

Wetland Enhancement

Virginia Conservation Practice Job Sheet

659



Definition

The augmentation of wetland functions beyond the original natural conditions on a former, degraded, or naturally functioning wetland site; sometimes at the expense of other functions.

Criteria

The purpose, goals, and objectives of the enhancement shall be clearly defined in the enhancement plan, including soils, hydrology, vegetation, and fish and wildlife habitat criteria that are to be met and are appropriate for the site and the project objectives. The enhancement plan is part of the Job Sheet for this practice.

The soils, hydrology, and vegetative conditions existing on the site, the adjacent landscape, and the contributing watershed shall be documented in the planning process.

The nutrient and pesticide tolerance of the plant and animal species likely to occur shall be evaluated where known nutrient and pesticide contamination exists. The availability of sufficient water rights should be reviewed prior to enhancement.

Upon completion, the site shall meet the appropriate wetland criteria and provide wetland functions as defined in the project's objectives.

Invasive species, federal/state listed noxious plant species, and nuisance species (e.g., those whose presence or overpopulation jeopardize the practice) shall be controlled on the site as necessary to enhance wetland functions. The establishment and/or use of non-native plant species shall be discouraged.

Do not enhance wetlands on sites with T&E species unless it is demonstrated that the impact will benefit the species at risk. Consultation with the appropriate regulatory agency or agencies is required.

If the wetland is adjacent to a cold water stream, obtain input from Virginia Department of Game and Inland Fisheries Biologist to ensure that there is no effect on water temperature.

Criteria for Soils

Enhancement sites will be located on soils that are hydric.

Changes to soil hydrodynamic and bio-geochemical properties such as permeability, porosity, pH, or soil organic carbon levels shall be made as needed to meet the planned objectives.

Criteria for Hydrology

The hydroperiod, hydrodynamics, and dominant water source of the enhanced site shall meet the project objectives. The enhancement plan shall document the adequacy of available water sources based on groundwater investigation, stream gage

data, water budgeting, or other appropriate means.

The work associated with the wetland shall not adversely affect adjacent properties or other water users unless agreed to by signed written letter, easement or permit.

Timing and level setting of water control structures required for the establishment and maintenance of vegetation, soil, and wildlife and fish habitat functions shall be determined.

Other structural practices, macrotopography and/or microtopography may be used to meet the planned objectives.

Macrotopographic features, including ditch plugs installed in lieu of re-filling surface drainage ditches, shall meet the requirements of other practice standards to which they may apply due to purpose, size, water storage capacity, hazard class, or other parameters.

If no other practice standard applies, they shall meet the requirements for Virginia Conservation Practice Standard *Dike (Code 356)* unless there is no potential for damage to the feature or other areas on or off site due to erosion, breaching, or overtopping. Dikes used to impound water must use the Virginia Conservation Practice Standard *Dike (Code 356)*. If there is 18 inches or less of water impounded against the dike, the minimum freeboard requirement is 6 inches.

Water control structures that may impede the movement of target aquatic species or species of concern shall meet the criteria in Virginia Conservation Practice Standard *Fish Passage (Code 396)*.

Criteria for Vegetation

Hydrophytic vegetation restoration shall be of species typical for the wetland type(s)

being established and the varying hydrologic regimes and soil types within the wetland. Preference shall be given to native wetland plants with localized genetic material (within 200 miles).

Where natural colonization of acceptable species can realistically be expected to occur within 5 years, sites may be left to re-vegetate naturally. If not, the appropriate species will be established by seeding or planting.

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

Determine the appropriate number of vegetative species to establish using the following criteria:

- On sites that are predominantly herbaceous vegetation, establish a minimum of 4 species on projects restored to one ecological site (i.e., wet meadow, shallow marsh, or slough ecosystems, etc.). For projects where there are two or more ecological sites, establish at least three native species on each site.
- On sites that are predominantly forest or woodland community types, vegetation establishment will include a minimum of 6 species.

Use the Virginia Plant Establishment Guide to determine vegetative species, seeding rates and dates.

NOTE: This summary does not address all requirements and considerations in the VA Wetland Enhancement Conservation Practice Standard (VA-659). Consult the Conservation Practice Standard for further details.

Virginia Wetland Enhancement - Practice Certification 659

<i>Landowner:</i>	<i>Farm #:</i>
<i>Field(s):</i>	<i>Tract #:</i>
<i>Acres:</i>	<i>Date:</i>

Purpose:
<input type="checkbox"/> To increase the habitat for targeted species:
<input type="checkbox"/> Recreational opportunity
<input type="checkbox"/> Other:

Enhancement Plan Summary (project goals, objectives, fish and wildlife habitat criteria to be met...):

NOTE: All of the following sections may not be needed, depending on the planned enhancement

Wetland Classification:			
Cowardin Classification of Wetland	Acres	HGM Classification of Wetland	Acres
Once enhanced, the wetland will provide the following additional functions/values:			
<input type="checkbox"/> Recharge of Groundwater	<input type="checkbox"/> Nutrient Management		
<input type="checkbox"/> Discharge of Groundwater	<input type="checkbox"/> Habitat for Fish		
<input type="checkbox"/> Flood Control	<input type="checkbox"/> Habitat for Wildlife		
<input type="checkbox"/> Water Quality Control	<input type="checkbox"/> Biomass Production and Export		
<input type="checkbox"/> Stabilization of Sediment			

Soil Description of Area:			
Hydic Soils Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No (Do not use this standard)	
Dominant Hydic Soils		High Water Table	
Series	Drainage Class	Depth	Months
Problem Soils		High Water Table	
Series	Drainage Class	Depth	Months

Hydrology Condition of Area:			
	Existing (% of area)	Planned (% of area)	
Ponded			
Saturated			
<6" depth			
6-24" depth			
>24" depth			
Area floods _____ times a year; during the month(s) of _____.			
Stays inundated and/or saturated (circle one or more) for approximately _____ days.			
Will the wetland project have off-site impacts? (If yes, a written permit or consent letter is required)			

Existing Water Source:				
<input type="checkbox"/> Flooding	<input type="checkbox"/> Precipitation	<input type="checkbox"/> Runoff	<input type="checkbox"/> Groundwater	<input type="checkbox"/> Other
Engineering Practice to Achieve Enhancement (if needed):				Units:
Dike (Code 356)				
Water Control Structure (Code 587)				
Ditch Plug (Code 657)				
Crush Tile (Code 657)				
Seasonal Pools (Code 657)				
Pumping Plant (Code 533)				
Diversion (Code 362)				
Well (Code 642)				
Pond (Code 378)				

Water Management:
<input type="checkbox"/> Slow drawdown starting on or around: _____
<input type="checkbox"/> Leave drained over summer for moist soil plants to grow.
<input type="checkbox"/> Allow shallow water area to gradually refill for migration, start refilling on: _____
<input type="checkbox"/> Maintain shallow water over winter. Vary water depth from year to year.
<input type="checkbox"/> Disk at the start of the growing season as necessary to stimulate annuals.
<input type="checkbox"/> No active management (natural water regime).

Vegetative Plantings:		
Riparian Herbaceous Cover (Code 390)	Acres:	Year:
Riparian Forest Buffer (Code 391)	Acres:	Year:
Critical Area Planting (Code 342)	Acres:	Year:
Other:	Acres:	Year:

<i>Species:</i>	<i>Rate:</i>	<i>Species:</i>	<i>Rate:</i>
Vegetation Management:			
Early Successional Habitat Development (Code 647)	Acres:	Year:	
Prescribed Burning (Code 338)	Acres:	Year:	
Herbaceous Weed Control (315)	Acres:	Year:	
Brush Management (314)	Acres:	Year:	
Other:	Acres:	Year:	

Fencing (if needed: Code 382)	Type: _____	Feet: _____
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Operation and Maintenance Requirements are located in a separate document (659-VA-O&M Plan) and must be included with the job sheet in the case file.

Planner Certification		
The Wetland Enhancement practice planned in this job sheet fulfills minimum requirements of Virginia NRCS Conservation Practice Standard 659.		
_____	_____	_____
Signature	Title	Date
Certification of Practice Completion		
The Wetland Enhancement practice planned in this job sheet has been completed and maintained according to Virginia NRCS plans and specifications (indicate in Practice Specifications any changes to the planned activities and acreage.)		
_____	_____	_____
Signature	Title	Date

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