



## Advanced Soil Evaluation Training for Piedmont Soils

**May 3-5, 2017**

The Summit at Haw River State Park  
339 Conference Center Drive  
Browns Summit, NC 27214  
(May 3-4)

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Upper Piedmont Research Station  
1944 Wentworth Street  
Reidsville, NC 27320  
(May 5—FIELD DAY)

**PURPOSE:** This course is designed to help Environmental Health Specialists better evaluate Piedmont soils. Attendees should leave the course with a better knowledge of clay mineralogy, soil texture, soil structure, redoximorphic features, and how to evaluate saprolite. This course will incorporate 2 days of classroom work, and the last day will be a field day (rain or shine).

**TARGET AUDIENCE:** Environmental Health Specialists, Supervisors, Program Specialists, Coordinators, and Soil Scientists working at local health departments and in the private sector.

### **CREDIT:**

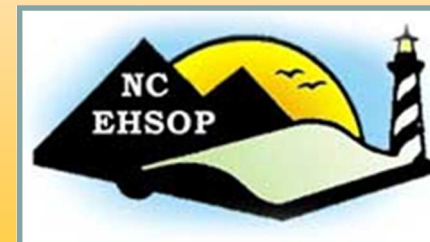
**Environmental Health Specialists (EHS):** Application will be made to the N.C. State Board of Environmental Health Specialist Examiners for 16.25 hours of continuing education credit.

**Licensed Soil Scientists (LSS):** Application will be made to the N.C. Board of Licensed Soil Scientists for 16.25 hours of continuing education credit.

***Fees: \$125***

***Course limited to 40 registrants!***

*Sponsored by the Environmental Health State of Practice Committee*



## AGENDA

<u>May 3, 2017</u>	<u>SOIL MINERALOGY</u>		<u>May 4, 2017</u>	<u>SOIL PROPERTIES</u>	
8:30 - 9:00 a.m.	Registration		8:00 - 8:30 a.m.	Check-In	
9:00 - 10:00 a.m.	Soil Mineralogy <ul style="list-style-type: none"> <li>• Mineral structures overview</li> <li>• 1:1 clay mineralogy systems</li> <li>• 2:1 clay mineralogy systems</li> <li>• Mixed mineralogy systems</li> <li>• Shrinking and swelling of soils</li> <li>• Influence of weathering on occurrence and distribution of various clay mineral systems</li> <li>• Parent material relationships to mineralogy</li> </ul> X-Ray Diffraction of Basic Structural Properties of Clay Minerals <ul style="list-style-type: none"> <li>• X-ray diffraction as an analytical tool</li> <li>• Clay mineral structures related to x-ray diffraction patterns</li> <li>• Basic interpretation of x-ray diffraction patterns</li> </ul>	<i>Alan Clapp</i>	8:30 - 9:30 a.m.	Redoximorphic Features	<i>Neal Floyd Ryan Smith Patrick Eaton</i>
			9:30 - 10:30 a.m.	Geology & Parent Material	<i>Phil Bradley</i>
			10:30 - 10:45 a.m.	Break	
			10:45- 11:30 a.m.	Evaluating Saprolite	<i>Karen Wallace</i>
			11:30 - 1:00 p.m.	LUNCH (PROVIDED)	
			1:00 - 2:00 p.m.	Soil Structure	<i>Scott Greene</i>
			2:00 - 2:45 p.m.	Soil Texture	<i>Patrick Eaton</i>
			2:45 - 3:00 p.m.	Break	
10:00 - 10:45 a.m.	Methods to Characterize Soil Expansive Characteristics <ul style="list-style-type: none"> <li>• COLE (Coefficient of Linear Extensibility)</li> <li>• Apparent CEC (Cation Exchange Capacity)</li> <li>• Atterberg limits</li> <li>• Plasticity, stickiness and moist consistence</li> </ul>	<i>David Ward</i>	3:00 - 4:30 p.m.	Hydraulic Conductivity & Ksats	<i>David Ward</i>
10:45 - 11:00 a.m.	Break		4:30 p.m.	Adjourn/Evaluations	
11:00 - 11:30 a.m.	Mineralogy and the OSWW Rules	<i>Scott Greene</i>			
11:30-1:00 p.m.	LUNCH (PROVIDED)				
1:00-1:30 p.m.	Taxonomic Classification	<i>Alan Clapp</i>			
1:30 - 2:30 p.m.	Classroom Practicum <ul style="list-style-type: none"> <li>• Evaluation of known samples</li> <li>• Moist consistence</li> <li>• Wet consistence</li> <li>• Determination of expansive characteristics from field morphology</li> </ul>	<i>Group activity</i>			
2:30 - 2:45 p.m.	Break				
2:45 - 4:45 p.m.	Evaluate soils for morphology and expansive clay	<i>Group activity</i>			
4:45 p.m.	Adjourn/Evaluations				
			<u>May 5, 2017</u>	<u>FIELD DAY</u>	
			LOCATION:		
			Upper Piedmont Research Station 1944 Wentworth St., Reidsville, NC 27320		
			<b><u>Transportation NOT provided. You must have your own means of transportation to this site.</u></b>		
			8:00-8:30 a.m.	Check-In	
			8:30-9:00 a.m.	Writing a Good Soil Profile Description	<i>Neal Floyd Ryan Smith</i>
			9:00-12:00 p.m.	Group Activity/Soil Stations	<i>Group</i>
			12:00-1:00 p.m.	Group Activity Wrap-Up/Comparing Group Results to Lab Results	<i>Group</i>
			1:00 p.m.	Adjourn/Final Evaluations	

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<http://ncehsop.org/>

## Registration Form

First & Last Name: \_\_\_\_\_

E-mail: \_\_\_\_\_

Contact Number: \_\_\_\_\_

County of Employment: \_\_\_\_\_ REHS/Intern Number: \_\_\_\_\_

Supervisor Name: \_\_\_\_\_

Emergency Contact:

Name: \_\_\_\_\_ Relationship: \_\_\_\_\_

Address: \_\_\_\_\_ Telephone: \_\_\_\_\_

**\*\*\*Please specify if special accommodations are needed\*\*\***

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**All information must be completed and returned to:**

**NCEHSOP - PO BOX 316 - Wentworth, NC 27375**

**With payment of credit card, check or money order made out to NCEHSOP for the total of: \$125.00; must be postmarked at least 7 calendar days from the first day of the course in order to be registered.**

*Upon payment approval your registration will be confirmed.*

# Faculty & Facilitators

Phil Bradley, PG  
Assistant Section Chief and Piedmont Geologist  
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