**Title**: 1108 Understand the uses and limitations of soil survey information.

**Type**: □ Skill  X Knowledge

**Performance Objective**: Trainee will be able to…
- Recognize uses and limitations to the use of soil survey spatial and attribute data.

**Target Proficiency**:
- □ Awareness  X Understanding  □ Perform w/ Supervision
- □ Apply Independently  □ Proficiency, can teach others

**Trainer Preparation**:
Trainer must understand the appropriate uses and limitations of soil survey.

**Special Requirements**:
Initiate an external learning request with a SF-182 in Aglearn for this activity. Instructions and a template are located on the training webpages for OJT modules.

**Prerequisite Modules**:
- □ 1107 Understand the soil survey procedures used in initial soil surveys.

**Notes**:
None

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**Approved by**:
Shawn McVey
The Five-Step OJT Cycle for **Declarative Training**
(Knowledge)

**Cycle Step 5**
Trainer/Trainee debrief

**Cycle Step 1**
Trainer/Trainee establish shared mental model

**Cycle Step 4**
Trainer observes
Trainee performs task provided as feedback

**Cycle Step 2**
Trainee reviews materials provided

**Cycle Step 3**
Trainer and Trainee discuss information
## OJT Module Lesson

**Title:** 1108 Understand the uses and limitations of soil survey information.

<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHY, WHEN, WHERE, HOW, SAFETY, QUALITY</th>
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</thead>
<tbody>
<tr>
<td><strong>Cycle step 1</strong></td>
<td>Trainer and trainee review objectives of module. Ensure that the trainee understands that this module is simply an overview intended to provide an understanding of the uses and limitations of soil survey in your area.</td>
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**Cycle step 2**

- Trainer and trainee read/review:
  - *Soil Survey Manual,* Chapter 6: Approaches to Generalizing Relative Soil Behavior
  - Soil Survey Geographic (SSURGO) database, Metadata-Identification Information-Use Constraints, for two different soil survey areas in the trainee’s area.

  Trainer should then lead discussion regarding effects of map scale, order of soil survey, and map unit design to use and constraints of use of soil survey information.

**Cycle step 3**

- Trainer asks trainee to:

  1. **Describe when to use a soil survey.**

     The trainee should be able to list appropriate uses of soil surveys.

     Examples might include:
     1. Intended for planning purposes in larger areas (typically >3 acres in order 2 mapping).
     2. Providing an idea of potentials and limitations you could expect to find before visiting a site.
     3. Helps compare the value of lands.

  4. **Describe the use constraints of the soil survey.**

     The trainee should be able to list constraints of a soil survey and what these constraints mean to a soil survey user.

     Example constraints to highlight should include:
     1. The survey is not a primary regulatory tool in permitting or citing decisions.
     2. The survey is limited in the information that can be provided by scale and order of soil
3. The survey is a planning tool and is not intended for site-specific locations and applications (e.g., where to site individual houses).
4. The survey does not replace the need for onsite investigation.

<table>
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<tr>
<th>5. Select three interpretations for discussion of use and misuse.</th>
<th>Why, when, where, and how might a user of soil survey interpretations misuse them if the user had read the above information in step 2.</th>
</tr>
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<td>6. Contrast the differences and/or similarities between surveys.</td>
<td>Using the metadata for the 2 selected survey areas, trainer and trainee’s dialogue explains why, when, where, and how similarities and differences are necessary among soil surveys. Example differences for discussion might include publication dates or scale used to make the soil survey. Example similarities for discussion might include data quality and the use of a standard system of classification.</td>
</tr>
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**Cycle step 4**

Select two soil survey areas that have different land uses, e.g., rangeland, cropland, or woodland.

Make distinctions using metadata to distinguish differences between the soil survey areas, e.g., map scale, kind of map unit, and size of map unit.

**Cycle step 5**

Trainer can debrief trainee and address any concerns.

Part of the debriefing should include discussing the history of the original soil survey and its update.

Trainer may choose to discuss additional items utilized to provide an understanding of the uses and limitations of soil survey, such as the “Order” (1, 2…) of a soil survey.
**OJT Module Lesson Measurement of Learning**

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<td>Trainee’s learning is measured.</td>
<td>Take the attached quiz below.</td>
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</tbody>
</table>

**SF-182**

Trainee and/or supervisor access Aglearn to verify completion of the module via its SF-182.
Quiz

1. Engineers, architects, city and county building officials, and contractors find soil surveys useful in assessing the soils of a specific area. __ true    __ false
2. Engineers, architects, city and county building officials, and contractors find soil surveys useful in foreseeing problems and evaluating the feasibility of soils for a planning area. __ true    __ false
3. Engineers, architects, city and county building officials, and contractors find soil surveys useful in determining the need for additional onsite investigation. __ true    __ false
4. Engineering interpretations of soil surveys are not intended to recommend location or design of structures. __ true    __ false
5. The dataset in SSURGO is not designed for use as a primary regulator tool in permitting or citing decisions, but it may be used as a reference source. __ true    __ false
6. Engineering interpretations of soil surveys are not intended to substitute for onsite investigations for specific uses and designs. __ true    __ false
7. SSURGO is public information and may be interpreted by organizations, agencies, units of government, or others based on needs; however, these entities are responsible for the appropriated application. __ true    __ false
8. NRCS will not perform any evaluations of SSURGO maps related to State or local regulatory programs. __ true    __ false
9. Photographic or digital enlargement of SSURGO maps to scales greater than at which they were originally mapped can cause misinterpretation of the data. __ true    __ false
10. The depicted SSURGO soil boundaries, interpretations, and analysis derived from them do not eliminate the need for onsite sampling, testing, and detailed study of specific sites for intensive uses. __ true    __ false