Query Sample Purpose

The purpose of this sample is to reinforce the fact that, in the Soil Data Mart database, the tabular data for both SSURGO and STATSGO is stored in the same set of tables. For most purposes, a person would not want to return a mixture of SSURGO and STATSGO tabular data. Therefore, this sample illustrates options for constraining the results of a query to either selected SSURGO data or selected STATSGO data, exclusively.

What are the options for making this distinction?

Option 1

All tabular data in the Soil Data Mart database is associated with one and only one survey area, and there are several attributes that can be used to determine if a given survey area is a SSURGO survey area, or *the* STATSGO survey area. In the Soil Data Mart database, there are over 3000 SSURGO survey areas, but only one STATSGO survey area. Using this option to distinguish between SSURGO and STATSGO requires a join to a table that includes one of the aforementioned attributes.

For a SSURGO survey area, the following will always be true:

> legend.areatypename = 'Non-MLRA Soil Survey Area'

For the STATSGO survey area, the following will always be true.

> legend.areatypename = 'Country'
> legend.areasymbol = 'US'

You can also leverage the meta-knowledge that the value of legend.areasymbol for any SSURGO survey area will never be "US". For a SSURGO survey area, the value of legend.areasymbol will always be a five character string where the first two characters in that string will be the state postal code of the state that has administrative responsibility for the corresponding survey area, and the last three characters will be a zero filled integer value that distinguishes between survey areas that are administered by the same state. For example, "CO644" is the area symbol for the SSURGO survey area whose name is "Larimer County Area, Colorado".

Option 2

The sample query document titled "Constraining a SQL Query to an Area of Interest.doc" shows how to constrain the results of a query to an area of interest. One of the ways this can be done is by referencing map units that coincide with that area of interest. Therefore the distinction between SSURGO and STATSGO can be made by referencing only map units associated with the appropriate kind of survey area. Please see the aforementioned sample query document for further details about this option. In cases where you need to define a relatively exact area of interest, this will be the preferred option.

Sample Query Syntax

If you want to constrain results to SSURGO or STATSGO, exclusively, in the clause that constrains the results to either SSURGO or STATSGO, take care that any additional constraint following an "OR" keyword in that same clause doesn't negate the constraint related to discriminating between SSURGO and STATSGO. By utilizing the syntax in the sample queries shown below, when the constraint that discriminates between SSURGO and STATSGO is included in the From clause, and any additional constraints are in the Where clause, the results will be constrained to either SSURGO or STATSGO, regardless of what constraints occur in the Where clause.

Sample 1

The following query returns selected attributes for ALL SSURGO map units in the Soil Data Mart database.

```
--Sample query begins…
--Note that a pair of dashes denotes the beginning of a comment.
SELECT
saversion, saverest, -- attributes from table "sacatalog"
l.areasymbol, l.areaname, l.lkey, -- attributes from table "legend"
musym, muname, museq, mu.mukey, -- attributes from table "mapunit"
comppct_r, compname, localphase, slope_r, c.cokey, -- attributes from table "component"
hzdept_r, hzdepb_r, ch.chkey -- attributes from table "chorizon"

FROM sacatalog sac
  INNER JOIN legend l ON l.areasymbol = sac.areasymbol
  AND l.areatypename = 'Non-MLRA Soil Survey Area'
    INNER JOIN mapunit mu ON mu.lkey = l.lkey
      LEFT OUTER JOIN component c ON c.mukey = mu.mukey
        LEFT OUTER JOIN chorizon ch ON ch.cokey = c.cokey

--WHERE additional constraint OR additional constraint…
--Sample query ends.
```

Sample 2

The following query returns selected attributes for ALL STATSGO map units in the Soil Data Mart database.

```
--Sample query begins…
--Note that a pair of dashes denotes the beginning of a comment.
SELECT
saversion, saverest, -- attributes from table "sacatalog"
l.areasymbol, l.areaname, l.lkey, -- attributes from table "legend"
musym, muname, museq, mu.mukey, -- attributes from table "mapunit"
comppct_r, compname, localphase, slope_r, c.cokey, -- attributes from table "component"
hzdept_r, hzdepb_r, ch.chkey -- attributes from table "chorizon"

FROM sacatalog sac
  INNER JOIN legend l ON l.areasymbol = sac.areasymbol
```

```
  AND l.areatypename = 'Country'
--The line above could also be "AND l.areasymbol = 'US'"
   INNER JOIN mapunit mu ON mu.lkey = l.lkey
     LEFT OUTER JOIN component c ON c.mukey = mu.mukey
       LEFT OUTER JOIN chorizon ch ON ch.cokey = c.cokey

--WHERE additional constraint OR additional constraint…
--Sample query ends.
```

Sample 3

The following query returns selected attributes for two selected SSURGO survey areas (Hall County Nebraska and Adams County Nebraska) in the Soil Data Mart database.

```
--Sample query begins…
--Note that a pair of dashes denotes the beginning of a comment.
SELECT
saversion, saverest, -- attributes from table "sacatalog"
l.areasymbol, l.areaname, l.lkey, -- attributes from table "legend"
musym, muname, museq, mu.mukey, -- attributes from table "mapunit"
comppct_r, compname, localphase, slope_r, c.cokey, -- attributes from table "component"
hzdept_r, hzdepb_r, ch.chkey -- attributes from table "chorizon"

FROM sacatalog sac
  INNER JOIN legend l ON l.areasymbol = sac.areasymbol
  AND l.areasymbol = 'NE079' or l.areasymbol = 'NE001'
    INNER JOIN mapunit mu ON mu.lkey = l.lkey
      LEFT OUTER JOIN component c ON c.mukey = mu.mukey
        LEFT OUTER JOIN chorizon ch ON ch.cokey = c.cokey

--WHERE additional constraint OR additional constraint…
--Sample query ends.
```

Additional Samples

A number of additional samples illustrating how the results a query can be constrained to either SSURGO or STATSGO, exclusively, by explicitly referencing only SSURGO or STATSGO map units, are available in the sample query document titled "Constraining a Query to an Area of Interest".