

# You can use the **WEB** to explore your soils



*By Astrid Martinez*

Thomas Jefferson once said, "Civilization itself rests upon the soil." That is as true today as it was in the 1800s.

Without soil, we cannot sustain life. Our success at growing food, building homes and businesses, and maintaining wildlife habitat depends on our knowledge and use of the soil.

Today, soil survey information is available on the Internet for most of the United States to assist landowners in making sound land-use decisions about their property. Wyoming and several other Western states still have some private lands without published soil surveys, but strong efforts are being made to have all private lands surveyed by the end of 2011.

## **What is a Soil Survey?**

A soil survey is an inventory of the soils that occur across the landscape. Soil scientists observe and collect information about soils in the field by digging holes and using excavated backhoe pits. The soil survey has maps with soil boundaries, aerial photos, descriptions, and tables of soil properties and features. The survey also includes information on the potentials and limitations of each major soil type.

Customers now have soil information at their fingertips. The Web Soil Survey is an Internet application developed by the National Cooperative Soil Survey and is maintained and operated by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS). It provides the general public, engineers, scientists, governmental offices, consultants, teachers and students, agricultural producers, and others with electronic access to relevant soils information needed to make wise management decisions.

## **How can a Soil Survey Help Me?**

Soil surveys help make informed planning decisions. For example, in construction planning, a soil survey provides information about soil wetness, stability, permeability, flooding hazard, and other properties important to building site development.

Knowing the soil characteristics on a property can also help determine if there are any potential limitations for a septic system at a building site. Soil surveys also provide important species and production information for range and wildlife management, as well as wetlands identification and information for soil and water conservation.



Getting started

Soil surveys are a great place to start when collecting information about your property and when making general land-use decisions; however, soil surveys do have limitations because of the scale at which they are made. Most soil surveys in Wyoming are made at a map scale of 1:24,000; or 1 inch on the map equals 24,000 inches or 2,000 feet. At that scale, it is impossible for the soil scientist to identify and show on maps unique soil areas smaller than five acres. Those smaller, unique areas are grouped with other soils in the surrounding area. When needing soil information for areas smaller than five acres, it is always best to have an onsite investigation performed by a qualified professional.

### Where can I Find the Web Soil Survey?

You can create your customized Web Soil Survey at <http://websoilsurvey.nrcs.usda.gov/app/>. The information is free, and you don't need a login or password for access.

To get started, click the big green button – START WSS. Then follow three basic steps.

#### Step 1: Find your location using the Area of Interest (AOI) tab.

Enter your location by choosing one of the choices available, and click **View**.

Use the **zoom tools** to get closer to your desired area. Once there, use the **AOI** button to define your area of interest. The maximum size for an area is 10,000 acres. If you get a message regarding this, please redraw a smaller square.



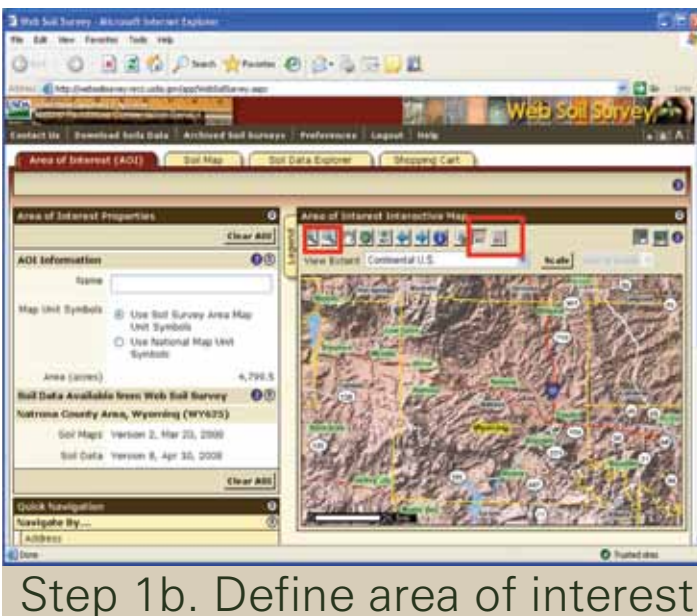
Step 1a. Find your location

#### Step 2. View the Soil Map and Soil Data Explorer tabs.

To view map unit descriptions, left click on the map unit name on the left column.

The **Soil Data Explorer** allows access to **Suitabilities and Limitations for Use, Soil Properties and Qualities, and the Soils Reports**. For teachers and students and those who want to learn more about soils, **Intro to Soils** has all sorts of general soils information. For those interested in knowing what vegetation may have grown in their soils before disturbance (i.e., "what is native here?"), one can navigate to the **Ecological Site Description** appropriate for the soil and location.

If you want a quick report, click on the **Printable Version** button. If you want to create more soil reports, click on **Add to Shopping Cart**. It will save your report until you are ready to print or download it.



Step 1b. Define area of interest





Step 2a. View soil map



Step 2b. View soil data explorer



Step 3. Check out

**Step 3. Check Out**

Use the **Shopping Cart** to get your custom printable report immediately, or download it later. You will have a list of all the items you have saved. If there is something you don't need or don't want, simply uncheck the box next to it. Also, you can preview items by clicking on top of each topic. It will be displayed on the right side.

If you choose to download later, the site will send an e-mail with a link where you can download your material later.

If, after reviewing the soil survey report, you still have unanswered questions, please contact the NRCS or conservation district office nearest you. To locate an office, visit [www.wy.nrcs.usda.gov/contact/index.html](http://www.wy.nrcs.usda.gov/contact/index.html).

You can also check your local library for a soil survey hardcopy or visit your local NRCS field office. Limited numbers of hard copies are available by contacting a state soil scientist.

*Astrid Martinez is the state soil scientist with the U.S. Department of Agriculture's Natural Resources Conservation Service in Wyoming. She can be reached at (307) 233-6774 or [astrid.martinez@wy.usda.gov](mailto:astrid.martinez@wy.usda.gov).*