the uppermost B horizon(s), if a B horizon is present

* If a B horizon is not present, the E horizon, if present, will be sampled in its entirety

1. Between the depths of 60 to 70 cm **below the ground surface**, if the soil pit is deep enough to bedrock to reach this depth