

## PENNSYLVANIA OFF-SITE WETLAND DETERMINATION METHODS

September 2009

### PURPOSE

This document outlines the methods that will be used to conduct Certified Wetland Determinations for Food Security Act purposes in Pennsylvania (certified Wetland Conservation compliance determinations). Off-site methods are state-specific procedures developed to interpret off-site and remotely-sensed data to assist in identifying wetlands. For areas where the natural vegetation has been removed and/or where hydrology may have been modified in the past such as agricultural lands, on-site methods may not be adequate to reflect long-term conditions and/or the conditions as they existed on December 23, 1985.

These off-site methods for conducting Certified Wetland Determinations are designed to ensure consistency among NRCS field offices. These methods are based on the off-site wetland determination tools described in the National Food Security Act Manual (NFSAM), and will be verified by using on-site methods from the NFSAM when required. Certified Wetland Determinations may include both agricultural and non-agricultural lands.

### GENERAL INFORMATION

Certified Wetland Determinations verifying compliance with Wetland Conservation (WC) provisions of the Food Security Act will be supported by off-site tools such as soils maps, various NRCS and Farm Service Agency (FSA) aerial photos, FSA color slides, National Wetland Inventory (NWI) maps, and U.S. Geological Survey (USGS) topographic maps, in either digital or hard copy. Climatic data and personal knowledge of an area will also be used. Soils maps and aerial images and photography will be the primary off-site tools used. Other tools listed above will be used to: (1) confirm the soils map and aerial image/photo information, (2) locate hydric minor components within soil map units or determine the presence of other probable hydric soil areas, and (3) provide information on past hydrology and cropping history.

Any area identifiable as wetland, regardless of size, will be labeled in accordance with these off-site methods.

County Hydric Soils Lists identify soil map units that have hydric major components or hydric minor components. However, small “inclusions” of hydric soils can occur in any soil delineation, not just those that appear in the County Hydric Soils Lists. Areas that include soil survey special features indicated by symbols for marsh or swamp, miscellaneous water, wet spot, spring, or closed depression or sinkhole will be considered “hydric soil”. For the purposes of these off-site methods hydric soils include all of the above soil map units and symbol areas.

The agricultural history of a field is important when making Certified Wetland Determinations for Food Security Act purposes. Wetland conversions which brought wetland into agricultural production **before** December 23, 1985 are given specific exemptions. Wetland conversions which occurred **between** December 23, 1985 and November 28, 1990 are treated differently than conversions which occurred **after** November 28, 1990.

NRCS will make Certified Wetland Determination for Food Security Act purposes only in response to receiving Form AD-1026 or when notified of a potential wetland violation via receipt of Form FSA-569. NRCS will document each Certified Wetland Determination on form NRCS-CPA-026E and a polygon in digital format (GIS). A copy of the form and digital image photo showing the wetland labels and boundaries will be provided to the participant, all persons associated with the tract, and FSA. Field verification of Certified Wetland Determinations will only be made when required by current NFSAM policy.

## **WETLAND OFF-SITE METHODS**

This document consists of three major off-site methods, one for Non-Agricultural Lands and two for Agricultural Lands, and two summaries of off-site methods, one for Abandonment and one for Wetlands farmed under Natural Conditions. All off-site methods conform to definitions and procedures in the NFSAM. Agricultural land is: used for the production of food, fiber, or horticultural crops; used for haying or grazing; or, left idle in accordance with USDA program requirements.

**Non-Agricultural Lands with Hydric Soils** Non-Agricultural lands with un-drained hydric soils will be labeled Wetland (W).

**Agricultural Lands - Pasture or Hayland with Hydric Soils** Agricultural lands with hydric soils manipulated (but not effectively drained<sup>1</sup>) and used for permanent pasture or hayland, which have not been abandoned, will be labeled Farmed Wetland Pasture or hayland (FWP).

**Agricultural Lands - Prior Converted Cropland** Agricultural lands with hydric soils manipulated and planted to an annual crop before December 23, 1985, which do not meet either the flooding or ponding criteria for Farmed Wetland (15 consecutive days of inundation during the growing season most years), will be labeled Prior Converted cropland (PC).

**Other** (summaries only) - Abandonment (FWP only) and Wetland (W) farmed under Natural Conditions.

<sup>1</sup> Continues to experience at least seven consecutive days of inundation or 14 consecutive days of soil saturation during the growing season most years (at least 50% chance of occurrence)

## NON-AGRICULTURAL LANDS ON HYDRIC SOILS

### OFF-SITE METHODS

Non-Agricultural lands are lands which are **not**: used for the production of food, fiber, or horticultural crops; used for haying or grazing; or, left idle in accordance with USDA program requirements. For the purposes of these off-site methods, forest land and abandoned agricultural lands (except Prior Converted cropland) are non-agricultural lands.

The principal tools used to map wetlands are: soils maps, aerial photography, USGS topographic maps, National Wetland Inventory (NWI) maps, and FSA aerial color slides.

Step 1. Review soils maps. This will help identify which areas have potential for wetlands.

Does the area contain: a soil map unit that has hydric major components or a soil map unit that has hydric minor components; or, a soil survey special feature symbol for marsh or swamp, miscellaneous water, wet spot, spring, or closed depression or sinkhole?

Step 2. Review aerial photography, USGS topographic maps, NWI maps, and FSA aerial color slides. Look on USGS topographic maps for forested areas along streams or rivers, especially on flat sites. Also note USGS "wet symbols" regardless of slopes. All wetlands on NWI maps will be considered wetlands (W) unless:

- a. The wetland has been cleared and grubbed, and/or drained, filled or otherwise manipulated since the date the NWI map was published (or date of revision).
- b. Review of aerial photography and FSA aerial color slides shows the wetland was manipulated and planted to an annual crop before December 23, 1985 (and not abandoned).

Step 3. The wetland, etc. boundaries will be digitized in order to display the off-site delineation on aerial photography for the participant and FSA:

- a. Any area determined to be wetland will be labeled "W".
- b. Any wetland cleared and grubbed, and/or drained, filled or otherwise manipulated **between** December 23, 1985 and November 28, 1990, and planted to an annual crop, will be labeled Converted Wetland "CW". Any wetland cleared and grubbed, and/or drained, filled or otherwise manipulated making production of an annual crop possible **after** November 28, 1990 will be labeled Converted Wetland with year of conversion "CW+Year".
- c. Artificial wetlands (AW) may be difficult to determine. Personal information or an on-site visit may be necessary. Ponds constructed on non-hydric soils will be labeled Artificial Wetlands "AW". Impoundments and dugout ponds on hydric soils, or on existing wetlands, will be labeled Wetlands "W".

**NON-AGRICULTURAL OFF-SITE METHODS**  
(Continued)

Step 4. The District Conservationist will review the wetland determination map and any other pertinent information available. The Certified Wetland Determination labels will be documented on the NRCS, participant's, and FSA copies of aerial photography and Form NRCS-CPA-026E.

**NON-AGRICULTURAL SUMMARY**

FOREST LAND

Forest land + hydric soil<sup>2</sup> or USGS "wet symbol" or NWI wetland = W

IDLE LAND

Idle land + hydric soil<sup>2</sup> or USGS "wet symbol" or NWI wetland = W

Artificial Wetland

Pond on non-hydric soil = AW

Pond on hydric soil<sup>2</sup> or USGS "wet symbol" or NWI wetland = W

Beaver Impoundment

Beaver impoundment on hydric soil<sup>2</sup> = W

Beaver impoundment on any soil + existing for five years = W

<sup>2</sup> Any soil map units that have hydric major components or hydric minor components; or, areas with soil survey special features symbols for marsh or swamp, miscellaneous water, wet spot, spring, or closed depression or sinkhole

## **AGRICULTURAL LANDS - PASTURE OR HAYLAND WITH HYDRIC SOILS**

### **OFF-SITE METHODS**

Farmed Wetland Pasture and hayland (FWP) is agricultural land with hydric soils which were manipulated and used for pasture or hayland before Dec. 23, 1985 and have not been abandoned. This includes areas used for the production of annual crops in the decades preceding the 1980's, but had been converted to permanent pasture or hayland before December 23, 1985.

The principal tools used to map wetlands are: soils maps, aerial photography, USGS topographic maps, National Wetland Inventory (NWI) maps, and FSA aerial color slides.

Step 1. Review soils maps. This will help identify which areas have potential for Farmed Wetland Pasture or hayland.

Does the area contain: a soil map unit that has hydric major components or a soil map unit that has hydric minor components; or, a soil survey special feature symbol for marsh or swamp, miscellaneous water, wet spot, spring, or closed depression or sinkhole?

Step 2. Review aerial photography, USGS topographic maps, NWI maps, and FSA aerial color slides to determine if the area was cleared and grubbed or otherwise manipulated and used for pasture or hayland before Dec. 23, 1985. Such areas will be designated Farmed Wetland Pasture or hayland (FWP), unless abandoned.

**NOTE:** Farmed Wetland Pasture and hayland (FWP) may be planted to an annual crop as long as there is no additional hydrologic manipulation beyond what existed on December 23, 1985. Unless earlier "as built" records exist, drainage may only be maintained to the extent that existed on December 23, 1985. Additional hydrologic manipulation (with or without annual cropping) is a violation of the Wetland Conservation provisions of the Food Security Act.

Step 3. The Farmed Wetland Pasture and hayland (FWP) boundaries will be digitized and labeled "FWP" in order to display the off-site delineation on aerial photography for the participant and FSA.

Step 4. The District Conservationist will review the wetland determination map and any other pertinent information available. The Certified Wetland Determination labels will be documented on the NRCS, participant's, and FSA copies of aerial photography and Form NRCS-CPA-026E.

## AGRICULTURAL - PASTURE OR HAYLAND

### SUMMARY

Permanent pasture or hayland + hydric soil<sup>3</sup> or USGS "wet symbol" or NWI wetland  
+ not abandoned = FWP

#### Beaver Impoundment

Beaver impoundment on any soil + existing for five years = W

<sup>3</sup> Any soil map units that have hydric major components or hydric minor components; or, areas with soil survey special features symbols for marsh or swamp, miscellaneous water, wet spot, spring, or closed depression or sinkhole

## AGRICULTURAL LANDS - PRIOR CONVERTED CROPLAND

### OFF-SITE METHODS

Prior Converted cropland (PC) is cropland occurring on former wetland that was used to produce an annually planted crop prior to December 23, 1985 and does not meet the flooding or ponding criteria of Farmed Wetland (FW)<sup>4</sup>.

The principal tools used to map wetlands are: soils maps, aerial photography, USGS topographic maps, National Wetland Inventory (NWI) maps, and FSA aerial color slides.

Step 1. Review soils maps. This will help identify which areas have potential for Prior Converted cropland.

Does the area contain: a soil map unit that has hydric major components or a soil map unit that has hydric minor components; or, a soil survey special feature symbol for marsh or swamp, miscellaneous water, wet spot, spring, or closed depression or sinkhole?

Step 2. Review aerial photography, USGS topographic maps, NWI maps, and FSA aerial color slides to determine if the area was cleared and grubbed, and/or drained, filled or otherwise manipulated and was used to produce an annually planted crop before December 23, 1985. Such areas will be designated Prior Converted cropland (PC).

**NOTE:** Conversion of wetland to agricultural use (planted to an annual crop) **between** December 23, 1985 and November 28, 1990 will be designated as Converted Wetland (CW). Conversion (making planting of an annual crop possible) **after** November 28, 1990 will be designated Converted Wetland with year of conversion (CW+Year).

Step 3. Fields including Prior Converted cropland areas may be labeled "PC" for the entire field, or only the hydric soil area may be labeled Prior Converted cropland "PC". When entire fields are labeled "PC", any hydric soils area without cropping history will be evaluated separately. The Prior Converted cropland (PC) boundaries will be digitized and labeled "PC" in order to display the off-site delineation on aerial photography for the participant and FSA.

Step 4. The District Conservationist will review the wetland determination map and any other pertinent information available. The Certified Wetland Determination labels will be documented on the NRCS, participant's, and FSA copies of aerial photography and Form NRCS-CPA-026E.

<sup>4</sup> Inundated at least 15 consecutive days during the growing season most years (at least a 50 percent chance of occurrence)

## AGRICULTURAL - PRIOR CONVERTED CROPLAND

### SUMMARY

Cropland + hydric soil<sup>5</sup> + no USGS "wet symbol" + no NWI wetland + no wet aerial photo signature<sup>6</sup> = PC

<sup>5</sup> Any soil map units that have hydric major components or hydric minor components; or, areas with soil survey special features symbols for marsh or swamp, miscellaneous water, wet spot, spring, or closed depression or sinkhole

<sup>6</sup> Wet aerial photo signatures may include: evidence of delayed planting; standing water (including drowned crops); stressed crops (yellow or stunted); contrasting color of crop in normal or dry years (unusually yellow in normal years or unusually green in dry years); differences in crop color or height/maturity due to different planting or emergence dates (later in normal years or earlier in dry years); or, irregular shaped areas having an absence of crops where crops were not planted, did not germinate or emerge, or were drowned-out after emergence

## OTHER OFF-SITE METHODS

### SUMMARY

#### ABANDONMENT

Any FWP + 5 years without grazing or haying = W

#### Beaver Impoundment

Beaver impoundment on abandoned area (no cropping, grazing or haying for 5 yrs.) = W

**NOTE:** Abandonment does **not** apply to Prior Converted cropland (PC).

#### WETLAND FARMED UNDER NATURAL CONDITIONS

Non-woody Wetland (W) without cropping history<sup>7</sup> + annually planted crop + no evidence of drainage = W

**NOTE:** This cannot include any draining, filling or otherwise manipulating the wetland hydrology -- only routine seedbed preparation.

The District Conservationist will review the wetland determination map and any other pertinent information available. The Certified Wetland Determination labels will be documented on the NRCS, participant's, and FSA copies of aerial photography and Form NRCS-CPA-026E.

<sup>7</sup> Includes Abandoned FWP that have reverted to Wetlands (W), i.e. no grazing or haying in the previous five consecutive years