Part 608 – Program Management

Subpart A – General Information

608.0 Definition and Purpose

A. Definition

Soil Survey Program management is the administrative phase of the National Cooperative Soil Survey (NCSS) that provides guidelines for a systematic approach to administering and coordinating soil survey activities.

B. Purpose

Soil Survey Program management ensures that the effective planning, scheduling, coordination, and organization needed to produce and maintain quality soil survey information are initiated as timely and as efficiently as possible. All initial soil surveys and all update soil surveys of major land resource areas (MLRAs) are managed on a project basis.

608.1 Responsibilities and Organization

A. The NCSS is directed, administered, managed, performed, and supported at various organizational levels within NRCS. Soil scientists and other specialists carry out soil survey activities at numerous management and technical support levels within NRCS and through coordination with NCSS partners. Additional information about responsibilities at various levels of the organization can be found in section 608.7C and in Title 430, General Manual, Part 402.

B. National Headquarters Office (NHQ)

(1) The director of the Soil Science Division—
  (i) Provides overall direction, policy, guidance, and leadership for the NCSS within NRCS.
  (ii) Coordinates the National Cooperative Soil Survey with NCSS partners.
  (iii) Distributes fund allocations for Soil Survey Program activities to the States and soil survey regional offices (SSRs).
  (iv) Establishes soil survey goals for the program and monitors progress made.
  (v) Ensures the Soil Science Division is represented and soil survey information is incorporated into external agency and all applicable NRCS business and programs at the national level.
  (vi) Supervises senior staff of the Soil Science Division, including the director of the National Soil Survey Center, associate director for soil survey programs, associate director for soil operations, national leader for world soil resources, and other functional branches.

(2) The associate director for soil operations—
  (i) Provides management, direction, and administrative support for soil survey activities in the SSRs to ensure compliance with agency goals and priorities.
  (ii) Supervises the soil survey regional directors.
  (iii) Approves the MLRA regionwide memorandum of understanding (MOU) for the soil survey regions, including any proposed amendments, and ensures that the soil survey needs of the regions are addressed.
  (iv) Approves annual business plans for SSRs.
  (v) Serves as an ex officio member of the board of advisors for the SSRs.

(3) The associate director for soil survey programs—

(i) Develops annual Soil Survey Program budget (President's Budget) and allocations.
(ii) Develops responses to congressional, White House, and departmental enquiries on the Soil Survey Program.
(iii) Manages Soil Survey Program allocation transfers and agreements at a national level.
(iv) Develops agency goals and annual and long-range plans and conducts performance analysis for the Soil Survey Program.
(v) Conducts Soil Survey Program civil rights analysis and compliance.
(vi) Serves as the lead contact for the NCSS activities, including coordination with other national leaders, States, regional soil survey offices, and NCSS partners, for planning and coordinating regional and national NCSS conferences.

C. National Soil Survey Center (NSSC)

(1) The director of the NSSC supervises seven functional branches grouped under six national leaders for—
(i) Soil Survey Research and Laboratory.
(ii) Soil Survey Standards.
(iii) Soil Business Systems.
(iv) Soil Survey Interpretations.
(v) Technical Soil Services.
(vi) Soil Quality and Ecosystems.

(2) The activities of the functional branches of the NSSC include—
(i) Leading program functions in their respective areas.
(ii) Coordinating national technical standards.
(iii) Developing procedures that guide soil survey operations.
(iv) Developing and delivering technical training.
(v) Performing soil survey research, investigations, and laboratory assistance.
(vi) Providing leadership and support to States for technical soil service activities.
(vii) Maintaining soil survey data and information systems.
(viii) Providing National Soil Information System (NASIS) technical support.
(ix) Coordinating with the Information Technology Center.
(x) Maintaining soil survey area symbols, names, and acreage.
(xi) Maintaining the Web pages for the Soils Hotline and Soil Science Division.
(xii) Developing and integrating spatial science and technologies to assist soil survey users.
(xiii) Researching and developing field-based technologies for efficient and accurate data collection.

D. Soil Survey Regional Offices

The directors of the SSRs—

(i) Lead the production and quality assurance of soil survey and ecological site information and products.
(ii) Lead the classification, correlation, interpretation, and joining of spatial and attribute data within and between soil survey areas.
(iii) Coordinate and support activities of the board of advisors (BoA) by communicating soil survey region priorities, work plans, and progress to ensure that soil survey operations are relevant to agency goals and priorities and to conservation needs.
(iv) Coordinate activities of the management teams and ensure development of standard operating procedures that identify business steps, structure, and team member responsibilities.
(v) Review and approve project plans.
(vi) Coordinate mapping goals and progress reporting throughout the soil survey region.

(vii) Provide quality assurance for the development and correlation of ecological site descriptions.
(viii) Support State soil scientists in coordinating with Federal land management agencies to ensure that NCSS standards are followed and partner needs are met.
(ix) Supervise SSR staff and the MLRA soil survey office (SSO) leaders located within their soil survey region.
(x) Provide administrative support to the SSOs within their soil survey region.
(xi) Provide legend administration for the soil survey areas.
(xii) Develop standard operating procedures as necessary for quality assurance within their soil survey region.
(xiii) Report progress related to field reviews and correlations.
(xiv) Where applicable, report compilation certification status.

E. Board of Advisors

(1) The BoA consists of the State Conservationist, or designee, from each State served by the SSR. Representatives from Federal, State, university, and other NCSS partners are invited to serve as members, as applicable. The soil survey regional director provides the necessary staff to plan work, conduct meetings, and present information. Specific operating procedures are developed by the BOA members as necessary.
(2) The BoA members—
(i) Serve as a review board to provide advice, counsel, and broad management direction to the soil survey regional director and management team to ensure soil survey operations and ecological site activities are relevant to agency goals, priorities, and conservation needs.
(ii) Review the progress and provide feedback of soil survey and ecological site activities in the region in relation to agency goals and priorities and provide feedback to the associate director for soil operations for consideration during periodic performance reviews and annual evaluations of soil survey regional directors.
(iii) Review and concur with management team recommendations on project priorities for soil survey and ecological site activities, ensuring that local needs are in balance with State and national issues, or provide alternate advice.

F. Soil Survey Management Team

(1) The management team consists of the soil survey regional directors, State soil scientists, State resource conservationists, and appropriate other State technical leaders as needed. Representatives from Federal, State, university, and other partners are invited to serve as members, as applicable. The management team develops specific operating procedures, which outline structure, chairmanship, and roles, to best serve the needs of the soil survey region.
(2) The management team—
(i) Reviews and concurs with technical team recommendations on project priorities for soil survey and ecological site activities, ensuring that local needs are in balance with State and national issues, or provide alternate advice.
(ii) Review technical team recommendations regarding approval of project plans, SSO annual plans of operation, and soil survey memoranda of understanding within the soil survey region, including any proposed amendments, and provides concurrence or alternate advice.
(iii) Assist the soil survey regional director in administering the technical soil service activities of the soil survey offices.

G. Soil Survey Technical Team

(1) The technical team for the SSO consists of the SSO staff, SSR staff (i.e., senior regional soil scientist, soil data quality specialist, and regional ecological site specialist, as appropriate), applicable resource soil scientists, applicable NCSS partners, and other applicable discipline specialists from field, area, State, or regional offices. The SSO leader serves as chair. Specific operating procedures are developed by the technical team as necessary for their assigned MLRAs.

(2) The technical team—

(i) Gathers and consolidates each State's needs in an SSO long-range plan of operations.

(ii) Develops proposed project priorities.

(iii) Assists the MLRA SSO leader in developing draft project plans and SSO annual plans of operation for management team review, then formulates recommendations for approval by the SSR.

(iv) Participates in quality control activities, as appropriate.

H. National Geospatial Center of Excellence (NGCE)

The director of the NGCE—

(i) Assists in the acquisition and processing of imagery and other digital data layers.

(ii) Stores and distributes geospatial data.

(iii) Develops standards and specifications and provides quality assurance for spatial soil data capture.

(iv) Develops geospatial Web services.

(v) Maintains print-on-demand map services.

(vi) Provides assistance to the NCSS Program in the development and application of new technology related to cartography, remote sensing, GPS, and geospatial data.

I. State Offices

The State soil scientists (SSSs) and State resource conservationists (SRCs)—

(i) Advise and assist the State Conservationist in allocating resources to soil survey, ecological site, and technical soil services in their area of responsibility.

(ii) Provide technical soil and ecological site services within their State.

(iii) Develop local soil and ecological site interpretations.

(iv) Direct (and in some cases, supervise) resource soil scientists and other technical specialists.

(v) Develop cooperative relationships and serve as liaisons to the State's soil survey and ecological site cooperators, Federal land management agencies, and soil survey regional offices.

(vi) Ensure that existing soil surveys and ecological site descriptions in their State are evaluated effectively by having the SSO staff, technical team, cooperators, resource soil scientists, and other technical specialists identify needs to be addressed in the long-range plan (see part 610 of this handbook).

(vii) Serve as a member of the management teams for the SSRs serving the State (the specific role is identified in the management team's operating procedures).

(viii) Assist the soil survey regional director in monitoring progress to ensure that work schedules and timelines are being met according to the plan of operations.

(ix) Coordinate with State office staff and regional soil survey office to develop schedules to meet soil and ecological site program objectives and to assist the State Conservationist in technical soil and ecological site service activities for conservation operations.

(x) Provide legend certification for delivery of soil survey information to customers.

(xi) Assist the State Conservationist and soil survey regional director in identifying needs for imagery, orthophotography, digital elevation models (DEMs), and other data layers.

(xii) Host annual meeting of State NCSS cooperators to gather input for workload planning.
(xiii) In general, assist all users of soil survey and ecological site information.

J. Area Offices and Field Offices

Resource soil scientists and other specialists—

(i) Provide coordinated soil survey and ecological site information to all users.
(ii) Respond to user needs for new interpretations and collect performance data.
(iii) Evaluate the adequacy of soil survey and ecological site information.
(iv) Provide soil survey support for USDA programs.
(v) Provide technical soil and ecological site services within their assigned area.
(vi) Update and maintain the field office technical guide (FOTG).
(vii) Train field personnel in the use of soil survey and ecological site information.
(viii) Participate as a member of appropriate soil survey technical teams.

K. Soil Survey Offices

The MLRA SSO leader—

(i) Develops the SSO long-range plan based on findings from an MLRA-wide soil survey and ecological site inventory and assessment.
(ii) Schedules routine work activities in plans of operations and monthly and weekly schedules, as appropriate, in consultation with the SSR.
(iii) Supervises the SSO staff.
(iv) Assesses training needs of the SSO staff and requests training through the SSR, State offices, and national technical support centers.
(v) Provides leadership for the SSO technical team.
(vi) Conducts activities on classification, correlation, interpretation, and joining of spatial and attribute data within and between soil survey areas.
(vii) Provides management and support of soil survey and ecological site activities over a large geographic region (assigned MLRAs).
(viii) Keeps soil survey maps and ecological site data throughout their assigned area current to meet the changing needs of users.
(ix) Checks the quality of digital line work, ensuring lines conform to the landscape.
(x) Performs investigations throughout their assigned area, maintaining soil survey and ecological site datasets and preparing and revising official series descriptions and ecological site descriptions.
(xi) Conducts quality control of all soil survey activities in the MLRA soil survey area, including any initial soil surveys conducted from soil survey project offices.
(xii) Coordinates quality control for ecological site description development and correlation.
(xiii) Develops project plans and annual plans to address the goals and activities identified by the management team and board of advisors as priority work.
(xiv) Provides and documents technical soil services to supplement State programs.
(xv) Conducts work in a manner that follows NCSS standards, policy, and procedure.
(xvi) Collects data in support of NCSS initiatives.

608.2 Soil Survey Area Designation

A. Definition

A soil survey area is a geographic area that has a size and shape defined for efficient field operations and timely release of products. A soil survey area is an administrative unit for project management (staffing and equipment), progress reporting, and delivery of products. Soil survey

area coverage includes all lands of the United States, Puerto Rico, the U.S. Virgin Islands, and the Pacific Basin Territories.

B. Purpose

(1) National Soil Survey Center personnel follow the guidance set out in this section to identify soil survey areas in the NASIS database. Each soil survey area receives a unique area name and alphanumeric area symbol that are used in NASIS, the Soil Data Warehouse and Soil Data Access sites, cooperative agreements, memoranda of understanding, all survey area publications, correlation documents, and other official reports and correspondence. There are two types of soil survey areas recognized for managing soil surveys:
(i) MLRA soil survey area (MLRA SSA)
(ii) Non-MLRA soil survey area (non-MLRA SSA)

(2) Refer to part 608, subpart B, section 608.12, for guidance on project administration and acreage management in the NASIS database.

C. MLRA Soil Survey Area (MLRA SSA)

(1) In 2008, the NCSS Program was reorganized with soil survey areas based on MLRAs formally recognized across the Nation rather than on political boundaries, such as counties, and Federal land ownership. The MLRA soil survey areas follow physiographic boundaries reflecting natural features such as similar soils, geology, land use, and climate. They are the basis for the development of the soil survey legend used for interpretive needs and for all related classification, correlation, quality control, and quality assurance functions. The goal is to provide a seamless soil survey.

(2) The boundaries of the MLRA SSA may encompass all or parts of one or more MLRAs. Changes in boundaries of the MLRA SSAs and office locations are approved by the director of the Soil Science Division.

(3) MLRA SSAs are identified with an area symbol consisting of the SSR area number to which they are assigned, followed by the first three letters of the city in which the office is located. Examples are Asheville, North Carolina (6-ASH) and Elko, Nevada (2-ELK).

D. Non-MLRA Soil Survey Area (Non-MLRA SSA)

(1) These areas are the county-based areas (or other similar areas based on political boundaries, such as a parish, national forest, or military base, or parts of a county subdivided or combined into more convenient-sized project areas) that have been traditionally used in the Soil Survey Program. They are used for exporting datasets from NASIS to the Soil Data Warehouse for product delivery to the Web Soil Survey. They are also used for completion of the initial soil survey. These areas are subsets of MLRA SSAs.

(2) Boundary Designation
(i) Cooperating agencies of the NCSS designate the boundaries of non-MLRA soil survey areas in consultation with major users of soil information.
(ii) The boundaries may correspond to county boundaries, physiographic boundaries, Tribal boundaries, Federal agency management boundaries, or other land management areas.
- Two or more small counties may be combined to form the survey area.
- Large counties and physiographic areas may be subdivided for efficiency of field operations and publication of a final product.

(iii) The boundaries used for non-MLRA soil survey areas may be changed by the SSR director in consultation with NCSS cooperators, State soil scientists, and the National Soil Survey Center, as needed. Refer to section 608.2D.
(iv) Considerations for defining boundaries include—
- Efficiency of managing legends and databases for different and overlapping spatial areas in the information system.
- Timely and efficient delivery of the products.

- Other factors important to cooperators.

(3) Naming and Symbolization

(i) The RSS director coordinates with the NSSC and affected State soil scientists in creating area names and symbols for soil surveys designated non-MLRA soil survey areas for registration in NASIS. The area names should not exceed 135 characters.

(ii) For non-MLRA soil survey areas that correspond to a single county, parish, or independent city boundary, the symbol consists of the State abbreviation followed by the Federal Information Processing Standards (FIPS) code for the county, parish, or independent city. The FIPS codes are in the Federal Information Processing Standards Publication Series of the National Bureau of Standards, U.S. Department of Commerce.

(iii) For all other non-MLRA soil survey areas, the symbol consists of the State abbreviation and a unique 600-, 700-, or 800-series number that is assigned in lieu of the FIPS code.

(iv) Below are examples of names and symbols for non-MLRA soil survey areas that have differing boundary designations:

- Soil Survey Area That Corresponds to a Single County Boundary
  - Baldwin County, Alabama (AL003)
  - Terrebonne Parish, Louisiana (LA109)
- Soil Survey Area That Corresponds to Two or More County Boundaries
  - Beaver and Lawrence Counties, Pennsylvania (PA603)
  - James City and York Counties and the City of Williamsburg, Virginia (VA695)
- Soil Survey Area That Includes Only Part of a Single County

  Select a name that clearly distinguishes the survey area from other survey areas in the county or from adjoining counties. If a clear designation cannot be made, use the words "part" or "area" to indicate that the survey area boundary does not include the entire county.

  -- Washoe County, Nevada, South Part (NV628)
  -- Socorro County Area, New Mexico (NM664)
- Soil Survey Area That Includes Parts of Two or More Counties in One State

  Use the name of a well-known place or geographic feature and list the counties.

  -- Jicarilla Apache Area, New Mexico, Parts of Rio Arriba and Sandoval Counties (NM698)
  -- Wenatchee National Forest, Naches Area, Washington, Parts of Kittitas and Yakima Counties (WA680)
- Soil Survey Area That Includes All of One or More Counties and Part of Another
  - Soil Survey of Curry County and Southwest Part of Quay County, New Mexico (NM669)
  - Menifee and Rowan Counties and Northwestern Morgan County, Kentucky (KY632)
- Soil Survey Area That Includes Parts of Two or More Counties in Adjoining States
  - Great Smoky Mountains National Park, Tennessee and North Carolina (TN640)
  - Great Smoky Mountains National Park, Tennessee and North Carolina (NC640)
  - Shiprock Area, Parts of San Juan County, New Mexico, and Apache County, Arizona (NM717)
  - Shiprock Area, Parts of San Juan County, New Mexico, and Apache County, Arizona (AZ717)

  Note: In order to maintain acreage integrity for all States, separate project entries are made in NASIS for survey areas that cross State boundaries.

- Soil Survey Area That is in a Region With No Counties

Use the name of a well-known place or geographic feature in the area.

-- San German Area, Southwestern Puerto Rico (PR787)
-- North Star Area, Alaska (AK642)

E. Small Geographic Areas

(1) Special management areas, such as small political subdivisions, areas of Tribal lands, and Federal management areas (e.g., National Park Service units, national forests, and Bureau of Land Management lands), are ordinarily handled as special projects or subsets (overlaps) of a larger soil survey area.
(2) Soil survey regional directors in consultation with State soil scientists designate small geographic areas as soil survey areas. Legends for these areas are linked to the appropriate area types in NASIS, as needed.

608.3 Areas of Limited Access, Denied Access Areas, and Areas Not Completed

A. Definition

Many survey areas include parts that have difficult or limited access for personnel conducting field operations, and occasionally landowners deny access to their property. The goal of the NCSS is to survey all lands, and soil survey area coverage includes all lands (refer to section 608.2). Some survey areas that are only partially mapped may be posted to the Web Soil Survey.

B. Purpose

Land should not be excluded from a soil survey area based on difficult or limited access or because of difficulty in obtaining permission to gain access. All available resources should be used, such as old soil survey maps (if available), geology and topographic maps, aerial photography, and other available remote-sensing materials, to apply common field procedures and techniques in delineating map units. For relatively small areas, mapping surrounding lands and projecting soil lines across the area of denied access may be feasible. For relatively large areas, more broadly defined map units may be appropriate. In these cases, the reduced reliability in the map unit description should be described.

C. Surveying in Denied Access Areas

(1) Soil survey regional directors, in consultation with the State Conservationist, State soil scientist, and local cooperators, determine the feasibility of mapping areas of denied access. Reliability of the mapping for anticipated use and interpretations should be the final determining factor.
(2) Use judgment in deciding whether to attempt to gain permission to map areas of denied access. In some cases, such as when areas are restricted for national security purposes or where Native American officials desire that Tribal lands remain unmapped, the decision may be made to not pursue the issue further.
(3) In situations other than those described in paragraph (1) above, use all reasonable means to obtain permission to map. Enlist the aid of community leaders, district cooperators and supervisors, county and State officials, and others, as appropriate.
(4) If reasonable efforts to gain access are unsuccessful, apply techniques and resources discussed in section 608.3B to map the area.

D. Reporting Denied Access Areas (ANS)

(1) Delineate the area with the map unit symbol "ANS" for a map unit with the name "Area not surveyed, access denied." This is a national map unit that is queried in NASIS and added to the survey area through a linkage in the NASIS "Legend Mapunit" table. The map unit status

is identified as "correlated" because an attempt was made to map the area but access was denied.

(2) In the map unit description, simply state "Area not surveyed, access denied." Include the symbol and the acreage in the soil survey acreage table of the final report. Acreage for small or isolated areas of ANS is reported as mapping progress using standard progress reporting procedures. In rare cases where the area of denied access is very large, acreage of the unmapped area (ANS) is not reported as mapping progress.

E. Identifying Areas Not Completed (NOTCOM)

(1) The purpose of identifying NOTCOM areas is to provide a consistently displayed map unit symbol for progressively correlated information published to the Web Soil Survey that identifies those areas yet to be completed.

(2) The map unit designation "NOTCOM" is used to identify spatial areas that have not been surveyed. This designation does not include areas of limited access or denied access areas.

(3) Delineate the area with the national map unit symbol "NOTCOM" and the map unit name "No digital data available." This is a national map unit that is queried in NASIS and added to the survey area through a linkage in the NASIS "Legend Mapunit" table. The map unit status is identified as "approved" though the area has been neither mapped nor correlated.

F. General Soil Maps

The STATSGO2 map is the basis for the survey area general soil maps. Do not exclude any areas, even those areas excluded from detailed mapping, from the general soil map for the survey area and the U.S. General Soil Map (STATSGO2) database. Use standard procedures for delineating general soil map units and STATSGO2 map units.

608.4 Determining Workloads

A. Definition

Title 340, General Manual, describes agency policy for strategic workload planning and continuous process improvement. Other cooperating agencies have their own policy for workload planning.

B. Purpose

The workload planning process considers the work to be done, which is identified as projects. Estimates are made of the amount of time required to complete each project, and a timetable is made for completing the work. The workload process will vary slightly depending on the type of survey operation, either initial or update.

C. Initial Soil Survey

(1) A long-range plan for initial soil survey projects details the activities needed to complete the project in a realistic amount of time (i.e., about 5 years or less). See part 608, subpart B, section 608.10.

(2) An annual plan of operations for initial soil survey projects is used to guide and provide specific focus to staff as the long-range plan is being implemented. See part 608, subpart B, section 608.11.

D. Update Soil Survey

(1) The SSO long-range plan considers all aspects of bringing all soil surveys in the area to a common standard to meet user needs. An inventory and assessment of the MLRA soil survey area is completed prior to development of a long-range plan (see part 610, subpart B, sections 610.10 to 610.12). In addition to the needs of the private lands in the area, it should include

the needs identified by the cooperators responsible for the Federal lands within the area so that a coordinated effort is achieved in all soil survey work. The format and level of detail for the long-range plan may vary. The purpose is not to develop detailed plans to accomplish all of the needs but rather to identify the needs in enough detail to allow them to be prioritized effectively. Detailed planning to accomplish the highest priority needs then takes place through project plans.

(2) Project plans for the SSO (see part 610, subpart A, section 610.4, of this handbook) are developed for one or more of the highest priority needs. The actual length of time needed to complete the project depends on the scope of the project and how it is defined. When possible, projects of very large extent should be redesigned as several smaller projects of shorter duration. Shorter-term projects are preferred because they can be managed and delivered more effectively. Some projects might be completed in weeks or months while others might require up to 2 years. Project plans are broken down into reportable milestones to identify annual progress. See part 610, subpart B, section 610.16, for an example.

(3) An SSO annual plan of operations (or business plan) is used to identify objectives, goals, responsibilities, and timelines during a fiscal year.

608.5 Priorities for Soil Survey Activities

A. Definition

State cooperative soil survey conferences, led by the State soil scientist, convene annually to discuss soil survey activities, consider cooperator priorities, and recommend action. Other interested user groups recommend priorities for such things as special or interim soil reports. Considerations for preparing the priority list are—

(i) The status of initial soil surveys.
(ii) NRCS needs for carrying out Farm Bill and technical or financial assistance programs and projects.
(iii) Cooperating agency needs for meeting their program and project needs.
(iv) Requests for soil surveys by local people.
(v) Needs of Federal partners on Federal lands.
(vi) Needs of State, Tribal, county, city or other local units of government for information that aids in land use planning and decisions.
(vii) Rapid land use changes in areas where critical soil problems are expected.
(viii) Contributions of funds or staffing.
(ix) Needs for assessing land productivity value.
(x) Other factors of specific local importance.

B. Purpose

(1) The management team, in cooperation with the MLRA SSO leader, works with the above information to identify the needs for each SSO. Long-range plans are then refined to address the needs of the MLRA soil survey area (see part 610, subpart A, section 610.2, of this handbook). Where Federal lands are included within the MLRA soil survey area, it is important to coordinate with the appropriate representatives of those agencies.

(2) The MLRA SSO leader, with input from the technical team, consolidates each State's needs for the SSO long-range plan.

(3) The long-range plan is used by the management team and technical team to develop priorities. Priorities are then reviewed by the soil survey regional director for approval. The MLRA SSO leader incorporates the priorities into one or more individual MLRA project plans.

(4) The SSO long-range plan is maintained as work progresses and new information or unforeseen circumstances arise. Additional issues to be addressed may come from a variety of sources, such as resource soil scientists, field offices, cooperators, customers, the SSR, and State soil scientists. Reports from Web Soil Survey or NASIS may also reveal issues and deficiencies that need to be prioritized and addressed in the future.

608.6 Planning Workflow

A. MLRA project plans direct the use of resources to accomplish identified activities as described above. An SSO will typically have multiple plans in progress each year. The plans are managed in NASIS and identify the activities that need to be accomplished by the plan. Each plan includes the name of the person or staff responsible for each activity, projected completion dates, and goals.

B. Part 608, subpart B, sections 608.10 and 608.11, provide sample formats for a long-range plan and annual plan of operations for initial soil surveys. In part 610, subpart B, sections 610.10 to 610.16, examples of documents used for planning MLRA update soil surveys are provided. These documents may be adapted to fit the needs identified for the soil survey area.

608.7 Goals and Progress

A. Definition

The establishment of performance goals and progress reporting is required by policy and outlined in the general manual (340-GM, Part 400, "Strategic Planning and Accountability"). NASIS includes a number of tables and data elements for planning, managing, and tracking status, milestone events, and progress of activities of the NCSS and Technical Soil Services (defined in part 600 of the Technical Soil Services Handbook). These data are stored in the "Project" object and in the "Technical Soil Services" object in NASIS. Projects for initial soil survey work are linked to "Non-MLRA Soil Survey Areas." Projects for update work are defined by map units and are linked in NASIS through the data field "MLRA Soil Survey Office Area." No entries are populated for update project work in the data field "Non-MLRA Soil Survey Area."

B. Purpose

(1) Managers use goals and progress information recorded in NASIS to assess workloads, develop activity schedules and budgets, and plan for resources needed to complete the national soil inventory and related databases. Included as projects in NASIS are all active initial mapping on non-MLRA soil survey areas, as defined in section 608.2, and all updating of survey information, as defined in part 610 of this handbook.

(2) Initial projects that are linked in NASIS to each "Non-MLRA Soil Survey Area" contain administrative and other data that track the key business processes of the initial survey from field data collection through final publication.

(3) Update projects are linked to the "MLRA Soil Survey Office Area" and contain administrative and other data that track the key business process for updating map units from the field data collection through final publication. The map units in an update project are listed in the "Project Mapunit" table.

(4) A "milestone" is an item or task identified to be completed during the initial or update project. Milestones are process steps, such as the number of transects collected, number of pedon descriptions gathered, amount of spatial line work edited, number of OSDs revised, etc. The milestone information is entered into the NASIS "Project Milestone" table. Milestones allow the manager to divide the project into reportable items and track the progress. Progress towards completion of each milestone is entered into the NASIS "Project Milestone Progress" table.

(5) The scheduled activities and progress of technical soil services are reported in NASIS. See section 608.8B for more information on scheduling.

C. Responsibilities

(1) Data stewards for the various soil survey business areas are responsible for populating data elements and ensuring data quality in NASIS. Soil survey business areas perform all inventory-related activities at the field level and support and enable activities done in the generation of soil survey products.
(2) The business area responsible for either initiating or completing a soil survey business process also is responsible for populating appropriate data elements and reporting progress associated with the process.
(3) Part 608, subpart B, section 608.11, identifies broad soil survey business areas along with associated NASIS tables and data elements, and section 608.13 specifies the organizational office levels in NRCS that are responsible for populating the data. Some data elements in the exhibit indicate more than one responsible office level. For these situations, the appropriate business area program managers designate the responsible data steward. See section 608.1 for additional information.
(4) Program managers may delegate the responsibility of populating some data elements to the SSO. For example, MLRA soil survey leaders may be designated to report mapping and compilation progress for their respective area.

D. Accessibility of the Data

Soil survey area legends and projects are accessible through the NASIS interface. The interface enables authorized users with full capability to create, edit, and report data. Extreme care should be taken to avoid populating or changing data that falls under the responsibility of another business unit. Various reports are available in NASIS to summarize the data.

E. Data Management

Part 608, subpart B, section 608.11, identifies soil survey business areas and related data elements, including key terminology and protocols, necessary for administration and maintenance of the data. Section 608.13 provides an overview of the data elements and responsible soil survey business areas.

F. Soil Survey and Ecological Site Performance Measurement

(1) The NRCS Performance Results System (PRS) is the official progress reporting instrument used by the agency to prepare national-level reports. Agency-accountable items, such as soil mapping on initial acres and progress on updating data, are assembled from NASIS nightly and automatically uploaded to PRS. Acres of ecological sites inventoried are entered directly into PRS by staff in the States.
(2) NASIS data is used to assess program performance and analyze budgets. Examples include signed MOUs, progress reviews and correlations completed, manuscripts edited, acres compiled and digitized, and the status of imagery and orthophotography acquisition. Both individual and business area performance can be analyzed.
(3) Performance Goals
(i) At the beginning of the fiscal year, individual and team goals for soil survey business activities should be established.
(ii) In addition to initial and update soil surveys, mapping goals may be set for nonproject survey areas based on anticipated requests for conservation planning.
(iii) Supervisors—
- Base performance goals on the individual's job description, experience, and training, on complexity, and on other factors.

- Monitor progress throughout the year.
- Revise individual or team performance goals, as needed, in consultation with the employee.

(iv) On initial soil survey projects, the soil survey office leader sets goals based on acres mapped (including data population in NASIS and geospatial components). In addition, goals for other aspects of soil survey can be established, especially for local project management.

(v) In update soil survey work, the soil survey office leader sets goals based on completing milestones tracked in NASIS.

(vi) The goals for technical soil services are assigned to resource soil scientists by supervisors at the State office or area office level.

(vii) Performance goals may be set for—

- Technical soil services and soil survey support activities.
- Mapping goals (although large water bodies, such as census water, should not be included, census water acres should be reported as a land category in the "Project Land Category Breakdown" table).
- Gathering of field documentation.
- Database development.
- GIS analysis.
- Correlations.
- Manuscript development.

(4) Progress and Progress Reporting

(i) Soil survey progress records the inventory of the Nation's soil resources, development of related databases, soil survey products, and interpretative materials.

(ii) Soil survey regional directors are responsible for ensuring that progress is reported.

(iii) Reportable items are all activities, including intermediate products (e.g., milestones) that lead to a final product that meets NCSS standards. These items are:

- Acres mapped
- Correlations completed
- Acres compiled and digitized
- Ecological site description development and inventory
- Documentation collected (e.g., pedon descriptions, transects, photographs, monitoring data, laboratory samples, vegetation data, and special studies)

(iv) Progress should be reported in NASIS as it occurs. As a minimum, mapping progress should be reported quarterly and all other progress monthly.

(5) Mapping Progress

(i) Initial Projects

- Refer to part 608, subpart B, section 608.11, for further discussion on reporting mapping progress.
- The regional soil survey director should discuss progress reporting issues with the associate director for soil survey programs and associate director of soil operations at Soil Science Division headquarters *before* significantly revising performance goals.
- For each non-MLRA soil survey area, create, if not already created, a project in NASIS and enter mapping progress into the "Project Mapping Progress" table by land category (refer to acreage accountability below).
- Enter the reporting date in the "Project Mapping Progress" table. This date determines the fiscal year for which progress is counted.
- Report progress as initial mapping.
- Distinguish NRCS personnel from cooperator personnel.
- Enter each individual's progress or the project team's progress as a whole.

- Closely monitor initial soil surveys. Report initial mapping progress only one time and never delete it from the system once it is reported, except when data entry errors are immediately recognizable and easily corrected.
- Upon completion of the initial soil survey, ensure that all initial acres reported as progress equal the land category acres and that the sum of all land category acres equals the area acres for the respective non-MLRA soil survey area.

(ii) Update Projects (See part 610, subpart A, section 610.3, of this handbook)

- Report milestones upon completion of the task.
- Distinguish NRCS personnel from cooperator personnel.
- Enter each individual's progress or the project team's progress as a whole.
- Report project acres upon publication of the project map units to the Soil Data Warehouse.

G. Project Administration and Acreage Management

(1) NASIS provides a variety of ways in which data can be managed. Therefore, if the system is to function optimally, a uniform approach is required.

(2) In NASIS, the data field "Non-MLRA Soil Survey Area" provides data about goals and progress for mapping and other milestone activities for initial soil survey work. A project is created for each initial soil survey project. Projects for soil survey update activities should be developed as needed (see part 610, subpart A, section 610.4, of this handbook).

(3) Unique Spatial Areas

(i) All "Non-MLRA Soil Survey Areas" represent a unique geographical (spatial) area, such as an entire county, multiple counties, or parts of one or more counties. They receive a unique area symbol and area name (see section 608.2).

(ii) In NASIS 6.0, a project was created for each legend linked to a "Non-MLRA Soil Survey Area." The resulting project was named for the survey area and the status shown in the "Legend" table (e.g., Allen County, Kansas - Update needed). Data from the "Legend Data" object related to goals and progress in NASIS 5.4 were moved to this new project and related tables. Acreage data in the various tables for these specific, completed projects are not to be edited.

(iii) Section 608.12 provides additional information and examples of various project scenarios and protocols.

(4) Acreage Accountability

NRCS, as Federal lead for the NCSS, maintains records of soil survey mapping for all lands of the Nation.

- Seven land categories distinguish non-Federal ownership from Federal ownership. Additionally, Federal lands are categorized according to the responsible Federal land management agency. The seven land categories are:
  - Native American land
  - Other non-Federal land
  - Bureau of Land Management
  - U.S. Forest Service
  - National Park Service
  - Other Federal land
  - Census water
- Refer to part 608, subpart B, section 608.12, for definitions of the land categories and for additional information on acreage management and accountability.

(5) Acreage Allocation

Federal and private land ownership and acreages constantly change. State soil scientists must periodically review land ownership for all soil survey areas. This information is maintained in the "Project Land Category Breakdown" table in NASIS.

- If ownership acres have changed in a soil survey area, the State soil scientist reports changes and discrepancies to the soil survey regional director. The soil survey regional director—
  - Reallocates acreage assigned to the seven land categories.
  - Reallocates progress assigned to each land category.
- The sum of all land category acres within a project for a "Non-MLRA Soil Survey Area" must equal the area acreage for the survey area.
- The sum of all land category acres within a project for a "Non-MLRA Soil Survey Area" must equal the State total acreage from the 1992 National Resource Inventory.
- To reallocate acres for soil surveys that have more than one project or that partially overlap another survey, refer to the discussion of acreage management and accountability in part 608, subpart B, section 608.12.

(6) Acreage Base

County-based 1992 National Resources Inventory (NRI) data for total surface area (land and water) is used within NRCS as the official acreage for non-MLRA soil survey areas that coincide with county or parish boundaries and for State totals. Acreages for non-MLRA soil survey areas that do not coincide with county or parish boundaries must be balanced with the respective State totals.

- Use the exact county-based figures or round to the nearest hundred.
- Coordinate acreage assigned to all survey areas with the national NASIS data steward at the National Soil Survey Center for inclusion in NASIS.

608.8 Developing Other Schedules for Soil Survey Operations

A. Soil Survey Operations

(1) Schedules and timelines for soil survey activities are detailed in long-range plans, project plans, annual plans of operation, and monthly or weekly schedules. Part 608, subpart B, section 608.10, is an example of a long-range plan for initial soil surveys, and section 608.11 is an example of an annual plan of operations for initial soil surveys. Part 610, subpart A, section 610.6, of this handbook discusses how long-range plans address identified needs for MLRA soil survey areas.

(2) MLRA SSO leaders schedule soil survey activities and coordinate routine work in consultation with the responsible soil survey regional director. Quality control activities are carried out and documented by the MLRA SSO leader per guidance in part 609 of this handbook.

(3) SSR staff schedule quality assurance reviews and field assistance visits in consultation with the SSO, State offices, and NCSS partners per guidance in part 609 of this handbook.

B. Technical Soil Services

(1) State, area, and field offices develop annual plans of operation and monthly or weekly schedules, as appropriate, for activities related to technical soil services.

(2) Resource soil scientists and soil scientists assigned to nearby SSOs provide soil information as needed for conservation planning and other special local needs. These efforts ensure efficient use of soil scientist time and timely delivery of soil information. These activities should be reported in the "Technical Soil Service" table in NASIS. A choice list of activities is provided. New activities can be added to the list by coordinating with the national leader

for technical soil services and the NASIS data steward at the National Soil Survey Center. Scheduled start and end dates can be recorded for each service provided, as well as the actual start and end dates. The person providing the service, the geographic location where the service was provided, the name of the person or entity receiving the service, and the benefits realized should also be documented.

C. Individual Schedules

Individual soil scientists prepare monthly or weekly schedules, as required by supervisors. These schedules include—

(i) Routine soil survey activities.
(ii) Training to be given and received.
(iii) Staff conferences.
(iv) Information and public relations needs.
(v) Planned leave.

608.9 Status Maps

A. Maps indicating the progress and status of soil surveys and soil survey products are important management and public relations tools. Maps may be on a national, regional, major land resource area, or State basis.

B. Source Data

(1) The primary sources of attribute data are NASIS and the Soil Data Access. Sections 608.7D-F identifies the soil survey business areas that are responsible for populating and maintaining the data.
(2) Base map cartography and spatial data for soil survey areas is maintained by the NSSC.

C. Responsibilities

(1) The NSSC maintains a digital file of soil survey area boundaries for all non-MLRA soil survey areas listed in NASIS. Boundaries are taken from SSURGO data archived on the Soil Data Warehouse where SSURGO data is complete.
(2) State soil scientists—
(i) Ensure the accuracy and completeness of non-MLRA soil survey area boundaries.
(ii) Initiate revisions and corrections to the boundaries, as needed.

D. Data Availability

(1) Soil Data Availability Status Map
(i) The Soil Data Availability Status Map portrays the availability of SSURGO data in the Web Soil Survey. This map is updated at least annually by staff of the NSSC based on the contents of the Soil Data Warehouse. The map legend indicates the data available for each soil survey area. Partial surveys are also shown. The map can be accessed online at http://websoilsurvey.sc.egov.usda.gov/DataAvailability/SoilDataAvailabilityMap.pdf.
(ii) The standard map legend colors and categories are as follows:
- Green – digital spatial and tabular data are available
- Orange – only digital tabular data are available
- White – no digital data are available

(2) Other Status Maps

Program managers at the national, soil survey region, and State levels may determine other types of soil survey status maps useful for management and information purposes within their operational area.