U.S. DEPARTMENT OF AGRICULTURE MLRA-NCSS

NATURAL RESOURCES CONSERVATION SERVICE REV. 06/2000

SOIL SURVEY MANUSCRIPT QUALITY CONTROL REVIEW

1. Have the following support materials been completed and submitted with the manuscript?

- ❑ Check prints of block diagrams and hand-drawn illustrations
- ❑ Black and white photos and/or color slides, and caption list (Call for number and format before submitting)
- ❑ General Soil Map - Acreage Distribution Chart and Legend Worksheet (From NSSH or ask correlator)
- ❑ Map Unit Soil Properties Checklist (from NASIS) {Can be generated by using the EXPORT reports and tailoring the resulting report to your manuscript. The content of the “Map Unit Soil Properties Checklist” will vary depending upon which properties need cross-checking and which are used in a particular manuscript}
- ❑ Map Unit Suitability Ratings (if used in survey)
- ❑ Completed NRCS-SOI-8's (Send complete soi-8 to SDQS for review an forwarding to NSSL for entry into the National Database)
- ❑ DOS diskette of unformatted manuscript materials (i.e., inserts, tables,)
- ❑ Marked up hard copy of pre-written materials (edits to an electronic copy will not be accepted without a hard copy indicating the edits)
- ❑ Marked up hard copy of manuscript tables generated from NASIS.

1. Pre-written material

- ❑ Are all edits marked on a hard copy of the pre-written material?
- ❑ Has the version of pre-written material to be used in this survey been approved by your state?
- ❑ Have optional sections been deleted if they are not to be used?
- ❑ Does the data in the columns of the tables match the column headings and are the column headings described in the pre-written material?

- ❑ If column headings have been deleted or modified from tables, have these paragraphs been crossed-out or modified in the pre-written material to match the current table configuration?
- ❑ Does the pre-written material you are using match the table format that you are publishing? (fuzzy vs crisp interps)

2. Cover and i pages

- ❑ Do cooperating agencies listed on the cover, credits page, and in the introduction agree with the correlation memorandum?
- ❑ Are all names in the "Index to Series" in agreement with the correlation memorandum?
- ❑ Are all names in the "Index to Map Units" in agreement with the correlation memorandum?

1. Introduction and general nature of the survey area

- ❑ Do map units in the prime farmland list, hydric soils list, etc., agree with the latest state lists?
- ❑ Do acreage figures given in the "Introduction" section agree with the “Acreage and Proportionate Extent of the Soils” table in the manuscript and the appropriate NRI data?
- ❑ Do acreage figures given in the “Introduction” section agree with acreage figures used in the “Agronomy”, “Forestland”, and other use and management sections?
- ❑ If land use acres are given in the "General Nature of the Survey Area" section, does this information agree with acreage figures used in the "Agronomy”, “Forestland”, and other use and management sections?

1. General soils map and general soil map units

- ❑ Has a “General Soil Map Acreage Distribution Chart” been completed?
- ❑ Are the names of the general soil map units on the map the same as those given in general soil map unit descriptions?
- ❑ Does the acreage and percent composition of the general soil map units agree with the “General Soil Map Acreage Distribution Chart”? (90 percent or more of the taxonomic units (series) distributed in one of the general soil map units)
- ❑ Are there more acres of any soil on the general soil map than acres mapped in the survey area?

- ❑ Do the general soil map units percentage add up to 100?
- ❑ In the description of each general soil map unit, does the percent of the named soils plus the percent of the minor soils add up to 100?
- ❑ Does the map join the general soil maps of adjoining published surveys? (if not, a detailed accounting should have been attached to the correlation memorandum)
- ❑ Has the general soil map been drafted on a 1:100,000 scale mylar copy of the latest possible general highway map? (Copies of mylars are available from NCG, Ft. Worth, Texas)—SDQS will order the mylars if asked.
- ❑ Has a separate general highway map been used to highlight roads, streams, and towns to be used on the general soils map and index to field sheets?
- ❑ Is the general soil map clearly legible and on a base that has enough cultural and drainage features to allow accurate location of general soil map unit boundaries?
- ❑ Do cultural and drainage feature names on the map agree with those given in the text of the manuscript?
- ❑ Are all of the delineations wide enough to reproduce at the publication scale (long narrow delineations should be at least 1/8 inch wide; circular delineations should be at least ¼ inch in diameter)
- ❑ Does each unit in the general soil map legend appear on the map? Does each unit on the map appear in the legend?
- ❑ Are all of the soil boundaries closed, and are there different symbols in adjacent delineations?
- ❑ Is there a symbol in each delineated area?
- ❑ Are the units logical? (They should meet a need and be clearly distinguishable from each other.)
- ❑ If there are 12 or more general soil map units, have the units been grouped and are the groups clearly distinguishable and reasonable and have they been described?
- ❑ Do the soil names in each map unit agree with the correlation memorandum? Are they listed from most to least extensive for each unit? Is the format consistent for each map unit name?
- ❑ Does the legend on the general soil map show each group heading and the names of each of the general soil map units? (The descriptive heading is no longer given in the legend of the general soil map.)

- ❑ Does the first paragraph (known as the summary paragraph or descriptive heading) of each general soil map unit description summarize and describe those features that are common to the major soils of the unit and distinguish the unit from other units in the survey area?
- ❑ Does the name of each general soil map unit consist of three or fewer soil series, higher taxa of soil taxonomy, or miscellaneous areas? Four names may be used if the total percentage of the dominant three components does not exceed 50 percent.
- ❑ Are the names of all series, higher taxa of soil taxonomy, and miscellaneous areas that have been identified in the general soil map section of the manuscript, names that have been correlated in the survey area?
- ❑ Have enough minor soils been listed in each general soil map unit? (The quotient of the percent of minor soils divided by the number of minor soils listed must be smaller than the percent shown for the smallest named component of that general soil map unit.)
- ❑ Does the text of each general soil map unit agree with the detailed soil map unit descriptions, the taxonomic unit descriptions, and the tables?
- ❑ Is the slope range for each general soil map unit within the correlated range of the detailed soil map units?
- ❑ Do statements about the "setting" agree with detailed soil map unit descriptions and/or taxonomic unit descriptions? Do "formed in" statements agree with the detailed soil map unit description and/or the taxonomic unit descriptions?
- ❑ Does the general soil map units brief soil profile description agree with the detailed soil map unit description and/or the taxonomic unit description?
- ❑ Is the format of the soil profile description consistent from one general soil map units description to another?
- ❑ Are minor soils located on the landform and their significance explained to the reader?
- ❑ Have all minor soil names shown in block diagrams that are illustrating general soil map units been listed in the general soil map unit description for that unit?
- ❑ Is dominant land use, suitability for relevant land uses, and major concerns of management provided for each general soil map unit?

- ❑ Do statements about present use of the soils and suitability for other uses agree with detailed soil map unit descriptions?
- ❑ Is there consistent use of terminology in discussions of limitations or suitabilities of the soils?

2. Detailed soil map unit descriptions
   - ❑ Are all map units listed in the correlation document described, including Dam, Udorthents, Pits, etc?
   - ❑ Do all map unit symbols and map unit names agree with those listed in the correlation document and in the “Acreage and Proportionate Extent of the Soils” table?
   - ❑ Does all information in the "setting" section of the map unit description agree with statements in other parts of the text (taxonomic units, general soil map units, and other sections, such as crops and pasture write-up) and tables?
   - ❑ For multi-taxa units, is the percent of the components logical? Does the description state why the soils are mapped together? (narrative format only)
   - ❑ Has the percent composition been given for each component of detailed soil map units that are complexes or associations?
   - ❑ Are cumulative amounts of contrasting inclusions given? Are the amounts of inclusions within National Soil Survey Handbook guidelines?
   - ❑ Does the sum of the percent of each component of complex map units plus the percent of inclusions equal 100?
   - ❑ Are all statements about included soils correct?
   - ❑ Are all soil names listed in the inclusions section of the detailed soil map unit description correlated in this soil survey? (Minor components may be correlated and is left to the discretion of the MLRA project leader and the Correlator.)
   - ❑ Are the contrasting inclusions (dissimilar soils and miscellaneous areas) located on the landform and their differences listed?
   - ❑ Are differentiating statements such as drainage, depth, color, etc. of included soils correct?
   - ❑ Is the texture of the surface layer the same as that in the name of the map unit and that of the surface layer for the map unit in the “Engineering Index Properties” table? (An exception is when the texture in the name of the map unit is for a mixed surface layer.)

- ❑ If a brief profile description is included, are the layers of the brief profile description consecutive? (Check to be sure there are no missing or overlapping layers.)
- ❑ Are general terms (surface, subsurface, subsoil, or underlying material) used consistently?
- ❑ If a brief profile description is included, does depth, color, texture, and/or mottling of the brief non-technical description agree with the typifying pedon?
- ❑ If a brief profile description is included, and if eroded phases are used, does the brief pedon description reflect this?
- ❑ Does the slope range for each soil in each map unit fit within the range given for that soil in the taxonomic unit description?
- ❑ If flooding or ponding is not in the mapunit name and if the soil floods or ponds, is this stated prominently in the properties paragraph? Mapunit name and/or properties statement must agree with the “Water Features” table
- ❑ Are statements in the management section that describe drainage only statements of fact and not drainage recommendations?
- ❑ Are eroded units discussed differently from uneroded units?
- ❑ Does permeability agree with the taxonomic unit description and the “Physical Properties” table? (Permeability should be given for the most restrictive material below the surface layer and above a depth of 80 inches that affect urban interpretations.)
- ❑ If water tables are mentioned, are the statements consistent with depths and/or duration provided in the water features table? (It is recommended that the water table information be eliminated from the properties section.)
- ❑ If organic matter content is listed, is it consistent with the organic matter listed in the tables ?
- ❑ Does soil reaction agree with the range in characteristics in the taxonomic unit description and the tables? (Soil reaction is not required in the soil properties paragraph and is not recommended.)
- ❑ Has rating terminology been used consistently throughout the map unit descriptions, is it consistent with ratings given in the tables, and is it correct? (Only applies to narrative manuscripts)
- ❑ Are the interpretive groupings that have been assigned to each soil, substantiated by statements that have been made in the management section, and do they agree with those statements?

- ❑ Does the capability shown in the map unit description agree with that shown in the “Land Capability and Yields per Acre of Crops and Pasture” table and in the author's checklist of soil properties for the survey area?
- ❑ Does the woodland ordination symbol shown in the map unit description agree with that shown in the “Forestland Management and Productivity” table? (Only for older surveys-the woodland ordination symbol is obsolete and should not be used in update soil surveys.)

3. Taxonomic unit descriptions
   - ❑ Have all of the soil series and taxadjuncts listed in the correlation document been described in the text?
   - ❑ Do all of the soils identified as taxadjuncts in the correlation document have a statement in the taxonomic unit description that describes the difference and gives the classification of the taxadjunct?
   - ❑ Does all taxadjunct information agree with that stated in the correlation document?
   - ❑ If depth class is listed, does the depth class agree with that shown in the “Soil Features” table and with depth class guides as defined in the "Soil Survey Manual"?
   - ❑ If permeability is listed, does the permeability agree with the “Physical Properties of the Soils” table?(It is not recommended to list the permeability in the taxonomic unit description.)
   - ❑ Is the numeric slope range given? Does the slope range given in the taxonomic unit description cover the full range on which the series has been mapped in the survey area?
   - ❑ Is the parent material correctly identified and in agreement with the block diagrams and the "Formation of the Soils" section?
   - ❑ Are general texture terms used correctly?
   - ❑ Does the pedon description support the classification?
   - ❑ If typifying pedon sites are being compiled, have all typifying pedon sites within the survey area been located by a special symbol on the map compilation sheets?
   - ❑ Is the location of the typical pedon accurate and complete? (For directions given in highway mileage, the starting point should be easily found on the index to map sheets.)
   - ❑ Have all of the locations of the typifying pedons been described consistently using standard geographic terms? (Abbreviated terms; IN 52, SR 1125, N., ft., etc. should be used.)

- ❑ Is the typical pedon located within a mapped area of that soil?
- ❑ If the complete map unit name is being used in the location paragraph, does the map unit name in the location paragraph of the typical pedon agree with the correlated name in the classification and correlation document?
- ❑ If the typical pedon is the "type location" for that series, does all information shown in the typical pedon agree with that in the official series description?
- ❑ Are the horizon designations correct?
- ❑ Does the texture of the surface layer of the typical pedon agree with the texture in the name of the map unit from which the typical pedon description is taken? Does it agree with the texture shown for the surface layer of that map unit in the “Engineering Index Properties” table?
- ❑ If the typical pedon location is within the survey area, do layer depths of the typifying pedon agree with those shown in the Engineering Index, Chemical, and Physical Properties Tables?
- ❑ Are the soil horizons and depths consecutively sequential?
- ❑ Where appropriate, have transitional horizons greater than 4 inches thick (typifying pedon) been added to the data mapunits? (Correlator has been consulted)
- ❑ Is the information within each horizon of the taxonomic unit description complete and in a consistent order, and has correct terminology been used?
- ❑ Have rock fragment texture modifiers (gravelly, cobbly, etc.) been correctly and uniformly used in the typifying pedon?
- ❑ Do all Munsell notations and color names agree? (Especially Munsell notations that have changed in the recent past.)
- ❑ Are any of the ranges of properties given in the range in characteristics section "vertical" ranges? For example, if the reaction of the A horizon is neutral or slightly alkaline and the reaction of the B horizon is moderately acid to neutral, it is not correct to say that the reaction of the solum is moderately acid to slightly alkaline.
- ❑ Does the range in characteristics for each taxonomic unit cover all phases of that series that have been mapped in the survey area? Information about inclusions belongs in the map unit description not in the taxonomic unit.

- ❑ Has information about inclusions been given in the range in characteristics? If it has, delete it. This information belongs in the map unit description.
- ❑ Does the range in characteristics section include the major soil properties?
- ❑ Are all horizons identified in the typifying pedon assigned a range in the "Range in Characteristics" paragraphs for individual layers?
- ❑ Is the format of the range in characteristic paragraphs consistent from one typifying pedon to another?
- ❑ Does the range of texture for the surface layer include only correlated textures (or major similar soils)? Permission must be granted from both the state and correlator and a note should be made in the correlation document if textures which are not in the name of the mapunits are to be included in the range of the surface texture.)
- ❑ Are all soil properties and their ranges within the range of the Official Series Description?
- ❑ If not, have the needed changes been made or requested in the Official Series Descriptions?
- ❑ Does all the information in the taxonomic unit descriptions agree with statements or information in other parts of the manuscript and tables?

4. Tables

- ❑ Do table numbers and names agree with those shown in the pre-written material?
- ❑ Do the column headings in each table agree with those shown in the write-ups in the pre-written material?
- ❑ Are the climate tables from the National Climate Center included?(SDQS can order these when requested)
- ❑ Do the data given in the climate tables agree with the information in the climate section of the manuscript?
- ❑ Are there any inappropriate blanks in the tables?
- ❑ Have interpretations and properties for miscellaneous areas been shown consistently?
- ❑ Are all map units included on each standard table? (With the exception of water)
- ❑ Are the symbols and names in agreement with the correlation memorandum?
- ❑ Does the acreage total in the “Acreage” table agree with the county acreage in NASIS? If the survey area boundaries are not the same as the county boundaries, this figure is adjusted to a state acreage total.

- ❑ Are all acreage figures correct in the “Acreage and Proportionate Extent of the Soils” table?
- ❑ Have areas of water greater than 40 acres in size (census water) and areas of water less than 40 acres in size (noncensus water) been shown separately in the “Acreage and Proportionate Extent of the Soils” table?
- ❑ Are the taxadjuncts identified in the correlation memorandum in agreement with the “Classification of the Soils” table?
- ❑ Have crop yields in the “Land Capability Classification and Yield” table been edited to reflect local productivity with a high level of management, as per state guidelines?
- ❑ Have yields been given consistently for soils that have similar properties?
- ❑ If yields are shown for cultivated crops, woodland, etc., in the tables, have management statements been given in the map unit descriptions about these uses?
- ❑ Are all detailed soil map units that have been identified as prime farmland in the correlation memorandum listed in the “Prime Farmland” table? Do all detailed soil map units that have been identified as prime farmland meet the prime farmland criteria?
- ❑ Are ordination symbols and management concerns listed in the “Forestland Management and Productivity” tables in agreement with map unit descriptions? (Woodland ordination symbols should not be used in update soil surveys)
- ❑ Have tree species and site index values been edited in the “Forestland Management and Productivity” tables to reflect conditions in the survey area?
- ❑ Has the column "Productivity Class" in the “Forestland Management and Productivity” tables been changed to “Volume" and the site index data converted to cubic feet per acre?
- ❑ Are the tree species listed in the “Forestland Management and Productivity” table in agreement with the map unit description and the use and management sections?
- ❑ Are depths and textures listed in the “Engineering Index Properties” table in agreement with the typifying pedon? The map unit description?
- ❑ Is there consistency between the USDA textural modifiers given in the texture column and the percent passing the number 10 sieve of each layer in the “Engineering Index Properties” table?

- ❑ Are the textures shown in the USDA texture column possible with the sieve passing values that have been given for the numbers 10, 40, and 200 sieves in the “Engineering Index Properties” table?
- ❑ Has only one T factor been given for each component of each detailed soil map unit in the “Soil Properties” table?
- ❑ Is there consistency between the percent clay for the layers that constitute the textural control section of each soil in the “Soil Properties” table and the textural family of that series as shown in the “Classification of the soils” table?
- ❑ Does the permeability given in the “Physical Properties” table agree with that shown in the detailed soil map unit and taxonomic unit descriptions?
- ❑ Are depths and values in the “Physical Properties” table in agreement with the typifying pedon?
- ❑ Are the depths and values in the “Physical Properties” table in agreement with the map unit descriptions?
- ❑ Has the percent clay column in the “Chemical Properties” and “Physical Properties of the Soils” tables been edited to the clay range of the correlated surface textures?
- ❑ Does the flooding frequency shown in the “Water Features” table agree with that given in the detailed soil map unit descriptions?
- ❑ Do the depth to the high water table and the months that the water table is high as shown in the “Water Features” table agree with the information given in the detailed soil map unit description?
- ❑ Does the depth to bedrock given in the “Soil Features” table agree with that shown in the taxonomic unit and detailed soil map unit descriptions?
- ❑ Does the bedrock hardness shown in the “Soil Features” table agree with that indicated in the taxonomic unit description? (If the horizon designation is "Cr," the bedrock hardness should be "Soft," and if the horizon designation is "R," the bedrock hardness should be "Hard." Both bedrock types and ranges should be given to a depth of 80 inches.)
- ❑ Does the depth to restrictive layers given in the “Soil Features” table agree with that shown in the taxonomic unit and the detailed soil map unit descriptions?
- ❑ Are all of the soil names shown in the “Engineering Index Properties”, “Chemical Properties”, and “Physical Properties” tables names of soils that have been correlated in the survey area?

- ❑ Do the engineering index test data in the “Engineering Index Test Data” table agree with the Unified and ASSHTO classifications shown in the “Engineering Index Properties” table?
- ❑ If any of the soils shown in the “Engineering Index Properties”, “Chemical Properties”, and “Physical Properties” tables are the typical pedons for that series, do the horizon depths agree with those in the taxonomic unit descriptions?
- ❑ Do the data in the “Engineering Index Properties”, “Physical Properties”, and “Chemical Properties” tables agree with one another and fit within the ranges of properties in the “Soil Features” table and the Taxonomic Unit Descriptions?
- ❑ Does the classification of each series in the “Classification of the Series” table agree with that in the correlation document and with that in the taxonomic unit description?
- ❑ Are all series that are identified as taxadjuncts in the “Classification of the Series” table also shown as taxadjuncts in the correlation document and in the taxonomic unit descriptions?
- ❑ If the “Capability Classes and Subclasses” table is included, are all acreage figures correct in the “Capability Classes and Subclasses” table?
- ❑ Have the “Soil Moisture Status Table” Low, RV, and High values been cross checked, and do they agree with the “Water Features” table?
- ❑ Have conflicts been resolved between the “Water Features” table and the restrictive features listed in the “Soil Features” table and the Taxonomic Unit Description range in characteristics?

1. References

- ❑ Have the required Reference Worksheets been completed for nonstandard references?
- ❑ Have all references been located in the text using the latest convention? (Pre-written material reference numbers may be used.)
- ❑ If there is a previously published soil survey, has it been referenced in the text?

1. Glossary

- ❑ Have the standard glossary terms needed for the survey area been marked in the pre-written material? (Or has a recent glossary from a recent publication been marked up?)
- ❑ If additional terms are needed has a definition and source been provided?

1. Illustrations
   - ❑ Have all photographs or color slides been carefully reviewed?
   - ❑ Are B&W negatives on file?
   - ❑ Have concise captions been prepared identifying significant soil properties or features?
   - ❑ Have all block diagrams, hand-drawn illustrations, black and white photographs, and color profile slides been properly identified and located in the text?
2. NASIS data population:
   - ❑ Have all data fields been populated that are needed to run MUG and generate manuscript tables?
   - ❑ Have data mapunit data validations been run for the following and have all errors been corrected?
     - ❑ Component percentages
   - ❑ Have component data validations been run for the following and have all errors been corrected?
     - ❑ Horizon depth
     - ❑ Taxonomic classes
   - ❑ Have component horizon data validations been run for the following and have all errors been corrected?
     - ❑ Percent passing sieves
     - ❑ Particle size distribution
     - ❑ Component percentages
     - ❑ Texture modifier (by sieves)
     - ❑ Texture modifier (by fragment volume)
     - ❑ Ksat population
     - ❑ Texture class vs particle size separates
     - ❑ AASHTO class

❑ Unified class

1. Certification of completion:

All items listed in the Soil Survey Manuscript Quality Control Review have been carefully evaluated and completed.

Soil Survey Project Leader _____ Date _____