

2006 NH SOIL JUDGING CONTEST - Great NH Envirothon Training

October 13, 2006 8:30-12:00 PM (approximate time) - Kingman Farm, Durham

NO Registration or Participate Fee

Teams of four compete together, and are judged both as a team and individually.

Public, Private, and Home-schoolers are welcome!!

Teams have the choice to compete against other teams or to participate in a non-competitive format.

The Goals of the NH Soil Judging Contest

- Help high school students prepare for the NH Envirothon
- Provide understanding of the common characteristics of soil that affect land use decisions

To Register: A registration form is enclosed in this packet. The registration deadline is October 11, 2006. If you have questions about registration, call the Merrimack County Conservation District at 223-6023 or 223-6029. Only teams that pre-register will have their scores entered into the competition. Non-competing teams may participate and are required to pre-register.

To Prepare: Students can prepare for the NH Soil Judging Contest in two ways. **1)** Read the *Soil Judging Manual* available on-line <http://www.nh.nrcs.usda.gov/teachers.html> or by calling (603) 223-6023. **2)** Contact your local County Conservation District and request training assistance from soil experts.

Sponsors: *New Hampshire Association of Conservation Districts* (NHACD), *Society of Soil Scientist of Northern New England* (SSSNNE), *Natural Resources Conservation Service* (NRCS)

Register today!
(registration deadline October 11)



Event Date: October 13, 2006

NH Soil Judging Contest



New Hampshire Association of Conservation Districts
2006 NH SOILS JUDGING CONTEST

REGISTRATION FORM

Please return form by **October 11, 2006** (See address below.)

HIGH SCHOOL _____

ADDRESS _____

TEACHER'S NAME _____

PHONE NUMBER (school) _____ (home) _____

FAX and/or EMAIL (for contest results) _____

TWO TEAMS FROM EACH SCHOOL MAY COMPETE. If you have more than two teams that are participating in the contest, please register them on a separate sheet of paper. *PLEASE PRINT NAMES.*

Team A **Score**

1. _____ _____

2. _____ _____

3. _____ _____

4. _____ _____

Team B **Score**

1. _____ _____

2. _____ _____

3. _____ _____

4. _____ _____

Please return this form to the address below by **October 11, 2006**. Teams are discouraged from waiting to register the day of the event. No team will be turned away but failure to pre-register may cause confusion and delay your start in the event. To register call 223-6023 or 223-6029.

Merrimack County Conservation District (MCCD)
The Concord Center, 10 Ferry Street, Box 312, Concord, NH 03301

What is soil?



Soil

(Additional Information for 2006 NH Soil Judging & Contest)

What is soil? The answer depends on whom you are asking. In engineering and construction, soil is the usual name for earth that can be excavated without blasting. Geologists commonly use the term soil for a layer of weathered, unconsolidated material on top of bedrock. To soil scientists, soil is an unconsolidated mixture of mineral and organic material at the surface of the earth that serves as a natural medium for growing plants.

Most soils take a very long time to form. They form from rocks and sediments (parent materials) that have disintegrated and decomposed through the action of weather and organisms. The five factors that control the formation of soils are:

- Climate
- Organisms
- Topography (slope, aspect, relief)
- Parent Material
- Time

As mentioned above, soils perform many functions that are important to all of us. A healthy soil performs five critical functions. Soil:

- Filters and cleans our water
- Acts as a medium for plant growth and habitat for organisms
- Stores and regulates water flow
- Is an engineering/structural medium
- Helps recycle nutrients and organic materials

Contest Day:

All teams are to report to the registration area to receive event information and agenda.

The day will begin with a sample soil pit to help students understand the questions they will be asked, and what types of answers are being sought. Students and teachers may compare notes at the sample pit. Once teams have left the sample pit area team members must refrain from talking to other team members, other teams, and to their teachers about the soils.

At each of the official test pits students will first be tested on their knowledge of the soil and then be given a review of the soil pit during which time they will be given the opportunity to ask questions. This format ensures that students will learn throughout the day. Students will be permitted to use the Soil Judging Manual (available on-line at <http://www.nh.nrcs.usda.gov/teachers.html>) throughout the contest. Students are not permitted to talk to other students during the test unless otherwise instructed by the staff conservation educator at the pit.

Thank you for your interest in our program!!

2006 Soil Judging Contest Rules:

1. Teams will consist of four students.
2. Schools may have any number of students participating, but only two teams (eight students) from each school will compete for the prizes.
3. It is anticipated that individual as well as team awards/prizes will be presented at the end of the contest.
4. A teacher or an advisor must accompany teams.
5. Four soil profiles (pits) will be judged.
6. Students and teachers should not converse or help each other in any manner during the judging at the pits or the walks between the pits. (An exception is made when it is necessary for two students to measure slope or distance between surface stones.)
7. A section of the soil profile will be marked in each pit for students to observe. Please do not disturb this section so that the students following can also observe this undisturbed profile.
8. Students will be expected to make some of their soil observations in the soil pit.
9. Two stakes will be set in the ground near each soil pit for students to observe. Please do not disturb this section so that the students following can also observe this undisturbed profile.
10. One scorecard will be complete for each soil profile. Scorecards will be turned into the soil pit monitor for scoring after the allotted time (generally 20 minutes per profile for judging).
11. Scorecards will be giving to each student when they arrive at the soil pit to be judged.
12. To alleviate congestion in the soil pit, samples of each off the (three) soil layers will be provided for students to determine texture.
13. The soil surface (from which depth measurements are made) will be indicated at each pit. Also indicated will be the breaks between the three soil layers.
14. Schools from out of state are invited to compete in this contest. Individual awards/prizes will be given to out of state students i.e., certificate or participation or individual high score, but team awards/prizes will only be given to New Hampshire schools/students.
15. The contest will be held regardless of weather. There will be no rain dates.
16. Students are permitted to use the Soil Judging Manual during the contest.
17. There is no registration fee.

Please bring the following items to the contest (if they are available to you):

Mandatory

- A copy of the Soil Judging Manual for every student.
- Clipboard, pen, pencil

Optional

- Ruler or tape measure (at least 60 inches long)
- Waterproof footwear and other raingear
- Rag or papertowels for cleaning hands
- Small blade knife (less than 3 inches), a knife with a rigid blade is recommended. Knives with hinged blades can fold back on your fingers when examining the soil. An old butter knife or a spoon can be used.
- A way to measure distances of at least 100 feet.
- A small container of water (less than 8 ounces).

NHACD SOIL JUDGING CONTEST
Kingman Farm, Durham, NH October 13, 2006

DRAFT Agenda

You will receive the final agenda when you arrive on the day of the event.

- 8:30-8:45am Arrival and Registration (Those arriving after 8:45 AM will be at a disadvantage.)**
- 8:45-9:00 Pre-Contest Practice at Sample Pit**
Measure Slope
Ask Questions
- 9:00 – 9:30 Welcome, Introductions, and Sample Soil Pit**
- 9:30-10:00 Evaluate first pit and Pit review**
- At the end of each pit review teams should take no more than 5 minutes to rotate to the next pit.**
- 10:05-10:30 Evaluate second pit and Pit review**
- 10:35-11:00 Evaluate third pit and Pit review**
- 11:05-11:30 Evaluate fourth pit and Pit review**
- 11:30 -12:00 Presentation: A Career in Soil – How to get started.**
- 12:00 Event Ends**

Directions To Kingman Farm:

From the Lee Traffic Circle follow Route 4 east for approximately four miles to a traffic light. Turn left at the light onto Madbury Road. Follow to end. Turn right onto Route 155 and drive approximately 0.3 mile, turn left onto Kingman Farm Road. Look for signs for the Soil Judging Contest!!