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POLICY AND PROCEDURES - Wetland Compliance

Subject: Policy and Procedures for Wetland Determinations in Alaska

Purpose: To provide consistent procedures to identify, determine, delineate and certify wetlands subject to the wetland conservation (WC) provisions as outlined in the Food Security Act of 1985 (and amendments) and implemented through the National Food Security Act Manual (NFSAM). The Policy and Procedures supplements the FSA Wetland Identification Procedures Appendix 2010.

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Where used: All lands that are subject to the WC provisions under the Food Security Act of 1985, as amended, NRCS has the sole responsibility to make wetland determinations and delineations for USDA program eligibility (16 U.S.C. Sec. 3822; 7 CFR 12.30) where the production of an "agricultural commodity" or "for the purpose of" to make production of an agricultural commodity (Title 180, MFSAM, Part 514, 5th edition, January 2010).

Background: The Food Security Act of 1985, as amended, requires NRCS to delineate, determine, and certify wetlands located on land subject to the wetland conservation (WC) provisions on a farm or ranch in order to establish a producer's eligibility for certain USDA program benefits. (16 U.S.C. Sec. 3822; 7 CFR 12.30). The wetland conservation (WC) provisions of the 1985 Act provide that *after December 23, 1985*, a program participant is ineligible for certain USDA program benefits for the *production of an agricultural commodity on a converted wetland*, or *after November 28, 1990*, for the *conversion of a wetland* that makes the *production of an agriculture commodity possible*. However, the 1985 Act, affords relief to program participants who meet certain conditions identified under the 1985 Act by exempting such actions from the ineligibility provisions. The National Food Security Act Manual (NFSAM) provides policy pertaining to the WC provisions. Policy concerning NRCS technical and financial assistance and the protection of wetlands is located in the NRCS General Manual at Title 190, Part 410, Section 410.26. The purpose of the provisions of this part are to remove certain incentives for persons to produce agriculture commodities on HEL or converted wetland and to thereby: 1) Reduce soils loss due to wind and water erosion; 2) Protect the nation's long-term capability to produce food and fiber; 3) Reduce sedimentation and improve water quality; and 4) Assist in preserving the functions and values of the nation's wetlands (7 CFR 12.1 (b)). The regulations outline specific circumstances as to when and how wetland determinations will be conducted. Pursuant to 7 CFR 12.30 (c):

> "*Certification of a wetland determination shall be completed according to delineation procedures agreed to by the COE, EPA, USFWS, and NRCS.*" And, pursuant to 7 CFR 12.6 (c) (5), "*A determination of whether or not an area meets the highly erodible land criteria or whether wetland criteria, identified in accordance with the current Federal wetland delineation methodology in use at the time of the determination and that are consistent with current mapping conventions, may be made by the NRCS representative based upon existing records or other information and without the need for an onsite determination.*"

Certification of a wetland determination means that the wetland determination is of sufficient quality to make a determination of ineligibility for USDA program benefits. All wetland determinations made after July 3, 1996, are considered certified determinations. [(7 CFR 12.30 (c)(1)] . Certified wetland determinations will be made under either of the following circumstances:

- In response to form AD-1026 completed by a USDA program participant for the field(s) identified, and/or
- In response to an FSA-569 or a whistleblower complaint.

To identify and label wetlands subject to the wetland conservation provisions, NRCS uses **offsite** [(7 CFR 12.6 (c)(5)] and **onsite** [(7 CFR 12.6 (c)(6)] methods. Site visits are conducted only in the following circumstances:

- Before withholding any USDA benefits [(7 CFR 12.30 (c)(4)].
- When a USDA program participant requests an onsite determination [(7 CFR 12.6 (c)(7)].
- When there is an appeal [(7 CFR 12.6 (c)(6)]
- When a USDA program participant requests a pre-conversion minimal effect determination [(7 CFR 12.31 (d)].
- In response to an FSA-569 or a whistleblower complaint.
- In conjunction with a compliance status review.
- If there is inadequate information to make determinations offsite [(7 CFR 12.6 (c)(6)].

FSA Wetland Definition: 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; and
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 identified as having high potential for agricultural development that have a predominance of permafrost soils.***

A Certified Wetland Determination is one that "is of sufficient quality to make a determination of ineligibility for program benefits"(7 CFR 12.3(c)(1). A final FSA determination (and delineation) made after July 3, 1996 are certified determinations.

References: The following link will direct you to the National Food Security Act Manual (NFSAM), the 1987 Corps of Engineers Wetland Manual (COEM), the Regional Supplement to the Corps of Engineer Wetland Delineation Manual: Alaska Region (Supplement), and other wetland references:

http://www.wli.nrcs.usda.gov/delineation/

and https://nrcs.sc.egov.usda.gov/west/ak/ecological_sciences/

Refer to the NFSAM, Circular No. 6 (Dec. 1, 2010) and other guidance documents located on the Alaska Home>Ecological Sciences>SharePoint Site to supplement this policy. *Note: due to web site changes, links may not be up to date. If this is the case, google the web site.*

Process: NRCS conducts wetland determinations and delineations through the use of on-site and off-site methodology. All wetland determinations are *approved* by a Certified Wetland Delineator (CWD).

The planner and the CWD must determine the most appropriate method and sampling intensity for each project based on site conditions and the *purpose of the request*. For example, site visits are *statutorily required (1) when requested by the program participant, (2) when a determination is appealed, and (3) prior to making a final determination that may result in a determination of ineligibility (e.g. FSA label of CW or CW-year).*

Time Frame: Information required conducting wetland determinations and delineations will be collected during the inventory and evaluation phase of the planning process. It is up to the District Conservationist to ensure adequate time is allowed for completion of the Off-Site Method prior to at least one growing season. If it is determined that an Off-Site cannot adequately support a *decision* on the NRCS-CPA-026e, an "On-Site investigation" will need to be completed prior to installation of a practice. All On-Site determinations are conducted during the growing season in Alaska.

To ensure a timely response requires coordination among field office personnel that may require a prioritization if there are several requests. Reference: Title 180 – Conservation Planning and Application, NFSAM, Fifth Edition, Part 510 – General Information, page 7:
https://nrcs.sc.egov.usda.gov/west/ak/ecological_sciences/

Offsite or "in-office" determinations shall be issued within 15 working days of receipt of the Form AD-1026. Determinations that require an on-site review shall be issued within 60 working days of the receipt of the Forms AD-1026 **or until** site conditions are favorable for the evaluation of soils, vegetation, and hydrology.

Responsibility: At least one person (wetland evaluator) within each service area will be a CWD to approve off-site and on-site wetland determinations and delineations. The wetland evaluator cannot be the same individual as the "planner". There must be a clear separation of duties by the "planner" and the "wetland evaluator" when working with a client. It is the responsibility of the District Conservationist (or designated conservationist) to sign the NRCS-CPA-026e and therefore certify determinations are correct and in accordance with regulations and procedures. All planners can gather and synthesize the off- site data sources and develop associated toolkit plan maps at least through Step 6 but they cannot make any certified wetland or HEL decisions.

Procedures

In the development of the Off-Site Methods and On-Site Methods, it is important to recognize that the application of NFSAM Off-Site Methods do not prohibit a site visit/investigation/determination, nor are On-Site Methods limited to field indicators. The expectation is that the wetland specialist utilizes all valid information when either method is used. Thus, in the application of NFSAM Off-Site Methods, the wetland specialist may often conduct a site visit. The methods complement the NFSAM, the COEM and the Alaska Supplement. For both methods, documentation includes, but is

not limited to, wetland plan maps with delineations, wetland labels, gps points (as appropriate), field forms, and other information to support a decision.

The distinction between the two methods are below:

- The Off-Site Method[1] determines the presence or absence of a *prevalence of hydrophytic vegetation* , *hydric soils*, and *hydrology* based on direct observation/evidence during normal circumstances (NC) and normal environmental conditions (NEC) or **indicators** (i.e., outside of NC). This method can be used when the sampling unit is obviously not a wetland, obviously is a wetland, or when a sampling unit is disturbed such that a reference site is not available or the three wetland factors cannot be obtained using the On-Site Method. These procedures supplement Part IV: Methods, Section B-Section D, COEM, Subsection 1 – Onsite Inspection Unnecessary and associated NFSAM variances.
- The On-Site Method[2] uses direct observation during NC and NEC or indicators (outside of NC and NEC) to determine the presence or absence of a *prevalence of hydrophytic vegetation, hydric soils, and hydrology*. This method is used when the Off-Site Method fails to provide the wetland specialist with the level of confidence needed to make a decision if the project area is a wetland. These procedures supplement Part IV: Methods, Section B-Section D, COEM, Subsection 2 – Onsite Inspection Necessary, the Alaska Supplement, and associated NFSAM variances.

The wetland evaluator must also be familiar with the allowed exemptions and apply as appropriate.

Exemptions

- Determine if an Exemption Applies and Delineate Sampling Units Based on Applicable Exemption (FSA Wetland Labels). The assignment of the most appropriate FSA wetland label is made at the *sampling unit* scale. Decision thresholds (*conditions*) are provided in each of the 14 different statutory and/or regulatory exemptions [7 CFR Part 12; Section 12.5 (b)]. These *conditions* are most typically based on number of days of inundation or saturation, cropping history, or the site conditions as of a particular point in time (i.e. December 23, 1985, November 28, 1990). Exemptions can be full (i.e. Prior Converted Cropland, irrigation induced or Artificial Wetland) or with conditions (i.e. Farmed Wetland, Farmed Wetland Pasture, Mitigation). Depending on the exemption, the decision may, or may not, be science-based. During this phase, a FSA wetland label is assigned to each *sampling unit*.
- Although not included as one of the 14 exemptions, Congress approved special consideration for certain lands in Alaska in the Urgent Supplemental Appropriations Act (P.L. 99-34, 100 Stat. 714, July 8, 1986) by adding to the FSA wetland definition – *this term [wetland] shall not include lands in Alaska indentified as having high potential for agricultural development which have a predominance of permafrost soils*. This special provision is managed by USDA in Alaska similarly to the formal exemptions provided in Section 12.5. The resource soil

[1] Refer to the COE 1987 Manual Part IV: Section C-Selection of Method: level 1: Onsite Inspection Unnecessary
[2] Refer to the COE 1987 Manual Part IV: Section C-Selection of Method: level 2: Onsite Inspection Necessary. Note that NRCS policy only supports the routine method.

scientist is responsible for maintaining and assigning the AEW to those permafrost soils that meet the soil property criteria. The list will be maintained in the FOTG.

FSA Variances to the COEM

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. Variances to the Corps Methods are discussed in the NFSAM Circular No. 6 (December 1, 2010) which is posted on the SharePoint Site. Refer to Circular 6 for a complete list. In most cases the FSA follows the COEM and Supplement with the exception of:

- COEM Sec B, page 36: 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.
- COEM Sec C, page 45: The comprehensive approach will not be used for FSA determinations
- COEM Sec D, page 45: States are provided an option of developing and approving additional guidance to a Level-1 determination, and for some sampling units, a soil survey may be sufficient to determine that the site supports a predominance of hydric soils.
- COEM Sec D, page 49: 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.
- COEM Sec F, page 73: 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.

OFF-SITE METHOD

Step 1. Preliminary Data Gathering and Synthesis
Locate, compile, and analyze data sources for the project area. The following data sources are an essential step for both the Off-Site Method and On-Site Method. Many of the data sources can be found in the Geodata Folder for each field office. ArcMap layers may also be available within a field office. It is recommended setting up a Wetland Plan project within the conservation plan but confer with the Toolkit Specialist on this. The wetland plan map can include those layers available in the Geodata Layer file, be used to locate gps points, and assign wetland labels to delineations on the wetland map. Data is recorded on the Alaska Supplement Data forms (.pdf and.doc) and Alaska NRCS source data forms found on the Alaska Home SharePoint Site Shared Documents (see steps below). Refer to the *Wetland Links job aid* for more links and websites. Once this information is gathered, proceed to **Step 2.**

Data Sources
Soils/Vegetation/Landform/Hydrology
- Locally available aerial imagery (X:\geodata\geodata_layers\One Big Wetland Layer_v2.lyr)
  - A layer that contains imagery, soils, climate, topography and vegetation, etc.
- Soil survey information (published or unpublished maps and data). This includes soils information on the Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/) , Soils Data Mart http://soildatamart.nrcs.usda.gov/County.aspx?State=AK), and Ecological Site Descriptions (http://esis.sc.egov.usda.gov) and/ or the FOTG https://my.nrcs.usda.gov/Portal/Technology/
- Wetland inventories (National Wetland Inventory, other wetland inventories): http://www.fws.gov/wetlands/Data/Mapper.html

Climate

- NRCS National Water & Climate Center main web site http://www.wcc.nrcs.usda.gov/
  - Climate Analysis for Wetlands by County (WETS tables, current up to 2001): http://www.wcc.nrcs.usda.gov/cgibin/getwetco.pl?state=ak ; http://www.wcc.nrcs.usda.gov/cgibin/state.pl?state=ak;
- Western Regional Climate Center which has a list of Alaska Climate Summaries by Location: http://www.wrcc.dri.edu/summary/Climsmak.html;
- State of Alaska Climate Charts: http://www.climate-charts.com/States/Alaska.html;
- National Weather Service, Alaska Region Headquarters: http://www.arh.noaa.gov/obs.php
- Climate data: Web WIMP: http://climate.geog.udel.edu/~wimp/ - web based, water budget modeling program
- Weather Underground: http://www.wunderground.com

Step 2. Identify and Delineate Sampling Units on a base map.
Using the available data sources from Step 1, mark the project area boundaries and delineate sampling units on the base map. *Sampling units* are separated based on changes in landscape position, vegetation, soils, and/or hydrology. These changes can be apparent or subtle. A project might be so small and/or homogeneous that one *sampling unit* is sufficient, but other projects may require multiple *sampling units*. Once the sampling units have been delineated on the base map, proceed to **Step 3.**

Step 3. Determine if the *Sampling Units* support *Normal Circumstances* (NC)
Data sources that best represent 1985 conditions and the most recent conditions are targeted to determine if the sampling unit supports *normal circumstances* (refer to COEM, NFSAM,). All hydrology alterations installed prior to 1985 are noted (i.e. surface drainage, subsurface drainage, micro/macro topographic features, levees, diversions, terraces). The information of pre-1985 conditions are then compared to current/recent conditions. A *normal circumstances* decision is then rendered for each preliminary *sampling unit*. If it is determined that the *sampling unit* supports *normal circumstances*, proceed to **Step 4.** If the sampling unit does not support *normal circumstances*, then the date (year) of the alteration(s) should be determined. The wetland determination is then based, not on current conditions, but rather on the conditions prior to the alteration(s) in question. Document the findings on *Form 3 Data Source Elements and Wetland Factor Indicators and Form 4, Summary of Indicators for Wetland Determination* and then proceed to **Step 4**.

Normal Circumstances (NC): For FSA wetland identification purposes, NC includes the consideration of both normal and abnormal climate-based site changes (NEC or normal environmental conditions) and natural and artificial disturbance-based (NC or disturbance) 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 (refer to the NFSAM and the NFSAM Appendix, Circular 6). Basically, for FSA wetland identification purposes, the concept of NC is what would occur:

1. In the absence of a post-1985 drainage action (disturbance) and
2. Under normal environmental conditions (climate)

Step 4. Decide if the *Sampling Units* reflect N*ormal Environmental Conditions (NEC)*

Data source information collected in Step 1 can be used to evaluate whether *normal environmental conditions* are present. Resources available to make a NEC decision are:

- Multiple years of aerial imagery
- WET tables (http://www.wcc.nrcs.usda.gov/climate/wetlands.html)
- Personal knowledge (or personal communication) of the site

In many cases, Alaska field offices do not have weather, climate, and imagery for the same year to make a decision as to whether or not NEC existed at the time the imagery was flown. Refer to job aids and other information on the Alaska SharePoint Site for more information. Rainfall documentation, imagery, and hydrology indicators can be recorded on Form 1 and 2 if applicable. If there is missing data record NA and explain. The decision as to whether or not NC or NEC exist must be supported in the documentation. If normal environmental conditions (NEC) exist, proceed to **Step 5**. If normal environmental conditions do not exist, the wetland specialist needs to postpone the determination and/or use the On-Site Method.

Step 5. Determine whether available data are sufficient for the project area

Examine and record the data source elements that are available for the project area. Form 3, Data source elements and Wetland Factor Indicators can be used to document the findings. Other means of documenting data source elements can be used such as a Wetland Inventory Report. The documentation should determine if the vegetation, soils, and hydrology of the project area is adequately characterized. Form 4, the summary sheet provides some general threshold guidance to assist in this decision. If more than 50% of the data elements and indicators are present to support a diagnostic factor then the threshold is a YES. If all three of the diagnostic factors have a YES, and the quality of the indicators are reliable and defensible, proceed to **Step 6.** If not, then the On-Site Method will be used or more information must be collected to support the Off-Site. *It is important to do this early in the planning process to allow a site visit during the growing season prior to installation of a practice*. Note: the purpose is to record and document data to support at least two independent indicators for each factor. The planner may use another method to document but the documentation must support the decision and must be defensible.

Step 6. Determine a prevalence of Hydrophytic Vegetation, Hydric Soils, and Hydrology

The wetland factors within the *sampling unit(s)* may or may not be directly sampled and analyzed. It is essential to have an understanding of the land use, weather patterns, and landscape conditions associated with the site being evaluated in order to accurately interpret aerial imagery. Refer to instruction for more information. For the applicable data source element, record if there is an indicator present for each wetland factor and describe. If an indicator is present and represents hydrophytic vegetation, hydric soils or positive indicators for wetland hydrology, record a "yes" and describe. If an indicator is present and represents non-hydrophytic vegetation, no hydric soils and no wetland hydrology, record a "no" and describe. If there is not enough information or the wetland factor is not available for a data source element, record a NA. There should be at least two strong independent indicators for each wetland factor which can support the decision if a prevalence of the three wetland factors exists. An example for vegetation is below. **Proceed to Step 7 if the sampling unit (s) is considered to be a wetland. Proceed to Step 8 if the sampling unit (s) is not considered to be a wetland.**

Vegetation

Indirect indicators or direct observation of the presence or absence of a prevalence of hydrophytic vegetation are used to evaluate each sampling unit. Indicators can include NWI, Land Fire, Imagery, Site Photo, Local expertise, and ecological site description (ESD). There must be at least two independent indicators present. If there is a tie, a third indicator will be needed. For example the following guidelines may be helpful:

1. If more than 50% of the data source elements and/or remote resources considered are valid for supporting hydrophytic vegetation record "yes" and the *sampling unit* is suspected (under *normal circumstances* and *normal environmental conditions*) to support a prevalence of hydrophytic vegetation. For example, a "no" is recorded for Vegetation under the Data Element "Imagery" (grass meadow); a "yes" is recorded for Vegetation under the Data Element "On-Site Photo" (cotton grass). The interpretation describes the "on-site Photo" as one received from the landowner. The decision as to whether or not vegetation is considered hydrophytic is inconclusive since one data source element is interpreted as a not representing hydrophytic vegetation" and the other does support hydrophytic vegetation. A third indicator is necessary. The planner goes to the site and records what vegetation is present at the site. The planner records vegetation on the AK Supplement data form and a photo is taken. The information confirms that the vegetation is hydrophytic. A "yes" is recorded for vegetation under the data source element Local Expertise. Two out of the three indicators for vegetation confirm that more than 50% of the data source elements support hydrophytic vegetation.

2. If less than or equal to 50% of the remote resources considered do not support hydrophytic vegetation, then record "no" the sampling unit is suspected (under *normal circumstances* and *normal environmental conditions*) not to support a prevalence of hydrophytic vegetation.

Ultimately, it is up to the wetland evaluator to make the decision if there is enough information available to make an Offsite Certified Wetland determination. Form 3 and form 4 are tools that support and document the wetland evaluator's decision.

<u>Soils</u>

Direct evidence or indirect indicators of the presence or absence of hydric soils is used to evaluate each sampling unit. Using remote resources to indicate the prevalence of hydric soils such as the hydric soils map, topography, and landform (mountain-side, convex/concave, toe-slope, active floodplain or low terrace) is highly scale-dependent and project dependent. Indicators can include hydric soils map, STATSGO, Imagery, Landform, Soil Survey, or topography layers. Direct evidence such as a photo of soil pit, local expertise, and ESD are also used. Decision thresholds are the same as those used above for vegetation.

<u>Hydrology</u>

Indirect indicators can provide much information regarding wetland hydrology. In many situations, remote resources can provide a better indicator of the sampling unit's normal hydro pattern than do field indicators. Aerial imagery and associated antecedent precipitation data can be extremely helpful to compare past and current hydro patterns; crop stress, drowned-out plants, standing water, plant specific wetland signatures, and altered patterns in vegetation are all useful indicators of

hydrology. Indicators can include Imagery, Landform, Photo, Climate data, Local expertise, and ESD. Decision thresholds are the same as those used above for vegetation.

Step 7. The sampling units are determined to support a prevalence of hydrophytic vegetation, hydric soils, and hydrology indicators.
On Form 4, Summary of Data Source elements, Indicators, and Thresholds, tally the results from form 3. If more than 50% of the resource indicators for each wetland factor support the prevalence of all three wetland factors, document and record the findings on Form 4. An explanation should support the wetland decision. Both should be recorded on Form 4. Additional information can be included such as a Wetland Report if needed. Label delineations on the plan map. Record on NRCS-CPA-026e and attach associated documentation as required. If a decision cannot be supported due to inadequate information, questionable indicators, then an On-Site will be needed. The purpose is to document 1) there is enough information for each factor available and 2) there are sufficient indicators for each factor to support a decision. The wetland evaluator must be confident that the indicators are reliable and of sufficient quality to make a defensible decision. The quality of the data elements is extremely important in the decision making process.

Step 8. At least one or more of the wetland factors have not been met and the sampling unit is not a wetland.
If less than or equal to 50% of the data source indicators for each wetland factor are a "no", then the evaluator must document and record the findings on Form 4 to support the decision that the site is not a wetland. If a decision cannot be supported due to inadequate information or questionable indicators then an On- Site will be needed.

ON-SITE METHOD

The standard for all wetland determination decisions is that FSA wetlands must under *normal circumstances* and *normal environmental conditions* meet the three conditions provided for in the FSA wetland definition (as published in 7 CFR Part 12, Section 12.2).

NFSAM On-Site Methods are utilized when Off-Site Methods fail to provide the wetland specialist with the level of confidence needed to base a decision [12.6 (c) (6)]. The results of an effort to make a wetland determination using NFSAM Off-Site Methods might have provided enough information for the evaluator to make a decision on portions of the project area, while inadequate information may be available for other portions (*sampling units*) of the project site. Those areas that remain in need of a determination require deployment of NFSAM On-Site Methods.

Guidance on sampling methodology for On-Site wetland determinations and delineations are found in the Alaska Regional Supplement and the Corps Manual, Part IV: Subsection 2: Onsite Inspection Necessary, Areas Equal to or Less Than 5 Acres in Size (page 52). Table 1 of the Alaska Supplements (Chapter 1) lists those sections of the COEM that are replaced by the Alaska Supplement. If you are unfamiliar with Table 1, you will want to access it before moving to the next discussion.

The first four steps for the On-Site Method are the same as for the Off-Site Method **Step 1 (Preliminary Data Gathering and Synthesis), Step 2 (Identify and Delineate *Sampling Units* on a base map), Step 3 (Determine if the *Sampling Units* support *Normal Circumstances),* and Step**

4 (Decide if *Sampling Units* reflect N*ormal Environmental Conditions).* Once these steps are completed and it is found that normal environmental conditions exist, proceed to **Step 5**. If normal environmental conditions do not exist, the wetland specialist needs to postpone the determination.

Step 5. Designing a Sampling Effort for each Sampling Unit.
This is one of the most important steps in the On-Site Method and will be discussed at length. Clear identification of sampling objectives is critical for selecting an appropriate sampling method. Each sampling unit may have more than one *sampling effort* depending on the size and complexity of the project area. A *sampling effort* is a single data collection effort using plot-less methods, plot-based methods, or line-transects methods. A field data form (*see Wetland Determination Data Form-Alaska Region, SharePoint Site*) must be completed for each *sampling effort*. It is up to the wetland specialist to decide which sampling effort will be utilized. Species composition, diversity, richness, age, and structure are considered in this process. Again, the purpose of delineating the project into different *sampling units* is to reduce the variability in data obtained; thereby, increasing confidence that the data, and ultimately the decision, is reflective of the unit as a whole. For FSA determinations, *sampling units* will be selected based on the plant community. It is the responsibility of the wetland specialist to design the sampling effort. Refer to the NFSAM Appendix found on the Alaska SharePoint Site for more information about designing a sampling effort. After the sampling effort has been designed proceed to **Step 6.**

Step 6. Stratification of vegetation for sampling.
In Alaska, the most common metric used to evaluate plant species dominance *canopy cover:*

- *Canopy cover* is defined as the area of ground covered by the vertical projection of the areal parts of the plants. Small openings within the crowns and gaps are included (as opposed to *foliar cover*) and overlap of plant species occurs which can result with total canopy cover over 100%. This is referred to as absolute cover. Relative cover always equals 100%. Canopy cover is visually estimated for each plant species in the sampling effort.

Refer to the COE Alaska Supplement and other documentation on the Alaska SharePoint Site for more information on sampling efforts. Sampling units are located using a GPS. Delineation of a wetland/non-wetland boundry is also located using a GPS. Proceed to **Step 7,**

Step 7. Data Analysis
Decisions are rendered based primarily on predetermined decision thresholds established for the selected data analysis method. The following are the thresholds to be used by NRCS to decide if a *sampling unit* supports a prevalence of hydrophytic vegetation.

- **Indicator 1: COE 50:20 Rule** - Greater than 50% of the dominant species are FAC or wetter (FAC- species are not considered hydrophytes using the 50:20 rule) (Table 1)
- **Indicator 2: COE Prevalence Index** - A PI score of 3.0 or less. This formula uses canopy cover and indicator status (Table 2)

Refer to the Alaska Supplement for more information on Data Analysis and indicator thresholds.

If the data sampling and data analysis find that the appropriate decision threshold is not met, AND the results are representative of *normal circumstances* and *normal environment conditions*, AND the

wetland specialist is confident in making a decision, then it is suggestive that the *sampling unit* is not a FSA wetland and no further investigation is needed. **Proceed to Step 9.**

If the data analysis supports the prevalence of hydrophytic vegetation for the sampling units under *normal circumstances* and *normal environmental conditions*, or would have supported such vegetation prior to a post-1985 alteration, then proceed **Step 8**

Step 8. **It is determined that the *sampling unit* is dominated by hydrophytic vegetation.**
Document the vegetation section of the field form for each sampling unit accordingly. Proceed to document the other two wetland factors, hydric soils and hydrology according to methodology in the Alaska Regional Supplement and section below, **Determine a Predominance of Hydric Soil**. **Proceed to Step 9.**

Step 9. Document field forms, assign wetland labels to plan map, and prepare CPA-026e for District Conservationist signature.
All documentation for wetland determinations and delineations should be maintained in the case file. A representative photo should be taken of the plant community, soil profile, and indicators of hydrology (if present) and attached to field sheets. A summary of the findings is also recommended if either the size of the sampling area or type of project dictates it. Regardless if a sampling unit has wetlands or no wetlands, documentation is necessary in case of an appeal. Documentation can also assist in future planning decisions.

Note: The 026 must have Sections I and II completed before submittal to Farm Services Agency.

Appendix A.
Alaska Exempt Wetland Label

The Alaska Exempt wetland designations are for FSA purposes only and will be assigned to undeveloped sites only (natural vegetation) based on criteria below and the guidance in the following paragraph (see Appendix B for a list of map units, components and soil series found in the Interior that meet the AEW criteria). Agricultural parcels recently developed on what may have been "AEW" sites, will be designated as upland if the site is effectively thawed and drained (Alaska Wetland Mapping Conventions, August 1994, SCS).

Soils with high agricultural potential that are saturated due to permafrost and that have the potential to thaw and drain, and can be expected to be dry enough for nomal tillage within five years[3] following clearing once the insulating vegetation is removed, are to be mapped as Alaska Exempt Wetlands (AEW) (See "Record of Decision for the Implementation of PL 99-349", January 1990).

Because this category defines an area's natural potential to drain without further manipulation, it must be mapped somewhat subjectively based upon several interdependent factors. Drainable permafrost soils should be differentiated from non-drainable permafrost soils (W) by considering the interplay of factors such as:

- Landscape position
- Availability and distance to a drainage outlet
- Soil materials, and
- Manipulation

Agricultural development practices such as those below are to be assumed:

- Complete removal of the organic mat;
- Proper berm placement and orientation
- Adequately sized clearing, and
- Yearly cropping

Landscapes with the following characteristics are factors promoting drainage:

- convex topography
- slopes of 2 percent or more
- course textured soils underlain by subsurface gravel, and
- a nearby outlet for surface drainage

Landscapes with the following characteristics are factors that limit drainage:

- Depressional
- Concave
- Toeslope and drainage-way positions in nearly level landscapes
- Heavy textured soils
- Thick organic mats
- High ice contents, and
- A lack of drainage outlets

[3] In some cases, this may take as long as 7 years.

Because many sites will have some favorable and unfavorable characteristics, the decision affecting whether an area would drain, can be based upon how an adjacent or similar site reacted to clearing.

Appendix B
Field Forms for recording and documenting Off-Site Wetland Determination

PRECIPITATION DATA AND ANALYSIS

The attached field forms can be used to document and support climate data and normal environmental conditions, both of which can be very difficult in Alaska. In many cases it is understood that the data may not exist or may only partially exist. In many situations climate data may not be appropriate depending on where the project is in relation to any climate station data. In this case, the most appropriate documentation may be on site photos. It is at the discretion of the field office to use the most appropriate documentation to justify a decision. Although only one of the 7 tools listed in Chapter 19, NRCS Engineering Field Manual, "Hydrology tools for Wetland Determination" applies to Alaska conditions, the policy and tools that are available for determining NEC can be found on the Alaska SharePoint or below:

http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17556.wba

Climate and Growing Season

Discuss the climate and growing season of the study area in which the delineation is being conducted (if data is not available for the specific site use data from the nearest city) – typical climate and temperature during the various seasons. Climate reports and data, such as growing season (28 degree day) and normal precipitation can be found at USDA NRCS National Water and Climate Center (WETS tables) (refer to Wetland Links on the share point site).

Precipitation and NRCS WETS table Summary

Daily precipitation records can be found on the web at http://www.wcc.nrcs.usda.gov/climate/wetlands.html. Other links are available under the Data Source, Off-Site section. Each field office will need to find the climate information that best suits their project site location.

Normal Precipitation should be evaluated using the WETS station nearest the project. **Normal Precipitation is not average precipitation, it is considered to be within the "30% Chance Less Than" and "30% Chance More Than" Values for Monthly Precipitation.** Unfortunately this information is only in the WETS tables and for many areas, there are no tables near the site location. Remember that local knowledge is also considered an "indicator" for a wetland factor. The information has to be documented and supported however.

Fill in Form 1, Rainfall Documentation and also Form 2, Daily Summary of Normal and Recorded Precipitation (if possible). The purpose is to document what the climatic conditions were/are at the time of making a certified wetland determination. The only data that may be available will be the planners notes of what the weather was like prior to making the determination, i.e, cloudy and no rain, pouring for three days solid, clean and sunny and rain for weeks.

Wetland Hydrology and Analysis

Discuss how the time of year of the field investigation and previous days and months precipitation may affect the wetland hydrology observed at the site. If the field investigation was during the normal wet season (early spring) and if the months preceding the site visit were below or above

Normal Precipitation, discuss what the normal hydrology would be and why the hydrology may be a false negative or positive indicator.

If the field investigation is for a seasonal wetland and was during the dry season (late spring or summer) discuss what the normal hydrology would be during the wet season. Again if the previous days or months are below or above Normal Precipitation, discuss how this may affect the observed hydrology at the time of the field visit.

FORM 1
Rainfall/Normal Environmental Condition Documentation
(use with Imagery as available and WETS tables)

Date: _____ [1]Do NEC exist ? Yes No
Weather Station/other: _____ Landowner: _____ Tract no: _____
Field Office: _____ Location (Lat/Long; Gps; Legal): _____
Soil Name (if available): _____ Growing season: _____
Imagery (type) and date: Year 1:_____; Year 2: _____ Year 3:_____

Year 1:		**Long Term Rainfall records**				1	2	3
	Month	3 yrs in 10 Less than	Normal Avg.	3 yrs in 10 More than	Rainfall current	Condition D, W, N	Mth wt value	Product (1) (2) =
1st prior month*							3	
2nd prior month*							2	
3rd prior month*							1	
							Sum =	

Year 2:		**Long Term Rainfall records**				1	2	3
	Month	3 yrs in 10 Less than	Normal Avg	3 yrs in 10 More than	Rainfall current	Condition D, W, N	Mth wt value	Product (1) (2) =
1st prior month*							3	
2nd prior month*							2	
3rd prior month*							1	
							Sum =	

Year 3:		**Long Term Rainfall records**				1	2	3
	Month	3 yrs in 10 Less than	Normal Avg.	3 yrs in 10 More than	Rainfall current	Condition D, W, N	Mth wt value	Product (1) (2) =
1st prior month*							3	
2nd prior month*							2	
3rd prior month*							1	
							Sum =	

***Compared to photo date**
Imagery Type: black & white; CIR; True; ICONOS, etc.
Condition value:
D (dry) = 1
W (wet) = 2
N (normal)= 3

Note: the result if the Sum in Col 3 is:
6-9 then prior period has been **drier** than normal
10-14 then prior period has been **normal**
15-18 then prior period has been **wetter** than normal

[1]Record YES or NO at the top of form if NEC exists

Form 2
Daily Summary of Normal and Recorded Precipitation
Normal Environmental Conditions
(can print or use weather information such as weather underground, etc)

The precipitation on the day of and immediately preceding (approximately 1 to 2 weeks) the date(s) of the field investigation(s) should be evaluated for normal conditions.

Summary of Normal and Recorded Precipitation between _____ and _____ (mm/dd/yyyy) (mm/dd/yyyy)															
Days Before	14	13	12	11	10	9	8	7	6	5	4	3	2	1	Total
Actual precip.															
Average precip.															
30% Less Than 30% More Than **															

**Only if you have WETS tables or the information, otherwise ignore

INSTRUCTIONS FOR RECORDING DATA SOURCE ELEMENTS for Form 3 and 4

Form 3 has 8 Data Source Elements "elements". There is room to add more data source elements under "other documentation". For each element there is a list of the three wetland factors. For example, the data source element "Imagery" might show an indicator for each of the wetland factors, Vegetation (V), Hydrology (H) or Soils (S). For the Data Source Element, NWI, there is potential to have indicators for two wetland factors, Vegetation (V) and Hydrology (H). It is rare for NWI to have the wetland factor Soils (S) but it is listed. In most cases it will be an NA. Rare cases, soils may be indicated.

For the Data Source Element Imagery, identify the imagery type and date of the imagery. This information can be recorded in the Interpretations box. The purpose is to identify if normal circumstances exist and to verify if the imagery represents any disturbance prior to 1985 FSA. You do not need to list if the wetland factors for each year and / or type of imagery is present or absent. That is optional but if the information helps support a decision then it can be recorded. This form is to be used to help the planner record information to help support a decision. Another form or method or documentation can be used as long as the information supports a decision.

For each corresponding WETLAND FACTOR, record a YES if there is an indicator that supports "wetland indicators". For example, YES for hydrophytes vegetation for vegetation; YES for indicators of wetland hydrology for hydrology; and YES for hydric soils for soils. Record a NO if there is NOT an indicator that supports hydrophytic vegetation (for vegetation), indicators for hydrology (for hydrology), or hydric soils (for soils). If there is NO DATA ELEMENT AVAILABLE for the project site indicate with a NA. If there is NO WETLAND FACTOR AVAILABLE for a DATA ELEMENT for the project site indicate with a NA. Indicators should support a decision for each wetland factor. In some cases, an indicator could be duplicated such as soil information from an ESD as well as from the soil survey. The idea is to be able to support the decision of whether or not there is enough information to make a confident call. The decision must be defensible and it is up to the investigator to support that decision.

Record in the Interpretation box the information that supports the YES or NO decision as well as the information for IMAGERY (as mentioned above). There needs to be a minimum of two indicators for each wetland factor. If there is a tie there needs to be a third indicator. Direct observation always takes precedent over indicators. For example, the soils map shows the project area to be in a Map Unit where the components are hydric. The project site is for a high tunnel. Due to the difference in scale the planner decides to go to the site and collect more information on soils. The planner goes to the site and digs a soil pit and finds that the site is in an inclusion where the area is convex. The soil is non-hydric. This is direct evidence that the soil is non hydric. In this example, with only two indicators for soils, the one with direct evidence (non hydric) is a stronger "indicator".

Form 4 can be used to summarize the information from Form 3. Record the number of YES's for each wetland factor. Record the number of NO's for each wetland factor. There should be a minimum of two indicators for each wetland factor. Record the percent for each wetland factor. For example, as a guideline, the evaluator may decide for wetland factor VEGETATION, there are 2 YES and 1 NO. Two out of three is .66 or over 50% support hydrophytic vegetation. For the wetland factor SOILS there is 1YES and 1 NO for 50%. This does meet 50 percent or greater for hydric soils. For the wetland factor HYDROLOGY there is 2 indicators for yes and none for no. Two out of two is 100% for indicators of hydrology. The total number of indicators for this project site is 7. The total number of YES for wetland indicators is 5. The wetland threshold is 5/7 or71% of the indicators for the three wetland factors is greater than 50%. In this case, the site is considered a wetland based on the Off Site Wetland Determination Procedure. All three of the wetland factors have been met and all three are greater than 50%. **However, it is up to the wetland evaluator to use their best professional judgment in making a decision if there is enough information to make an OFFSITE Wetland determination decision.** There is room to summarize the documentation, wetland factors, data elements and final decision.

Form 3. Data Source Elements and Wetland Factor Indicators.

Data Source Elements	***Indicators***		***Description/Interpretation***
	YES	***NO***	****type/year***
Imagery*			
Vegetation			
Soils			Usually NA for this element
Hydrology			
On-Site Photo			
Vegetation			
Soils			
Hydrology			
Local Expertise			
Vegetation			
Soils			
Hydrology			
NWI			
Vegetation			
Soils			
Hydrology			
Soil Map			
Vegetation			
Soils			
Hydrology			
LandForm/Topography			
Vegetation			
Soils			
Hydrology			
ESD			
Vegetation			
Soils			
Hydrology			
Other Documentation			
Vegetation			
Soils			
Hydrology			

Form 4. Summary of Data source Elements, Indicators, and Thresholds.

WETLAND FACTORS	INDICATORS		WETLAND Thresholds	
	# of YES	# of NO	Yes/Total x 100 =%	Yes or No
Vegetation				
Soils				
Hydrology				
Total				

Summary: explain decision. Attach field data forms (if necessary), plan maps, climate and weather summaries, etc.

Note: the forms are a method to record observations and indicators for determining the prevalence of hydrophytic vegetation, hydric soils, and wetland hydrology to make a certified wetland decision using the OFF-SITE Method. A decision must be documented and supported in order for the Designated Conservationist to sign off on the NRCS-CPA-026e. The above is to be used as a guide to record information about each indicator. In the NOTES also specify the decision to support whether or not a site meets NC or does not meet. Include information from the landowner to help support a decision especially for NC.