

OJT Training Module Cover Sheet

Title: How to understand what is a map unit, a delineation, and the components within your survey area

Type: Skill Knowledge

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 w/ 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:

Optional Follow-up step will require coordination with a Soil Scientist in the state.

Prerequisite Modules:

- None required.
- Consider modules “How to Use the Soil Data Mart” and “How to Find, Access, and Use the Web Soil Survey website” . These will familiarize the trainee with developing soil maps and soil reports in the SSURGO data.

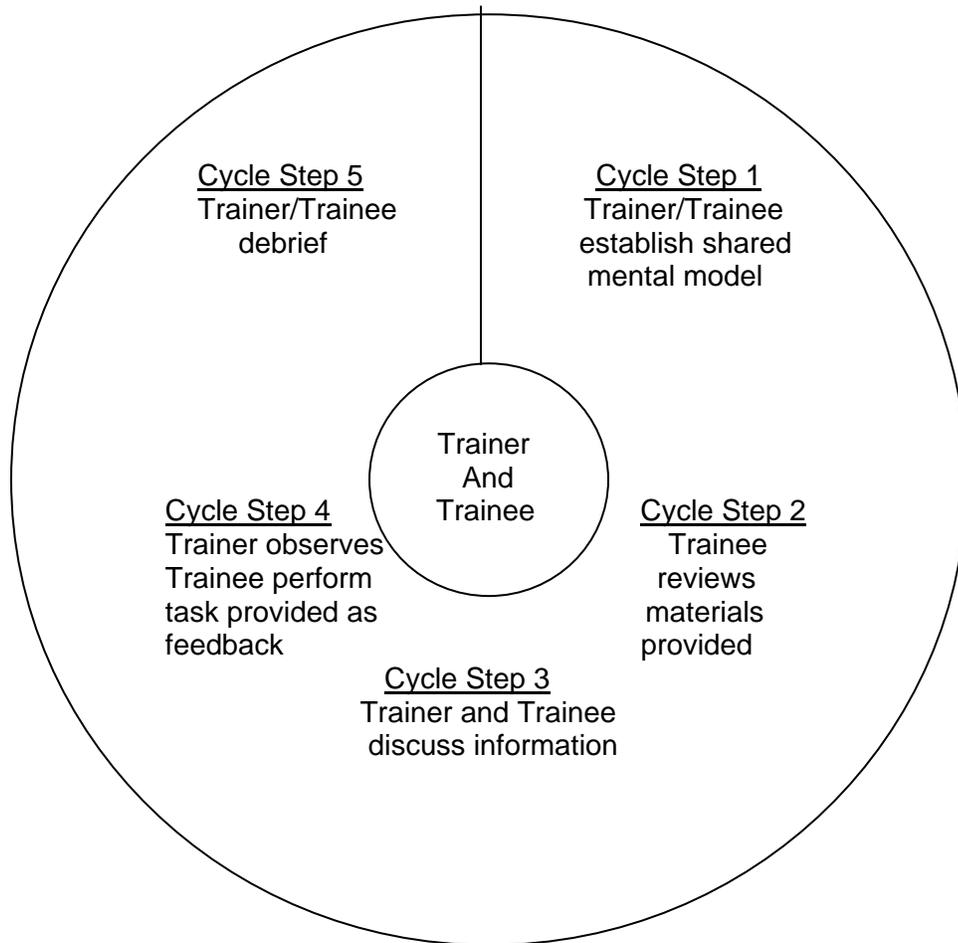
Notes:

Authors:

Steve Page, Soil Scientist, NRCS NY

Approved by:

The Five Step OJT Cycle for Declarative Training (Knowledge)



OJT Module Lesson

Title: How to understand what is a map unit, a delineation, and the components within your survey area	
WHAT	WHY, WHEN, WHERE, HOW, SAFETY, QUALITY
OJT Cycle for Knowledge Step 1	Trainer and Trainee review objectives of module, identify attached materials to be studied by Trainee.
OJT Cycle for Knowledge Step 2	Trainee reviews attached reference material: <ul style="list-style-type: none"> • CONCEPTS • ILLUSTRATIONS – Figures 1, 2, 3
OJT Cycle for Knowledge Step 3	Trainer and Trainee discuss information. Trainer leads by asking these questions:
1. Map unit	<ul style="list-style-type: none"> • Ask them to describe the concept of a map unit.
2. Delineation	<ul style="list-style-type: none"> • Ask them to explain what a delineation is and to distinguish between map units and delineations.
3. Component	<ul style="list-style-type: none"> • 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.
OJT Cycle for Knowledge Step 4	Trainer provides Trainee with a soil map from the survey area. Trainer or trainee navigates to the survey area on the Soil Data Mart or 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	<ul style="list-style-type: none"> • 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. (Use Ctrl key to select multiple map units.) • Generate the <i>Component Legend</i> report. Trainee explains the rationale for separate columns for map units and components. • Generate the <i>Map Unit Description</i> 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 <i>RUSLE2 Related Attributes</i> 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.

2. Measurement of Learning	Trainee completes Measurement of Learning Quiz, below.
OJT Cycle for Knowledge Step 5	Trainer and Trainee review topics. Trainer responds to questions, concerns.
Follow-up (optional step)	<p>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.</p> <ul style="list-style-type: none"> • 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 mapping activity.

OJT Module Lesson Measurement of Learning

Title: Measurement of Learning Quiz

1. A map unit symbol that identifies a particular map unit in a survey area is associated with the same map unit in any other 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 a 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 a delineation on a soil map is likely to be consistent across the entire extent of that delineation.
 - a. True
 - b. False

Trainee OJT Performance Report Form

Trainee's Name: _____ Job Title: _____

Trainer's Name: _____ Date: _____

Task (module title)	Date(s) of Training	Rating		Trainer's Comments
		Acceptable	Unacceptable	

Additional Trainer's comments:
Trainee's Comments:
Action to be taken if unacceptable:

Signatures

Trainee	Date
Trainer	Date
Supervisor, if different	Date

CONCEPTS

Soils occur in a repeating and recognizable pattern on the landscape. Soil maps are made by separating the landscape into map units.

A **map unit** is a collection of areas defined and named the same in terms of their soil components or miscellaneous areas* or both. Each map unit differs in some respect from all others in a survey area and is uniquely identified on a soil map. Each individual area, or polygon, on the map is a **delineation** of a particular map unit.

Map units consist of one or more **components**. An individual component of a map unit represents a particular soil type or a kind of miscellaneous area. Soil components can be defined at the series level (e.g. "Volusia") or at a higher taxonomic level (e.g. "Fluvaquents").

The components in the map unit name are the major components in the map unit. Major components make up most of the map unit and are the dominant influence on interpretations, use, and management. Typically a map unit will also have one or more minor components, or inclusions. These are of small extent compared to the major components, but have significant differences in characteristics. Some minor components/inclusions can be limiting to use and management, others may not be limiting. Minor components that are limiting have more severe limitations for most major uses in the soil survey area.

A delineation of a map unit generally contains the dominant component(s) in the map unit name, but it may not always contain a representative of each kind of inclusion.

*Miscellaneous areas are land types that are predominantly not soil. Examples are rock outcrop, beaches, and urban land.

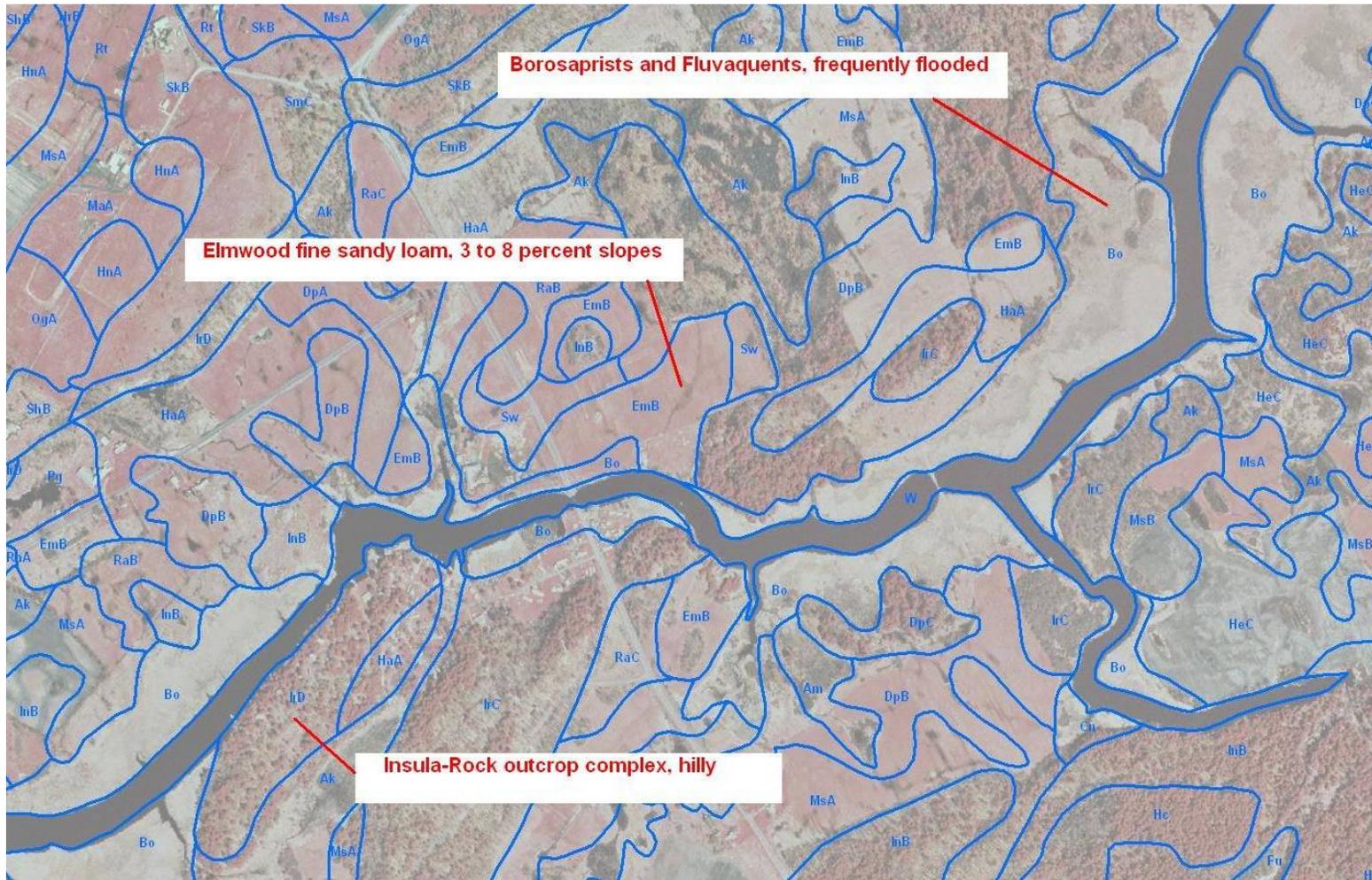


Figure 2 – Each of these polygons is a delineation of a particular map unit in the survey area.

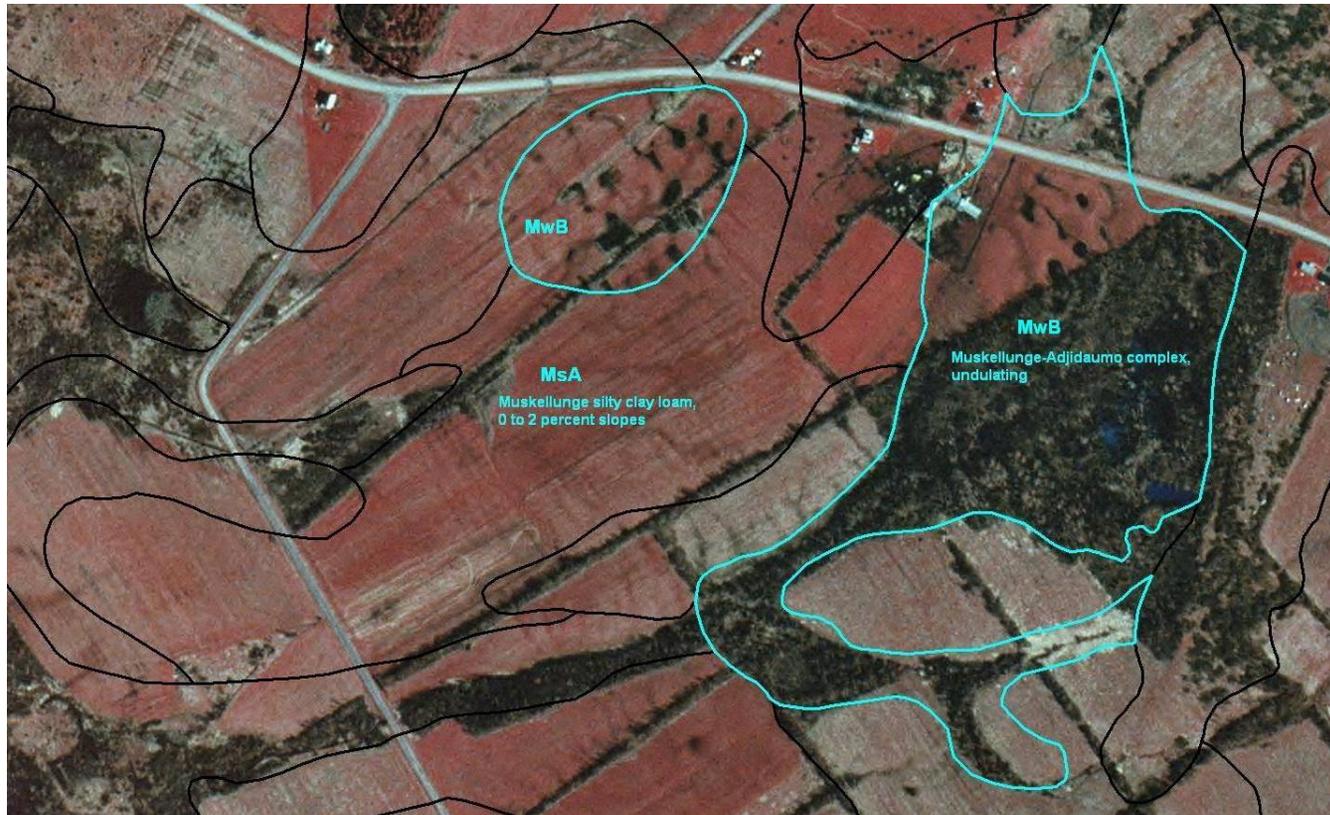


Figure 3 – The highlighted (in blue) “MwB” delineations are examples of the “Muskellunge-Adjidaumo complex, undulating” map unit, on a lake plain. This map unit has two major, or named, components. Somewhat poorly drained Muskellunge soils are on undulating slopes. Poorly drained and very poorly drained Adjidaumo soils are in depressions or potholes. Although the Muskellunge component makes up the higher percentage of the map unit, the wetter Adjidaumo component has a significant and potentially restrictive influence on use and management.

The polygon labeled “MsA” is a delineation of a different map unit, with Muskellunge as the single major component.

