

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD AND SPECIFICATIONS**

**WETLAND CREATION**

(acre)

**CODE 658**

**DEFINITION**

A wetland created on a site which historically was not a wetland.

**PURPOSE**

- Create wetlands that have wetland hydrology, hydrophytic plant communities, hydric soil conditions, and wetland functions and values.

**CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to sites where no natural wetland occurred or existed.

Upon completion of the practice the site will meet the current NRCS definition of Wetland, when hydric soils have developed at the site.

This practice is applicable only if hydrologic conditions can be approximated by modifying drainage and/or artificial flooding of a duration and frequency to create and maintain wetland conditions during an average annual precipitation event. The wetland class/subclass as identified in the Classification of Wetlands and Deepwater Habitats of the United States will be specified.

This practice does not apply to: CONSTRUCTED WETLAND (656) intended to treat point and non-point sources of water pollution; WETLAND ENHANCEMENT (659) intended to rehabilitate a degraded wetland where specific functions and/or values are enhanced beyond original conditions; or WETLAND RESTORATION (657) intended to rehabilitate a degraded wetland where the soils, hydrology, vegetative community, and biological habitat are returned to original conditions.

**CRITERIA**

**General Criteria Applicable to all Purposes**

The landowner shall obtain all necessary local, state and federal permits prior to installation of this practice.

Created wetlands will only be located where the soils, hydrology and vegetation can be modified to meet the NRCS criteria for a wetland.

Document the soil, hydrology and vegetative characteristics of the site before alteration.

Complete the Wetland Planning Checklist, Appendix A, - Chapter 13, NRCS – Engineering Field Handbook.

The effect of any modification to the existing surface and/or subsurface drainage system on upstream and downstream landowners shall be evaluated. Upstream surface and subsurface drainage shall not be impacted unless appropriate permissions are obtained or mitigation measures are implemented. All applicable state and local laws and regulations pertaining to flooding, surface and subsurface drainage will be followed.

Excessive nutrient, pesticide, or other pollutant inflows shall be controlled prior to site restoration. Examples of excessive inflows include direct runoff from a feedlot or other obvious pollution source, an actively eroding gully emptying into the site, or a poorly treated watershed that is contributing sediment and its associated pollutants.

**NRCS, MOFOTG  
February, 2000**

### **Hydric Soil Condition**

Establish an approximation of the soil conditions needed to typically support the wetland type being established.

### **Wetland Hydrology**

The hydrology of the site is defined as the rate and timing of inflow and outflow, source, duration, frequency, and depth of flooding, ponding or saturation.

Wetland hydrology will be created which will support the wetland type being established. As a minimum, the hydrologic soil conditions must be able to support hydrophytic vegetation.

If embankments, water control structures, surface or subsurface drainage manipulation, or grade stabilization structures are required, the standards and specifications for WETLAND RESTORATION (657) or STRUCTURE FOR WATER CONTROL (587) will be followed as appropriate.

### **Hydrophytic Vegetation**

Vegetation will be established which is native and typical for the wetland type(s) being created. Soils and site condition will dictate what vegetation is appropriate.

Preference is given to top-dressing at least 50% of the site with soil containing a seed bank of desired native species to a minimum depth of 4 inches. If natural colonization of native species will realistically dominate within 5 years, then natural regeneration can be left to occur without top-dressing. Specific guidelines that consider soil, seed source, and species will be developed from recommendations by MDC or NRCS biologist.

If the site was predominantly herbaceous vegetation prior to modification and planting is necessary, then a minimum of two species adapted to the site will be planted. Use soils and site information to determine plants to use. Planting rates and species will be based on recommendations from MDC or NRCS biologist.

Forested wetland plantings will include a minimum of three species adapted to the site. Where appropriate, two of the species will be hard mast

producing species. Use TREE/SHRUB ESTABLISHMENT (612).

### **Wetland Functions**

Created wetland goals and objectives should include targeted wetland functions for the wetland type and site location.

A functional assessment shall be performed on the site prior to creation using the Hydrogeomorphic (HGM) approach, as identified in the National Food Security Act Manual, or similar method.

See WETLAND WILDLIFE HABITAT MANAGEMENT (644) or SHALLOW WATER MANAGEMENT (646).

### **CONSIDERATIONS**

Consider applying this practice adjacent to existing wetlands to increase wetland system complexity and diversity, decrease habitat fragmentation, and ensure colonization of the site by wetland flora and fauna.

Consider linking wetlands by corridors to enhance the wetland's use and colonization by wetland flora and fauna.

Consider adverse effects on downstream flows or aquifers that would impact other water uses or users.

Consider nutrients, pesticides, and other pollutants contained in surface and ground water, as well as accumulated sediments, that may have an adverse effect on wetland vegetation. The nutrient and pesticide tolerance of the species planned along with the wetland objectives should be considered where known nutrient and pesticide contamination exists.

Consider the need for buffer practices beneficial to wildlife around the perimeter of the site. Plan practices such as FILTER STRIP (393), FIELD BORDER (386) and/or CONSERVATION COVER (327) to create a vegetative buffer between the management unit and adjacent land uses. This buffer should be at least 30 feet wide, or wider, depending on its purpose.

Consider use of these areas by reptiles and amphibians. Stacked logs and/or rock piles may

be located near the water's edge to provide critical habitat for local reptile and amphibian species.

### **PLANS AND SPECIFICATIONS**

Plans and specifications for this practice shall be prepared for each site. Plans and specifications shall be recorded using approved specification sheets, job sheets, technical notes, narrative documentation in the conservation plan, or other acceptable documentation.

Plans and specifications for installing structures for water control shall be in keeping with this standard and shall prescribe the requirements for applying the practice to achieve its intended purpose. The plan shall specify the location, grades, dimensions, materials, hydraulic and structural requirements for the individual structure, and the timing or sequence of installation activities. Provisions must be made for necessary maintenance.

NRCS staff is encouraged to work closely with the NRCS Biologist, MDC Biologist, or other wetland specialist in developing site specific plans and specifications.

### **OPERATION AND MAINTENANCE**

The purpose of operation and maintenance is to insure that the practice functions as intended over time.

A plan for the operation, maintenance, and management of the area shall be developed and recorded using approved job sheets, technical notes, or other forms of acceptable documentation.

The plan shall include monitoring and management of the overall site, as well as structural and vegetative measures. The area should be reviewed annually to see if adjustments are needed in any water/vegetation management plan.

Repair and upkeep of the practice (maintenance) shall be carried out as needed, such as repair or replacement of vegetative or structural components.

The following activities will be addressed in the plan: (1) timing and level setting of water control structures required for establishment of desired hydrologic conditions or for management of vegetation; (2) inspection schedule of embankments and structures for damage assessment; (3) depth of sediment accumulation allowed before removal is required; (4) management needed to maintain vegetation, including control of unwanted vegetation; and (5) acceptable uses and timing (e.g. grazing and haying).

Biological control of undesirable plant species and pests (e.g., using predator or parasitic species) shall be implemented where available and feasible.

### **REFERENCES**

Cowardin, L.M., V. Carter, F. C. Golet, E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service. FWS/OBS-79-31.