

**U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE**

**Region 11 MO
Rev. May 2008**

**QUALITY ASSURANCE WORKSHEET FOR
UPDATE SOIL SURVEYS REQUIRING EXTENSIVE REVISION**

MLRA(s):

COUNTY, STATE:

STSSAID:

REVIEW TYPE:

DATE:

This quality assurance report is to ensure that: the soil survey is science-based; that the legend and correlation use the MLRA concept; and that the survey meets the standards and specifications of the National Cooperative Soil Survey.

All negative responses identified in this report must be adequately addressed in a narrative (see item 11.14).

1.0 GENERAL INFORMATION and SCHEDULING

1.1 Agency in charge of survey:

1.2 Cooperating agencies:

1.3 Survey team (name, title, agency):

1.4 Total acres (land, census water):

1.5 Acres updated/mapped and percent of survey:

1.6 Status of Memorandum of Understanding (e.g., current, signed):

1.7 List quality assurance reviews (type, date):

1.8 Scheduled date - next quality assurance review:

1.9 Scheduled date - mapping completion:

1.10 Scheduled date - final correlation:

1.11 Scheduled date - publication to the MLRA Regional Office for technical review:

1.12 Scheduled date - map compilation completion:

1.13 Participants at this review (name, title, agency):

2.0 MANAGEMENT ISSUES

2.1 Are deficiencies and agreed-to items stated in previous Quality Assurance Reviews satisfied?

2.2 Are management-related documents current (e.g., long-range plan of operation, annual plan of operation, standards of performance, individual training plans)?

2.3 Are any management concerns associated with this survey?

2.4 Is the survey party accessing and using the latest versions of the NSSH, Keys to Soil Taxonomy, Region 11 MLRA Regional Office technical notes and other guidance documents, past quality assurance reports, and other relevant documents?

2.5 Is the information in the soil survey schedule correct?

2.6 Are there any specific technical training needs of the soil survey staff not already identified by the local staff as part of their development plans? (If yes, please specify the training needs.)

3.0 CORRELATION and DESCRIPTIVE LEGEND

All map units correlated must have data to support the correlation -- if not from the subset, then from the MLRA. The MLRA concept must be used for developing the legend.

3.1 Do all project members and participants understand the concept of map units, data mapunits, and the MLRA process?

One legend is maintained for the survey containing the provisional and the approved map units for the MLRA. The legend is the official, progressively correlated subset legend of the MLRA. The map units in the legend have been approved by the Region 11 MLRA Regional Office. The legend contains “provisional” map units that are being mapped but that have insufficient acreage or documentation. The type and amount of documentation required for the map units to become approved depends on the complexity of the map unit, existing documentation for the map unit within the MLRA, and previous correlation decisions.

Attach the legend (see item 11.1). Attach a list of map units added, dropped, or changed since the last review (see item 11.2). Attach the conversion legend (see item 11.3). Attach a summary of the documentation gathered (see item 11.4) and attach a narrative of the field stops seen on this review (see item 11.5).

3.2 Is documentation sufficient for approved data mapunits on the legend?

3.3 Do all new components (series) of map units to be added to the legend classify properly in accordance with current soil taxonomy?

3.4 Are the properties (at least the representative values) of all new components of map units as mapped in the survey area within the range of the named series?

Appendix IV

- 3.5 Is the official soil series description up-to-date for all series used in the survey area (georeferenced, classification current, metric units of measure, horizon nomenclature current, competing series current, diagnostic horizons and features listed)?
- 3.6 Have names for new series been reserved and a description uploaded to the OSD database?
- 3.7 Are the map unit names and design consistent with the MLRA soil survey area for this soil survey?
- 3.8 Are all proposed changes in the legend recorded and reported in the appropriate NASIS tables?
- 3.9 Are notes recorded in NASIS detailing the location and acreage of provisional map units until they are approved for the identification legend?
- 3.10 Is a strategy in place for gathering documentation and are there instructions as to kind and quality of field notes needed?
- 3.11 Does each project member have an up-to-date copy of the descriptive legend?
- 3.12 Is the descriptive legend adequate to ensure consistency of the mapping by all project members and to ensure a timely completion of the publication?
- 3.13 Are the pedon descriptions stored in NASIS?
- 3.14 Are field notes, transect data, and laboratory data summarized regularly? Is the descriptive legend brought up-to-date?
- 3.15 Is a conversion legend generated? Is it up-to-date?

The project leader is responsible for updating the section "Notes to Accompany Classification and Correlation of the Soils." Refer to NSSH exhibit 609-1, item 17 for an example. Attach the notes or the plans for developing this document (see item 11.6).

4.0 SOIL INVESTIGATIONS

- 4.1 Is a soil investigation work plan prepared and approved by the Region 11 MLRA Regional Office?
- 4.2 Is the soil classification of lab data current with soil taxonomy?
- 4.3 Are pedons properly classified? Is the disposition of the laboratory data given and provisions made to update the laboratory database?

The project leader is responsible for updating the section "Classification of Pedons Sampled for Laboratory Analysis." Refer to NSSH exhibit 609-1, item 15 for an example. Attach the document or plans for developing this document (see item 11.7).

5.0 SOIL MAPPING

Describe in a narrative the process used by the survey project office to ensure quality control of mapping and approval by the project leader (see item 11.8).

Describe in a narrative the process used by the survey project office to ensure an exact join as described in NSSH, Part 609.03; or an acceptable join with join statements to allow an exact join in the future (consider metadata) (see item 11.9).

- 5.1 Is there a process for ensuring security of the original maps, compiled maps, and data files (e.g., fire-safe copies, back-up disks at a secure location, etc.)?
- 5.2 List the field sheets reviewed:
- 5.3 Is update mapping consistent throughout the subset and MLRA?
- 5.4 Does the map unit design represent the landscape/landform position, and other information in the data mapunit?
- 5.6 Do map unit boundaries generally conform to landscape features and other features visible on the photo base?
- 5.6 Is the level of detail in mapping consistent and does the level of detail conform to the specifications in the memorandum of understanding?
- 5.7 Do map sheets join?
- 5.8 Is Features and Symbol Legend for Soil Survey 37A (exhibit 627-5) applied properly and consistently?
- 5.9 Is the 37A current and are major/minor codes completed?
- 5.10 Are all ad hoc features clearly defined?
- 5.11 Are typical pedons located in a delineation with the component named?
- 5.12 Are typifying pedons accurately georeferenced?
- 5.13 Is there a system in place to track for each field sheet, the surveyors name, dates, acreage mapped, acreage reported, and date of completion of the field sheet?
- 5.14 Do completed maps show: survey name and state, date of survey, name of soil scientist, "advance copy"?
- 5.15 Are legible and oriented symbols in all delineations?
- 5.16 Where appropriate, are section corners marked?
- 5.17 Is a progress map maintained?
- 5.18 Is the provisional *Digital General Soil Map of the U.S.* (STATSGO) map concurrent with mapping?

6.0 MAP COMPILATION and DIGITIZING

If applicable, describe in a narrative the process to ensure quality control (100% check) of map compilation activities (see item 11.10).

- 6.1 Is the compilation performed according to the NRCS specifications as described in the NSSH, part 647?
- 6.2 Is the soil survey compiled to NRCS approved base maps?
- 6.3 Do compiled map unit delineations and their symbols match across map boundaries? Has an exact or acceptable (choose one for each adjacent survey) join been achieved with adjacent surveys?
- 6.4 Do plans ensure a 100% edit of the compilation prior to sending the maps to the Region 11 MLRA Regional Office for quality assurance and map compilation certification?

Describe in a narrative plans to digitize the survey, including plans for preparing the maps for publication (see item 11.11).

7.0 PUBLICATION PREPARATION

Date the following publication items that are complete. Address incomplete items in a narrative (see item 11.12). Note: not all of the items listed below are required for a publication (see part 644).

- | | |
|---|---|
| <input type="checkbox"/> Map unit descriptions | <input type="checkbox"/> Block diagrams and other graphics |
| <input type="checkbox"/> Taxonomic unit descriptions | <input type="checkbox"/> Database populated for generation of interpretations and map unit descriptions |
| <input type="checkbox"/> General soil map | <input type="checkbox"/> Input from appropriate partners |
| <input type="checkbox"/> General soil map unit descriptions | <input type="checkbox"/> Input from other disciplines |
| <input type="checkbox"/> Edited pre-written material | <input type="checkbox"/> Soil formation section |
| <input type="checkbox"/> General Nature of the County section | <input type="checkbox"/> Use and management narratives |
| <input type="checkbox"/> Climate tables and narrative | <input type="checkbox"/> Draft publication for technical review |
| <input type="checkbox"/> Interpretive tables | |
| <input type="checkbox"/> Pictures and captions | |

8.0 NASIS and DATABASES

- 8.1 Is NASIS being populated by the soil survey office staff?
- 8.2 Are data elements for all map unit components (including miscellaneous areas as appropriate) being populated sufficiently with data to meet nationally mandated requirements as well as state and local needs?

Attach plans to populate the database. Include NASIS training received and training needed for all project members, along with the staff member(s) who have responsibility for editing (see item 11.13).

9.0 INTERPRETATIONS

- 9.1 Are existing interpretations adequate for the purposes of the survey as described in the memorandum of understanding?
- 9.2 Are interpretive ratings being reviewed and tested?

Appendix IV

- 9.3 What special interpretations or interpretive tables are needed?
- 9.4 What assistance have other disciplines provided or scheduled for making, testing, and coordinating interpretations?
- 9.5 What soil performance data (e.g., crop yields, site indices) are collected and how?

10.0 MISCELLANEOUS ISSUES

- 10.1 What are the roles and responsibilities of the resource soil scientist(s) with this survey? Conversely, what are the roles and responsibilities of the survey party with the resource soil scientist(s)?
- 10.2 What input and involvement is there from soil survey partners?
- 10.3 Describe the survey party's involvement with technical soil services (i.e., CRP, soil quality, FOTG, on-site investigations, etc.).
- 10.4 What are the plans for the state certifying and updating the field office technical guide?
- 10.5 Does this office have adequate Internet access to run NASIS, obtain OSDs, download laboratory data from the NSSL, view the NSSH, etc? If not, state plans to obtain access.
- 10.6 What are the plans to provide advanced information and support to users?
- 10.7 How is the survey being publicized?
- 10.8 What are the plans to update the *Digital General Soil Map of the U.S.* (STATSGO) when the survey is completed?
- 10.9 Other issues. Attach narrative if needed (see item 11.14).

11.0 ATTACHMENTS AND NARRATIVES

- 11.1 Legend
- 11.2 List the map units added, dropped, or changed
- 11.3 Conversion legend
- 11.4 Summary of documentation
- 11.5 Field Stops report
- 11.6 Notes to accompany classification and correlation of the soils
- 11.7 Classification of pedons sampled for laboratory analysis
- 11.8 Narrative for quality control and approval of mapping
- 11.9 Narrative for achieving an exact join
- 11.10 Narrative for quality control of map compilation (if applicable)
- 11.11 Narrative for plans to digitize the survey and prepare maps for publication
- 11.12 How publication items planned but not completed are being addressed
- 11.13 Plans to populate the database; NASIS training received and needed
- 11.14 Narrative for any negative responses identified or issues not addressed in this report
- 11.15 Commendable items
- 11.16 Recommended or significant items
- 11.17 Action items (agreed-to items)

12. SIGNATURE PAGE

We, the undersigned, have reviewed this report and concur with its findings.

Project Leader Date

Soil Data Quality Specialist Date

NCSS Partner Date

State Soil Scientist Date

CERTIFICATION

As of _____, this soil survey meets the standards and specifications of the National Cooperative Soil Survey. The survey is science-based and the legend and correlation use the MLRA concept.

Region 11 MLRA Regional Office Leader

