Title: 310 How to prepare SoilDB for use with R

Type:  ✔ Skill  ☐ Knowledge

Performance Objective: Trainee will be able to …
- Operate the ODBC (Open Database Connectivity) connection necessary to pull data from a local NASIS database into R.
- Manipulate pedon data into R from an ODBC database connection to the local NASIS database and from a MS Access pedon.accdb database.

Target Proficiency:
☐ Awareness  ☐ Understanding  ☐ Perform with supervision
✔ Apply independently  ☐ Proficiency, can teach others

Trainer Preparation:
- Go through the ODBC setup process on your system before you go through it with the trainee.

Special Requirements:
- The trainee needs R and RStudio on their computer and must load the “soilDB” package.
- The trainee needs to understand the basic operations of R.

Prerequisite Modules:
None

Notes:
This applies to pedon data from NASIS or a Pedon PC database.

Authors:
Dylan Beaudette, Soil Scientist, CA
Jay Skovlin, Soil Scientist, CA

Approved by:
Henry Ferguson, Soil Scientist, NSSC
Shawn McVey, Soil Scientist, NSSC
The Five-Step OJT Cycle for Procedural Training (Skill)

- **Cycle Step 1**: Trainer/Trainee establish shared mental model
- **Cycle Step 2**: Trainer demonstrates task as Trainee observes
- **Cycle Step 3**: Trainer coaches as Trainee performs task
- **Cycle Step 4**: Trainer observes Trainee perform task and gives feedback
- **Cycle Step 5**: Trainer/Trainee debrief
OJT Module Lesson

Title: 310 How to prepare SoilDB for use with R

<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHY, WHEN, WHERE, HOW, SAFETY, QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle Step 1</td>
<td>Trainee should review the attached job aid that contains excerpts from the online documentation for Soil Database Interface: the soilDB package.</td>
</tr>
<tr>
<td>Cycle Step 2</td>
<td>Do the following:</td>
</tr>
<tr>
<td>1. Set up and ODBC Connection to the Local NASIS Database.</td>
<td>Demonstrate the procedural steps for finding and starting the ODBC connection. Refer to the attached job aid as needed.</td>
</tr>
<tr>
<td>2. Load Pedon Data into R from an ODBC Database Connection.</td>
<td>Demonstrate how to find and start RStudio, and then load pedon data into R from an ODBC database and from a Microsoft Access pedon.accdb database.</td>
</tr>
<tr>
<td>Cycle Step 3</td>
<td>You and trainee switch seats. Close the applications so a new session can be started. Coaching the trainee, have the trainee perform the steps in Cycle Step 2.</td>
</tr>
<tr>
<td>Cycle Step 4</td>
<td>Have trainee repeat cycle step 3 without coaching.</td>
</tr>
<tr>
<td>Cycle Step 5</td>
<td>Answer any questions. Repeat any steps as necessary.</td>
</tr>
</tbody>
</table>

OJT Module Lesson Measurement of Learning

Title: 310 How to prepare SoilDB for use with R

<table>
<thead>
<tr>
<th>WHAT</th>
<th>WHY, WHEN, WHERE, HOW, SAFETY, QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collect and prepare database data for use in R routinely during project activities.</td>
<td>During project activities, assign this task to the trainee. Sign off on performance when target proficiency is achieved.</td>
</tr>
</tbody>
</table>

Performance Report Form

Open attachment: Trainee Performance Report Form template.pdf.