UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service – Regional Technical Service Center
7600 West Chester Pike, Upper Darby, Pennsylvania 19082

March 31, 1970

ENGINEERING FIELD MANUAL NOTICE-RTSC-1

The following supplements are to be added to Chapter 2 of the Engineering Field Manual. Listing is by RTSC-NE – ENG Form Numbers.

1. 200 Runoff Curve Numbers - may be placed following page 2-16. it supplements Exhibit 2-2.

2. 210 Interpolating Factors for Slope and Drainage Area - This supplements the procedure described in the manual beginning on page 2-8.

3. 220 Rainfall Runoff Depths for Selected Runoff Curve Numbers – This supplements Exhibit 2-7 and may be placed following page 2-36.

4. 230 Data Sheet for Calculating Peak Rates of Discharge from Small Watersheds - This provides an example of the use of form 230. It may be placed following page 2-82.

In addition to the above material is an initial supply of data sheet - 230 to facilitate the computation of peak discharge rates.

Pen and Ink Change - Form 200, sheet 2 of 2, Exhibit 2-2B, under hydrologic soil group A, residences on 1 acre lots – change 60 to 50.

/s/ Vincent McKeaver, Acting

Neil F. Bogner
Head, Engineering and
Watershed Planning Unit

	200, 210, 220, 230 (filled out)	230 (data sheet)
Conn.-R.I.	30	260
Delaware	25	60
Kentucky	400	1200
Maine	125	400
Maryland	165	500
Massachusetts	50	200
New Hampshire	60	320
New Jersey	150	300
New York	225	1000
Ohio	600	1600
Pennsylvania	320	1300
Puerto Rico	75	300
Vermont	70	1600
Virginia	280	1000
West Virginia	175	400

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service – Regional Technical Service Center
7600 West Chester Pike, Upper Darby, Pennsylvania 19082

March 1, 1971

ENGINEERING FIELD MANUAL NOTICE-RTSC-2

The following supplements are to be added to Chapter 14 of the Engineering Field Manual.

RTSC-NE-ENG.

NO.	TITLE
1410	Acres Drained Per Quantity of Flow
1411	Capacity of Corrugated Metal Pipe Culverts, Circular Capacity of Corrugated Metal Pipe Culverts, Arch Capacity of Concrete Pipe Culverts
1412	Capacity of Culverts, Inlet Control, Without Headwalls
1413	Minimum Gage Corrugated Iron and Steel Pipe, Round
1414	Minimum Gage Corrugated Iron and Steel Pipe, Arch
1415	Minimum Gage Corrugated Aluminum Pipe, Round

Neil F. Bogner
Head, Engineering and
Watershed Planning Unit

Distribution:

Conn-R. I.	65	N.Y	225
Del.	25	Ohio	600
Ky.	400	Pa.	320
Maine	125	Puerto Rico	75
Md.	165	Vt.	70
Mass.	50	Va.	280
N. H.	60	W. Va.	175
N. J.	150	Upper Darby EWP Unit	215

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service – Regional Technical Service Center
7600 West Chester Pike, Upper Darby, Pennsylvania 19082

March 5, 1971

ENGINEERING FIELD MANUAL NOTICE-RTSC-3

The following supplemental pages are to be added to the Engineering Field Manual.

Page 14-28.1
Page 14-28.2
Page 14-28.3
Page 14-34.1

Neil F. Bogner
Head, Engineering and
Watershed Planning Unit

Distribution:

Conn-R. I.	65	N.Y	225
Del.	25	Ohio	600
Ky.	400	Pa.	320
Maine	125	Puerto Rico	75
Md.	165	Vt.	70
Mass.	50	Va.	280
N. H.	60	W. Va.	175
N. J.	150		

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service – Regional Technical Service Center
7600 West Chester Pike, Upper Darby, Pennsylvania 19082

March 12, 1971

ENGINEERING FIELD MANUAL NOTICE - RTSC -4

The following supplemental pages are to be added to the Engineering Field Manual .

Page 14- 44 . 1 through page 14-44 . 30

Neil F. Bogner
Head, Engineering and
Watershed Planning Unit

Distribution:

Conn-R. I.	65	N.Y	225
Del.	25	Ohio	600
Ky.	400	Pa.	320
Maine	125	Puerto Rico	75
Md.	165	Vt.	70
Mass.	50	Va.	280
N. H.	60	W. Va.	175
N. J.	150		

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service – Regional Technical Service Center
7600 West Chester Pike, Upper Darby, Pennsylvania 19082

March 23, 1971

ENGINEERING FIELD MANUAL NOTICE-RTSC-5

The following supplemental pages are to be added to the Engineering Field Manual.

Page 14-108.1
Page 14-108.2

Neil F. Bogner
Head, Engineering and
Watershed Planning Unit

Distribution:

Conn-R. I.	65	N.Y	225
Del.	25	Ohio	600
Ky.	400	Pa.	320
Maine	125	Puerto Rico	75
Md.	165	Vt.	70
Mass.	50	Va.	280
N. H.	60	W. Va.	175
N. J.	150		

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service – Regional Technical Service Center
7600 West Chester Pike, Upper Darby, Pennsylvania 19082

March 26, 1971

ENGINEERING FIELD MANUAL NOTICE-RTSC-6

Attached are RTSC-NE-ENG 1420 (formerly ESNE-26) and RTSC-NE-ENG 1430 (formerly ESNE-27). These pages are to be added to the Engineering Field Manual.

Page 14-104.1 through 14- 104 42 - RTSC-NE-ENG 1420
Page 14-104.43 through 14-104.54 - RTSC-NE-ENG 1430

Neil F. Bogner
Head, Engineering and
Watershed Planning Unit

Distribution:

Conn-R. I.	65	N.Y	225
Del.	25	Ohio	600
Ky.	400	Pa.	320
Maine	125	Puerto Rico	75
Md.	165	Vt.	70
Mass.	50	Va.	280
N. H.	60	W. Va.	175
N. J.	150		

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service – Regional Technical Service Center
7700 West Chester Pike, Upper Darby, Pennsylvania 19082

April 2, 1971

ENGINEERINC FIELD MANUAL NOTICE-RTSC-7

The following supplemental pages are to be added to the Engineering Field Manual.

Page 7-28.1
Page 7-42.1
Page 7-45

Page 9-14.5
Pages 9-14.11 through 9-14.16
Pages 9-20.5 through 9-20.10

Neil F. Bogner
Head, Engineering and
Watershed Planning Unit

Distribution:

Conn-R. I.	65	N.Y	225
Del.	25	Ohio	600
Ky.	400	Pa.	320
Maine	125	Puerto Rico	75
Md.	165	Vt.	70
Mass.	50	Va.	280
N. H.	60	W. Va.	175
N. J.	150		

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service – Regional Technical Service Center
7700 West Chester Pike, Upper Darby, Pennsylvania 19082

July 1, 1971

ENGINEERING FIELD MANUAL NOTICE-RTSC-B

The following supplemental pages are to be added to the Engineering Field Manual.

Page 1-48.1

Pages 2-8.1 (This sheet replaces 2-8.1 dated 2/70.)
Pages 2-10.1 through 2-10.4

Page 4-34

Page 5-23.1
Page 5-24

Page 7-14.1
Page 7-28.1

/s/ Vincent McKeever, Acting

Neil F. Bogner
Head, Engineering and
Watershed Planning Unit

Distribution:

Conn-R. I.	65	N.Y	225
Del.	25	Ohio	600
Ky.	400	Pa.	320
Maine	125	Puerto Rico	75
Md.	165	Vt.	70
Mass.	50	Va.	280
N. H.	60	W. Va.	175
N. J.	150		

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service – Regional Technical Service Center
7700 West Chester Pike, Upper Darby, Pennsylvania 19082

July 29, 1971

ENGINEERING FIELD MANUAL NOTICE-RTSC-9

You recently received Washington ENGINEERING FIELD MANUAL NOTICE -4. Only the original copies of Chapter 2 are to be replaced. All supplemental pages (green sheets) are to be retained as work aids. The following page number changes will properly locate the green supplemental material within the revised Chapter 2.

Original Page No.	Revised Page No.
2-16.1 and 2- 16.2	2-30.1 and 2- 30.2
2-36.1 thru 2-36.14	2-50.1 thru 2- 50.14
2-83	2-77

Note also that the peak discharge values in Exhibit 2-11 are not now in agreement with those that would be obtained from the new ES-1027 . We plan to issue a revision of Exhibit 2-11 in the near future.

Neil F. Bogner
Head, Engineering and
Watershed Planning Unit

Distribution:

Conn-R. I.	65	N.Y	225
Del.	25	Ohio	600
Ky.	400	Pa.	320
Maine	125	Puerto Rico	75
Md.	165	Vt.	70
Mass.	50	Va.	280
N. H.	60	W. Va.	175
N. J.	150		

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service – Regional Technical Service Center
7700 West Chester Pike, Upper Darby, Pennsylvania 19082

August 18, 1971

ENGINEERING FIELD MANUAL NOTICE-RTSC-10

The following supplemental pages are to be added to the Engineering Field Manual.

Page 2-77, Exhibit 2-13
(replacing page 2-77 (formerly page 2-83)
Exhibit 2-11)

Pages 11-54.1 through 11-54.11
Pages 11-61 through 11-64

Pages 14-76.1 through 14-76.2
Page 14-108.3

Neil F. Bogner
Head, Engineering and
Watershed Planning Unit

Distribution:

Conn-R. I.	65	N.Y	225
Del.	25	Ohio	600
Ky.	400	Pa.	320
Maine	125	Puerto Rico	75
Md.	165	Vt.	70
Mass.	50	Va.	280
N. H.	60	W. Va.	175
N. J.	150		

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service – Regional Technical Service Center
7700 West Chester Pike, Upper Darby, Pennsylvania 19082

September 22, 1971

ENGINEERING FIELD MANUAL NOTICE-RTSC-11

The following supplemental pages are to be added to the Engineering Field Manual.

Pages 11-56.1 through 11-56.5	RTSC-NE-ENG-1114
Pages 11-56.7 through 11-56. 10	TSC-NE-ENG-1115

Pen and Ink Changes

Chapter 7

Page 7-28.1 (RTSC-NE-ENG-705) - change the exhibit number from Exhibit 7-4.1 to Exhibit 7-4.2 (distributed with Engineering Field Manual Notice-RTSC-7).

Page 7-28.1 (RTSC-NE-ENG-703) - change the exhibit number from Exhibit 7-4.2 to Exhibit 7-5.1 and change the page number from 7-28.1 to 7-28.2 (distributed with Engineering Field Manual Notice-RTSC-8).

Page 7-42.1 (RTSC-NE-ENG-710) - change the exhibit number from Exhibit 7-5.1 to Exhibit 7-5.2 (distributed with Engineering Field Manual Notice-RTSC-7).

Chapter 14

Page 14-104.47, Exhibit 14-6.2 (RTSC-NE-ENG-1430, sheet 5 of 12) - please change the grade in feet per foot from 0.00010 to 0.0010 (distributed with Engineering Field Manual Notice-RTSC-6).

Neil F. Bogner
Head, Engineering and
Watershed Planning Unit

Distribution:

Conn-R. I.	65	N.Y	225
Del.	25	Ohio	600
Ky.	400	Pa.	320
Maine	125	Puerto Rico	75
Md.	165	Vt.	70
Mass.	50	Va.	280
N. H.	60	W. Va.	175
N. J.	150		

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service – Regional Technical Service Center
7700 West Chester Pike, Upper Darby, Pennsylvania 19082

November 14, 1973

ENGINEERING FIELD MANUAL NOTICE-RTSC-12

The following supplemental pages are to be added to the Engineering Field Manual.

Page 11-65
Page 11-66
Page 11-67
Page 11-68 RTSC-NE-ENG-1130

These pages provide an alternate routing method for proportioning the principal spillway capacity and temporary storage requirements for ponds and reservoirs.

ARTHUR B. HOLLAND
Head, Engineering and
Watershed Planning Unit

Distribution:

Conn-R. I.	65	N.Y	225
Del.	25	Ohio	600
Ky.	400	Pa.	320
Maine	125	Puerto Rico	75
Md.	165	Vt.	70
Mass.	50	Va.	280
N. H.	60	W. Va.	175
N. J.	150		

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service – Northeast Technical Service Center
1974 Sproul Road, Broomall, Pennsylvania 19008

December 2, 1977

ENGINEERING FIELD MANUAL NOTICE - NETSC 13

The following supplemental pages are to be added to the Engineering Field Manual.

Page 2-77
Page 2-78 - TSC-NE-ENG 225
Page 2-79 - TSC-NE-ENG 225
Page 2-80 - TSC-NE-ENG 225

These pages provide an alternative method for estimating peak rates of runoff for watersheds from. 1 to 2000 acres in size. This method is the one used in Appendix D. TR-55.

Edgar L. Helmey
Head, Engineering Staff

Distribution:

CT-RI	65	NY	225
OE	25	PA	320
ME	125	PR	75
MD	165	YT	70
MA	50	VA	280
NH	60	WV	175
NJ	150		

UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service – Northeast Technical Service Center
1974 Sproul Road, Broomall, Pennsylvania 19008

February 9, 1978

ENGINEERING FIELO MANUAL NOTICE - NETSC 14

The following pen and ink changes should be made to the supplemental page numbers distributed by Notice - NETSC 13.

Page 2-77 - change to 2-78
Page 2-78 - change to 2-79
Page 2-79 - change to 2-80
Page 2-80 - change to 2-81

Edgar L. Helmey
Head, Engineering Staff

Distribution:

CT-RI	65	NY	225
OE	25	PA	320
ME	125	PR	75
MD	165	YT	70
MA	50	VA	280
NH	60	WV	175
NJ	150		

United States Department of Agriculture

Natural Resources Conservation Service

Northeast NTC
1974 Sproul Road
Broomall, PA 19008

July 21, 1980

ENGINEERING FIELD MANUAL NOTICE - NETSC 15

National Engineering Field Manual Notice 9 dated April 30, 1980 distributed a more accurate design procedure for vegetated spillways.

These changes superseded information in Exhibit 11-3.1 or TSC- NE- ENG-1110. Pages 11- 54.1 through 11-54.11 of the green sheets should be discarded.

Edgar L. Helmey
Head, Engineering Staff

Attachment

Distribution:

CT-RI	65	NJ	150
DE	25	NY	225
ME	125	PA	320
MD	165	PR	75
MA	50	VA	280
NH	60	VT	70
		WA	175

United States Department of Agriculture

Natural Resources Conservation Service

Northeast NTC
1974 Sproul Road
Broomall, PA 19008

July 28, 1980

ENGINEERING FIELD MANUAL NOTICE - NETSC 16

The following supplemental pages are to be added to the Engineering Field manual:

11-69	
11-70	
11-71	
11-72	Exhibit 11-10
11-73	Exhibit 11-10

These pages provide a method for sizing sedimentation ponds to when the detention time is known.

Edgar L. Helmey
Head, Engineering Staff

Attachment

Distribution:

CT-RI	65	NJ	150
DE	25	NY	225
ME	125	PA	320
MD	165	PR	75
MA	50	VA	280
NH	60	VT	70
		WA	175

United States Department of Agriculture

Natural Resources Conservation Service

Northeast NTC
1974 Sproul Road
Broomall, PA 19008

November 3, 1980

ENGINEERING FIELD MANUAL NOTICE - NETSC 17

The following supplemental pages are to be added to the Engineering Field Manual:

Page 2- 82	
Page 2- 83	TSC - NE- ENG 230
Page 2- 84	TSC - NE- ENG 230
Page 2- 85	TSC - NE- FNG 230

These pages provide an alternative method for estimating peak rates of runoff for watersheds from 1 to 2,000 acres in size on the Delmarva Peninsula .

Edgar L. Helmey
Head, Engineering Staff

Attachment

Distribution:

CT-RI	5	NJ	10
DE	25	NY	5
ME	5	PA	5
MD	165	PR	5
MA	5	VA	280
NH	5	WA	5

United States Department of Agriculture

Natural Resources Conservation Service

Northeast NTC
1974 Sproul Road
Broomall, PA 19008

January 5, 1981

ENGINEERING FIELD MANUAL NOTICE - NETSC 18

The following supplemental page is to be added to the Engineering Field Manual:

Page 2-30.3 TSC-NE-ENG 205

This page provides runoff curve numbers for hydrologic soil-cover complexes for conservation tillage and residue management.

Edgar L. Helmey
Head. Engineering Staff

Attachment

Distribution:

CT-RI	65	NJ	150
DE	25	NY	225
ME	125	PA	320
MD	165	VT	70
MA	50	VA	125
NH	60	WV	175

United States Department of Agriculture

Natural Resources Conservation Service

Northeast NTC
1974 Sproul Road
Broomall, PA 19013

August 18, 1981

ENGINEERING FIELD MANUAL NOTICE - NETSC-20

Attached are runoff curve numbers (CN'S) that can be used in design of conservation measures in disturbed surface mine areas and for gob piles. These should be inserted in Chapter 2, EFM. The CN's were developed from information furnished by ARS. Additional research is now underway. Should the results prove enlightening, they will be used to update the attached information.

Gerald E. Oman
Acting Head. Engineering Staff

Attachment

Distribution:

CT-RI	65	NJ	150
DE	25	NY	225
ME	125	PA	320
MD	165	VT	70
MA	50	VA	125
NH	60	WV	175

United States Department of Agriculture

Natural Resources Conservation Service

Northeast NTC
1974 Sproul Road
Broomall, PA 19008

April 20, 1982

ENGINEERING FIELD MANUAL NOTICE - NENTC 21

Enclosed is a copy of an expansion to Table B. Pipe Flow Structures with a discharge under 0.47 ft^3 /sec/acre. This chart can be used to calculate Qo when the volume of runoff is less than 1.0 watershed inch.

This information was developed by Edward Minneck. Assistant State Conservation Engineer in Ohio.

Lloyd E. Thomas
Acting Head, Engineering Staff

Enclosures

Distribution:

CT-RI	65	NJ	150
DE	25	NY	225
ME	125	PA	320
MD	165	VT	70
MA	50	VA	125
NH	60	WV	175

United States Department of Agriculture

Natural Resources Conservation Service

Northeast NTC
1974 Sproul Road
Broomall, PA 19008

May 12, 1982

ENGINEERING FIELD MANUAL NOTICE - NE NTC 22

Enclosed are copies of revised pages 11.56.7 through 11.56.10 titled Excavation Tables for Dugout Ponds. The New Jersey staff brought to our attention several errors in the old tables. The earth yardage figures were rounded to nearest 5 cubic yards and the capacity to nearest 1000 gallons. Since the trend is to build excavated ponds with warped surfaces and irregular waterlines. these tables will mainly be used for estimation purposes.

Remove and destroy old pages 11.56.7 through 11.56.10.

LLOYD E. THOMAS
Head, Engineering Staff

Enclosure

Distribution:

CT-RI	65	NJ	150
DE	25	NY	225
ME	125	PA	320
MD	165	VT	70
MA	50	VA	125
NH	60	WV	175

United States Department of Agriculture

Natural Resources Conservation Service

Northeast NTC
1974 Sproul Road
Broomall, PA 19008

June 16, 1983

ENGINEERING FIELD MANUAL NOTICE - NENTC 23

Remove and destroy page 2-30 .3 of the Engineering Field Manual and replace with enclosed page 2-30.3, NTC-NE-ENG. 205. The conservation tillage runoff curve numbers have been expanded to wider range of land use conditions.

James N. Krider
Head, Engineering Staff

Enclosure

Distribution:

CT-RI	65	NJ	150
DE	25	NY	225
ME	125	PA	320
MD	165	VT	70
MA	50	VA	125
NH	60	WV	175

United States Department of Agriculture

Natural Resources Conservation Service

Northeast NTC
160 E. 7th Street
Chester, PA 19013

February 19, 1986

ENGINEERING FIELD MANUAL NOTICE - NENTC 24

Attached are runoff curve numbers (CN's) that can be used in the design of conservation measures where vineyards occur. These should be inserted in Chapter 2 EFM. These values were developed from information furnished by SCS in California.

LLOYD E. THOMAS
Head, Engineering Staff

Enclosures

Distribution:

CT-RI	65	NJ	150
DE	25	NY	225
ME	125	PA	320
MD	165	VT	70
MA	50	VA	125
NH	60	WV	175

United States Department of Agriculture

Natural Resources Conservation Service

Northeast NTC
160 E. 7th Street
Chester, PA 19013

June 22. 1986

ENGINEERING FIELD MANUAL NOTICE - NENTC 25

Attached are runoff curve numbers (CN's) for porous pavement that can be used in the design of stormwater management structures in urban or urbanizing areas.

LLOYD E. THOMAS
Head, Engineering Staff

Enclosures

Distribution:

CT-RI	65	NJ	150
DE	25	NY	225
ME	125	PA	320
MD	165	VT	70
MA	50	VA	125
NH	60	WV	175

United States Department of Agriculture

Natural Resources Conservation Service

Northeast NTC
160 E. 7th Street
Chester, PA 19013

July 9. 1986

ENGINEERING FIELD MANUAL NOTICE - NENTC 26

Design data for vegetated spillways for retardances B, C-D are enclosed. This design data, while in a different format from Tables 3-B thru 3-D Hp and slope range for discharge, velocity and crest length, was developed using the same computer. This information supplements the information in Table 3-B thru 3-D or page 11-54g - 11-54i of the Engineering Field Manual. The information should be used for the proportioning of emergency spillways of farm ponds, storm water management structures, etc.

LLOYD E. THOMAS
Head, Engineering Staff

Enclosures

Distribution:

CT-RI	65	NJ	150
DE	25	NY	225
ME	125	PA	320
MD	165	VT	70
MA	50	VA	125
NH	60	WV	175

United States Department of Agriculture

Natural Resources Conservation Service

Northeast NTC
160 E. 7th Street
Chester, PA 19013

March 10, 1988

ENGINEERING FIELD MANUAL NOTICE - 27

The enclosed supplemental pages 4-35 through 4-64 have been issued by the NENTC. They are to be added to Chapter 4 of the Engineering Field Manual.

This supplement provides information on foundation analysis for structures used in resource management systems.

LLOYD E. THOMAS
Head, Engineering Staff

Enclosures

Distribution:

CT-RI	65	NJ	150
DE	25	NY	225
ME	125	PA	320
MD	165	VT	70
MA	50	VA	125
NH	60	WV	175

United States Department of Agriculture

Natural Resources Conservation Service

Northeast NTC
160 E. 7th Street
Chester, PA 19013

November 14,1989

ENGINEERING FIELD MANUAL NOTICE - 28 (REVISION)

The enclosed supplemental pages 4-65 through 4-70 have been issued by the NNENTC to replace page. 4-65 through 4-68 which were blurred in the reproduction process. These new sheets are to be added to Chapter 4 of the Engineering Field Manual.

This supplement provides a field log sheet for recording engineering soil data tor investigation. of sites for most on-farm type practices, including drainage, farm ponds, waste storage ponds, waste treatment lagoons, waste storage structures, borrow sites, etc.

The investigator should till out the log sheets completely when on-site. Checklists for descriptions of coarse - and fine-textured soils are provided as a ready reference on the back side of the form. The log is organized to be filled out from left to right; this information provides the basis for determining Group Name and Unified Class Symbol. Flow charts and concise tables of the criteria for describing various soil properties are provided on the second sheet to help classify the soil according to ASTM D-2488 standards (Unified Soil Classification System). For more information on the description and identification of soils refer to ASTM D-2488 (visual-manual procedure).

The sheet. should be duplicated on an as-needed basis.

LLOYD E. THOMAS
Head, Engineering Staff

Enclosures

Distribution:

CT-RI	35	NJ	75
DE	13	NY	100
ME	50	PA	140
MD	80	VT	35
MA	25	VA	50
NH	30	WV	70