Web Soil Survey for Forest Soils

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websoilsurvey.nrcs.usda.gov

Web Soil Survey provides a useful tool to aid woodland owners and foresters in understanding the opportunities and constraints of soils to forestry operations. Use WSS prior to the field visit to collect information relevant to the owner's objectives. The field visit will allow ground-truth verification of data and maps portrayed online. All maps are representations of reality.

1. Use QUICK NAVIGATE to position the map onto the street address.

2. On the "Interactive Map" tool bar, select the AOI tool for box or polygon. Define the boundaries of your property. You will need to estimate the boundary locations you define as the AOI using landscape features, roads, etc.

3. Select the tab for SOIL MAP. A soil map is created. Select "LINK" from menu on top bar and copy URL to retain the perimeter. Email the URL to yourself.

4. Click tab for SOIL DATA EXPLORER

5. On the third menu bar from the top, find "VIEW SOIL INFORMATION BY USE" - Select "forest land."
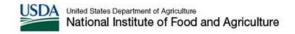

For each of the following attributes, select "view rating" to display a report that includes a map and data table. The tabs are described here in sequence, but users can look at the tabs in any sequence and do not need to use a tab or its contents. *Save the information about your property by selecting "add to shopping cart" as the information is displayed on screen*.

   a. Follow tab for SUITABILITIES AND LIMITATIONS – this allows you to view individual soil attributes (e.g., soil rutting hazard) for all soils on your AOI. The attribute can be "viewed" on the map and displayed in tabular form.

   Consider the following, or other, SUITABILITIES AND LIMITATIONS

      i. Recreational development >> paths and trails

    ii. Land management >> construction limitations haul roads and log landings

    iii. Land management >> harvest equipment operability

    iv. Land management >> Potential for seedling mortality

    v. Land management >> Suitability for roads (using natural surface)

    vi. Vegetative Productivity >> Forest Productivity (site index by species. Map colors display site index relative to other soils for a given species)

b. Follow the tab for SOIL PROPERTIES AND QUALITIES – this allows you to view physical and chemical properties of your soils. Consider the following

    i. Soil chemical >> Effective Cation Exchange

    ii. Soil chemical >> pH

    iii. Soil physical >> available water 0 to 100 cm

    iv. Soil qualities and features >> depth to any restrictive layer

    v. Soil qualities and features >> drainage class

c. Select the tab for SOIL REPORT. This tab allows you to look at integrated summaries of multiple related soil attributes. Consider the following

    i. Land Management >> Damage by fire or seedling mortality

    ii. Vegetative Productivity >> Forest Productivity (this shows a tabular site index for all species by soil map unit, and the recommended species to plant or manage for in that soil unit)

6. Select "Shopping Cart" tab. When you are finished, create a report. Reports with considerable content may not be immediately available, but the report will be compiled and a download link will be sent to the email address that you are prompted to provide.

7. The use of the forest soils information provided by Web Soil Survey will depend on the owner's objectives. As with all mapping resources, the information that is displayed needs to be verified on the ground. Soils information for forest management will typically assist the owner with:

a. Those species to favor, on specific soils, based on their relative site index. Species can survive on soils where they have a low site index, but they may be more susceptible to health issues and inclined towards low vigor.

b. Areas that have limitations for forest operations, such as roads and log landings.

c. Areas prone to drought or frost that will complicate the physical needs of seedling associated with tree planting. Other issues with seedlings such as interfering vegetation and deer browsing still need attention in every planting activity.