USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

Wetland Restoration

Virginia Conservation Practice Job Sheet *657*

Definition
The return of a wetland and its functions to a close approximation of its original condition as it existed prior to disturbance on a former or degraded wetland site.

Criteria
The purpose, goals, and objectives of the restoration shall be clearly defined in the restoration 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 soils, hydrology and vegetative conditions existing on the site, the adjacent landscape, and the contributing watershed shall be documented in the planning process.

The availability of sufficient water rights should be reviewed prior to restoration.

Upon completion, the site shall meet soil, hydrology, vegetation and habitat conditions of the wetland that previously existed on the site to the extent practicable.

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 restore wetland functions. The establishment and/or use of non-native plant species shall be discouraged.

Criteria for Hydric Soil Restoration

Restoration sites will be located on soils that are hydric.

If the hydric soil is covered by fill, sediment, spoil, or other depositional material, the material covering the hydric soil shall be removed to the extent needed to restore the original soil functions.

Criteria for Hydrology Restoration

The hydroperiod, hydrodynamics, and dominant water source of the restored site shall approximate the conditions that existed before alteration. The restoration 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, if needed, will be based on the actions needed to maintain a close approximation of the original, natural hydrologic conditions.

The original natural water supply should be used to reestablish the site's hydrology to approximate the hydrologic conditions of the wetland type. If this is not possible, an alternate natural or artificial water supply can be used; however, these sources shall not be diverted from other wetland resources. If the alternate water source requires energy inputs, these shall be estimated and documented in the restoration plan.

To the extent technically feasible, reestablish macrotopography and/or microtopography. Use reference sites within the local area to determine desired topographic relief. The location, size, and geometry of earthen structures, if needed, shall match that of the original

macrotopographic features to the extent practicable.

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.

Excavations from within the wetland shall remove sediment to approximate the original topography or establish a water level that will compensate for the sediment that remains.

Criteria for Vegetative Restoration

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 (200 mile radius).

Where natural colonization of acceptable species can realistically be expected to occur within 5 years, sites may be left to revegetate 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.

If natural colonization of pre-identified, selected species will realistically dominate within 5 years, then allow natural revegetation. Active forms of revegetation may be required if a site has not become dominated by the targeted species within 5 years.

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 eco-sites, 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 Restoration Conservation Practice Standard (VA-657). Consult the Conservation Practice Standard for further details.

Virginia Wetland Restoration - Practice Certification 657

Landowner:	*Farm #:*
Field(s):	*Tract #:*
Acres:	*Date:*

Purpose:
☐ To restore wetland function, value, habitat, diversity and capacity to a close approximation of the pre-disturbance (original) conditions

Description of the Wetland Restoration Need (what prior conversions were made, when, current agricultural status, current FSA label…):

Wetland Classification:			
Cowardin Classification Original Wetland	Acres	After Restoration	Acres
HGM Classification Original Wetland	Acres	After Restoration	Acres
Once restored, the wetland will provide the following functions/values:			
☐ Recharge of Groundwater		☐ Nutrient Management	
☐ Discharge of Groundwater		☐ Habitat for Fish	
☐ Flood Control		☐ Habitat for Wildlife	
☐ Water Quality Control		☐ Biomass Production and Export	
☐ Stabilization of Sediment			

Soil Description of Restorable Area:			
Hydric Soils Present?	☐ Yes	☐ No (**Do not use this standard**)	
Dominant Hydric Soils		High Water Table	
Series	Drainage Class	Depth	Months
Problem Soils		High Water Table	
Series	Drainage Class	Depth	Months

Hydrology Condition of Restorable 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 _____.		
Hydrology was removed/impacted by:		
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)		

Planned Water Source:				
☐ Flooding	☐ Precipitation	☐ Runoff	☐ Groundwater	☐ Other

Engineering Practice to Achieve Water Source (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:
☐ Slow drawdown starting on or around: _____
☐ Leave drained over summer for moist soil plants to grow.
☐ Allow shallow water area to gradually refill for migration, start refilling on:_____
☐ Maintain shallow water over winter. Vary water depth from year to year.
☐ Disk at the start of the growing season as necessary to stimulate annuals.
☐ 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:
Species:	*Rate:*	*Species:*	*Rate:*

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:** _____

Operation and Maintenance Requirements are located in a separate document (657-VA-O&M Plan) and must be included with the job sheet in the case file.

Planner Certification
The Wetland Restoration practice planned in this job sheet fulfills minimum requirements of Virginia NRCS Conservation Practice Standard 657. _____ _____ _____ Signature Title Date
Certification of Practice Completion
The Wetland Restoration practice planned in this job sheet has been completed and maintained according to Virginia NRCS specifications (indicate in Practice Specifications any changes to the planned activities and acreage). _____ _____ _____ Signature Title Date

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