Oregon Geoscience FIT
Soils data workgroup - meeting of April 16, 2007

Attendees: Chad McGrath, NRCS; Jimmy Kagan, OSU-INR; Paul Staub, Geology; Bob Harmon, OWRD; Duane Lammers, USFS; Rod Therriault, Phil McClellan, DOR; Gail Ewart, DAS/GEO; Jay Noller (by phone) OSU Crop & Soil Sciences

This meeting was held to determine the interest, feasibility, and support for developing a preliminary soils statewide dataset within the Oregon Framework Themes development process. Gail and Paul briefed the group on the Oregon Framework concept in general and past Geoscience-Soils meetings.

Natural Resources Conservation Service soil surveys status – Chad McGrath
Chad handed out a map of the status of NRCS soil surveys for Oregon. NRCS maps the private/state/tribal lands and, depending on funding agreements, federal lands. Approximately 20 million acres of Oregon remain to be mapped. Projected completion date for NRCS soil surveys is 2011, which includes most cooperative soil surveys except Bureau of Land Management lands. Present NRCS-BLM cooperative agreement funding is not adequate to complete by 2011. Chad mentioned efforts of the Federal Lands Advisory Group. This group is attempting to modify funding regulations governing soil surveys so that state level decisions can be made to achieve the most efficient mapping efforts.

U.S. Forest Service soil mapping status – Duane Lammers
All new soil mapping on National Forests is done in cooperation with NRCS. Completion of National Forest soil surveys is projected to be about 10 years out. Past USFS soil mapping has been variable, both in content and quality. Duane described the Soil Resource Inventories dating back several decades. These mapping efforts resulted in 1:62,500 scale information. Individual National Forest offices digitized their own soils maps, without a common data structure and content. These individual soil surveys vary in quality and resolution.

Discussion:
Jimmy asked for opinions on the value and feasibility of joining past USFS soil mapping with completed NRCS soil surveys to build a statewide layer. A 'best available' dataset would consist of SSURGO, plus the older USFS, with STATSGO to assist in certain areas. Functionally, this would be a 1:62,500 scale layer with the 1:24,000 scale SSURGO data on top where available. Chad expressed some doubt about such an endeavor and was concerned about time needed to complete. Duane suggested a combined effort of compiling existing data plus including a DEM-based soil modeling effort. Chad stated that a well-constructed pre-mapping effort such as being discussed could assist the NRCS as it begins mapping new project areas.

Jimmy asked the group what content is needed in a statewide soil layer. The Oregon Department of Revenue presently is digitizing soil capability and productivity information. Rod is currently working on such a project and expressed the need for consistency from western Oregon to eastern Oregon. Bob expressed a need for soil data to support water availability modeling - soil permeability, layer depth, available water capacity, soil drainage class, hydrologic group, and depth to bedrock information is needed.

(Jay Noller of Oregon State University Crop and Soil Sciences joined the meeting by phone.)

Jay stated that the STATSGO data is actually reconnaissance mapping and nominally of 1:1,000,000 resolution. He agreed an improvement on STATSGO is needed for a statewide dataset. Jay then briefly discussed his research project using GIS to assist in soil survey modeling. Discussion ranged to improving on STATSGO by incorporating existing data to yield a 1:250,000 scale data set with zoom capability to 1:100,000. Jimmy asked about the feasibility of Jay having a graduate student work on such a project, to include soil modeling in unmapped areas. Jay estimated that a Faculty Research Assistant (FRA) with a Master's degree in GIS-Soils working a full year could complete a statewide soil dataset. This would include SSURGO, STATSGO in certain areas and filling in with modeled soils. Chad reiterated that this would be a good tool for his NRCS soil surveys yet to be completed.

Approach: Use SSURGO where available and modeled soils in the gaps.
Scale: 1:250,000, with zoom capability to 1:100,000
Resources Required: One FRA for one year, housed at OSU
Cost: (to be determined)

ACTION ITEMS from this meeting:

1. Data content needs should be sent to Jimmy Kagan at: jimmy.kagan@oregonstate.edu
2. Gail Ewart will send out a data needs request to an appropriate e-mail list held at GEO.
3. A Tuesday/Thursday meeting with Jay Noller will be held at OSU as soon schedules permit.
4. Jay will provide soil modeling data needs at the next workgroup meeting.
5. Engage other soils professionals, such as private viticulture soils scientists.