Soil Survey Training

Website - soils.usda.gov

1. NCSS Training News
    a. Subscribe
        i. 373 individual subscribers as of March 10
        ii. 31 SSS
        iii. At least one person all states but HI
        iv. FS, BLM, NPS
2. Syllabuses
    a. Overview
3. Training and Job Aids
    a. Note listings for:
        i. GIS
        ii. Database
        iii. Soils
        iv. Other
4. Schedules
    a. Note Links to NEDC, NCGC, ESRI
    b. Note SSD sponsored courses
    c. Note SGI information
5. Strategic Plans
    a. Note the SSD Training Strategic Plan
    b. Note the SSD GIS Training Plan
6. IDPs
    a. Note info provided
7. OJT
    a. Note the OJT Training Tips
    b. Note OJT Modules
        i. More on this module section later
8. Refresher Training
    a. Links to ESRI updates
    b. Forums and "News" sources
    c. Posting of most recent course modules
        i. Digital Soil Survey
9. Instructor Guidance
    a. Developing lesson plans
    b. Tips for powerpoints and other items
10. University Courses
    a. Specific to availability of Distance learning courses and programs
        i. Undergraduate; originally compiled and maintained for the 437 series
        ii. Graduate; programs available now via distance learning

11. Workshops
    a. State or MO hosted
        i. Post info for yours
            1. People outside state/MO might want to attend
            2. Maybe just get Ideas for own workshops
            3. Generally know what is going on across the country – share what you are doing
        ii. I can provide assistance to you
            1. Agenda building
            2. workshop set-up
            3. Guidance for instructors in preparation and delivery of training
12. Links
    a. Sources of training info
        i. NEDC, Aglearn, USDA Grad School, ESRI, NCGC

Distance Learning

1. Not the preferred method but!
    a. Training or no training is the issue because of
        i. NEDC budget to offer training
        ii. State budgets to send people to training
    b. Need to look at courses that could be delivered via distance learning
2. Issues with going to distance learning
    a. Hard to see the Huh? factor from those struggling with something
    b. Networking among participants is destroyed
    c. How to arrange so that they participate actively
    d. How to arrange so that they are not seated at a computer for long hours
    e. How to avoid the distractions that occur while in their office
3. Considering
    a. Basically still instructor led for majority of training– will not be learner isolated with a module on Aglearn except for possibility of designated modules
    b. For application type training (SDV, DSS examples), will provide opportunity for good to high end ArcGIS users to complete modules on their own prior to session, get certified, and opt out of "attending" the distance sessions.
    c. Breaking up session over longer period of time, fewer hours per day
    d. Smaller class size for application training (SDV, DSS) with those classes broken into smaller groups with an instructor assigned as mentor for 1-on-1 assistance via Netmeeting, emails, phone.
    e. Prerequisite work, placing more responsibility for learning on the participant, especially for material that they can easily read versus receive as a lecture
    f. Continued use of post course projects as means of measuring learning
4. Adobe Connect is the software package selected by NEDC as a delivery tool
    a. Interface and capabilities are almost exactly the same as MyMeeting/LiveMeeting if you have "attended" one of those
5. Distance learning is a "work in progress"

Addressing Specific Courses

1. Management of Soil Survey by MLRA [Correlation & Management of MLRA Soil Surveys]
   a. 2 reasons for a name change
      i. Reflects different approach in that it is mostly management oriented – little in way of correlation
      ii. Makes it easier to "retake" the course
   b. Highest priority
   c. Redesign began in Sept
   d. Draft lesson plan objectives went to MOLs in Feb
      i. MOLs addressed topics and objectives during their Feb meeting
   e. Pilot when?
      i. Planning a rough cadre-only run through of materials the week of July 14-18.
      ii. Do a pilot with small group of MLRA-SSO Leaders and maybe SDQSs) in Sept-Oct
   f. Provide in FY09 via a **blended distance learning** package
      i. All primary target audience in FY09
2. Technical Soil Services [Soil Technology – Programs & Applications]
   a. Basically same 2 reasons for a name change
   b. Provide via **blended distance learning** package
   c. Pilot?
   d. Provide?
3. Soil Technology - Application of Soil Data Viewer and ArcGIS in Technical Soil Services
   a. Terry Aho and Ed Griffin currently working on a distance learning package using the training handbook pretty much as is
   b. Have a bulletin out and announcement in my.nrcs to expand the instructor cadre
4. Digital Soil Survey Data Management and Editing [Digital Soil Survey Mapping and Updating]
   a. Currently updating for new tools, etc to stay current
   b. 2 state hosted sessions this year
   c. Will then begin developing a distance learning package using the training handbook as is
   d. Doing this because
      i. NEDC difficulties in funding training
      ii. Need to provide this timely within early stages of careers
5. Soil Geomorphology Institute
   a. Currently in session at NMSU
   b. Remaining sessions at
      i. PSU (moved to Oct 21– Nov 6, FY09)
      ii. Alabama A&M (FY09? – funding decision))
      iii. Texas A&M (possibly – fall of 2009 or spring 2010)
      iv. UC-Davis (possibly)
      v. NDSU (possibly)
   c. SGI targets:

    i. All soil scientists but especially those involved in project soil survey
    ii. New soil scientists (2nd to 3rd year) would benefit greatly
    iii. It is not a course about the geomorphology of the area where located…
      1. all environments are covered equally
      2. It is about 4 principles and how they are integrated to develop landscape models
        a. Stratigraphy – Geomorphology – Hydrology - Pedology

6. <u>Remote Sensing</u>
 a. Package of 3 courses
   i. Photo Interpretation
   ii. Introduction to Digital Remote Sensing using Erdas Imagine software
   iii. Applications of Digital Remote Sensing to Soil Survey
 b. Unfortunately, because of funding, the last in the series is ready for a pilot before the prerequisites are available

7. <u>NASIS 6.0</u>
 a. Basics covered by Jim Fortner this week
 b. Paul Finnell's modules already posted on our website remain viable as far as processes are concerned
 c. Paul will update the posted modules to reflect the new interface

8. All courses are certified by NEDC through the Association Continuing Education & Training (ACET) to receive CEUs at rate of 1 CEU per 10 hours of training satisfactorily completed.

Pre and Post Course Assignments as Part of Training

1. Already part of several courses
    a. Basic Soil Survey (Pre)
    b. Soil Correlation (Pre and Post)
    c. SGI (Post)
    d. Digital Soil Survey Data Management and Editing (Post)
2. They will:
    a. Reinforce and measure learning
    b. Support their project work versus being make-work assignments
    c. Be part of requirements for earning CEUs
3. We use a learner-supervisor contract to make everyone aware of them and check off that they will agree to complete them
    a. Some in form of a OJT module
4. Need SSS continued support for these

OJT

1. **Why**
    a. Part of the SSD Training Strategic Plan developed in 2005
2. **What**
    a. See 2 lists in your hands
        i. **Handout #1 - Project Soil Survey** – primarily new soil scientists but some will address more experienced people
        ii. **Handout #2 - Technical Soil Services** – primarily new non-soil scientist NRCS and SWCD employees
        iii. List developed by two separate teams
            1. **PSS** - Project soil scientists, SDQSs
            2. **TSS** - Resource Soil Scientists, Assistant State Soil Scientists
        iv. Lists are dynamic – will add when determined a need exists
    b. Each list addresses a task that could be completed in about 30-45 minutes, to include:
        i. "understanding" or "complete with supervision" proficiency levels
    c. Each module includes:
        i. Cover sheet with objectives, etc.
        ii. 5 step process for instruction
        iii. Lesson
        iv. Job aids
        v. Measurement of learning – quiz is an example
        vi. Performance report
    d. Examples provided
        i. **Handout #3 -** Fairly simple to develop – already has a job aid with instructions to follow [Web Soil Survey]
        ii. **Handout #4 -** More involved, need to create steps to follow [Soil Taxonomy & Keys to Taxonomy]
        iii. **Handout #5 -** Generic, a template for trainer to prepare for use ***"in their soil survey area"*** [environmental issues]

          iv. **Handout #6 -** A precourse prerequisite assignment example [<u>soil components</u>]

    e. **TSS** effort also includes a set of target audiences for which we would like to capture and share existing <u>lesson plans</u>
        i. **Handout #7 –** Target audiences
        ii. Exist on paper
        iii. Exist in their minds (tacit knowledge)
        iv. How do we capture and share? (later)

3. **Why the OJT effort**
    a. From day one, not waiting for formal NEDC courses
    b. For consistent training across the country
    c. Cover all training needs (hence the lists)
    d. A few are prerequisites for CBC (Conservation Boot Camp)
    e. Some are and will be prerequisites for SSD NEDC courses
        i. Soil Correlation course is an example
    f. A side benefit – the Trainer has to review the material also – hence a refresher for that person

4. **How OJT modules utilized**
    a. Part of IDP or your call
    b. Suggest some kind of formal approach
        i. IDP – list of modules for that planning period
        ii. Completed performance report

5. **the $100,000 question – how to get the OJT modules developed**
    a. NSSC has taken on some – see the lists
    b. Best done at the field level in an actual training situation
        i. Recording steps as they go
        ii. A trainee (real or faux) provides best feedback
    c. Utilize existing job aids as part of module
    d. There is an OJT module developed for developing OJT modules

How get these OJT modules prepared?

1. Note NSSC may do half or more
2. **Handout #8 -** Review the plan for OJT modules
    a. Left hand side is PSS, right hand side is TSS
    b. Not much difference in the 2 except target instructors and who supervises them
3. **Handout #9 -** Review the plan for Lesson Plans
4. Comments, suggestions
5. Will contact SSS via email to keep it voluntary.
6. When
    a. Complete 25% within FY08?
    b. Complete 90-100% by end of FY09?
    c. Complete modules targeted as prerequisites for CBC by Jan 1, 2009