**Description of Soil Map Unit File ("SMUF") Structure and Database**

Date of last update: 31-Mar-2003

<table>
<thead>
<tr>
<th>Field</th>
<th>Field Name</th>
<th>Type</th>
<th>Width</th>
<th>Dec</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AREA</td>
<td>Numeric</td>
<td>18</td>
<td>5</td>
<td>N</td>
</tr>
<tr>
<td>2</td>
<td>PERIMETER</td>
<td>Numeric</td>
<td>18</td>
<td>5</td>
<td>N</td>
</tr>
<tr>
<td>3</td>
<td>SOIL_</td>
<td>Numeric</td>
<td>11</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>4</td>
<td>SOIL_ID</td>
<td>Numeric</td>
<td>11</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>5</td>
<td>TAGID</td>
<td>Character</td>
<td>20</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>6</td>
<td>RM</td>
<td>Character</td>
<td>25</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>7</td>
<td>PROJECT_NU</td>
<td>Character</td>
<td>3</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>8</td>
<td>PROJECT_NA</td>
<td>Character</td>
<td>40</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>9</td>
<td>SCALE</td>
<td>Character</td>
<td>11</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>10</td>
<td>VERSN_DATE</td>
<td>Character</td>
<td>10</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>11</td>
<td>MAPUNITNOM</td>
<td>Character</td>
<td>60</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>12</td>
<td>SOIL_CODE1</td>
<td>Character</td>
<td>3</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>13</td>
<td>MODIFIER1</td>
<td>Character</td>
<td>3</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>14</td>
<td>CLASS1</td>
<td>Character</td>
<td>4</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>15</td>
<td>EXTENT1</td>
<td>Numeric</td>
<td>3</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>16</td>
<td>SOIL_CODE2</td>
<td>Character</td>
<td>3</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>17</td>
<td>MODIFIER2</td>
<td>Character</td>
<td>3</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>18</td>
<td>CLASS2</td>
<td>Character</td>
<td>4</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>19</td>
<td>EXTENT2</td>
<td>Numeric</td>
<td>2</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>20</td>
<td>SOIL_CODE3</td>
<td>Character</td>
<td>3</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>21</td>
<td>MODIFIER3</td>
<td>Character</td>
<td>3</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>22</td>
<td>CLASS3</td>
<td>Character</td>
<td>4</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>23</td>
<td>EXTENT3</td>
<td>Numeric</td>
<td>2</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>24</td>
<td>SLOPEP1</td>
<td>Numeric</td>
<td>5</td>
<td>1</td>
<td>N</td>
</tr>
<tr>
<td>25</td>
<td>SLOPEP2</td>
<td>Numeric</td>
<td>5</td>
<td>1</td>
<td>N</td>
</tr>
<tr>
<td>26</td>
<td>SLOPEP3</td>
<td>Numeric</td>
<td>5</td>
<td>1</td>
<td>N</td>
</tr>
<tr>
<td>27</td>
<td>STONE1</td>
<td>Character</td>
<td>1</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>28</td>
<td>STONE2</td>
<td>Character</td>
<td>1</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>29</td>
<td>STONE3</td>
<td>Character</td>
<td>1</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>30</td>
<td>EROSION1</td>
<td>Character</td>
<td>1</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>31</td>
<td>EROSION2</td>
<td>Character</td>
<td>1</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>32</td>
<td>EROSION3</td>
<td>Character</td>
<td>1</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>33</td>
<td>SALINITY1</td>
<td>Character</td>
<td>1</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>34</td>
<td>SALINITY2</td>
<td>Character</td>
<td>1</td>
<td></td>
<td>N</td>
</tr>
<tr>
<td>35</td>
<td>SALINITY3</td>
<td>Character</td>
<td>1</td>
<td></td>
<td>N</td>
</tr>
</tbody>
</table>

**TOTAL** 289
Database Content Description

**AREA**
Area of feature in internal units squared.

**PERIMETER**
Perimeter of feature in internal units.

**SOIL_**
Internal feature number.

**SOIL_ID**
User-defined feature number.

**TAGID**
System Attribute for storing polygon identifier.

**RM**
Rural Municipality.

**PROJECT_NU**
Soil Survey Report Number.

**PROJECT_NA**
Project Name.

**SCALE**
There are two basic types of soils surveys:
- Detailed: based on a large number of soil observations
  Scales: 1:20 000, 1:40 000, 1:50 000, 1:63 360
- Reconnaissance: based on fewer soil observations
  Scales: 1:100 000, 1:125 000, 1:126 720

**VERSN_DATE**
Version date.

**MAPUNITNOM**
Soil Map Unit Symbol as shown on the original paper map.

**SOIL_CODE**
Three character code for the soil name.
- **SOIL_CODE1** Must not be blank, values assigned by correlator
- **SOIL_CODE2** Use blank if EXTENT1 = 100
- **SOIL_CODE3** Use blank if EXTENT1 + EXTENT2 = 100

**MODIFIER**
Three character code to show soil variations. The modifier applies to the soil name and the soil code. This field may be blank. Modifiers may be used in various combinations, as required. Common single modifiers are:
- **d**
  - drained phase
- **p**
  - peaty phase
- **S**
  - Sphagnic phase (organic soils only)
- **v**
  - very poorly drained phase
- **s**
  - slightly saline phase
- **t**
  - moderately saline phase
- **u**
  - strongly saline phase
- **l**
  - numeric variant (series specific)
2 numeric variant (series specific)
___1  slightly eroded phase
___2  moderately eroded phase
___3  strongly eroded phase
___0  overblown phase

Modifier codes are left justified, except for erosion phase variants (to avoid confusion with numeric soil series variants).

CLASS Field for storing EROSION, SLOPE, STONINESS and SALINITY codes.
Used with SOIL_CODE and MODIFIER to create unique soil map units
  CLASS1 Must not be blank, defaults to xxxx
  CLASS2 Use blank if SOIL_CODE2 is blank
  CLASS3 Use blank if SOIL_CODE3 is blank

EXTENT Percent of the map unit occupied by a specific soil.
Allowable Extent Value
  EXTENT1  34 TO 100
  EXTENT2  0 TO 50   0 if SOIL_CODE2 is blank
  EXTENT3  0 TO 33   0 if SOIL_CODE3 is blank

SLOPEP Slope steepness in percent
  SLOPEP1  0 to 150 % if SOIL_CODE1 is mineral.
  SLOPEP2  0 to 150 % or -9.
  SLOPEP3  0 to 150 % or -9.
    -9 if SOIL_CODE is nonsoil or unclassified

STONE Stoniness Class
  - Not Applicable
  0 Nonstony   0 < .01% of surface covered
  1 Slightly stony  .01 - .1%
  2 Moderately stony  .1 - 3 %
  3 Very stony   3 - 15%
  4 Exceedingly stony  15 - 50%
  5 Excessively stony  > 50% of surface covered by stones

EROSION Apparent Erosion Class
  - Not Applicable
  1 Slightly eroded
  2 Moderately eroded
  3 Severely Eroded
  o Overblown

SALINITY Salinity Class
  x Non Saline  0 - 4 mS/cm
  s Weakly Saline  4 - 8 mS/cm
  t Moderately Saline  8 - 15 mS/cm
u Strongly Saline  > 15 mS/cm