

State Soil Scientists Meeting

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Florence, Kentucky

MLRA Plans, Evaluations, and
Implementation Guides



MLRA Soil Survey Area – Board of Directors, Management Team, and Technical Team

– Board of Directors

- Membership includes State Conservationists from the states serviced by the MLRA Regional Office (MO). They are responsible for providing guidance to the MO and for helping to resolve issues with the management team. They also review and approve the MLRA SSA Long Range Plan. The host State Conservationist provides direct supervision.

– Management Team

- Membership includes State Soil Scientists from the states serviced by the MLRA SSO. Where Federal reimbursable projects are involved, the Federal NCSS partner should also be included on the team. The Management Team is responsible for providing guidance and support to the MLRA SSO related to the development of long range plans, project plans, and setting priorities for project work.



MLRA Soil Survey Area – Board of Directors, Management Team, and Technical Team

- **Technical Team** – Membership includes the MLRA SSO staff , the respective Soil Data Quality Specialist, Resource Soil Scientists, and where appropriate and beneficial, possibly other NRCS personnel such as district conservationists or rangeland management specialists who can provide knowledgeable technical information and advice to the MLRA SSO. Where Federal reimbursable projects are involved, Federal NCSS partner soil scientists should also be included. Team members are responsible for assisting the MLRA SSL with the soil survey area evaluation and providing technical guidance to the MLRA SSO related to resource needs and concerns.



MLRA Soil Survey Area Evaluations

- An evaluation is a process/document that summarizes the deficiencies of soil survey information and products (attribute and spatial) within the MLRA SSA related to current customer need and resource concerns. It is vital document used to plan and guide future update work. Findings from the evaluation will be a large part of the MLRA long range plan. An evaluation is required prior to beginning soil survey update activities.



MLRA Soil Survey Area Evaluations

- Guidance for conducting evaluations is found in part 610.03 of the NSSH.
- In conducting evaluations it is important that we capture what we already know about the soil survey area. There is no need to spend a lot of time researching and analyzing what is already known.



MLRA Soil Survey Area Evaluations

From part 610.03 - The extent of the evaluations will depend on the current level of existing knowledge about each soil survey. For many soil survey areas, some knowledge is available from staff experience, records, or from those who participated in the previous soil survey. Users of a given soil survey may have kept records of deficiencies. Where existing information on deficiencies is available, an abbreviated evaluation process may be all that is needed. Where information is limited, a more structured evaluation is required. In either case, the result of evaluations summarizing deficiencies and recommendations for improvement is documented. Evaluation worksheets in [Exhibits 610-1](#) and [610-2](#) are useful, particularly for soil surveys that have little or no information available to current staff.



MLRA Soil Survey Area Evaluations

Responsibilities and coordination of evaluations is outlined in part 610.03:

- The State Soil Scientist provides leadership and direction to the evaluation process within their respective state. The State Soil Scientist assures that the evaluation includes documentation related to the current quantity and quality of the soil survey data. This evaluation serves as an inventory and assessment of the data on file, and helps to direct the State Soil Scientist and the state soil survey partners in update projects.
- The time frame for completing an evaluation should be 1 year or less.



MLRA Soil Survey Area Management Documents

1. Evaluation
2. MLRA Soil Survey Update Implementation Guide
3. MLRA SSA Long Range Plan
4. Project Plans
5. Annual Plan of Operations



MLRA Soil Survey Update Implementation Guide

- These are documents drafted by the MOs to provide guidance to the MLRA SSOs for initiating and conducting soil survey update activities. These documents are not mentioned in the NSSH and not all MOs have drafted them. They are a fairly recent development. Discussion should be given to possibly drafting a generic MLRA Soil Survey Update Implementation Guide that could be incorporated into the NSSH.



MLRA Soil Survey Update Implementation Guide

General phases or process steps
for MLRA soil survey update

1. Phase I: Foundation Building, Evaluation, and Improvement (maintenance) of Existing Soil Survey Information. This phase lays the ground work for phase II when soils are updated on a “project” basis. Phase I generally would not involve project field work.



Phase I

- A. Foundation Work – Develop and gather tools that will be needed for all future correlation and update work:
 1. Identify training needs of staff and obtain training.
 2. Gather all existing information for the MLRA soil survey area: lab data, investigation reports, manuscripts, maps, box samples, pedon descriptions, correlation documents, geospatial layers, etc.
 3. Identify/delineate geographic subsets of soils (LRUs, CRAs, catenas, geologic formations, geomorphic landforms, etc) that will serve as the basis for doing future updates on a project basis.



Phase I

4. Review/refine/develop soil temperature and moisture regime breaks and maps, soil-veg-climate correlation models, geology maps, lists of landform and parent material terminology, lists of ESDs, crop information, OSDs and Benchmark soils list, etc. for the MLRA SSA.
5. Initiate any needed investigations such as soil temperature or moisture, water table depth, permeability, or other similar studies.



Phase I

- B.** Perform Evaluation of the MLRA SSA – Identify deficiencies and resource concerns that will be used to guide future update work.



Phase I

- C. Improve existing soil survey information, attribute and spatial, using known information. Correct any obvious errors, omissions, or inconsistencies in attribute or spatial information without doing any harm.
- D. Identify any areas, issues, or problems that cannot be improved during phase I for project update work to be completed in phase II.



Phase II

Soil Survey Update and Enhancement – Phase II implements the MLRA long range plan and the project plans for the purpose of enhancing soil survey information. This phase involves field investigation, correlation, quality control, and quality assurance on a project basis.



MLRA Soil Survey Area Long Range Plan

This document is intended to be a general overview of the MLRA SSA describing the area and the soil resource needs. It is essentially an inventory and soil resource assessment of the soil survey area. It is not intended to include detailed work items identifying who, what, when, and where for every possible project that needs to be completed.



MLRA Soil Survey Area Long Range Plan

Possible Items to include in the plan are:

- General nature and setting of the MLRA SSA (MLRAs, acres, soils, climate, geology, landforms, parent materials, etc)
- Breakdown of landownership in the MLRA SSA with status.
- Listing of initial soil surveys to be completed.
- Map or list of geographic subsets upon which project activities will be based.
- Major findings from the evaluation documenting deficiencies and areas needing improvement and enhancement.



MLRA Soil Survey Area Long Range Plan

Possible Items to include in the plan are:

6. Listing of benchmark soils and OSDs with type locations in the MLRA SSA.
7. Listing of needed special investigations and/or long term sampling and monitoring activities.
8. General chronological timeline of update activities.
9. Other pertinent or useful information.



Project Plans

Generally, these plans identify specific geographic subsets of soils (LRUs, catenas, etc) to be updated and enhanced. Timeframe is 1 to 5 years.

They should include:

1. Brief description and map of the project area.
2. Breakdown of landownership and acres.
3. List of deficiencies or needs identified in the evaluation that will be updated and enhanced
4. List of any associated special investigations or studies needed or implemented.
5. Workload analysis identifying personnel responsible, estimated staff years needed, and the timeline for completion.
6. Other pertinent or useful information.



Annual Plan of Operations

The APO should account for all staff time and activity in a fiscal year, including time and staff spent on update project activities.

