**OJT Training Module Cover Sheet**

**TITLE:** 1107 Understand the soil survey procedures used in developing initial soil surveys.

<table>
<thead>
<tr>
<th>Type:</th>
<th>☐ Skill</th>
<th>☒ Knowledge</th>
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**Performance Objective:** Trainee will be able to:
- Understand how initial soil surveys were made prior to GIS.
- Understand how initial soil surveys are made utilizing GIS and related tools.

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

**Trainer Preparation:**
Be familiar with past and present methods used for developing initial soil surveys.

**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:**
None

**Notes:**
Additional skill development may be facilitated using OJT modules:
- 001 MLRA concept for doing soil survey.
- 007 Understanding the processes of mapping soils.

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

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

**Cycle Step 2**
Trainee reviews materials provided

**Cycle Step 3**
Trainer and Trainee discuss information

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

**Cycle Step 5**
Trainer and Trainee debrief
# OJT Module Lesson

## Title: 1107 Understand the soil survey procedures used in developing initial soil surveys.

<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHY, WHEN, WHERE, HOW, SAFETY, QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle step 1</td>
<td>Trainer and trainee review module objectives.</td>
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</table>
| Cycle step 2 | Trainer and trainee read/review:  
  - The attached file *How This Survey Was Made*, an excerpt from a 2009 published soil survey.  
  Optional review material for additional knowledge development, accessed via the internet:  
    - *Soil Survey Manual, Chapter 4*. |
| Cycle step 3 | Trainer discusses the following with trainee:  
  1. Soil survey prior to GIS  
  Trainer should lead a discussion that includes all or part of the following:  
    - Memorandum of Understanding guidance for soil surveys (order of survey, scale of mapping, map unit delineation minimum size, documentation standards, etc.).  
    - Tools used in field and office.  
    - Kinds of maps, such as black and white photographs (low and high altitude), Infrared photos, topoquad sheets.  
    - Photo interpretation as method of location.  
    - Meeting national standards (OSDs and SIRs) versus gathering local data (typical pedons, interpretations).  
    - Gathering documentation supporting correlation decisions – how that has been done and how it has changed.  
      - Field descriptions, field notes, selection of typical pedon  
      - Sampling for laboratory analysis  
      - Addition of transects to broaden information supporting decisions  
      - Documentation standards used to support map unit design and map unit components  
    - Development of NASIS changing standard from national focus to what exists locally (the data map unit).  
    - Length of time to complete an initial survey (based on size and complexity of survey area, and number of soil scientists assigned). |
| Cycle step 4 | Trainer should continue discussion, adding how GIS and related tools affect initial survey activities.  
| | • Imagery versus photographs  
| | • Accuracy of point data location (pros and cons) with GPS and GIS tools  
| | • Accuracy of line placement in relation to landforms and surface morphometry  
| | • Speeding up delivery of data (available in days versus years)  
| | • Ability to edit data when needed  
| Cycle step 5 | • Apply the trainees understanding from this module to their assigned job in regards to conservation  
| | • Answer any questions trainee may have.  

| 2. Soil survey with GIS | Why adjoining survey areas may not have joined maps and data (era of mapping, people involved, changes within NCSS way of doing things, etc.).  

OJT Module Lesson Measurement of Learning

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<td>Trainee understands the mapping procedures used for initial soil surveys</td>
<td>If opportunity arises, take the trainee to the field to observe mapping of soil resource.</td>
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**SF-182**

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