### OJT Training Module Cover Sheet

**Title:** 309 How to develop a range of characteristics for a taxonomic unit description.

<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 a range in characteristics (RIC) for a taxonomic unit description (TUD) is developed under guidelines of the NCSS.

**Target Proficiency:**
- Awareness
- Understanding
- Perform with Supervision
- Apply Independently
- Proficiency, can teach others

**Trainer Preparation:**
- Trainer should be familiar with the assigned reading/review material in the lesson plan that follows.
- Have example TUDs from a published soil survey ready and available.

**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:**
- 011 How to recognize and use components in soil survey.
- 212 How to develop a range of characteristics for a new soil series.

**Notes:**
You may or may not develop TUDs in your survey area. However, TUDs are a major part of previous soil survey efforts and the trainee needs to understand them and how they are developed.

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

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

- **Cycle Step 2**
  - Trainee reviews materials provided

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

- **Cycle Step 4**
  - Trainer observes Trainee perform task provided as feedback

- **Cycle Step 5**
  - Trainer/Trainee debrief
**OJT Module Lesson**

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<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 the objective of this module. Note that a taxonomic unit description will be referred to as a TUD.</td>
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<tr>
<td>Cycle step 2</td>
<td>- Complete review based on two separate scenarios as follows:</td>
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</tbody>
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1. **TUD based on a soil series.**

   Select a TUD based on a soil series in the survey area and review with the trainee the following tasks that went into developing the range of characteristics:
   - Reviewing the final correlation memorandum for the survey area to obtain an approved list of series for the manuscript.
   - Gathering appropriate documentation (access via the internet and review NSSH 627.08).
   - Aggregating documentation by master horizon or subhorizon to determine the normal ranges for soil properties.
   - Establishing norms and class limits.
   - Incorporating appropriate lab data.
   - Ensuring that ranges in soil properties are no wider than the series which it is correlated as and are not so narrow as to be impractical for consistent identification.
     - If characteristics extend beyond limits of the series, are correlation notes provided in the RIC explaining what and why?
     - Did characteristics beyond the series limits create a situation for a taxadjunct or not. If yes, explanatory notes must be provided in the RIC section of the TUD.
   - Reviewing any MLRA Soil Survey Regional Office (MO) guidelines regarding development of TUDs, correlation processes, and QA technical reviews.

2. **TUD based on a higher category taxon.**

   If you have any in your survey area, select a TUD developed for a higher category taxon in the survey area and review with the trainee the steps that went into developing the range of characteristics. If you
do not have any, provide an overview of the process based on the following:

- Why a taxonomic category above the series was correlated for a map unit component.
- Ensuring that an appropriate level of detail from field documentation was used.
- Incorporating appropriate lab data.
- Establishing norms and class limits.
- Characteristics are no wider than the taxonomic category used (family, subgroup, great group are typical) and are not so narrow as to be impractical for consistent identification.
  - If characteristics extend beyond limits of the taxonomic category used, are correlation notes provided explaining what and why?

| Cycle steps 3 & 4 | Using a proposed TUD under development, have the trainee follow along with the process of developing or revising the range in characteristics to help achieve understanding. |
| Cycle step 5     | Discuss what has been covered and what has been learned. |
**OJT Module Lesson Measurement of Learning**

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<td>Use Cycle Step 4 above for measurement of learning.</td>
<td>Use this cycle step as your measurement of learning, remembering that this module is meant to be an overview of how a range in characteristics for a TUD is developed.</td>
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</table>

**SF-182**

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