Frequently Asked Questions
for the "Raster Soil Survey of a portion of Essex County, Vermont"

Q. What is the "Raster Soil Survey of a portion of Essex County, Vermont" (RSS)?

A. This soil survey product represents the portion of Essex County dominated by loamy lodgement till parent material with predictable soil landform relationships that allowed soil scientists to more accurately represent the pattern of soil distribution.

Q. How did soil scientists create the RSS?

A. Field work was conducted using the same techniques as traditional soil survey. RSS used rules set by data layers that defined the environmental setting of each soil class to map the distribution of each class.

Q. What layers were used?

A. Wetness index and slope were the most important layers. Wetness index, in general, is the upslope area divided by slope. Areas lower in the landscape with low slopes have higher values than areas higher in the landscape with high slopes.

Q. How did soils scientists use these layers?

A. Soil scientists were very familiar with the soil landform relationships of the soil classes occurring in this parent material. They used field observations and their knowledge to determine the values of wetness index and slope that best defined the environmental setting of each soil class.

Q. Why is this soil survey product in raster format?

A. The soil landform relationships in this parent material are controlled by terrain. High resolution elevation data allowed development of terrain derivatives that were used as predictors for the setting of various soils. These predictor layers were in raster format, so the output data format matches the input format.

In addition, many of the datasets being developed in the GIS community are in raster format and will be used in conjunction with soils. For example, air and space borne imagery, imagery classified into land cover or parent material layers, electromagnetic induction surfaces or vegetation density surfaces.

Q. Why not convert to polygons?

A. There was no advantage to converting to another data format

Q. How does this differ from the SSURGO product for Essex County?

A. The two products are related. The soil polygons representing the map units formed in the loamy lodgement till parent materials were based on the RSS data. The SSURGO product is based on the polygon format. There are minimum size requirements for the polygons that require the creation of map units. Map units are comprised of one to three named soils and their minor components. When the pattern of soil distribution is complex, polygons are used to group soils that occur in an area with common factors like slope range. The raster format does not have this limitation.

Q. Why is the RSS data not seamless?

A. RSS is presented as a separate dataset since it was developed using rule-based inference techniques that were unique to the presented area. It would be a loss of knowledge and information to not make this data available.

Q. How is the RSS different from gSSURGO?

A. gSSURGO is a raster version of the SSURGO layer at 10-meter resolution. RSS is a 5-meter resolution dataset with individual soil classes represented.

Q. Why are the map unit names unfamiliar?

A. The range in characteristics of soil properties is wider than traditional soil series, so the series name was dropped in favor of an ad-hoc name.

Q. What is in the tabular data?

A. The tabular data format is identical to the SSURGO and gSSURGO. The soil properties populated in the various tables of the RSS have a wider range when compared with the SSURGO/gSSURGO data.

Q. How can the tabular data be used?

A. The tabular data may be used in a manner similar to the tables in gSSURGO

Q. Are there "ready to map" tables in RSS like the VALU tables in gSSURGO?

A. Not at this time

Q. Can the RSS be used with Soil Data Viewer?

A. Not at this time

Q. Why use this data vs. SSURGO or gSSURGO?

A. That is a question we would like feedback on. Is greater spatial resolution helpful, even though the defined soil classes are wider? The contention is the RSS is a more realistic match of the natural distribution of a soil body. These soil bodies have a range in characteristics that is centered on a named soils series, e.g. Cabot, but extend beyond the upper and lower limits to overlap with similar soil series. Some would argue this is the case with most soil maps.