

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD
RHODE ISLAND

WETLAND CREATION

(acre)

CODE 658

DEFINITION

A wetland that has been created on a site which historically was not wetland or is a wetland that will be converted to a different hydrology, vegetation type, or function than naturally occurred on the site.

PURPOSE

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

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to sites where no natural wetland occurred or where a wetland exists, or existed, and the wetland characteristics (hydrology, vegetation, and functions) will be different from what historically occurred.

Upon completion of the practice, the site will meet the current National Food Security Act Manual (NFSAM) definition of wetland, if hydric soils exist 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. The wetland class/subclass will be specified.

This practice does not apply to sites where the purposes of Rhode Island NRCS Practice Standard 656, Constructed Wetland (intended to treat point and non-point sources of water pollution); Rhode Island NRCS Practice Standard 659, Wetland Enhancement

(intended to rehabilitate a degraded wetland where specific functions and/or values are enhanced beyond original conditions); or Rhode Island NRCS Standard 657, Wetland Restoration (intended to rehabilitate a degraded wetland where the soils, hydrology, vegetation, and habitat are returned to original conditions) apply.

CRITERIA

General Criteria

Laws and Regulations. All Federal, state, and local laws, rules, and regulations, including local inland wetland agency regulations, governing the construction and use of this practice as well as setbacks from wells, surface water and property boundaries shall be followed. Planned work shall comply with all federal, state, and local laws and permit conditions and requirements. **The landowner shall obtain all necessary permits prior to construction or any land clearing activities.**

If required, water rights and water availability are assured prior to creation.

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

Establish vegetative buffers on surrounding uplands to reduce sediment and soluble and sediment-attached substances carried by runoff and/or wind.

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

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service Rhode Island State Office (<http://www.ri.nrcs.usda.gov>), or download it from the Rhode Island electronic Field Office Technical Guide (eFOTG) <http://www.nrcs.usda.gov/technical/efotg/>

NRCS, RI
November, 2005

Criteria for Hydric Soil Conditions

Establish an approximation of the soil micro topography typical for the wetland type(s) being established.

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 Rhode Island NRCS Practice Standards 356, Dike and 587, Structure for Water Control will be used as appropriate. Refer to the Engineering Field Handbook, Chapters 13, "Wetland Restoration, Enhancement, and Creation," and 6, "Structures," 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. Specific guidelines which consider soil, seed sources, and species will be developed for each site on a case by case basis.

Preference shall be given to native wetland plants with localized genetic material. Plant materials collected or grown from material collected within a 200 mile radius from the site is considered local.

Where natural colonization of selected species will realistically dominate within 5 years, then natural regeneration can be left to occur.

Adequate substrate material and site preparation necessary for proper establishment of the selected plant species shall be included in the design.

If the targeted hydrophytic vegetation is predominantly herbaceous, several species adapted to the site will be established. Herbaceous vegetation may be established by a variety of methods including: mechanical or aerial seeding, topsoiling, organic mats, etc., over the entire site, or a portion of the site and at densities and depths appropriate.

Forested wetland establishment will include a minimum of three species, where appropriate.

Seedling preparation and planting will follow the criteria of Rhode Island NRCS Conservation Practice Standard 612, Tree Planting.

Criteria for Wetland Functions

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

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

CONSIDERATIONS

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

Consider the potential for a change in rates of plant growth and transpiration because of changes in the volume of available soil water.

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 positioning site(s) 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 wherever appropriate to enhance the wetland's use and colonization by the flora and fauna.

Consider the nutrient and pesticide tolerance of the species planned known nutrient and pesticide contamination exists.

Consider effects on temperature of water resources to prevent undesired effects on aquatic and wildlife communities.

Consider that embankments and excavated slopes should be located and shaped in a manner that is compatible with the existing landscape.

PLANS AND SPECIFICATIONS

Plans and specifications shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose. Plans and specifications shall include construction plans, drawings, job sheets or other similar documents. These documents shall as a minimum, specify the requirements for installing the practice and include the kind, quantity and quality of materials to be used.

To the extent practical, specifications shall conform to NRCS National Engineering Handbook Parts 642 and 643 (Section 20).

AS BUILT DRAWINGS

As built drawings shall be prepared which show all pertinent elements and elevations as actually installed. A copy shall be provided to the owner / operator upon construction completion.

OPERATION AND MAINTENANCE

An Operation and Maintenance (O&M) plan shall be prepared for, reviewed and signed by the landowner or operator. The plan shall specify that the treated areas and associated practices are inspected annually and after significant storm events to identify repair and maintenance needs.

The O&M plan shall detail the level of repairs needed to maintain the effectiveness and useful life of the practice.

The following actions shall be carried out to insure that this practice functions as intended throughout its expected life. These actions include normal repetitive activities in the application and use of the practice (operation), and repair and upkeep of the practice (maintenance):

Any use of fertilizers, mechanical treatments, prescribed burning, pesticides and other chemicals shall not compromise the intended purpose. Biological control of undesirable plant species and pests (e.g., using predator or parasitic species) shall be implemented where available and feasible;

Timing and level setting of water control structures required for the establishment of desired hydrologic conditions or for management of vegetation;

Inspection schedule for embankments and structures for damage assessment;

Depth of sediment accumulation to be allowed before removal is required;

Management needed to maintain vegetation, including control of unwanted vegetation;

Haying and livestock grazing will be managed to protect and enhance established and emerging vegetation.