

**General Manual
Title 450 – Technology
Part 401 – Technical Guides**

**Subpart A - Policy and Responsibilities
PART 401 - TECHNICAL GUIDES
SUBPART A - POLICY AND RESPONSIBILITIES**

WA401.0(D)

WA 401.0 General

- A. This part states policy for establishing, changing and maintaining Field Office Technical Guides (FOTG) and activities of supporting committees.
- B. The Natural Resources Conservation Service (NRCS) is responsible for providing national leadership for conservation of natural resources and administration of programs to conserve soil, water, and related resources on nonfederal lands, including private and American Indian Tribal lands. NRCS is also involved in the coordinated management of resources on intermingled private, State, American Indian Tribal, and Federal lands. A primary goal is to provide technical assistance to decision-makers for planning and implementation of a system of conservation practices and management that achieves a level of natural resources protection that prevents degradation and permits sustainable use. In cases where degradation has already occurred, the goal is to restore the resource to the degree practical to permit sustainable use.
- C. Field Office Technical Guides are the primary technical references for NRCS. They contain technical information about the conservation of soil, water, air, plant, and animal resources. The FOTG used in any office are to be localized so that they apply specifically to an identified geographic area. These documents, referred to as FOTG, are meant to include both electronic and paper copies of materials.
- D. An FOTG will be maintained for each NRCS field office as a compilation of technical knowledge and standards. Each FOTG comprises five sections. (See GM-450, Part 401, Section 401.3, Content of Technical Guides, for details.) The FOTG contents are kept and maintained in electronic format that allows easy access and reproduction as necessary. The contents will be placed on the electronic Field Office Technical Guide (eFOTG) server as directed by the NRCS National Information Technology Center. FOTG contents not available electronically are to be kept in hard copy in the field office, labeled, and available for use and copying.

WA401-1

General Manual
Title 450 – Technology
Part 401 – Technical Guides

WA401.0(E)

E. Content Managers of each State-level FOTG, after receiving approval from the State Technical Guide Committee (STGC), will insert technical information into the appropriate section of the FOTG. The following metadata will be provided for all entries:

- (1) Display Title
- (2) Abstract
- (3) Location
- (4) Revision Date
- (5) STGC Review Date
- (6) Key Words
- (7) Subject(s)
- (8) Applicable Counties
- (9) State Contact Information
- (10) Practice Code (Section IV)
- (11) Document Type (Section IV)

F. The following guidance is given regarding supporting documentation for technical information contained in the FOTG:

- (1) Section I - No documentation will be needed for references contained in Section I.
- (2) Section II - Sources of data and information will be included.
- (3) Section III - NRCS will be cited as the source for information contained, unless it is otherwise provided. In those cases, the source will be included.
- (4) Section IV - Citations of technical materials used to prepare practice standards, specifications, and other documents will be included with each numbered standard, as needed.
- (5) Section V - NRCS will be cited as the source for effects information, unless supplemented or refined to relate to State or local laws and criteria. In those cases, the source of those laws and criteria will be cited.

G. NRCS will establish a database of Conservation System Guides (CSG) that will support high-quality planning and technical assistance in its programs.

- (1) State-specific CSG content shall be managed by State-level specialists.
- (2) CSG database management will be accomplished through the National Information Technology Center (NITC), Fort Collins, Colorado.

WA401-2

WA 401.1 Responsibilities

- A. Staff in the National Headquarters (NHQ) Office.
- (1) The Deputy Chiefs for Science and Technology and Soil Survey and Resource Assessment have joint national leadership for policy and procedures for developing and using the FOTG.
 - (2) The Director, Ecological Sciences Division (ESD), serves as Chairperson of the National Technical Guide Committee (NTGC).
 - (3) The NTGC makes recommendations regarding FOTG policy and procedures to appropriate Deputy Chiefs, and reviews and approves all nationally issued FOTG materials.
 - (4) The NTGC will establish and maintain a National Quality Criteria Template for Section III. In addition, the NTGC will review and approve resource concerns, the criteria for the resource concerns, and the measurement tools to determine the quality criteria levels. This will be done in consultation with the national discipline leader for the respective resource concern. All quality criteria will have an assessment tool or process to determine the quality criteria level. National discipline leaders assigned to each resource concern will be shown on the resource concern and quality criteria table.
 - (5) The National Conservation Practice Standards Subcommittee (NCPSS), a standing subcommittee of the NTGC (see GM-450, Part 401, Section 401.2 (c) below), will establish and maintain all National conservation practice standards. This includes ensuring the appropriate scientific support documentation; conservation practice physical effects (CPPE) documentation and associated guide sheets (GS), job sheets, statements of work (SOW), and fact sheets are kept current according to the revision schedule in current policy. (See GM-450, Part 401, Subpart B, Sections 401.14 - 401.19, for development and maintenance of practice standards, interim standards, and archiving superseded standards.)
 - (6) When not available for meetings, NRCS Division Directors will designate a representative to participate in meetings and attend to NTGC business.
 - (7) Deputy Chief for Science and Technology will support CSG through the National Technical Guide Committee as well as through technical guidance from S&T Divisions and National Technical Support Centers.

General Manual
Title 450 – Technology
Part 401 – Technical Guides

WA401.1(8)

(8) Deputy Chief for Soil Science and Resource Assessment will support CSG through maintenance of Common Resource Area support and necessary soils information.

(9) Deputy Chief for Management will support CSG through NITC expertise.

B. Regional Assistant Chiefs (RAC) will:

(1) Ensure consistent application of agency policies and procedures concerning development and approval of FOTG technical materials.

(2) Ensure that State Conservationists and Directors Pacific Basin and Caribbean Areas (hereafter referred to as STC) coordinate FOTG contents with adjoining States, in particular across Major Land Resource Areas (MLRA), Common Resource Area (CRA) boundaries and Technology Support Areas as necessary.

(3) Regional Assistant Chiefs will serve as a conduit of information from States to National Leadership regarding broad policy issues and concerns regarding CSG and their use.

C. Staff at the National Technology Support Centers (NTSC).

The NTSC Directors will:

- (i) Provide assistance to STC and State technical leaders in the development and review of FOTG materials, when requested by STCs.
- (ii) Work with the Regional Assistant Chiefs (RACs) and STCs in the Service Areas to identify and address technology concerns for the FOTG.
- (iii) Ensure that National Technology Specialists (NTS) work closely with technical staff and committees in NHQ.
- (iv) Work closely within the NRCS, with partners, universities, and others to identify, adapt, and communicate new technical materials.
- (v) Provide technical leadership, guidance, support, and expertise for development and maintenance of conservation practice standards.
- (vi) Provide technical leadership to improve consistency for conservation practice standards nationwide.
- (vii) Carry out assigned functions for emerging technology, acquisition and development.

WA401-4

D. Staff at the State Office or equivalent.

- (1) Each STC or equivalent will:
- (i) Assure that State-level technical leaders work with national discipline leaders and NCPSS as appropriate to assure State-level issues, related to practice standards, are addressed.
 - (ii) Be responsible for the development, quality, coordination, use, and maintenance of FOTG materials in his/her State.
 - (iii) Coordinate FOTG contents to achieve reasonable uniformity between and among States where MLRA and CRA are shared across State lines. "Special resource areas" should also be considered for multi-State coordination, e.g., Lake Champlain or Chesapeake Bay.
 - (iv) Approve all State interim standards and associated materials, request interim practice standard code numbers from the NCPSS, and provide interim practice evaluations to the NCPSS (see GM-450, Part 401, Subpart B, Section 401.17, Interim Standards, for more detail).
- (v) Establish and appoint membership to a STGC to assist in development and maintenance of the FOTG. The STGC is responsible for the approval and distribution of State-developed, State-supplemented, or field-office-supplemented FOTG materials. The STGC is also responsible for quality assurance activities to ensure the completeness and correctness of field office FOTG materials. *The State Technical Guide Committee (STGC) for Washington will consist of the following members:*

- *State Resource Conservationist (Chair)*
- *State Conservation Engineer*
- *State Soil Scientist*
- *Area Resource Conservationists (from each Area)*
- *Engineer (from each Area)*

The following individuals will serve as advisors to the Committee:

- *Assistant State Conservationist for Programs*
- *Field Office Technical Guide Content Administrator (as appointed by the Chair with approval of employee's supervisor)*
- *Field Office Technical Guide Content Manager (State Webmaster, unless otherwise assigned, with approval of employee's supervisor)*
- *Geographic Information Specialist/Cartographer (with approval of employee's supervisor)*

**General Manual
Title 450 – Technology
Part 401 – Technical Guides**

WA401.1(D)(v)

The committee will convene once per year, or as deemed necessary by the Chair, to provide direction and guidance on matters related to the quality and content of the Field Office Technical Guide.

(vi) Establish quality criteria for FOTG Section III consistent with the National Template (see GM-450, Part 401, Subpart C, Table III. National Resource Concerns and Quality Criteria).

(vii) Provide Conservation System Guides (CSG) and Conservation Systems (CS) examples as needed for field office service areas.

(viii) Establish procedures for maintaining the contents of the FOTG. All FOTG material is to be reviewed by the STGC every five years, or more often as needed, to maintain technical adequacy and meet State and local requirements. As content of the FOTG is updated, removed and replaced, each STGC will instruct the State Content Manager to mark appropriate materials as archived before exiting the metadata Web-page, when removing documents (See GM-450, Part 401, Subpart B, Section 401.18 and GM-450, Part 401, Subpart A, Exhibit 401.8, for more detail). Any proposed changes will be reviewed with the State Technical Committee and adjacent States, as applicable. Each FOTG Section contains an automatically generated table of contents (see GM-450, Part 401, Section 401.4 Exhibit, Sample Table of Contents for FOTG Subsections) which must reflect STGC review/revision dates in each table.

(ix) Forward State-level technology concerns and needs to the RAC and the appropriate NTSC Director.

(x) Establish policy on posting materials to the FOTG and distribution of the FOTG.

- *Prior to posting of material to the FOTG, the STGC Chair or the FOTG Content Administrator will electronically mail STGC members, and as appropriate the advisors, a notification requesting review of such material. The STGC members will have a one to three week period, as specified in the notification, to provide comments. The FOTG Content Administrator will review comments and consult with technical specialists and the STGC Chair to finalize materials for distribution.*

WA401-6

General Manual
Title 450 – Technology
Part 401 – Technical Guides

WA401.1(2)(iii)

(x) Provide training and/or instruction to field offices on managing and using the FOTG.

(xi) Appoint a FOTG content administrator and content manager(s) to input content and manage the FOTG.

- *The STGC Chair will appoint a FOTG Content Administrator with approval from the employee's supervisor. The State Webmaster will serve as the FOTG Content Manager, unless otherwise assigned, with approval of the employee's supervisor. These individuals will also serve as Advisors to the STGC.*

(xiii) Provide State-level procedures, training, and instructions to the field offices on adding county-specific content to the FOTG.

(xiv) Assure that all superseded FOTG materials are appropriately organized and archived. Superseded materials should be accessible and maintained until such materials are no longer relevant to any active conservation plan or contract. See GM-450, Part 401, Subpart B, Archiving Standards, Section 410.18, for more details. The Soil Data Warehouse provides automatic archive capability for soils data that appears in the eFOTG through a link to the Soil Data Mart. Other material, such as documentation used in program eligibility, will also be considered for archiving.

(xv) Ensure that CSG are developed as needed, that they are technically correct within guidance given, and that they are maintained to fit the needs of field office personnel.

(xvi) Ensure adequate training of field personnel in use and development of CSG.

(2) State-level Technical Specialists will:

- (i) Participate, as directed by the STC, in the development and maintenance of the NHCP.
- (ii) Identify and report FOTG technology needs and issues to the STGC.
- (iii) Help develop and evaluate interim practice standards and associated materials.

WA401-7

General Manual
Title 450 – Technology
Part 401 – Technical Guides

WA401.1(E)

E. Staff at the Field Office or Equivalent.

- (1) The field office technical leader (e.g., district conservationists, team leaders, and group leaders) will:
- (2) Identify and report technical and resource needs, local issues, etc. and prepare such material for review and approval by the STGC prior to inclusion into the FOTG.
- (3) Ensure access to FOTG materials for the office(s) they supervise.
- (4) Ensure that all field office employees maintain and use up-to-date materials to provide technical assistance.
- (5) Identify needed changes and/or additions to the FOTG.
- (6) Request assistance from specialists at the Area, Zone, or State-level, as appropriate, to make needed changes or additions.
- (7) All field office employees are responsible for identifying the needs for improvements and new technology, and for informing field office technical leaders of those needs, who in turn inform STCs or designees, as appropriate.

WA 401.2 - National Technical Guide Committee (NTGC)

A. NTGC membership includes:

- (1) Director, Animal Husbandry and Clean Water Division.
- (2) Director, Conservation Engineering Division.
- (3) Director, Conservation Planning and Technical Assistance Division.
- (4) Director, Ecological Sciences Division (who shall serve as Chairperson).
- (5) Director, Resource Conservation and Development and Rural Lands Division.
- (6) Director, Resource Economics and Social Sciences Division.
- (7) Director, Resources Inventory and Assessment Division.
- (8) Director, Soil Survey Division.
- (9) A representative (3) from each of the National Technology Support Centers.
- (10) A representative State Conservationist from each technical support area, to serve on a three-year rotation, as recommended by the RAC for that area.
- (11) Executive Secretary, appointed by the NTGC Chairperson.
- (12) The National Technology Support Coordinator.
- (13) The Chairperson of the NCPSS.
- (14) Representatives from the Cooperative State Research, Education, and Extension Service, Forest Service, the USDA National Organics Program, etc., as identified by the NTGC.
- (15) Other NRCS Division Directors or staff members, as identified by the NTGC.

WA401-8

B. NTGC Operations:

- (1) Meet quarterly and otherwise, as convened by the Chairperson.
- (2) Coordinate the development of, approve, and issue national FOTG materials, utilizing the official NRCS Electronic Directive System.
- (3) Send materials for NTGC consideration to the Chairperson and distribution to members as directed.
- (4) Distribute minutes of each meeting to all members, all NRCS Deputy Chiefs, NTSC Directors and STCs.
- (5) Act upon matters (e.g., those requiring action) within 45 days of receipt, or as determined by the NTGC.
- (6) Recommend policy changes to the Deputy Chiefs for Science and Technology and Soil Survey and Resource Assessment.
- (7) Respond to requests for FOTG policy and procedures clarification.
- (8) Designate a Chairperson of the NCPSS and approve the Committee membership.
- (9) Act upon recommendations from the NCPSS.
- (10) Create ad hoc subcommittees, as necessary, to address technical policy and coordination issues.
- (11) Receive and provide a timely response to requests, recommendations, referrals, and suggestions from the Regional Assistant Chiefs and the Directors of the NTSC.
- (12) Have the Chairperson appoint an Executive Secretary to the NTGC.
- (13) Allow official members to designate alternates to participate in NTGC meetings and business matters.

C. NCPSS is a standing subcommittee of the NTGC. Positions on the committee are term positions not to exceed three years. Representative replacement dates will be staggered to allow for committee knowledge continuity. Selection of State representatives will be made by the Regional Assistant Chiefs. Membership includes:

- (1) National Agricultural Engineer (who shall serve as Chairperson).
- (2) Practice Standards Review Coordinator.
- (3) One Representative from each of the Science and Technology Divisions:
 - (i) Engineering
 - (ii) Ecological Sciences
 - (iii) Animal Husbandry and Clean Water
 - (iv) Resource Economics and Social Sciences
- (4) One Representative from each Deputy Area:
 - (i) Programs
 - (ii) Soil Survey and Resource Assessment
 - (iii) Strategic Planning and Accountability
- (5) Two State representatives from each regional administration area (preferably one engineering and one ecological science)

General Manual
Title 450 – Technology
Part 401 – Technical Guides

WA401-2(C)(6)

- (6) One representative from each of the following National Centers:
- (i) East National Technical Support Center
 - (ii) Central National Technical Support Center
 - (iii) West National Technical Support Center
 - (iv) National Water Management Center
 - (v) National Water and Climate Center
 - (vi) National Design, Construction, and Soil Mechanics Center

WA 401.3 Content of Field Office Technical Guides (FOTG)

A. Each section of the FOTG is to include a list of contents, which is to be revised each time a change is made in the contents. The list is to show clearly the date of last revision and the date of last STGC review of each item or supplement.

B. The FOTG is to contain Sections I through V, as identified below and in appropriate subsections:

- (1) Section I - General Resource References.
- (2) Section II - Natural Resources Information.
- (3) Section III - Resource Management Systems and Quality Criteria.
- (4) Section IV - Practice Standards and Specifications.
- (5) Section V - Conservation Effects.

C. The FOTG sections will include the following materials, at a minimum:

- (1) Section I - General Resource References.
 - (i) The beginning of Section I will include a folder containing State-level notices or amendments to the FOTG.
 - (ii) Section I lists references and other information for use in understanding natural resources of the field office service area or in making decisions about resource use and management systems. The actual references listed are to be filed in a FOTG reference section of the office. Computer-based tools used in resource analysis and modeling will be listed in Section I. References kept in other locations will be cross-referenced. Examples include texts and publications dealing with databases found in Section II (below) as well as other resource issues. Subsections can be seen in GM-450, Part 401, Section 401.5 Information and Examples for FOTG Contents, Section I, General Resource References.

WA401-10

General Manual
Title 450 – Technology
Part 401 – Technical Guides

WA401.3(3)(ii)

- (iii) File FOTG transmittals, notices, amendments, tabulation sheets, disclaimers, FOTG policy links, Technical Guide Committee information, State-level technical notes-that are not Standard Specific, and other information deemed appropriate by the STGC in the first folder of Section I, FOTG.
- (2) Section II - Natural Resources Information.
- (i) Section II contains natural resource data, databases, and procedures for interpretation. This section will have a statement indicating exactly which maps, data, and interpretations comprise the official soil survey and how those maps, data, and interpretations may be accessed. In some cases separate statements may be needed for maps, data, and interpretations.
- (ii) The following are subsections of Section II of the FOTG:
- Soils Information;
 - Climatic Data;
 - Cultural Resources Information;
 - Special Environmental Concerns;
 - Forage Suitability Group Descriptions; and
 - Ecological Site Descriptions.
- (iv) See GM-450, Part 401, Section 401.6 for additional information about subsections of Section II.
- (3) Section III - Resource Management System (RMS) and Quality Criteria:
- (i) An RMS will address all identified resource concerns at or above the level of sustainability, taking into account other natural resource considerations, human-cultural, economic, and social concerns relative to each of the following natural resources in the field office area for:
- Soil
 - Water
 - Air
 - Plants
 - Animals
- (ii) Conservation System Guides (CSG), Conservation Systems (CS), and Conservation Effects examples at the RMS level common to the field office service area will be maintained in Section III. Conservation practices that make up a system should be identified. The documents shall be prepared according to guidance found in the National Planning Procedures Handbook for formulating RMS and the NRCS Web-based CSG software.

WA401-11

General Manual
Title 450 – Technology
Part 401 – Technical Guides

WA401.3(7)(iii)

(iii) Quality Criteria for treatment required to achieve an RMS will be established by NRCS and filed in this section of the FOTG. Criteria shall be stated in either qualitative or quantitative terms for each resource consideration and the assessment tool or process to determine quality criteria. The State Conservationist or equivalent will establish quality criteria when State criteria are more restrictive than the national quality criteria for a resource concern. Where State-level and/or local regulations establish more restrictive criteria, these must be used in developing the RMS.

(4) Examples of program-specific plans will be placed in the appropriate manual for that program.

(5) Sample CSG and CS that reflect various program requirements will be maintained in Section III. Those conservation practices that make up a system should be identified. When programs exist which define other levels of planning for specific resource issues, clients will be offered alternatives that, as a minimum, meet the criteria of those programs. For clarification see [GM 180 Conservation Planning and Application 409.1 Conservation Planning Objective \(a\)\(2\) and \(b\)](#).

(6) Quality criteria and guidance documents are to be filed in Section III of the FOTG. As a general outline, Section III will contain RMS quality criteria, with supporting guidance documents, followed by program criteria and related guidance documents needed to meet levels of treatment defined by legislated programs and initiatives that are different from RMS criteria.

(7) Section IV - Practice Standards and Specifications.

(i) Section IV of the FOTG contains conservation practice standards applicable in that field office.

(ii) Conservation practice standards establish the minimum level of acceptable quality for designing, installing, operating, and maintaining conservation practices. National standards from the NHCP are to be supplemented and used by State-level offices, as needed. For policy on use of interim standards, see Section 401.17, Interim Standards," of Subpart B [Conservation Practice Standards](#).

(iii) Section IV may also include the following State-developed documents. In section IV, create one folder for each Conservation Practice Standard and Interim Standard, used within the State. Following is a list of documents and information that is to be contained in each folder, organized with the State Conservation Practice Standard to which they refer:

WA401-12

General Manual
Title 450 – Technology
Part 401 – Technical Guides

WA401.3(5)(iv)

- (iv)
- Practice Specification Guide Sheets (GS) establish and list terms and conditions, and show how the practice standard will be made site-specific.
 - Job Sheets provide site-specific location and installation information to the field conservationist and client.
 - Practice Documentation Requirements list minimum documentation to be completed and provided to NRCS when the practice is completed and certified. □
 - Statement of Work (SOW), which provide the minimal requirements to design, install, and certify completion of conservation practices and other technical services. □
 - Worksheets are a series of requirements, check lists, or forms used to ensure all aspects of the practice are considered and included, during planning and installation. □
 - Fact sheets are used to explain a technology or process. A fact sheet provides an overall explanation of the practice and the technology it delivers, but not the details on practice installation. □
 - Operation and Maintenance (O&M) documents provide guidance for proper operation and maintenance of the practice and are usually provided to the client. □
 - Additional documents may be included, such as instructions, technical notes that are standard specific, emergency response plans, tools, etc.
- (v) See Subpart B Conservation Practice Standards of this Part for policy and procedural details for national, State, and interim practice standards and specifications.

(4) Section V - Conservation Effects

Conservation effects provide the FOTG user with indicators of the impact that conservation practices may have on the natural and cultural resources. They are recorded in the CPPE data base filed electronically in Section V of the FOTG. The recorded data is based primarily on empirical information and field experience. The effects often vary when used on a site-specific basis, and the experienced user may need to express other effects during the conservation planning process. The CPPE is a dynamic database requiring frequent revisions.

WA401-13

General Manual
Title 450 – Technology
Part 401 – Technical Guides

WA401.3(4)

This section of the FOTG contains:

- Data on the national CPPE database are National in scope. Therefore State level offices are encouraged to review and localize the information as necessary to reflect those effects expected to occur under local conditions. See the National Planning Procedures Handbook, [Part 600.4](#) for additional information on Conservation Effects; □
- Appropriate procedures for keeping the database updated and methods for developing, recording, analyzing, and displaying conservation effects data;
- Appropriate procedures and methods for collecting, analyzing, and displaying conservation effects data; and □
- Case studies may be developed and filed for one or more of the most common RMS in the local area. Case studies are a way of observing, collecting, and documenting the practical results of conservation treatment, along with the motivations that lead to their adoption. They help us increase the technology base from planning to implementation of conservation systems.

WA401-14

**General Manual
Title 450 – Technology
Part 401 – Technical Guides**

(6) Reserved.

WA 401.4 Exhibit: Sample Table of Contents for FOTG Subsections

Table of Contents
(Name of FOTG Subsection)

Title	File Size (Kb)	Revision Date	STGC Review Date
Average Annual Rainfall	350	05/16/2004	05/16/2004
Climate Mapping (PRISM)	Web Link	04/26/2004	04/26/2004
Costs and Returns Estimation (CARE) Website	Web Link	12/21/2004	04/26/2004
CRP Cost List FY2004	47	07/19/2004	07/19/2004
EQIP Cost List FY2005	226	05/17/2004	05/17/2004
EQIP Cost List FY2004	233	05/16/2004	05/16/2004
EQIP Cost List FY2005	68	05/29/2005	05/29/2005
Erosion Prediction	3	06/17/2005	06/17/2005
FIP Cost List FY2001	30	05/16/2004	05/16/2004
FIP Cost List FY2004	30	05/16/2004	05/16/2004
Longleaf Pine Conservation Priority Area	446	05/16/2004	05/16/2004
Major Land Resource Areas	Web Link	04/26/2004	04/26/2004
National Earthquake Information Center	Web Link	04/26/2004	04/26/2004
National Register of Historic Places	Web Link	04/26/2004	04/26/2004
National Resources Inventory (NRI)	Web Link	04/26/2004	04/26/2004
National Water & Climate Center Irrigation Page	Web Link	04/26/2004	04/26/2004
National Wild & Scenic Rivers System	Web Link	04/26/2004	04/26/2004

WA401-15

**General Manual
Title 450 – Technology
Part 401 – Technical Guides**

Title	File Size (Kb)	Revision Date	STGC Review Date
Plant Hardiness Zones	Web Link	04/26/2004	04/26/2004
State Soil Geographic Database (STATSGO)	4201	05/16/2004	05/16/2004
State Local Laws, Ordinances, Regulations	11	05/16/2004	05/16/2004
WHIP Cost List FY2005	25	08/07/2005	08/07/2005
WHIP Cost List FY2004	26	05/13/2004	05/13/2004
WHIP Cost List FY2005	33	01/25/2005	01/25/2005

General Manual
Title 450 – Technology
Part 401 – Technical Guides

WA401-5

**WA 401.5 Exhibit: Information and Examples for FOTG Contents, Section I,
General Resource References**

Section I of the FOTG, General Resource References, lists references and other information for use in understanding natural resources of the field office service area or in making decisions about resource use and management systems. The actual references listed are to be filed to the extent possible in the same location as the FOTG. References kept in other locations will be cross-referenced; this may include electronic or Internet locations. This section will contain the following subsections and materials, at a minimum:

(1) Reference lists include applicable discipline (for example, economic handbooks are here and not in cost data) handbooks, manuals, and reports commonly used in resource conservation planning and implementation activities:

- (i) Irrigation and drainage guides;
- (ii) The [PLANTS](#) database;
- (iii) The [National Register of Historic Places](#) and other regional cultural resources lists;
- (iv) State Surface and Ground Water classifications and associated standards (water quality and any fishery), sole source aquifers, and designated Wild and Scenic Rivers;
- (v) Recreational potential appraisals;
- (vi) [Natural Resources Inventories](#);
- (vii) Reports that identify such items as areas susceptible to flooding;
- (viii) [River basin reports](#);
- (xii) [Seismic zones](#);
- (x) Documentation of useful computer models;
- (xi) Various National Centers and other products from Institutes, e.g., [Soil Quality Test Kit Guide](#), [Soil Quality Health Card Design Manual](#), and the [Pesticide database](#); and
- (xii) [Economic Handbook](#).
- (xiii) Historical copy of the published soil survey and any additional descriptive or narrative material related to land use and management.
- (xiv) Cost data.

(2) [Cost data](#). General reference data on costs of conservation practices and the methods and tools used for cost estimates as well as cost data or information, such as component costs, practice costs, and cost lists for program contracting.

- (i) Maps. For example, water quality problem areas and areas with a potential water quality problem are to be included here or appropriately referenced.

WA401-17

(ii) **Erosion prediction.** Guidance, data, and NRCS-approved techniques for predicting soil erosion are to be included here, or appropriately referenced.

(iii) **Laws.** Includes lists of Federal, American Indian Tribal, State, and local laws, ordinances, or regulations that impact RMS development and technical applications such as conservation practice application.

(iv) Section I of the FOTG will contain other related materials that the field office staff would deem applicable.

WA 401.6 Exhibit: Information and Examples of FOTG Contents, Section II, Natural Resources Information

A. Section II of the FOTG will contain the following, at a minimum:

- (1) Soils Information: Official soil survey information comprises five parts.
- (i) Statements about which soil maps, data, and interpretations are official for each USDA program purpose and where to find those maps, data, and interpretations. For example, official lists of highly erodible soil maps may exist only as hard copy in the FOTG while other standard data and interpretations exist as a link to the Soil Data Mart;
 - (ii) Soil maps. Where an archived version is required for program purposes (i.e. 1990 soil map in a survey area which has since been updated), both the archived map and the contemporary map are included in the FOTG and their respective uses clearly identified;
 - (iii) Soil survey data to accompany the soil maps, which exist as a link to the Soil Data Mart. Where an archived version is required, the data may exist either electronically or in hard copy.

At a minimum, the following data will be available:

- Map unit symbol and map unit name for each symbol shown on the official soil survey map(s);
 - Data elements required to meet national program needs and the needs of the area served by the Field Office Technical Guide. The list of required data elements must, by necessity, be somewhat flexible to accommodate data needs created as a result of new planning or engineering practices, models, or interpretive criteria.
- (iv) Brief soil description for each map unit identified on the soil maps;
and
- (vi) Interpretations required to meet national program needs and the needs of the area served by the FOTG. Archived lists may be required for some program needs and will be clearly identified as to their intended purpose.

General Manual
Title 450 – Technology
Part 401 – Technical Guides

WA401-5(A)(2)(i)

(2) Climatic Data:

(i) This subsection contains local climatic data needed for planning RMS and installing conservation practices, such as:

- Record low and high temperatures;
- Averages for such items as rainfall, length of growing season, temperatures, wind velocities, hail incidence, and snowfall;
- Water supply data;
- Probability of receiving selected amounts of precipitation by months; and
- Frost-free periods.

(ii) References should be made to other climatic data in other field office documents.

(3) Cultural Resources Information:

(i) Cultural resources include historic, archaeological, architectural, historic engineering, and traditional cultural properties and historic and cultural landscapes. There are criteria of significance for cultural resources that NRCS must consider during program, project and conservation planning; these criteria (of eligibility for listing in the National Register of Historic Places) are found at [36 CFR Part 60](#). Significant historic properties are generally over 50 years old, but clearly not all properties of this age meet the significance criteria. This section should include a brief discussion of the nature and distribution of cultural resources across the State and a clear description of the cultural resources review process for employees at that State-office level. It should also include the State Level Agreement with the State Historic Preservation Officer and references to the General Manual title/part and any State handbooks or guidance.

WA401-19

General Manual
Title 450 – Technology
Part 401 – Technical Guides

WA401-5(A)(4)(iv)

(ii) The section should also include information (including lists), or appropriate references on:

- Known historic sites, if available;
- NRCS State Office instructions on integration of cultural resources data into project, program and conservation planning;
- A directory of contacts for information on cultural resources (e.g., State Historic Preservation Officer, local historical commissions, State Archaeologist, research institutions);
- Cultural and Historic Properties (National Historic Preservation Act)
- A print-out of the listed National Register of Historic Places for the State (update annually);
- A print-out of any State Register of Historic Places;
- Predictive maps or models for archaeological sensitivity for the State;
- Drawings or photos of projectile points and prehistoric pottery types in the State;
- Any State Historic Preservation Officer, State archaeologist or State museum data request forms;
- Site and building/structure inventory forms;
- NRCS State Office cultural resources field worksheet (for undertakings); and
- Any other data or guides that might make field office investigations work well in the State.

(iii) Archaeological site maps contain restricted information and should remain in separate working files within the field office and not within the FOTG.

(4) Special Environmental Concerns Information: This subsection contains lists, maps, documents or other appropriate references necessary to identify the presence or location of the following environmental concerns that are to be considered for all conservation assistance. Actual data not intended for public disclosure should only be referenced. The list may be expanded to include other information needed to address Federal, State, local, or Tribal concerns that pertain to the field office service area.

- (i) Clean Water Act 303(d) listed streams;
- (ii) Clean Air Act non-attainment areas;
- (iii) Coastal Zone Management Areas;
- (v) Coral Reefs;

WA401-20

General Manual
Title 450 – Technology
Part 401 – Technical Guides

WA401-5(BA)(4)(viii)

(vii) Threatened and Endangered Species, and related information. This subsection contains information, or appropriate references, on species of plants and animals that are threatened and endangered and are to be accounted for in conservation planning. General descriptions, photos or drawings, inventory forms, or procedures, would be helpful for planning purposes.

(vi) Essential Fish Habitats and Fishery Management Plans;

(vii) Floodplains;

(viii) Invasive Species;

(ix) Natural Areas;

(x) Areas of Scenic Beauty;

(xi) Sacred Sites and Landscapes ([AIRFA](#) and [E.O. 13007](#)); and

(xiii) [Wild and Scenic Rivers](#).

(5) Forage Suitability Group Descriptions: Forage suitability groups are composed of one or more individual soil map units having similar potentials and limitations for forage production. They are electronic and maintained through an electronic link to the Ecological Site Information System. Soils within a forage production suitability group are sufficiently uniform to:

(i) Support the same adapted forage plants under the same management conditions;

(ii) Require similar conservation treatment and management to produce the forages selected in the quality and quantity desired; and

(iii) Have comparable potential productivity.

(6) Ecological Site Descriptions: Landscapes are divided into ecological sites for the purposes of inventory, evaluation, and management. An ecological site is a distinctive kind of land with specific physical characteristics that differs from other kinds of land in its ability to produce a distinctive kind and amount of vegetation. Ecological sites are defined for land uses such as rangeland and forestland. Contemporary Ecological Site Descriptions are electronic and maintained through an electronic link to the Ecological Site Information System.

B. Section II of the FOTG may contain other related materials that the field office staff would deem applicable.

WA401-21

**WA 401.7 Exhibit: Information and Examples for FOTG Section V,
Conservation Effects**

Section V of the FOTG contains conservation effects information designed for use in planning. The conservation effects are recorded in an electronic table using the following concepts:

- (1) CPPE are generic and may or may not be accurate for a specific field site. But the data provides an indication of the physical effects expected to occur when an individual practice is installed. Since the practices effects are generally additive, combinations of practices can be evaluated using the practice effects data. The CPPE information is recorded in data base format and includes each official NRCS practice and resource concern applicable to the work area. The information is available electronically to facilitate efficient updates and localizing of data content. Most of the information is based on field experience and empirically derived information rather than scientific data. As science-based data become available, the CPPE tables can be evaluated and updated as appropriate.
 - (i) State-level employees should develop a CPPE worksheet and attach it to proposed Interim Standards. When the Interim is approved for use in that State, the State-level technical specialists should place the CPPE worksheet in Section V of FOTG.
- (2) Effects recorded in CPPE may be expressed in either qualitative or quantitative terms that represent expected results of the conservation practice as applied to the generic resource setting, or site, described in the matrix. Effects of conservation will normally be expressed in qualitative terms because quantitative effects are impractical to estimate unless a specific site is being evaluated. For example, a typical effect of applying conservation tillage could be a “substantial reduction in sheet and rill erosion.” In order to estimate the quantitative effects of the practice, one would need to run a computer model using specific site condition inputs related to climate, soil, and management.
 - (i) "Impacts" is a closely related term. An “impact” is a measure of the change expected to occur when comparing a treatment alternative to existing conditions. Detailed guidance on the use of effects information is contained in the [National Planning Procedures Handbook](#).

WA401-8

WA 401.8 Exhibit: Instructions for Archiving Materials in the FOTG

A. As content of the FOTG is updated and replaced, each STGC will instruct the State Content Manager to mark appropriate materials as archived before exiting the metadata Web page. Content Managers are to follow the following process to archive necessary documents.

- (1) In Content Manager, navigate to the document that is to be archived.
- (2) At the bottom of the metadata screen, on the right hand side of the screen, click on the Archive button.
- (3) When Content Managers click this button, eFOTG automatically performs the following actions:
 - (i) Creates a new folder in the Section named "Archive Materials - Section X"
 - (ii) This folder is displayed as the last folder in the section.
 - (iii) This Archive folder will NOT be displayed in the Menu or Table of Contents.
 - (iv) eFOTG will move the document to be archived to this new folder.
 - (v) The archived document will be renamed to "Archived - old document name - YYMMDD" to help clarify that this is archived material and file them chronologically.
 - (vi) The revision date will be set to the current date, and the review date is set to 10 years from current date. These can be adjusted from within Content Manager as needed.
 - (vii) The archived document will NOT be displayed in the Menu or Table of Contents.
 - (xiv) Archived documents will NOT be displayed in the What's Changed Recently section.
 - (ix) Any metadata relating to practice code number and document type (Standard, Specification etc.) will be removed.
 - (x) Archived material will only be available to Content Managers through the Content Manager screens.
- (4) Content Manager can now upload the new document that will replace the archived document. This is not required, but it will generally be done.
- (5) When possible, the new document should have the same file name as the old. This will keep any links that users have created in their Favorites, Thunderbook or other Web pages intact.

B. These steps, in addition to accurate metadata, are important to eliminate archived files from the search engine and access by the public as well as field conservationists. They are needed to eliminate confusion between current and archived files. The information in this bulletin will be included in revised Technical Guides policy (GM 450, Part401) scheduled for distribution Spring, 2007.

WA401-23

**General Manual
Title 450 – Technology
Part 401 – Technical Guides**

WA401-8(F)

C. The system does not create the “Archive Materials - Section X” folder until a Content Manager archives a document in that eFOTG section.

D. The system does not create any subfolders in the Archive Materials folder. Content Managers can manually do this as desired. They should be sure to click No for “Display to Menu and Table of Contents.” As with all eFOTG changes, the actual changes do not appear until the next day.

E. Materials archived as described above can only be viewed by State eFOTG Content Managers. A State may have a business need for all employees to have access to archived materials. If this is the case, State Content Manager can make the following changes to make Archived material available to all NRCS employees through my.NRCS view of Content Manager.

- (1) After archiving a document, refresh the content manager menu.
- (2) Open the recently created “Archive Materials - Section X” folder in Content Manager.
- (3) Click YES on “Display to Menu and Table of Contents”.
- (4) Click Save.
- (5) Open the recently created archived document in Content Manager.
- (6) Click YES on “Display to Menu and Table of Contents”.
- (7) Click Save

F. With this change, archived documents will be readily available to all NRCS employees in MY.NRCS eFOTG. All employees must be careful when using Search and general viewing. This will allow a search to locate archived material.

WA401-24