

## PART 506 - TECHNICAL MATERIALS

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AL506.05 Distribution of engineering technical materials within NRCS.

(a) The state conservation engineer (SCE) is responsible for procuring all engineering technical materials needed in the state. The SCE will automatically distribute all new engineering technical materials, as well as subsequent revisions. Requests for additional copies of technical materials shall be made to the SCE.

(b) All engineering technical materials will be filed in loose leaf, three ring binders. They shall be filed in accordance with appropriate instructions. As revisions or new materials are received, they are to be filed in the proper binder. When revised reference specifications are received, the older copy is to be discarded after all contracts which incorporate the older specification are completed.

(c) All engineering technical materials used at the field level will be assigned directly to the field office. It will be the responsibility of the district conservationist (DC) to keep the engineering technical references current at the field office.

(d) Engineering technical materials for resource engineers will be assigned directly to the engineer. It shall be each engineer's responsibility to keep his/her technical materials up-to-date. Engineers relocated within the state shall take all technical materials assigned to them to their new location. Engineers transferred out of state shall leave all technical materials assigned to them at that location.

(e) Engineers assigned to the state office will not have a complete set of technical materials assigned to them individually. They will have access to the complete engineering technical material assigned to the engineering section.

(f) The following shall be considered as the complete engineering technical material for all engineers regardless of their assignment.

- (1) [National Engineering Manual \(NEM\)](#)
- (2) National Engineering Handbook Series
  - (i) Parts 600-649.
  - (ii) Parts 650-659 – Field Office Handbooks include the following:
    - [Part 650 – Engineering Field Handbook – Volumes 1 and 2](#)
    - [Part 651 - Agricultural Waste Management Field Handbook \(AWMFH\)](#)
    - [Part 652 - Irrigation Guide](#)
    - [Part 653 – Stream Corridor Restoration](#)
- (3) Field Office Technical Guide (FOTG) – Section I, Engineering References and [Section IV, Standards and Specifications](#).
- (4) [Alabama Poultry Waste Management – Waste Utilization and Poultry Design Workbook](#).

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- (5) Alabama Engineering technical notes and forms.
- (6) Bulletins and Instructions received from the national and state office.
- (7) Miscellaneous technical references as follows:
  - (i) Applicable National Technical Releases
  - (ii) Applicable design notes, specification notes, soil mechanics notes, and technical notes from the National Office.

[NOTE: Due to the fact that all technical materials are in the process of being incorporated into the NEHS, it will be necessary to maintain technical material (i.e., technical releases, etc.) as they are until they are included in the NEHS.]

(g) The following shall be considered as the complete engineering technical materials to be maintained in NRCS offices and the distribution of these materials.

DIRECTIVE	ASTC FO	RE	DC	RES CON	SOIL TECH	SOIL CON
National Engineering Manual and AL Supplements	X	X	X			
Engineering Field Handbook – Volumes 1 and 2 (NOTE: This Handbook is Part 650 of the National Engineering Handbook Series.) and AL Supplements	X	X	X		X	X
Agricultural Waste Management Field Handbook (NOTE: This Handbook is Part 651 of the National Engineering Handbook Series.) and AL Supplements	X	X	X	X	X	
Irrigation Guide (NOTE: This Handbook is Part 652 of the National Engineering Handbook Series.) and AL Supplements	X	X	X			
Stream Corridor Restoration Handbook (NOTE: This Handbook is Part 653 of the National Engineering Handbook Series.) and AL Supplements	X	X	X	X		
Alabama Poultry Waste Management - Waste Utilization and Poultry Design Handbook and AL Supplements	X	X	X	X	X	X
Alabama Engineering Forms	X	X	X			
Alabama Engineering Technical Notes	X	X	X			

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- (h) The following technical materials will be distributed to engineers and offices as needed and shall be maintained as part of that office location or engineer's file.

(1) Reference Specifications

(i) Those standard specifications of other agencies, associations, institutes, or societies that are referenced in NRCS National Engineering Handbook NEH-19, Construction Inspection; NEH-20, Construction and Material Specifications; and the FOTG Section IV, Conservation Practice Standards. See NEM 542.40 for list of reference specifications.

(ii) Alabama Department of Transportation, Standard Specifications for Highway Construction.

(2) Reference Textbooks:

- (i) Handbook of Hydraulics by King and Brater
- (ii) Occupational Safety and Health Administration (OSHA), Parts 1910 and 1926 Construction Industry Standards and Interpretations.
- (iii) Surveying, by Davis and Foote.
- (iv) Earth Manual, Bureau of Reclamation.
- (v) Concrete Manual, U.S. Department of Interior, Eleventh Edition.
- (vi) Structures and Environment Handbook, Midwest Plan Service, Eleventh Edition, 1987.
- (vii) Post-Frame Building Handbook Materials, Design Constructions, Construction Procedures, Northeast Regional Agricultural Engineering Service, Revised 1997.
- (viii) Water Measurement Manual, U.S. Department of the Interior, Bureau of Reclamation, Third Edition, 1997.

(i) Engineering computer software programs shall be distributed to engineers and offices as needed. The following procedures shall apply to the development, distribution, and use of engineering computer software.

(1) Individual engineers or technicians in Alabama and other states may develop computer programs for the solution of engineering problems for their own use or for use by others. Some programs are developed for nation wide use. Others are initially intended for local use only, but later become widely accepted through sharing among individuals. Many programs are developed within the framework of a commercially available program such as Microsoft Excel. Each individual is responsible for ensuring that the programs they develop for their own use provide accurate results and that the results are checked and verified in the same manner as other engineering calculations. Users of programs not approved or made available by the State Conservation Engineer (SCE), assume responsibility for verification of results obtained using the programs.

(2) New engineering programs developed by Alabama NRCS employees and made available by the SCE will comply with the following procedures prior to distribution:

(i) The program author will document all formulas and procedures used in the program. The documentation will be in sufficient detail to enable a person reviewing the program to locate, understand, and follow the processes and calculations within the program. The documentation will

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be maintained by the author and a copy sent to the SCE for filing. The program password will be included in the documentation.

(ii) Detailed instructions for applicability and use of the programs will be developed in a form readily available to users, preferably within the program as in Excel programs.

(iii) The program will be checked by an engineer not directly involved in the development of the program. This check will include verifying the applicability of the formulas and procedures used as well as a detailed check of each step in the program.

(iv) After the program author and the reviewer are satisfied that the program is ready for use it will be sent to the SCE for distribution and/or posting on the Alabama NRCS web site. Programs developed within Excel or similar programs will be password protected.

(v) Programs should be titled with a name that is descriptive of its function along with a version number (e.g. Stream Crossing Version 5). As revisions are made to the program the version number should be changed and the latest version distributed and/or posted on the web site. Major revisions should have a whole number change (e.g. Version 2 to Version 3). Minor revisions should have a decimal number change (e.g. Version 2.1 to Version 2.2).

(3) Engineering programs approved for use in Alabama include the following programs in versions at or above those listed. This list is not all-inclusive and does not include commercially developed programs adopted by NRCS. The contact persons for the programs developed by Alabama NRCS personnel are listed with the programs:

	<b>PROGRAM</b>	<b>CONTACT</b>
1.	AWM, version 2.3.0	Resource Engineer (Nat'l program)
2.	EFH2, version 1.1.0	Resource Engineer (Nat'l program)
3.	Excavated Pondver6.xls	Jeff Allred
4.	HUA Quantity Calculations, version 1.1	Jeff Allred
5.	Hydraulics Formula, version 2.2.1	Resource Engineer (Nat'l program)
6.	Nutrient Budget Dry 7/2/03.xls	Bill Prince
7.	Nutrient Budget Dry w/o feeding 3-3-04.xls	Bill Prince
8.	Nutrient Budget Wet 7/2/03.xls	Bill Prince
9.	POND program, last revised 05/07/96	Perry Oakes
10.	Riprap flume design version 1.xls	Resource Engineer
11.	Rock_ChuteXP.xls	Resource Engineer (Nat'l program)
12.	SET, build 01.0001.050701	Resource Engineer (Nat'l program)
13.	SITES, version 2005.0.2	Resource Engineer (Nat'l program)
14.	Stage Storage Curve and Graph Ver.1.xls	Resource Engineer
15.	Stream Crossing5.2.xls	Jeff Allred
16.	TERRACE, version 2.5	Resource Engineer
17.	Trapezoidal Rock Structure Quantities V3.xls	Resource Engineer
18.	Watering system design Version 5.3.xls	Resource Engineer
19.	WinPond 2006, build 1.5.2405.11111	Resource Engineer (Nat'l program)
20.	WinTR-55, version 1.00.08	Resource Engineer (Nat'l program)
21.	Yardage Program Ver.3.xls	Jeff Allred

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(j) Consultants, contractors, or other individuals desiring copies of reference specifications and NRCS manuals may obtain them from the issuing agencies in the list below.

- (1) NRCS Publications can be purchased from:

National Technical Information Service  
U.S. Department of Commerce  
Springfield, VA 22161  
(703) 605-6500  
[www.ntis.gov](http://www.ntis.gov)

- (2) Federal specifications, standards, and interim specifications (and the index thereof) may be purchased from:

Superintendent of Documents  
Government Printing Office  
Washington, D.C. 20401  
(202) 512-1530  
[www.access.gpo.gov/su\\_docs/sale/prf/prf.html](http://www.access.gpo.gov/su_docs/sale/prf/prf.html)

- (3) Specifications and test methods of the American Society for Testing and Materials (ASTM) may be purchased from:

American Society for Testing and Materials  
100 Barr Harbor Drive  
West Conshohocken, PA 19428-2959  
(610) 832-9585  
[www.astm.org](http://www.astm.org)

- (4) Commercial standards and product standards may be obtained from:

Commodity Standards Division  
NIST, Office of Weights and Measures  
820 W. Diamond, Room 223  
Gaithersburg, MD 20878  
(301) 975-4004  
[www.nist.gov/owm](http://www.nist.gov/owm)

and

Superintendent of Documents, GPO  
Washington, D.C. 20401  
(202) 512-1530

- (5) Manuals of the Bureau of Reclamation, U.S. Department of the Interior, may be purchased from:

U.S. Government Printing Office  
Superintendent of Documents  
Washington, D.C. 20402  
(202) 512-1800 or (888) 293-6498  
[www.access.gpo.gov/su\\_docs/sale.html](http://www.access.gpo.gov/su_docs/sale.html)

or

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National Technical Information Service  
Port Royal Road  
Springfield, VA 22161  
(800) 553-6847  
[www.ntis.gov/](http://www.ntis.gov/)

- (6) Standards of the American Water Works Association (AWWA) may be purchased from:

American Water Works Association  
AWWA Bookstore  
6666 W. Quincy Avenue  
Denver, CO 80235  
(800) 926-7337 or (303) 795-2114

- (7) Standards of the American Concrete Institute (ACI) may be purchased from:

American Concrete Institute  
Member/Customer Services Department  
P.O. Box 9094  
Farmington Hills, Michigan 48333  
(248) 848-3800  
[www.aci-int.org/bookstore/bo-custser.htm](http://www.aci-int.org/bookstore/bo-custser.htm)

- (8) Specifications of the American Institute of Steel Construction (AISC) may be purchased from:

American Institute of Steel Construction  
Dept. 77-5245  
Chicago, IL 60678-5245  
(800) 644-2400

- (9) Publications of the American Welding Society (AWS) may be purchased from:

American Welding Society  
550 N.W. LeJeune Road  
Miami, FL 33126  
(800) 334-9353 or (305) 443-9353  
[www.aws.org/cgi-bin/shop](http://www.aws.org/cgi-bin/shop)

- (10) Standards of the American National Standards Institute, Inc. (ANSI)  
(USA or AN Standards), can be purchased from:

American National Standards Institute, Inc.  
11 West 42<sup>nd</sup> Street  
New York, NY 10036  
(212) 642-4900  
[www.ansi.org/](http://www.ansi.org/)

- (11) Military Specifications may be purchased from:

Commanding Officer  
Naval Supply Depot  
5801 Tabor Avenue  
Philadelphia, PA 19120  
Attn: Code CDS.  
(215) 697-2667  
[www.dodssp.daps.mil/dodssp.htm](http://www.dodssp.daps.mil/dodssp.htm)

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## PART 506 - TECHNICAL MATERIALS

AL506.06

AL506.06 Distribution of engineering technical materials outside of NRCS.

(a) Outside requests for engineering technical materials are to be handled by the office receiving the request. Generally, requests are to be referred to the appropriate issuing office as listed in [NEM AL506.05\(i\)](#).

(b) Copies of Alabama engineering directives, amendments, conservation practice standards, etc., may be provided directly to units of government, individuals with whom NRCS has established a professional relationship, individuals who may be involved with NRCS programs and contracts, or others. When a field office cannot provide copies locally, these requests should be forwarded to the SCE. Copies of Alabama conservation practice standards and guide sheets are available on the Alabama NRCS homepage at <http://www.al.nrcs.usda.gov/>

(c) Requests for NRCS technical materials out of publication or not available for sale normally require reproduction which is can be time consuming. When a field office cannot make copies locally, these requests should be screened and a real need determined before the request is forwarded to the SCE.