September Dynamic Soil Survey Meeting Notes:

Attendance: Dylan Beaudette, Suzann Kienast-Brown, Skye Wills, Stephen Roecker, Kevin Norwood, Chad Remley, Carlos Quintera

Carlos presented his work to date as part of the interagency agreement between US. Forest Service and Soil Plant and Science Division. Carlos reminded us of the project objective: “To build spatially explicit models of soil moisture dynamics at watershed scales in two (or more) Forest Service Experimental Forests, including the Coweeta Hydrologic Lab and Hubbard Brook. These models will incorporate long-term hydrometeorologic data and both NRCS and locally developed soil surveys to examine sensitivity in predictions of spatial and temporal dynamics in soil moisture.”

Carlos spent the rest of the presentation discussing work with the RHESSys Model. Carlos discussed the input variables, data input summaries, parameters, obtaining texture data from SSURGO, technical issues, hurdles and his current work. Lot of discussion on soil moisture parameter, depth of rooting and where does DSS go from here. Carlos made clear these model runs calibrate to streamflow. Additional model runs will be based on the detail of soil moisture information.

There was discussion of the DHVSM model versus the RHESSys model and where is the DSS effort moving in terms of the future concept. Deploying soil moisture sensors at the experimental forest will help future model runs. Testing of the models on areas where we don’t have calibration data.

Lot of discussion on seeing the future of DSS and how we move into that future.

Update on Soil Moisture sensors for Fernow, Coweeta and Hubbard Brook Experimental Forests. Sensors are at IAS and should be delivered this fall. Meter company stated delivery would be slightly later than normal.

Update on Kansas Watershed: Soil moisture sensors will be installed last week of October or first week of November dependent on the crop being harvested onsite. The following depths will have soil moisture sensors 10, 20, 30, 50, 100, 150 and 200cm. Each depth will have a soil matric potential and temperature sensor and three soil moisture sensors. Kansas State University is conducting the calibration for the soil moisture sensors as its unlikely out of the box any of the sensors will be accurate. The soil at the site is a smectic silty clay and past use of soil moisture sensors has required calibration to be accurate.

Open discussion was the continued discussion of progress of raster maps for Coweeta and Hubbard Brook. Coweeta is in final draft and while there are staffing issues to work on Hubbard Brook. Region staff will be making time available to move that product forward.