# 1102 Understand map units, delineations, and the components within your survey area.

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<tr>
<th>Type:</th>
<th>Skill</th>
<th>Knowledge</th>
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**Performance Objective:** Trainee will be able to:
- Understand the concept of a map unit as used in soil surveys.
- Indicate what is a delineation and describe the difference between a map unit and a delineation.
- Identify major components in a map unit and explain the relationship between map units and components.
- Identify delineations on a soil map and relate these to map unit and component information in the SSURGO soil data.

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

**Trainer Preparation:**
- Trainer should be familiar with concepts in the attached reference material.
- Create a soil map for a project area or other area. The map should include delineations of at least five different map units.
- Trainer should be able to generate soil reports on the Soil Data Mart and/or Web 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.
- Optional Follow-up step will require coordination with a Soil Scientist in the state.

**Prerequisite Modules:**
- None required.
- Consider module 1014 How to Find, Access, and Use the Web Soil Survey website. This will familiarize the trainee with developing soil maps and soil reports in the SSURGO data.

**Notes:**
None

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**Approved by:**
Marc Crouch
The Five Step OJT Cycle for Declarative Training (Knowledge)

Cycle Step 5
Trainer/Trainee debrief

Cycle Step 4
Trainer observes
Trainee perform task provided as feedback

Cycle Step 3
Trainer and Trainee discuss information

Cycle Step 2
Trainee reviews materials provided

Cycle Step 1
Trainer/Trainee establish shared mental model
### OJT Module Lesson

**Title:** 1102 Understand map units, delineations, and the components within your survey area.

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<th>WHAT</th>
<th>WHY, WHEN, WHERE, HOW, SAFETY, QUALITY</th>
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<tbody>
<tr>
<td>Cycle step 1</td>
<td>Trainer and Trainee review objectives of module, identify attached materials to be studied by Trainee.</td>
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| Cycle step 2 | Trainer and trainee read/review attached reference material:  
  - Map unit and Component Concepts  
  - Illustrations-Concepts of map units delineations and components – Figures 1, 2, 3 |
| Cycle step 3 | Trainer and Trainee discuss information. Trainer leads by asking these questions: |
| 1. Map unit | • Ask them to describe the concept of a map unit. Take time to explain the difference between the assigned map unit symbol for the local survey area versus the national map unit symbol assigned for the MLRA. Explain how the same map unit may have different symbols assigned at the county level. |
| 2. Delineation | • Ask them to explain what delineation is and to distinguish between map units and delineations. |
| 3. Component | • Ask them to describe what a component is and how components relate to map units.  
  • Ask them how to identify the major components in a map unit. |
| Cycle step 4 | Trainer provides Trainee with a soil map from the survey area. Trainer or trainee navigates to the survey area using Web Soil Survey. If the trainee is unfamiliar with how to generate reports, the trainer can provide guidance – the objective here is to demonstrate understanding of the concepts. |
| 1. Apply understanding | Using the Web Soil Survey:  
  • Have the Trainee select four or five different delineations from the soil map and make note of the map unit symbols.  
  • The trainee scrolls through the list of map unit names and selects the map units corresponding to the selected delineations on the soil map.  
  • Generate the Component Legend report (AOI Inventory/Component Legend). Trainee explains the rationale for separate columns |
for map units and components.

- Generate the *Map Unit Description* report. Trainee indicates which sections in the report apply to the map unit as a whole and which sections apply to the component(s).
- Generate the *RUSLE2 Related Attributes* report. Trainee identifies the major component(s) in each map unit. Trainee indicates whether the data in this report are assigned at the map unit or the component level, and why.
- Generate other reports to show where data is assigned to components versus the map unit.

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<td>Cycle step 5</td>
<td>Trainer and Trainee review topics. Trainer responds to questions, concerns.</td>
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| Follow-up (optional step)  | Trainee interacts with Soil Scientist in the field. The soil scientist identifies landforms and relates the concepts of map units, components, and delineations to the landscape and soil map of the area.  
  - This could be a matter of a brief session at a project site where a soil scientist is present.  
  - Alternatively, the Trainee accompanies the soil scientist during a field activity. |
OJT Module Lesson Measurement of Learning

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<tr>
<td>Quiz</td>
<td>Complete quiz below.</td>
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**SF-182**

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

1. A map unit symbol that identifies a particular map unit in a county survey area (versus an MLRA survey area) is associated with the same map unit in any other county survey area.
   a. True
   b. False

2. A map unit can consist of more than one major soil component.
   a. True
   b. False

3. Small areas of soil within delineation, that are significantly different than the named components, are known as
   a. errors
   b. minor components
   c. variations
   d. other soils

4. Rating classes (e.g. “Somewhat limited”) in soil interpretation reports apply to
   a. the entire map unit
   b. a specific component of the map unit

5. The composition of major components in individual delineations of a map unit is likely to be consistent across the entire extent of that map unit (all delineations) in a soil survey area.
   a. True
   b. False

6. The composition of minor components in individual delineations of a map unit is likely to be consistent across the entire extent of that map unit (all delineations) in a soil survey area.
   a. True
   b. False