

WEB SOIL SURVEY

In my younger days, while teaching Vocational Agriculture at Sky View High School, I enjoyed teaching students how to use the USDA Soil Survey of the Cache Valley area. Students were often intimidated as we placed the 400 page book on their desk for the first time. It did not take long, however, before they learned how to pinpoint specific locations in the valley, started to analyze soil types and used detailed charts and tables to identify strengths and limitations of specific sites for a variety of uses.

Being an agricultural class, we spend most of our time interpreting soil properties for farming and ranching. Content of sand, silt and clay, fertility, acidity and alkalinity, flood hazard, depth to water table, natural drainage and potential for erodibility were all priorities to us. A question that students asked every year was, "Why are we building homes on the most productive soils?" High school students were also quick to observe when homes were built in flood plains or where tight soils would inhibit the capacity of drain fields to function properly with individual septic systems.

I was very impressed last week when Suzann Kienast-Brown, NRCS Soil Scientist, made an interesting presentation on the new Web Soil Survey (WSS). Her presentation, to Supervisors of the northern Utah Soil Conservation District Boards, demonstrated the ability to access relevant soil information for almost any site any where in the entire United States. This easy web application provides effortless electronic access to farmers and ranchers, homebuyers, land use planners, appraisers, developers and builders, waste disposal entities, construction engineers or anyone else who types <http://websoilsurvey.nrcs.usda.gov/app/>.

Suzann demonstrated three easy steps for WSS users. Step one is to define your area of interest (AOI). This can be accomplished by setting specific selection criteria such as address or county. The use of zoom tools will allow individuals to get as detailed as the user wishes. Step two allows one to view the soils map with accompanying soil map unit legends. The maps can also be printed or saved for future reference by following the steps identified on the screen. Step three involves exploring a multitude of additional options. This may include the suitabilities and limitations, properties and qualities of soils for a specific use. This relevant information is essential to making wise management decisions concerning land use in specific areas.

There are several benefits to this electronic format as compared to the traditional hardcopy publications. Perhaps the greatest benefit comes from quicker access to the most current data. Users can also get only the information they want without wading through pages and pages of material that has no application to their needs. The ability to save and print maps is another feature that users will appreciate. The WSS is also linked to related NRCS information and resource data that can be printed on demand.

Homebuyers may benefit from this new resource as much as anyone. The WSS can answer a multitude of important questions that potential buyers will want to know. Is the soil stable, or does it have properties that can cause the foundation or walls to crack? Is

the site located in an area where soils indicate a potential for flooding, and the need for further onsite evaluation and review? Will storm water drain safely away from the home and lot, or will it turn my basement into a pond? Does the soil have a seasonal high water table that can cause a basement to flood or a septic system to fail? Is this a suitable spot for a basement? Will garden and landscape plants survive and thrive with this soil type?

The WSS can help land use planners make and substantiate the difficult decisions local government officials must make for zoning ordinances, building permits, sewer systems and sediment control. Developers and builders will find information on the WSS that may alert them to potential complications such as soil slippage, flooded basements, and other structural problems caused by adverse soil properties. Soil surveys describe soil properties in sufficient detail to allow for special designs such as wall and floor drains so that potential problems can be anticipated before they present themselves. The potential success of septic tank absorption fields can also be predicted by looking at the WSS.

Farmers and ranchers will appreciate their easy access to the WSS as they attempt to find the right combination of practices to manage their lands for maximum net profits. Tillage methods, water management, fertility and crop selection are all related to soil characteristics. The soil survey can help producers determine how intensively they can use their soils without damage. It also helps in determining what conservation measures are needed to control erosion and maintain or increase the productivity of the land.

Individuals with dial-up access to the Web will quickly become frustrated with the speed of the WSS. The large volumes of information provided will slow the process significantly. Users who have direct access and a little time, will find the WSS to be a valuable instrument to use again and again.