



USDA Forest Service Watershed, Fish, Wildlife Air and Rare Plants Staff Briefing Paper

Date: September 30, 2009

Topic: Review of the Terrestrial Ecological Unit Inventory (TEUI) Geospatial Toolkit

Issue: Remote Sensing Applications Center (RSAC) discussion of potential direction and uses of the TEUI Geospatial Toolkit (Toolkit), September 22-24, 2009

Background: The Toolkit was originally proposed in 2001 as a Remote Sensing Steering Committee (RSSC) project. The intent of the proposal was to investigate ways for TEUI mapping teams to more easily incorporate geospatial information into the mapping process. In 2004, the Information Resources Board (IRB) provided additional funding for developing and enhancing the Toolkit which include 3 years of Toolkit development to make the Toolkit a national application. The FS TEUI Technical Guide General Technical Report was released in 2005, which the Toolkit supports. Additionally, NRCS was brought into a discussion of how the FS and the NRCS could leverage the corporate application. Several pilot areas including Nevada, Texas, and Alabama, were established with the NRCS to test the Toolkit within on-going soil surveys. The NRCS National Geospatial Data Center in West Virginia served as a point-of-contact for the RSAC staff supporting the Toolkit. Much has been learned including: software license requirements and limitations, project specific requirements including scale of projects and data requirements, and challenges for sharing corporate applications between federal agencies. RSAC has developed training modules that include on-line and classroom sessions and provided numerous poster and oral presentations across the country.

In 2008, NRCS formally accepted the Toolkit as a corporate application for use with the National Cooperative Soil Survey (NCSS) Soil Survey Toolbox. NPS and BLM have also expressed interest in the adopting the Toolkit but are limited due to supporting software license agreements. Currently the IRB is supporting the maintenance of the Toolkit application. Discussions are underway to form a user-board to guide the future development of the Toolkit for NCSS use.

Summary of the Meeting:

There are two versions of the Toolkit that are in the process of being integrated into one application. The second version of the Toolkit was necessary for use on NRCS soil surveys.

Raster based and (Light Detection and Ranging) LiDAR coverages can be used but contain large data sets associated with them that require those data sets to be processed prior to being used with the Toolkit.

Models like the Soil Inference Engine (SIE) are being developed to leverage existing knowledge of landscapes and expedite field sampling in support of soil survey and TEUI. The Toolkit provides complimentary technology to these developing models.

The White Mountain National Forest (WMNF) in collaboration with the NRCS and USGS has acquired LiDAR coverages in support of their vegetation management and TEUI project. Early evaluation of the data shows great promise in low relief landscapes with dense overstory vegetation. The FS Eastern Regional Office has expressed support for the WMNF to pilot the development of a SIE/TEUI Toolkit application.

The Washington Office will continue to work with the Regional Offices and the NRCS to evaluate how to refine the Toolkit especially with the use of LiDAR data to enhance TEUI field operations.

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