

## NC-94 Files distributed on CD-Rom

by

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### Directory: *Maps\Blanking*

Files: Iall.blm      Illl.blm      Inll.blm      Ksll.blm      Mill.blm      Mnl1.blm  
Moll.blm      Nc9411.blm      Ndll.blm      Nell.blm      Ohll.blm      Sdll.blm  
Will.blm

These files contain the latitude and longitude coordinates for the outline of the state or NC94 region for use with the Golden Software Surfer program. The file designation is “ssl”, where “ss” is the two letter state abbreviation, and “ll” indicates the files have latitude and longitude coordinates in them. The “blm” file type is required by the Surfer program to use as the blanking file.

### Directory: *Maps\County*

Files: Ia.bna      Il.bna      In.bna      Ks.bna      Mi.bna      Mn.bna  
Mo.bna      Nc94cnty.bna      Nd.bna      Ne.bna      Oh.bna      Sd.bna  
Wi.bna

These files contain the latitude and longitude coordinates for the state and county outlines of the state or NC94 region for use as a base map with the Golden Software Surfer program. The file designation is “ss”, where “ss” is the two letter state abbreviation. The “bna” file type is one of the possible base map file designations used by the Surfer program to use as the blanking file. Each county is identified by a line providing the fips code for the state and county, the county name, and an integer indicating the number of latitude and longitude coordinates used to draw the county outline.

### Directory: *Maps\CRD*

Files: Ilcrd.bna      Incrd.bna      Kscr1d.bna      Micrd.bna      Mncrd.bna      Mocrd.bna  
Nc94crd.bna      Ndcrd.bna      Necrd.bna      Ohcrd.bna      Sdcrd.bna      Wicrd.bna

These files contain the latitude and longitude coordinates for the state and crop reporting district

(CRD) outlines of the state or NC94 region for use as a base map with the Golden Software Surfer program. The file designation is “ss”, where “ss” is the two letter state abbreviation. The “bna” file type is one of the possible base map file designations used by the Surfer program to use as the blanking file. Each CRD is identified by a line providing the state fips number and the crop reporting district number (i.e. 17001, is for CRD 1 in Illinois), the CRD name (NW-CRD), and an integer indicating the number of latitude and longitude coordinates used to draw the CRD outline.

**Directory: *Maps\State***

Files: Ilstate.bna    Instate.bna    Ksstate.bna    Mistate.bna    Mnstate.bna    Mostate.bna  
          Nc94state.bna    Ndstate.bna    Nestate.bna    Ohstate.bna    Sdstate.bna    Wistate.bna

These files contain the latitude and longitude coordinates for the state outlines for each individual state or the NC94 region for use as a base map with the Golden Software Surfer program. The file designation is “ss”, where “ss” is the two letter state abbreviation. The “bna” file type is one of the possible base map file designations used by the Surfer program to use as the blanking file. Each State is identified by a line providing the state fips code, the state name, and an integer indicating the number of latitude and longitude coordinates used to draw the state outline.

**Directory: *Soils***

**Files:** NC94SO1.DAT    NC94SO2.DAT    NC94SO3.DAT    SOCNTYAC.DAT  
           SOCNTYAC.DB    SOILINFO.DAT

**File Format and Data:**

NC94SO1.DAT:  
 17    1    551284.4    551284.4    0.987700    3.5    3.5    4.0    183.0    127.1    125.7

| <u>Datum</u> | <u>Description</u>  | <u>Format</u> |
|--------------|---|---------------|
| 17           | State fips code.  | Integer       |
| 1            | County fips code.   | Integer       |
| 551284.4     | Total land acres in county.   | Real          |
| 551284.4*    | Total arable acres in county.   | Real          |
| 0.987700     | Percent of land area in total county area. If less than 1.00 there is a water body in the county. | Real          |
| 3.5**        | Mean slope of arable land in county.  | Real          |
| 3.5          | Mean slope of total land in county  | Real          |
| 4.0***       | Mean drainage classification of county.   | Real          |
| 183.0        | Depth to water table during wettest part of year (cm).  | Real          |
| 127.1        | Depth to bed rock (cm).   | Real          |
| 125.7        | Maximum root depth (cm).  | Real          |

\*In this file, all land area was assumed to be arable, therefore the total land area and arable land area are equal.

\*\*The mean slopes for the arable and total land area are equal because all the land in the county was considered as arable in this printout.

\*\*\*Drainage classification code:

- 1 = Excessively well drained.
- 2 = Somewhat excessively well drained.
- 3 = Well drained.
- 4 = Moderately well drained.
- 5 = Somewhat poorly drained.
- 6 = Poorly drained.
- 7 = Very poorly drained.

**NC94SO2.DAT:** File contains soil characteristics of each soil layer of the county composite soil. The county composite soil is the weighted mean of each of the counties soil type characteristics. The mean is weighted by the percent of each soil type in the county. Data in the Datum column are contained in a single row of the file.

| <u>Datum</u> | <u>Description</u>   | <u>Format</u> |
|--------------|--|---------------|
| 17           | State fips code.   | Integer       |
| 1            | County fips code.  | Integer       |
| 1*           | Soil layer.  | Integer       |
| 5.0          | Percent sand in layer  | Real          |
| 70.1         | Percent silt in layer  | Real          |
| 23.0         | Percent clay in layer  | Real          |
| 4.39         | Water content at liquid limit (cm)   | Real          |
| 1.67         | Water content at plastic limit (cm)  | Real          |
| 2.16         | Plant available water content (cm)   | Real          |
| 1.32         | Bulk density of layer (Mg m <sup>-3</sup> )  | Real          |
| 2.5          | Percent organic matter content   | Real          |
| 1.27         | Permeability (cm/hr)   | Real          |
| 0.016        | Geometric mean particle diameter   | Real          |
| 5.432        | Geometric standard deviation of particle diameter  | Real          |
| -4.06        | Air entry water potential for soil with a bulk density of 1.30 Mg m <sup>-3</sup> (J/kg).                |               |
| 9.21         | Slope of the natural log of the soil matric potential Vs the natural log of the volumetric water content | Real          |
| -4.824       | Air entry water potential, corrected for soil bulk density.  | Real          |
| 1.67         | Lower limit to plant available water (cm)  | Real          |

3.83

Upper limit to plant available water (cm)

Real

\*The soil layers are those needed by the DSSAT models. There are 9 soil layers with top and bottom layers shown in cm below the surface layer.

| <u>Layer</u> | <u>Top</u> | <u>Bottom</u> |
|--------------|------------|---------------|
| 1            | 0          | 10            |
| 2            | 10         | 25            |
| 3            | 25         | 50            |
| 4            | 50         | 75            |
| 5            | 75         | 100           |
| 6            | 100        | 125           |
| 7            | 125        | 150           |
| 8            | 150        | 175           |
| 9            | 175        | 200           |

**NC94SO3.DAT:** Variable order and description in this file are the same as those in NC94SO2.DAT, except values are supposed to represent the standard deviation of the soil variables. ***NOTE: There was an error in computing these variables so the file created on 5/20/97 should not be used. I will send out a corrected file when it is ready.***

**SOCNTYAC.DAT:** The file is comma and “ ” delimited.

17001,"IL003",988.4,.18,17,"ASSUMPTION",14,"IL0204",1,.0177912

| <u>Datum</u> | <u>Description</u>                       | <u>Format</u> |
|--------------|--|---------------|
| 17001        | State and county fips code.              | Longinteger   |
| "IL003"      | Map unit identification                  | String        |
| 988.4        | Area in map unit                         | Real          |
| .18          | Percent county made up of this map unit. | Real          |
| 17           | State fips code.                         | Integer       |
| "Assumption" | Soil name                                | String        |
| 14           | Soil component number of map unit.       | Integer       |
| "IL0204"     | S5ID, Statsgo soil identification.       | String        |
| 1            | Percent of soil unit in map unit.        | Integer       |
| .0177912     | Percent of soil unit in county.          | Real          |

**SOCNTYAC.DB:** Same as SOCNTYAC.DAT except in Paradox database format.

**SOILINFO.DAT.** This is a random access file and must be read using a program. It contains the soil characteristics for each soil in the North Central Region. I will distribute, as soon as it is available, a program that will allow you to read the file and output the data to an

ASCII file. The file contains the same information as found in NC94SO1.DAT and NC94SO2.DAT, except it is for an individual soil rather than a composite soil.

**Directory: *Weather\statename***

Each subdirectory under Weather contains the weather data for the state identified by the subdirectory name. The file name is “ssWXyyyy.TXT”, where “ss” is the two letter abbreviation for the state, and “yyyy” is the year. The weather data are tab delimited and have the following format: (The example below is from Weather\Illinois\ILWX1972.TXT)

```
17 1 1972 1 4.18 7.44 -1.33 1.02 0.28
17 1 1972 2 7.37 3.28 -4.78 1.02 0.62
```

The datum contained in each number is:

|       |   |
|-------|---|
| 17    | State fips code.  |
| 1     | County fips code (These numbers are all odd, 1, 3, 5, etc.) |
| 1972  | Year (1972 to 1995).  |
| 1     | Day of year (1 to 366).                                     |
| 4.18  | Total solar radiation (MJ m <sup>2</sup> ).                 |
| 7.44  | Maximum temperature for the day (°C).                       |
| -1.33 | Minimum temperature for the day (°C).                       |
| 1.02  | Total precipitation for the day (mm).                       |
| 0.28  | Total potential evapotranspiration for the day (mm).        |

**County Centroid File**

The centroid for each county is contained in the county centroid file. The structure of the file is:

| <u>Datum</u> | <u>Description</u>          | <u>Format</u> |
|--------------|-----------------------------|---------------|
| Adams        | County name.                | String        |
| 17001        | State and county fips code. | Long integer  |
| 17           | State fips code.            | Integer       |
| 1            | County fips code.           | Integer       |
| 3            | Crop reporting district.    | Integer       |
| -90.816...   | County centroid longitude.  | Real          |
| 39.9833...   | County centroid latitude.   | Real          |