

Model Decentralized Wastewater Practitioner Curriculum

SOILS 120 Soil Wetness

Suggested Course Materials

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Soils 120 Agenda

- | | |
|-----------|--|
| 845-900 | Introductions |
| 900-945 | Understanding morphology/saturation relationships:
redox reactions and redoximorphic features |
| 945-1030 | Describing the problem: drainage, lithochromic
colors, relict features |
| 1030-1045 | Break |
| 1045-1115 | Monitoring principles: Wells |
| 1115-1145 | Monitoring Principles: Rainfall, temperature, redox |
| 1145-1215 | Interpretation Methods |
| 1215-100 | Lunch |
| 100-230 | Interpretation Methods (cont.) |
| 230-330 | Classroom exercise in interpretation |
| 330-500 | Field installations and interpretation |

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Overview

Soil color is frequently used to determine soil wetness conditions. However, oftentimes, there are additional interpretations that can be made when actual water table monitoring data is available at a site. This one-day short course describes soil color, redoximorphic features, their causes, and interrelationships between redoximorphic features with both saturation and reduction in the soil profile. In addition, this short course illustrates field methodologies for site instrumentation using wells and piezometers and interpretation of water table monitoring data gathered through such monitoring networks.

This course will instruct the participants on site instrumentation, monitoring protocol and methods. The participants would be given background on how the various methods were developed. Examples would be used throughout to illustrate the effectiveness of the procedures. A field portion would illustrate proper methods to install and monitor wells, piezometers, etc. Additionally, information will be presented on where to obtain the supportive documentation to fully evaluate the site data. This course will provide information for site monitoring for a variety of land uses.

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Goals

1. Participants will master an advanced working knowledge of soil wetness used for accurate field descriptions of soil morphology.
2. Participants will begin learning how to apply their knowledge of soil wetness to a typical land use question – land suitability for an on-site wastewater treatment system.

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Learning Objectives

1. To gain a better understanding of how redoximorphic features form.
2. To gain a better understanding of how to interpret redoximorphic features.
3. To gain a better understanding of how to instrument a site.
4. To gain a better understanding of how to interpret water table data.

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Prerequisites

SOILS 110

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Evaluation Form

Soil Wetness Evaluation Form

Name (Optional): _____

We are requesting your assistance in reviewing the modules developed through the On-Site Consortium curriculum project. Please complete the following form while reviewing the materials

With a rating scale of 1 (Disagree) to 5 (Agree), please respond to the following questions

Review of printed materials:

	Disagree			Agree	
The text completely covers the topic area.	1	2	3	4	5
The visuals completely cover the topic area.	1	2	3	4	5
The discussion notes completely cover the topic area.	1	2	3	4	5

Review of learning objectives:

I gained a better understanding of how redoximorphic features form.	1	2	3	4	5
I gained a better understanding of how to interpret redoximorphic features.	1	2	3	4	5
I gained a better understanding of how to instrument a site.	1	2	3	4	5
I gained a better understanding of how to interpret water table data.	1	2	3	4	5

What specific recommendations would you provide for the text. _____

What specific recommendations would you provide for the visuals. _____

What specific recommendations would you provide for the notes. _____

Please give specific positive comments on the topic/module. _____

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Problem Sets

None

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Additional Materials

Munsell Color Books

Augers

Tape Measures

County Soil Survey

Soil Monoliths or Cores

Soil Pits

Wells

Piezometers

Bentonite

Beepers