United States Department of Agriculture

NRCS

Natural Resources Conservation Service
P.O. Box 2890
Washington, D.C. 20013

December 1, 2010

NATIONAL FOOD SECURITY ACT MANUAL (NFSAM)
180 – CPA
Circular No. 6, Part 527, Appendix

SUBJECT: CPA-Food Security Act Wetland Identification Procedures

Purpose. To provide wetland identification procedures to be used when making wetland determination and delineations for the Food Security Act of 1985, as amended.

Effective Date. This circular is effective upon receipt.

Explanation. Under the Food Security Act of 1985, as amended, NRCS has the sole responsibility to make wetland determinations and delineations for USDA program eligibility. The U.S. Army Corps of Engineers has responsibility for wetland jurisdiction under the Clean Water Act. NFSAM Circular No. 4, Part 514, Wetland Conservation Compliance (Guidance on Wetland Determinations and Delineation Methodology), dated December 23, 2009, provided notification that NRCS staff with the appropriate job-approval level who are listed on the State Conservationist's roster of employees approved to make wetland determinations should utilize the methods found in Part IV of the Corps of Engineers Wetland Delineation Manual (January 1987) and regional supplements to make wetland determinations.

There may be situations in which NRCS agency experts need to vary from the methods provided in the 1987 Corps manual and regional supplements due to the statutory requirements of the Food Security Act. This circular provides wetland identification procedures to be used in making wetland determinations and delineations for the Food Security Act of 1985, as amended. These procedures are based on the Corps method (Part IV of the Corps manual and regional supplements), but contain variances based on statutory and regulatory authorities provided for in the Food Security Act, as amended.

Policy. This amendment clarifies procedures in making wetland determinations and delineations for the Food Security Act of 1985, as amended. These procedures should be utilized for wetland determinations that commence after the date of receipt.

Contact. Questions regarding this policy should be directed to Eric West, National Wetlands and Highly Erodible Lands Compliance Specialist, Ecological Sciences Division, at (202) 690-0249 or by e-mail at eric.west@wdc.udsa.gov.

/s/ Michael D. Hubbs for

C. WAYNE HONEYCUTT, Ph.D.
Deputy Chief
Science and Technology

Attachment

Food Security Act
Wetland Identification Procedures
(2010)

Table of Contents

(PART I) INTRODUCTION 3

(PART II) DEFINITIONS 3

(PART III) FSA WETLAND DEFINITION 6

(Part IV) THE INDICATOR-BASED APPROACH AS USED IN THE FSA WETLAND IDENTIFICATION METHODS 7

(Part V) FSA Wetland Identification Methods 8

SUBPART A: GENERAL FSA VARIANCES TO THE CORPS METHODS 9

SUBPART B: DISCUSSION AND FSA VARIANCES TO THE CORPS MANUAL 9

Corps Manual Section A: Introduction 9

Corps Manual Section B: Preliminary Data Gathering and Synthesis 10

Corps Manual Section C: Selection of Method 10

Corps Manual Section D: Routine Determinations 10

Corps Manual Section E: Comprehensive Determination 12

Corps Manual Section F: Atypical Situations 12

Corps Manual Section G: Problem Areas 13

SUBPART C: DISCUSSION AND FSA VARIANCES TO THE REGIONAL SUPPLEMENTS TO THE CORPS MANUAL 13

Supplements Chapter 1: Introduction 14

Supplements Chapter 2: Hydrophytic Vegetation Indicators 14

Supplements Chapter 3: Hydric Soil Indicators 15

Supplements Chapter 4: Wetland Hydrology Indicators 16

Supplements Chapter 5: Difficult Wetland Situations 17

REFERENCES 19

(PART I) INTRODUCTION

(1-1) NRCS conducts wetland determinations, delineations, or both for the purpose of assisting the Department of Agriculture (USDA) program participants in complying with the wetland conservation (WC) provisions of the Food Security Act of 1985 (FSA), as amended. The wetland identification procedures detailed in this section (FSA wetland identification procedures) are for the sole purpose of identifying FSA wetlands.

(1-2) Unless otherwise noted, the use of the term "act" in this section refers to the FSA, "statute" refers to 16 U.S.C. sections 3801 and 3821-3824, and the terms "regulation" and "rule" refer to 7 CFR part 12, "Highly Erodible Land and Wetland Conservation."

(1-3) The Secretary of Agriculture directed NRCS to "develop and utilize offsite and onsite wetland identification procedures" (7 CFR section 12.30(a)(4)).

(1-4) Part IV, "Methods," of the 1987 Corps of Engineers Wetlands Delineation Manual (Wetlands Research Program Technical Report Y-87-1) and the approved Corps of Engineers regional supplements to the manual are the foundations to the FSA wetland identification procedures. Part IV of the Corps manual and supplements are collectively referred to as "Corps methods."

(1-5) In addition to the offsite procedures provided in the Corps methods, States will continue to have the option of utilizing State mapping conventions or State offsite methods as detailed in part V, subpart B, of these procedures.

(1-6) Because the act, statute, and regulation provides specific definitions (e.g., wetland, hydric soils, and hydrophytic vegetation) and guidance for implementation of the FSA WC provisions that differ from those used by the Corps for implementation of the Clean Water Act, certain variances to the Corps methods are listed. The definitions and concepts provided in the statute and regulation take precedence over what is provided in the Corps methods as detailed in the "FSA Variances" found in Part V of these procedures.

(PART II) DEFINITIONS

(2-1) The following are definitions as applied to this section.

(2-2) Agency Expert.—An individual granted job approval authority by a State Conservationist to make technical decisions related to the WC provisions. Job approval authority criteria are found in Title 180, National Food Security Act Manual (NFSAM) Part 514.1(B). All agency experts must be listed on a roster of qualified employees, maintained by the State Conservationist and filed in section III of the Field Office Technical Guide.

(2-3) Certified Wetland Determination or Delineation.—A wetland determination or delineation that is of sufficient quality to make a determination of ineligibility for program benefits (7 CFR

section 12.30(c)(1)). All final FSA determinations and delineations made after July 3, 1996, are certified determinations or certified delineations.

(2-4) Comparison Site.—A site in the local area that has the same hydric soil map unit as the subject site. The comparison site is used to make a decision on the presence of hydrophytic vegetation when the subject site is altered and the plant community that occurred prior to the alteration cannot be determined from onsite inspection or remote sensing and other remote data sources. The comparison site should support hydrologic conditions that are similar to what existed on the subject site prior to the alteration.

(2-5) Diagnostic Factor (Factor).—A physical characteristic common to all wetlands that is used in the identification of a wetland. The three diagnostic factors are hydric soils, hydrophytic vegetation, and wetland hydrology. In the Corps manual, these are referred to as "diagnostic environmental characteristics" or "parameters," whereas they are referred to as "factors" in the supplements.

(2-6) Drainage.—Any human-induced, onsite or offsite, activity that results in an altered depth, duration, frequency, or timing of the hydrologic condition (inundation or saturation by surface or ground water) of the site.

(2-7) Growing Season.—The portion of the year when onsite observations of the following biologic activity indicators are present: 1) above-ground growth and development of vascular plants as per the applicable Corps Regional Supplement is present, and/or 2) the soil temperature meets the criteria in the applicable Corp Regional Supplement (see Chapter 4). [Note: For the Alaska Region, growing season dates are determined by evaluating vegetation green-up, maintenance, and senescence at the site location, based on direct observation or remote-sensing methods; also for the Caribbean Islands Region and the Hawaii and Pacific Islands Region, the growing season is year round or 365 days long.] If onsite data gathering is not practical, growing season dates may be approximated by using WETS tables available from the NRCS National Water and Climate Center to determine the median dates of 28°F (-2.2°C) air temperatures in spring and fall based on long-term records gathered at the nearest appropriate National Weather Service meteorological station. [Note: WETS data in the Alaska Region is impractical.]

(2-8) Hydric soil.—"means soil that, in its undrained condition, is saturated, flooded, or ponded long enough during a growing season to develop an anaerobic condition that supports the growth and regeneration of hydrophytic vegetation" (16 U.S.C. section 3801(a)(12)).

(2-9) Hydrophytic vegetation.—"means a plant growing in (A) water; or (B) a substrate that is at least periodically deficient in oxygen during a growing season as a result of excessive water content" (16 U.S.C. section 3801(a)(13)).

(2-10) Normal Circumstances (NC).—The soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed (7 CFR section 12.31(b)(2)(i)). For FSA wetland identification purposes, this concept is the consideration of normal and abnormal climate-based site changes and natural and artificial disturbance-based site changes that can create wetland identification challenges. "Normally present" is further

explained as the vegetative, soil, and hydrologic conditions that occur under both of these conditions:

a. Without regard to whether the site has been subject to drainage actions (see drainage definition) after December 23, 1985, and without regard to whether the vegetation has been removed or significantly altered.
b. During the wet portion of the growing season under normal climatic conditions (normal environmental conditions).

(2-11) Normal Environmental Conditions (NEC).—The climate-based concept of NC, defined as the physical conditions, characteristics (hydrology, soil, and vegetation), or both that would exist in a typical situation (2-12) on a site during the wet portion of the growing season in a normal climatic year.

(2-12) Sampling Unit.—The smallest portion of the area subject to the wetland determination, delineation, or both for which consideration is made regarding a wetland determination decision. In Part IV of the Corps manual, this unit is referred to as a unique "plant community." In the supplements, the concept is referred to interchangeably as "plant community," "vegetative unit," and "landscape unit." Sampling units are selected based on having (or would have) similar plant communities resulting from similar soil properties, hydrologic regimes, and landscape positions. Each sampling unit differs (landscape position, hydrology, soils, and vegetation) from other sampling units within the subject area. In the second step of the FSA wetland determination process (determination of FSA wetland type or assignment of the wetland conservation label), sampling units may be further divided or combined.

(2-13) State Mapping Conventions (SMC).—Methods developed by States in response to the 1994 Agricultural Wetland memorandum of agreement. SMCs are unique as they were developed cooperatively between the Corps, Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), and NRCS for consistent use for Clean Water Act and FSA purposes.

(2-14) State Offsite Methods (SOSM).—Methods developed by NRCS for the sole purpose of supplementing the offsite methodology in the Corps manual for use in identifying wetlands for FSA purposes. The adoption process for State offsite methods will include solicitation of State Technical Committee recommendations. These methods may replace or supplement methods provided for in SMCs. The use of "Hydrology Tools for Wetland Determination" contained in Title 210, National Engineering Handbook (NEH), Chapter 19, Part 650 shall be considered to be a SOSM. The SOSM must contain the objective criterion that defines wetland hydrology for each of the hydrology tools in Chapter 19.

(2-15) Typical and Atypical Situations.—A typical situation is one in which neither of the following occurred:

a. An alteration (removal or change) in the plant community such that a decision cannot be made using routine methods if the site would support prevalence of hydrophytic vegetation if undisturbed or in the absence of a post-12/23/1985 drainage action.
b. A post-12/23/1985 drainage action that has altered the normal soil or hydrologic conditions.

An atypical situation is one that does meet either "a" or "b" above.

(2-16) Undrained Condition.—This phrase is used in the FSA hydric soils definition. A hydric soil may be either drained or undrained. In the FSA hydric soil definition, a hydric soil in its undrained condition supports hydrophytic vegetation. A drained hydric soil is one in which sufficient ground or surface water has been removed by artificial means.

(2-17) Wetland Delineation.—Outlining the boundaries of a wetland determination on aerial photography, digital imagery, other graphic representation, or on the land.

(2-18) Wetland Determination.—A technical decision regarding whether or not an area is a wetland, including identification of appropriate wetland type (WC label) and size.

(2-19) Wetland Hydrology.—Inundation or saturation of the site by surface or groundwater during a growing season at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation.

(2-20) Wetland Identification.—The technical decision regarding whether or not an area is a wetland (first step in the FSA wetland determination process). This does not include the determination of the FSA wetland type (assignment of a WC label).

(2-21) Wetland Type.—In the regulation, the term "wetland type" is used to refer to the FSA wetland conservation labels assigned to a subject area based on the definition of wetland types in 7 CFR section 12.2(a) and exemptions provided in 7 CFR section 12.5(b).

(PART III) FSA WETLAND DEFINITION

(3-1) For FSA purposes, the term "wetland" is defined in 16 U.S.C. section 3801(a)(18) as land that—

A) Has a predominance of hydric soils.
B) Is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.
C) Under normal circumstances supports a prevalence of such vegetation. For the purposes of FSA and any other act, this term does not include lands in Alaska indentified as having high potential for agricultural development that have a predominance of permafrost soils.

(3-2) This definition is unique to the statute, and all decisions regarding the identification of FSA wetlands must be based on this definition. The statute adds further clarity to the concept of an FSA wetland by defining "hydric soil" and "hydrophytic vegetation" (as those concepts will be applied to the WC provisions) and by the specific direction given to the Secretary as to the hydric soils and hydrophytic vegetation criteria that must be developed by USDA (16 U.S.C. section 3801(b)(1)).

- Hydric soil "means soil that, in its undrained condition, is saturated, flooded, or ponded long enough during a growing season to develop an anaerobic condition that supports the growth and regeneration of hydrophytic vegetation" (16 U.S.C. section 3801(a)(12)).
- Hydrophytic vegetation "means a plant growing in (A) water; or (B) a substrate that is at least periodically deficient in oxygen during a growing season as a result of excessive water content" (16 U.S.C. section 3801(a)(13)).

(3-3) "Normal circumstances" as used in the FSA wetland definition requires that decisions be based not on anomalies, but rather what would normally occur on the site during NEC.

(3-4) In the Corps manual, the concept of "normal" is separated into the disturbance-based concept of normal circumstances (typical/atypical situations) and the climate-based concept of normal circumstances called "normal environmental conditions" (NEC). NRCS adopts this concept that a determination of "normal" is a two-pronged consideration.

(3-5) For FSA purposes, the agency expert will determine the normal circumstances (NC) of the site as those that would be expected to occur—

(1) In the absence of post-12/23/1985 drainage actions that alter the normal soil or hydrologic conditions.
(2) In the absence of an alteration (removal or change) in the plant community such that a decision cannot be made if the site would support a prevalence of hydrophytic vegetation if undisturbed.
(3) During the wet portion of the growing season during a year experiencing normal weather patterns.

(Part IV) THE INDICATOR-BASED APPROACH AS USED IN THE FSA WETLAND IDENTIFICATION METHODS

(4-1) FSA wetlands are identified by direct evidence (observation of conditions under NC) or indirect evidence (indicators of what the site condition would be under NC).

(4-2) When a site visit is required, agency staffs cannot always visit the subject site during optimum field conditions (under NC). In these situations, indicators are used to render a decision. An indicator is indirect evidence of what the site conditions would be under NC and may be obtained from remote resources, site visits, or both.

(4-3) In the absence of direct evidence, the decision if a site meets a particular diagnostic factor (wetland hydrology, prevalence of hydrophytic vegetation, and a predominance of hydric soils) is assisted by confirmation of the presence of indicators. The use of indicators to predict the conditions that would occur under NC is referred to as the "indicator-based approach to wetland identification." The Corps, EPA, and NRCS utilize the indicator-based approach to assist in decision-making. The ultimate decision if a site meets the FSA criteria for any of the three diagnostic factors is made from a preponderance of evidence, best professional judgment, and the FSA definitions, criteria, or both of hydrophytic vegetation, hydric soils, and wetland hydrology.

(4-4) The decision if the site is an FSA wetland is ultimately rendered based on the determination of a presence or absence of each of the three factors under NC. Areas determined to support wetland hydrology, a prevalence of hydrophytic vegetation, and a predominance of hydric soils (all under NC), as each factor is defined by the FSA, are wetlands subject to the WC provisions of the act.

(Part V) FSA Wetland Identification Methods

Act

(5-1) Section 1201(b) of the FSA requires that "The Secretary shall develop (1) criteria for the identification of hydric soils and hydrophytic vegetation; and (2) lists of such soils and such vegetation." (Note: Applicable statute cross-reference citations are found at 16 U.S.C. sections 3801 and 3821-3824.)

Regulations

(5-2) In 7 CFR section 12.30(a)(4), the Secretary directs NRCS to "develop and utilize offsite and onsite wetland identification procedures." Further, in section 12.31, "Onsite Wetland Identification Criteria," the Secretary provides additional guidance to NRCS on processes and technical resources for identifying and determining a predominance of hydric soils and the prevalence of hydrophytic vegetation.

Policy

(5-3) NRCS meets the departmental regulation (12.30(a)(4)) by the adoption of:

(1) The wetland identification methods provided in Part IV, "Methods," of the Corps manual and the "flexibility provisions" provided in Part I, "Introduction," paragraph 23. Any reference to the Corps manual refers to the online version available during the adoption of these procedures.

(2) Corps Regional Supplements are available online at http://www.usace.army.mil/CECW/Pages/reg_supp.aspx (only non-draft versions will be used). If an area is not covered by a supplement, then the hydrophytic vegetative indicators (paragraph 35) and wetland hydrology indicators (paragraph 49) provided in Part III, "Characteristics and Indicators of Hydrophytic Vegetation, Hydric Soils, and Wetland Hydrology," of the Corps manual will be utilized. Additionally, in all circumstances NRCS staffs may use—

i. The "Hydrology Tools for Wetland Determination" contained in Title 210, National Engineering Handbook (NEH), Chapter 19, Part 650, to base a decision on the hydrology factor if objective criteria for wetland hydrology are contained in the State offsite methods.

ii. The latest version of the "Field Indicators of Hydric Soils in the United States" (currently USDA Natural Resources Conservation Service 2010) to base a decision on the hydric soils factor.

(3) Variances to the Corps Methods Discussed and Presented in Subparts A through C of this Part.—These variances are based on the unique statutory and regulatory requirements associated with the FSA, as well as unique challenges associated with the identification of wetlands on lands associated with agricultural operations.

SUBPART A: GENERAL FSA VARIANCES TO THE CORPS METHODS

(5-4) In the statute and regulations, there are situations that are specific to wetland identification as authorized under FSA. These situations must be considered when developing any wetland determinations or delineations for FSA purposes. They are detailed as follows:

- 7 CFR section 12.6(c)(6).—An onsite determination as to whether an area meets the applicable criteria must be made by an NRCS representative if he or she disagrees with the determination made under paragraph (c)(5) of this section or if the information available to the NRCS representative is insufficient to make an offsite determination.
- 7 CFR section 12.6(c)(7).—An onsite determination, where applicable, will be made by the NRCS representative as soon as possible following a request for such a determination, but only when site conditions are favorable for the evaluation of soils, hydrology, or vegetation.

Note: An onsite determination (or onsite inspection or site visit) does not necessarily mean the exclusive application of onsite methods or the exclusive use of onsite indicators. In keeping with the statute at 16 U.S.C. section 3822(a)(5) and 16 U.S.C. section 3822(c), an onsite inspection is required upon appeal or prior to the withholding of benefits. This onsite inspection or site visit might be conducted merely to collect additional information about planned or completed manipulations, or it may be conducted to verify remotely sensed data or offsite indicators when the decision was rendered from the exclusive use of offsite methods, among many other reasons.

- 7 CFR section 12.6(c)(8).—With regard to wetland determinations, if an area is continuously inundated or saturated for long periods of time during the growing season to such an extent that access by foot to make a determination of predominance of hydric soils or prevalence of hydrophytic vegetation is not feasible, the area will be determined to be a wetland.

SUBPART B: DISCUSSION AND FSA VARIANCES TO THE CORPS MANUAL

Corps Manual Section A: Introduction

(5-5) In the application of the Corps manual, flexibility has been provided for by the Corps. The Corps provides that the user should consider the quantity and quality of existing information and the subject site's physical complexity prior to the selection of any method presented, especially with respect to sampling design. Standard sampling methodology must be modified if it does not accurately assess the site; however, the basic approach for making wetland determinations should not be altered (i.e., the determination should be based on the vegetative, soil, and hydrologic characteristics of the area in question). Any variation from the sampling methods should be fully documented by the agency expert and the following caution from the Corps manual should be followed: Modification of "*...sampling procedures requires that the user be familiar with wetlands of the area and use his or her training, experience, and good judgment in making wetland determinations* (Environmental Laboratory, 1987)."

(5-6) **FSA Variance**.—None.

Corps Manual Section B: Preliminary Data Gathering and Synthesis

(5-7) In this section, the Corps provides a list of remote data sources that may prove of value when deciding which method is most appropriate. Remote resources can serve as indicators if the routine Level-1 method, "Onsite Inspection Unnecessary," is selected. USDA has compiled an array of aerial imagery representing decades of site conditions during the growing season. Additionally, quality light detection and ranging (i.e., LiDAR) data can be a valuable tool in the identification of some wetlands.

(5-8) Although the Corps manual does not require preliminary data gathering, reviews of such data, regardless of the sampling method used, can provide an opportunity to "view" the subject site over many years and conditions and will add to the information used in decision-making at the diagnostic factor level.

(5-9) **FSA Variance.**—Because NC is determined based on pre- and post-12/23/1985 drainage actions, agency experts must utilize preliminary data gathering and synthesis in determining whether a typical or atypical situation exists.

Corps Manual Section C: Selection of Method

(5-10) The Corps provides for two major approaches: the routine approach and the comprehensive approach. The various options under the routine approach provide for adequate means to identify an FSA wetland.

(5-11) **FSA Variance.**—The comprehensive approach will not be used for FSA determinations.

Corps Manual Section D: Routine Determinations

(5-12) Within the routine approach, Part IV, Section C of the Corps manual describes three "levels":

- Level 1 – Onsite Inspection Unnecessary.—In this level, remote resources (offsite methods and indicators) are utilized to make a decision on each of the three diagnostic factors for a sampling unit.
- Level 2 – Onsite Inspection Necessary.—In this level, onsite data (onsite methods and indicators) are used to make a decision on each of the three diagnostic factors for a sampling unit.
- Level 3 – Combination of Levels 1 and 2.—Utilization of Level 3 may include the use of offsite methods for one sampling unit and onsite methods for another sampling unit. A Level-3 effort may also include the use of offsite methods for one factor of a sampling effort, while using onsite methods for another factor of that same sampling unit.

(5-13) **Note:** These levels are first introduced by the Corps in Part I: Introduction, paragraph 21.

Each level is discussed in more detail below:

(5-14) **Onsite Inspection Unnecessary (Level 1 Determination)**.—This level (offsite methods) allows for decisions regarding each of the three diagnostic factors without collecting field data or using onsite indicators. The preponderance of evidence collected from remote resources is then used in deciding if the sampling unit supports any of the three diagnostic factors (hydric soils, hydrophytic vegetation, and wetland hydrology).

(5-15) This subsection is particularly useful for obvious wetland and obvious nonwetlands where the NRCS agency expert may determine that a decision can be rendered for a sampling unit without collecting any onsite data or indicators. A site visit may be conducted for verification of offsite indicators, but no field data is collected.

(5-16) **FSA Variances**.—Agency experts will use Part IV, section D, subsection 1, "Onsite Inspection Unneccessary," of the Corps manual with the following variances:

- (5-17) States are provided an option of developing and approving additional guidance to a Level-1 determination, as well as using any additional guidance currently in place. This Level-1 additional guidance is referred to as State Offsite Methods or State Mapping Conventions (refer to Part II, "Definitions"). These documents provide locally specific remote sensing methods that may be used to address unique problems associated with wetland identification on agricultural landscapes.

- (5-18) For some sampling units, a soil survey may be sufficient to determine that the site supports a predominance of hydric soils. This use of soils mapping and hydric soils lists is supported by regulation (7 CFR section 12.31(a)) as the sole indicator for a determination of a predominance of hydric soils.

(5-19) **Onsite Inspection Necessary (Level-2 Determination)**.—The Corps provides for two routine Level-2 methods: Areas Equal To or Less Than 5 Acres in Size and Areas Greater Than 5 Acres in Size.

(5-20) **FSA Variance**.—Agency experts will use section D, subsection 2, "Onsite Inspection Necessary," of the Corps manual with the following variance:

- (5-21) The 5-acre threshold is only a guide based on the assumption that areas greater than 5 acres will be too complex or too difficult to divide visually into different vegetative communities. For subject sites where differing areas (of soils, vegetation, or hydrology) can be easily separated into different sampling units as described in the Areas Equal To or Less Than 5 Acres in Size method, there is no advantage in using the Areas Greater Than 5 Acres in Size method. For the majority of FSA wetland determinations and delineations, the Areas Equal To or Less Than 5 Acres in Size method will be appropriate, regardless of size.

(5-22) **Combination of Levels 1 and 2 (Level-3 Determination)**.—This routine method allows for the use of a combination of offsite and onsite methods. Level 1 could be used for one sampling unit or factor, while Level 2 is used for another unit or factor. For example, onsite methods (Level 2) are used for vegetation and soils, while wetland hydrology is confirmed from

remote sources (Level 1). This method is particularly suitable for agricultural lands where suitable comparison sites are lacking and field indicators have been removed by current or past cultural practices and for sites where the development and persistence of indicators are problematic (i.e., problem soils, seasonal depressional wetlands).

(5-23) **FSA Variance.**—None.

Corps Manual Section E: Comprehensive Determination

(5-24) The comprehensive method was developed by the Corps for sites that are very complex, when the determination requires rigorous documentation, or both. The Corps provides litigation as an example of when this is needed. With the flexibility provisions provided for in the Corps manual, agency experts have the opportunity to increase the sampling intensity to meet the project needs or site conditions; the requirement for the comprehensive method as a standard method has no advantage.

(5-25) **FSA Variance.**—The comprehensive approach will not be used for FSA determinations.

Corps Manual Section F: Atypical Situations

(5-26) The Corps manual directs the user to utilize these methods when the site has been significantly disturbed, making the decision more difficult (drainage or vegetation removed or significantly altered). For FSA determinations, all hydrologic alterations that occurred prior to (and existed on the date of) December 23, 1985, are "grandfathered" by the statute. Thus, the hydrologic or soil conditions that have resulted from the pre-1985 alteration (e.g., drainage, filling, leveling, etc.) are considered NC for FSA purposes. The disturbance portion of NC is not met when a post-12/23/1985 alteration (vegetation, soils, or hydrology) is significant enough to potentially alter the wetland identification decision. This typically occurs when the alteration removed indicators of wetland hydrology, soils, vegetation, or some combination of these.

(5-27) **Note:** The climate-based considerations included in the FSA concept of NC are addressed in the discussion of section G of the Corps manual, below.

(5-28) **FSA Variances.**—NRCS will use the date of December 23, 1985, when making a decision on the disturbance-based consideration portion of NC as it relates to the soils and hydrology diagnostic factors.

- (5-29) The terms "unauthorized activities" and "unauthorized discharges" in paragraph 71(a) are replaced with the term "Recent (post-12/23/1985) activities or actions."
- (5-30) For vegetation, when using the Corps manual *adjacent vegetation* data source (Corps manual paragraph 73, STEP 3 (d)), NRCS will collect vegetative data from a comparison site "in the local area on the same hydric soil map unit," in accordance with 7 CFR section 12.31(b)(2)(ii). The comparison site should support hydrologic conditions that are similar to what existed on the altered site prior to the drainage. Long-term hydrologic monitoring, as referenced in the Corps methods, is not required. **Note:** The

adjacent vegetation data source is only one of several options provided for making a decision on the hydrophytic vegetation factor in section F.

- (5-31) For vegetation, when using the *SCS records* data source (Corps manual paragraph 73, STEP 3 (e)), the agency expert will consider NRCS records, such as ecological site descriptions and data from NRCS reference sites, as potential data sources in addition to soil survey data.
- (5-32) When using section F, subsection 4, "Man-Induced Wetlands," the agency expert will disregard paragraph 76, STEP 2.

(5-33) **Note:** In the supplements, the Corps combines their concepts of NEC and NC into Chapter 5 - Difficult Wetland Situations. In addition to problems associated with NC and NEC, the Corps includes situations where indicators are absent for other reasons (i.e., soil properties do not allow for the development or expression of a hydric soil field indicator). The information in chapter 5 of the supplements is designed to support both sections F and G and add guidance for other wetland identification problems not associated with disturbance or climate.

Corps Manual Section G: Problem Areas

(5-34) The agency expert will utilize section G when site data are determined to **not** be reflective (false positive or false negative indicators) of NEC. Section G provides examples of common problem situations related to climate-based site changes and includes a four-step procedure to address the situations. The Corps manual clearly encourages and allows for the use of best professional judgment ("personal ecological knowledge," "basic knowledge of the ecology of the particular community types") (Environmental Laboratory, 1987) in the implementation of section G.

(5-35) **Note:** In the supplements, the Corps combines their concepts of NEC and NC into Chapter 5, "Difficult Wetland Situations." In addition to problems associated with NC and NEC, the Corps includes situations where indicators are absent for other reasons (i.e., soil properties do not allow for the development or expression of a hydric soil field indicator). The information in chapter 5 of the supplements is designed to support both sections F and G and add guidance for other wetland identification problems not associated with disturbance or climate.

(5-36) **FSA Variance**.—None.

SUBPART C: DISCUSSION AND FSA VARIANCES TO THE REGIONAL SUPPLEMENTS TO THE CORPS MANUAL

(5-37) The Corps has nearly completed an effort to develop supplements to the Corps manual in order to address regional differences in diagnostic characteristics of wetlands. In their release, the Corps stressed that regional supplements are not stand-alone documents, but rather are to be used in conjunction with the Corps manual. Portions of the supplements replace portions of the Corps manual, while other portions of the supplements are provided as alternative guidance or methods only.

(5-39) **Discussion**.—In Chapter 1, "Introduction," of each supplement, the Corps provides table 1 to clarify which sections of the Corps manual are replaced by the supplement. The Corps explains that other guidance, methods, procedures, or some combination of these given in the supplements (e.g., sampling recommendations) are intended to augment the Corps manual, but do not supersede or replace what is presented in the manual.

(5-40) **FSA Variance**.—None.

Supplements Chapter 2: Hydrophytic Vegetation Indicators

(5-41) Act.—The portions of the FSA that are related to hydrophytic vegetation are contained in Title XII, Subtitle A:

- The act defines hydrophytic vegetation to mean "a plant growing in (A) water; or (B) a substrate that is at least periodically deficient in oxygen during a growing season as a result of excessive water content" (section 1201(a)(13)).
- Section 1201(b) of the act directed the Secretary to develop criteria for identifying and lists of such vegetation to assist in the wetland identification process.

(5-42) Regulation.—The portions of 7 CFR part 12 related to hydrophytic vegetation are as follows:

- Section 12.2.—The Secretary defined hydrophytic vegetation identically to what was provided by statute.

- Section 12.31(b)(1).—"A plant shall be considered to be plant species that occurs in wetland if such plant is listed in the National List of Plant Species that Occur in Wetlands." Thus, for FSA purposes, a plant occurring on a site and listed on the National Plant List may be considered hydrophytic vegetation. For FSA purposes, the question is not as much the species, but rather how individual plants are behaving within any one sampling unit. The indicators provided for in regional supplements may be used when direct evidence and observations cannot confirm if a plant is growing in water or growing in a substrate deficient in oxygen due to excessive water content, but do not take precedence over the FSA definition of hydrophytic vegetation or what is provided for in section 12.31(b).
- The Secretary met the statutory mandate of developing a list of hydrophytic vegetation by adopting the USFWS*National List of Plant Species that Occur in Wetlands*.
- Section 12.31(b)(3).—The Secretary adds that the determination of prevalence of hydrophytic vegetation will be "made in accordance with the current Federal wetland delineation methodology in use by NRCS at the time of the determination."

(5-38) The following is an overview of each of the five common sections contained within each supplement. Additionally, a brief discussion of each chapter is provided with comments on how NRCS will vary (variances) from what is provided by the Corps in their supplements.

Supplements Chapter 1: Introduction

(5-43) Discussion.—NRCS has developed these procedures as the current Federal wetland delineation methodology in use by NRCS for FSA purposes.

(5-44) As an indicator of hydrophytic vegetation, agency experts will utilize the most current wetland plant list authorized for use by the applicable supplement. This is supported by discussion in the preamble of the following rule: *"Section 12.31(b)(3) is amended to provide that the determination of prevalence of hydrophytic vegetation will be made in accordance with the current Federal wetland delineation methodology in use at the time of the determination. This change assures that the four agencies will utilize consistent and up-to-date technical standards and criteria."*

(5-45) **Note:** In the supplements, alternative vegetative sampling methods are provided to what is presented in the Corps manual. As explained in chapter 1, these sampling methods do not replace what is in the Corps manual, but rather are alternative methods. The agency expert should select the sampling intensity and method that best characterizes the plant community, soils, or hydrology. Standard sampling methodology provided in the Corps manual allows for modification if it is determined that it does not accurately assess the site. All variations should be documented by the agency expert.

(5-46) **FSA Variances.**—Agency experts will utilize chapter 2 to assist in the determination of a prevalence of hydrophytic vegetation with the following variances:

- (5-47) The FSA hydrophytic vegetation definition and the guidance provided for in 7 CFR section 12.31(b) will take precedence over what is provided for in chapter 2.
- (5-48) As an alternative to the indicators in chapter 2, the hydrophytic vegetation factor can be verified directly if the site visit is conducted under NC by direct observation that the FSA hydrophytic vegetation definition has been met (plants growing in water or plants growing in a substrate that is periodically deficient in oxygen).

Supplements Chapter 3: Hydric Soil Indicators

(5-49) **Act.**—In Title XII, Subtitle A, the FSA provides two concepts, mandates, or both related to hydric soils.

- Section 1201(a)(12).—Defines hydric soil as "soil that, in its undrained condition, is saturated, flooded, or ponded long enough during a growing season to develop an anaerobic condition that supports the growth and regeneration of hydrophytic vegetation."
- Section 1201(b).—Directs that NRCS will develop criteria and lists of such soils.

(5-50) **Regulations.**—Portions of the regulation that relate specifically to hydric soils are found in the following:

- Section 12.2.—USDA repeated the FSA hydric soil definition.
- Section 12.31(a)(1).—"NRCS shall identify hydric soils through the use of published soil maps which reflect soil surveys completed by NRCS or through the use of onsite reviews. If a published soil map is unavailable for a given area, NRCS may use

unpublished soil maps which were made according to the specifications of the National Cooperative Soil Survey or may conduct an onsite evaluation of the land."

(5-51) Discussion.—By regulation, NRCS is afforded the opportunity to utilize two processes to determine if this criterion is met: utilization of soil maps, lists, or both, or an onsite evaluation.

(5-52) If the agency expert determines that the soil map, list, or both are sufficient, then it is considered a Level-1 or Level-3 determination, decision, or both (refer to part V, subpart B, section D of these procedures). If the "onsite evaluation" option is selected for a determination of hydric soils, then the hydric soil decision will be based on field observations involving one of the following:

(1) Use of the most recent version of the Field Indicators of Hydric Soils in the United States with the supporting information in chapters 3 and 5 of the appropriate regional supplement.
(2) Verification under NC that the FSA hydric soil definition is met.

(5-53) **FSA Variances**.—Agency experts will utilize chapter 3 to make the determination of a predominance of hydric soils with the following variances:

- (5-54) If soil mapping and hydric soil lists are used, the criteria in 7 CFR section 12.31(a)(2) will be followed:
  - NRCS must determine whether a sampling unit has a predominance of hydric soils that are inundated or saturated, as follows:
    - If a soil map unit has hydric soil as all or part of its name, that soil map unit or portion of the map unit related to the hydric soil will be determined to have a predominance of hydric soils.
    - If a soil map unit is named for a miscellaneous area that meets the criteria for hydric soils (i.e., riverwash, playas, beaches, or water) the soil map unit will be determined to have a predominance of hydric soils.
    - If a soil map unit contains inclusions of hydric soils, that portion of the soil map unit identified as hydric soil will be determined to have a predominance of hydric soils.
- (5-55) In chapter 3 of every supplement, the Corps provides the following guidance: "Indicators are not intended to replace or relieve the requirements contained in the definition of a hydric soil. Therefore, a soil that meets the definition of a hydric soil is hydric whether or not it exhibits indicators (U.S. Army Corps of Engineers, 2008)." Since the FSA hydric soil definition differs from that used by the Corps, EPA, and the National Technical Committee of Hydric Soils, the agency expert will use the FSA definition when applying this principle.

Supplements Chapter 4: Wetland Hydrology Indicators

(5-56) Act.—The portion of the act concerning hydrology is solely found in the FSA wetland definition, that a wetland "...is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation...." The act does not specifically define wetland hydrology, nor does it direct the Secretary to link FSA wetland

identification methodology to the consideration of hydrology, as was done with hydric soils and hydrophytic vegetation.

(5-57) Regulation.—In adherence to the statute, only soils and vegetation are listed in section 12.31, "Onsite Wetland Identification Criteria." However, inferences to the Corps' three-factor approach (using hydrology as a diagnostic factor in addition to soils and vegetation) exists in section 12.6 (c)(7), which states, "An onsite determination, where applicable, will be made by the NRCS representative as soon as possible following a request for such a determination, but only when site conditions are favorable for the evaluation of soils, hydrology, or vegetation." Similarly, in section 12.2, not-inventoried land is defined as "...an area for which no evaluation of soils, vegetation, or hydrology has been conducted to determine if wetland criteria are met."

(5-58) **Discussion**.—Based on the inferences in the current rule that wetland hydrology should be considered as a diagnostic factor in the FSA wetland identification process, NRCS has adopted the concepts in chapter 4, "Wetland Hydrology Indicators," of the supplements. The consideration of wetland hydrology is particularly important on sites where the hydrology has been altered (increased or decreased) by manipulations, as some plant communities are slow to respond to changes in hydrology. Coupled with the fact that redoximorphic soil features are very resistant to change, it becomes important that the agency expert confirms that under NC wetland hydrology is still present at the time of rendering a FSA wetland identification decision.

(5-59) The FSA wetland hydrology criterion is derived from the statutory wetland definition as:

- Under NC the site would be inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation.

(5-60) **FSA Variances**.—Agency experts will utilize chapter 4 to make the determination of a presence of wetland hydrology with the following variances:

- (5-61) The appropriate analytical techniques for determining duration and frequency of saturation, inundation, or both found in "Hydrology Tools for Wetland Determination" contained in 210-NEH, Chapter 19, Part 650, may be used by the agency expert as a primary hydrology indicator when objective criteria for wetland hydrology are included in the State offsite methods for the hydrology tool used.
- (5-62) As an alternative to the indicators in chapter 4, the hydrology factor can be verified directly if the site visit is conducted under NC by direct observation of inundation or saturation by surface or groundwater at a frequency and duration sufficient to support a prevalence of FSA hydrophytic vegetation.

Supplements Chapter 5: Difficult Wetland Situations

(5-63) Act.—In the FSA wetland definition, the phrase "normal circumstance" is used to ensure that decisions rendered are based on site characteristics that normally occur, rather than an anomaly expressed at the time of a site visit. For example, anomalies in site characteristics might be due to either recent disturbances (disturbances to the vegetation or post-12/23/1985

drainage activities) or seasonal or annual changes in the "wetness" of a site due to climatic variability.

(5-64) **Regulation**.—In 7 CFR part 12, sections of the rule that relate specifically to NC are found in the following sections:

- Section 12.2.—The regulatory wetland definition mimics the statute with the use of the phrase "normal circumstances."
- Section 12.31(b)(2)(i).—"The term normal circumstances refers to the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed."

(5-65) **Discussion**.—For FSA wetland identification purposes, the statutory and regulatory intent of NC is addressed by following the Corps manual approach of dividing the concept into two distinct parts: the disturbance-based challenges and the climate-based challenges.

(5-66) In chapter 5 of each of the supplements, the Corps provides an inclusive discussion on situations where decisions are made more difficult due to the lack of evidence (indicators) when a site does not meet NC. Further, part IV of the Corps manual directs the user to section F- "Atypical Situations," section G- "Problem Areas," or both, each being supplemented by chapter 5.

(5-67) In addition to NC, the Corps recognizes another situation that can be problematic in the identification of wetlands using indicators that were not addressed in the Corps manual. In some situations, field diagnostic indicators do not develop because of unique site characteristics. The most common situations are when a particular soil meets the hydric soil definition, but does not develop any apparent redoximorphic features and where a seasonally wet herbaceous depression does not develop a persistent wetland hydrology indicator. The Corps includes these problematic situations that are not related to disturbance or climate in chapter 5 of the supplements.

(5-68) It is important that the agency expert understand that all FSA wetland identification decisions should be based on what the site conditions would be under NC.

(5-69) **Note:** Under the "Wetland/Non-Wetland Mosaics" portion of chapter 5, the point-intercept sampling at fixed intervals method should be appropriate for most FSA wetland identification purposes.

(5-70) **FSA Variance**.—Agency experts will utilize chapter 5 with the following variance:

- (5-71) When using the "Reference Sites" approach as detailed in chapter 5, a comparison site "in the local area on the same hydric soil map unit" will be used, in accordance with 7 CFR section 12.31(b)(2)(ii). The comparison site should support hydrologic conditions that are similar to what existed on the altered site prior to the alteration. Long-term hydrologic monitoring, as referenced in the Corps methods, is not required. **Note:** The "Reference Sites" approach is only one of several procedures for making a decision on the hydrophytic vegetation factor provided in chapter 5.

REFERENCES

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual.* Technical Report Y-87-1. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station. (http://el.erdc.usace.army.mil/wetlands/pdfs/wlman87.pdf)

U.S. Army Corps of Engineers. 2008. *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region.* ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-30. Vicksburg, MS: U.S. Army Engineer Research and Development Center. (http://el.erdc.usace.army.mil/elpubs/pdf/trel08-30.pdf)

U.S. Department of Agriculture-Soil Conservation Service. 1985. Hydric Soils of the United States.USDA-SCS National Bulletin No. 430-5-9

USDA Natural Resources Conservation Service. 1997. Hydrology Tools for Wetland Determination. Chapter 19 in *Engineering Field Handbook.* Fort Worth, TX: U.S. Department of Agriculture, NRCS. (http://www.info.usda.gov/CED/ftp/CED/EFH-Ch19.pdf)

USDA Natural Resources Conservation Service. 2010. *Field Indicators of Hydric Soils in the United States, version 7.0.* ed. L. M. Vasilas, G. W. Hurt and C. V. Noble. Fort Worth, TX: USDA NRCS in cooperation with the National Technical Committee for Hydric Soils. (http://soils.usda.gov/use/hydric/)