

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**WETLAND CREATION**

(acre)

**CODE 658**

**DEFINITION**

A wetland that has been created on a site location which historically was not a wetland.

**PURPOSE**

To create wetlands that have wetland hydrology, hydrophytic plant communities, hydric soil conditions, and wetland functions and/or values.

**CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to sites where wetlands will be created on sites where no natural wetland occurred.

Upon completion of the practice, the site will meet the current NRCS definition of Wetland or Artificial Wetland as defined in the National Food Security Act Manual.

This practice is applicable only if hydrologic conditions can be approximated by modifying drainage and/or artificial flooding to create and maintain wetland conditions resulting from average annual precipitation.

This practice does not apply to the Oklahoma Conservation Practice Standards 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 necessary local, state, and federal permits that apply before the practice is applied.

Water rights and water availability will be assured prior to creation as required.

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

The design will insure that offsite impacts do not occur on neighboring lands without first obtaining easements or permits.

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

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

**Criteria for Hydric Soil Conditions**

Establish an approximation of hydric soil conditions by creating surface water inundation or saturated soil conditions consistent with the wetland type(s) being created.

**Criteria for 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.

The hydrologic conditions created on the site will be sufficient to allow for the development of hydric soil conditions and support a prevalence of hydrophytic vegetation.

The Oklahoma Conservation Practice Standards Pond (378), Diversion (362), Grade Stabilization Structure (410), and Structure for Water Control (587) will be used as appropriate. Refer to the Engineering Field Handbook, Chapter 6, "Structures," Chapter 13, "Wetland Restoration, Enhancement, and Creation", and "Oklahoma Engineering Forms and Standard Drawings Handbook" (Also available on the Oklahoma NRCS website) for additional design information.

Existing drainage systems will be utilized, removed, or modified as needed to achieve the intended purpose.

### **Criteria for Hydrophytic Vegetation**

Establish hydrophytic vegetation typical for the wetland type(s) being established. Determine typical vegetation by evaluating the vegetation on nearby reference wetland sites similar to the wetland type(s) being created. Use literature reviews and other technical references to determine typical vegetation, if appropriate reference sites are not available.

Native wetland plant species will be used. Preference will be given to the use of localized plant genetic material.

Natural regeneration of native wetland plants can be used in lieu of planting where targeted species are expected to dominate within five years.

Required soil conditions and site preparations will be addressed in the specifications to insure proper establishment of the selected plant species.

Where planting and/or seeding is necessary, the density, distribution and diversity of species on the created wetland will be based on the predominant species present in the reference wetland or appropriate technical reference.

Creation of herbaceous wetland plant communities will require establishment of at least two species per wetland type. Herbaceous vegetation may be established by

a variety of methods including: natural regeneration, mechanical or aerial seeding, topsoiling, organic mats, etc., over the entire site, or a portion of the site and at appropriate densities and depths.

Creation of forested or shrub wetland communities will require establishment of at least three species per wetland type. Where appropriate, at least two of the species will be hard mast producing species. Seedling preparation and planting will be in accordance with Oklahoma Conservation Practice Standard Tree/Shrub Establishment (612).

### **Criteria for Wetland Functions**

A functional assessment (Hydrogeomorphic approach or similar method) shall be performed on the site prior to creation.

Management plans for created wetlands should include provisions for achieving the desired functions for the wetland type and the site location.

A functional assessment will be performed following project installation and as part of the monitoring process to help evaluate project success.

## **CONSIDERATIONS**

Consider the use of buffer zones around the perimeter of created wetlands. Refer to Oklahoma Conservation Practice Standards Filter Strip (393), Field Border (386), or Conservation Cover (327).

Consider effect of volumes and rates of runoff, infiltration, evaporation, and transpiration on the water budget.

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

Consider effects on wetlands or water-related resources and wildlife habitats that would be associated with the practice.

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

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

Consider the nutrient and pesticide tolerance of the plants and animals expected to utilize the created wetland site.

Consider effects on water temperature and the resulting impact on aquatic and wildlife communities.

Consider impacts on the landscape when planning structures and vegetative plantings.

Consider using Oklahoma Conservation Practice Standard Wetland Enhancement (659) to add value to the wetland site.

### **PLANS AND SPECIFICATIONS**

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

Plans and specifications will be reviewed by the appropriate NRCS engineering and ecological sciences staff to insure that the design specifications, management goals, and wetland functions and values are achieved.

### **OPERATION AND MAINTENANCE**

Actions will be carried out to insure that created wetlands function as intended over the anticipated life of the project. These actions include normal repetitive activities in the use and application of practices to maintain the desired wetland functions.

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

Maintenance shall be carried out as needed to repair or replace structural or vegetative components in a timely manner.

The plan will include any provisions for water level control to achieve the desired hydrologic conditions and corresponding impacts on plant and animal communities.

The plan will include an inspection schedule for embankments and structures for damage assessment.

The plan will include provisions for maintaining desired vegetation and controlling undesirable vegetation through the use of scheduled mowing, haying, grazing, burning, disking, or chemical use.