

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

WETLAND WILDLIFE HABITAT MANAGEMENT

(Ac.)

CODE 644

DEFINITION

Retaining, developing or managing wetland habitat for wetland wildlife.

PURPOSE

To maintain, develop, or improve wetland habitat for waterfowl, shorebirds, fur-bearers, or other wetland dependent or associated flora and fauna.

CONDITIONS WHERE PRACTICE APPLIES

On or adjacent to wetlands, rivers, lakes and other water bodies where wetland associated wildlife habitat can be managed. This practice applies to natural wetlands and/or water bodies as well as wetlands that have been previously restored (657), enhanced (659), and created (658). This practice will not be used to create, restore or enhance wetlands.

CRITERIA

A habitat evaluation or appraisal, approved by the NRCS state office, shall be used to identify habitat-limiting factors in the planning area.

Application of this practice shall remove or reduce limiting factor(s) in their order of significance, as indicated by results of the habitat evaluation.

Application of this practice alone, or in combination with other supporting and facilitating practices, shall result in a conservation system that will enable the planning area to meet or exceed the minimum quality criteria for wildlife habitat established in Section III of the FOTG.

Identify wildlife species management goals and objectives. For the desired species, identify the types, amount and distribution of habitat

elements and the management actions necessary to achieve the management objectives.

Establish additional criteria for components of this practice including, but not limited to:

- vegetation establishment for shelter, food and to enable movement;
- structural measures to provide shelter, food or enable movement; and,
- manipulation of vegetation to sustain desirable habitat conditions over time.

This practice *will not* include deepening of portions of the wetland for the purpose of fish production or stocking of fish.

Locate food and cover to maximize access by target species, minimize their predation, and to minimize impacts to sensitive or protected habitats.

Buffers to enhance water quality must meet or exceed Maine NRCS' wildlife habitat evaluation procedure (WHEP) criteria, or other approved habitat assessment procedures.

All management will be conducted in time and space and using methods to minimize negative impacts to wildlife or their habitat.

Avoid and minimize disturbance during the primary nesting season (see practice specification guide for applicable time periods).

If a site is suspected of containing hazardous waste, soil samples will be collected and analyzed for the presence of such materials as required by local, state, or federal regulations. Sites containing hazardous material shall be cleaned prior to the installation of this practice.

Soil borings will be used to determine the feasibility of excavation, dike or embankment construction to manage hydrology.

Embankment structures shall be designed according to NRCS conservation practice *Pond*, code 378.

Low embankments will be designed according to NRCS conservation practice *Wetland Restoration*, code 657. Structures are considered low embankments if all of the following apply:

- the embankment does not cross a perennial stream,
- the maximum height of fill, measured from the lowest point at the downstream toe to the top surface elevation along the embankment centerline, does not exceed 6 feet, and
- failure of the embankment will not result in loss of life, in damage to homes, commercial or industrial buildings, main highways, or railroads; or in the interruption of the use or service of public utilities.

Any use of fertilizers, mechanical treatments, grazing (flash), pesticides and other chemicals for management of wetlands or adjacent uplands shall assure that the intended purpose of this practice is not compromised.

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

All activities planned under this practice shall comply with applicable federal, tribal, state, and local laws, rules and regulations.

Criteria for Establishment, Management and Control of Vegetation

Plant material specifications shall include only high quality and adapted species. Native plants will be used wherever possible. When practical, local genotypes of native species will be used. Plant materials grown from collections within a 200 mile-radius of the site are considered local.

Planting of noxious weeds and invasive species is prohibited.

Site preparation, planting dates, and planting methods shall optimize vegetation survival and growth.

Invasive species, federal and state listed noxious plant species, and nuisance species (e.g., those whose presence or overpopulation jeopardize the practice) shall be controlled at less than 15% areal coverage. Control methods shall be specified.

Chemical control will use targeted, precision pesticide/herbicide applications to minimize over-spray and will be applied according to NRCS practice standard *Pest Management*, code 595.

Where grazing is used as a management tool under this practice, a prescribed grazing plan developed to specifically meet the intent and objective(s) of this standard is required. All grazing must be closely monitored to ensure compliance with the grazing plan.

Seasonal management of water depths, flooding duration frequency shall follow a water management plan developed to achieve management objectives.

Refer to the appropriate ME NRCS conservation practice standard (e.g., *Riparian Forest Buffer*, code 391, *Forest Site Preparation*, code 490, *Tree and Shrub Establishment*, code 612, *Wetland Wildlife Habitat Management*, code 644, *Upland Wildlife Habitat Management*, code 645, ME Technical Notes\Exhibits *ME-01* and *ME-03* of the *National Biology Handbook*, as appropriate for vegetative plantings.

CONSIDERATIONS

Consider as a high priority wetland sites that provide significant ecological services (e.g., water storage, water quality improvement, sediment trapping and nutrient retention, wildlife and fisheries habitat), are adjacent or near existing wetlands and water bodies, as this increases system complexity and diversity, decreases habitat fragmentation, and helps to ensure colonization by wetland flora and fauna, and will be more ecologically sustainable.

When possible, wetland hydrology management practices should support or mimic natural seasonal fluctuations.

Consider setting water control structures and outlet controls structures at the average wet season water level (defined as the mean or median water level achieved over the 3 contiguous wettest months of the year).

Consider the impact that water surface draw-downs will have on concentrating aquatic species such as turtles and amphibians into diminished pool area that may result in increased mortality.

Consider the impacts of water manipulation on vegetative structure and composition, the ratio of open water to emergent vegetation and the effects on wildlife.

Consider the effect of water control structures on the ability of fish or other aquatic species to move in and out of the wetland.

Consider effects management will have on disease vectors such as mosquitoes.

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.

For discharge wetlands, consider underground upslope water and/or groundwater source availability.

Other vegetation management methods include mowing, disking, and managing wildlife species that have the ability to alter habitat (e.g., muskrat, beaver).

Consider use of pond leveler devices to maintain desirable water levels on beaver maintained wetlands.

Establishing vegetative buffers on surrounding uplands can reduce the delivery of sediment and soluble and sediment-attached contaminants carried by runoff and/or wind.

The nutrient and pesticide tolerance of the species planned should be considered where known nutrient and pesticide contamination exists.

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

Consider the effects of soil disturbance and probability of invasion by unwanted species.

On sites where woody vegetation will dominate, consider adding 1 to 2 dead snags, tree stumps or logs, or brush piles per acre to provide

structure and cover for wildlife, and a carbon source for food chain support.

Adding artificial nesting structures can increase utilization of wetlands where natural structures are lacking.

When determining which species to plant, consider micro and macrotopography and different hydrology levels.

Consider using photo plots, satellite imagery or other efficient means to monitor management progress and success.

Consider effects of management actions on compliance with state and federal hunting regulation (e.g., baiting).

Consider effects of livestock grazing on runoff, infiltration, wetland vegetation and nesting success.

Consider the cost of permitting and long-term management and maintenance costs prior to committing to management.

Where invasive species are not a problem, consider stripping and stockpiling topsoil, then placing over disturbed areas and shallow areas to serve as a source of seed propagules for vegetative restoration.

The improved habitat that results from the installation of this practice may lead to increased crop depredation by wildlife on adjacent cropland.

Where geese are a nuisance, consider establishing a border of adapted tall grasses or grass-like, trees and or shrubs extending upslope at least 30 feet from the average growing season water elevation.

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

To increase value to wetland wildlife, especially amphibians and reptiles, consider the following options when creating micro- and macrotopography:

- side slopes of 20:1 or flatter,
- create basins with more sinuous fringe areas,

- develop or maintain canopy and ground cover (e.g., rocks, coarse woody debris) in the adjacent terrestrial life zone.

Where burrowing animals may be a problem, consider control methods.

Consider controlling water levels to prevent oxidation of organic soils and inundated organic matter and materials.

PLANS AND SPECIFICATIONS

Document how habitat needs will be provided for the desired kinds of wildlife:

- required depth of water during the different seasons;
- types and sizes of structures required;
- desired native plant species and the means of establishing and maintaining them.

Specific information may be provided using appropriate job sheets or written documentation in the conservation plan.

OPERATION AND MAINTENANCE

A plan for operation and maintenance at a minimum should include monitoring and management of structural and vegetative measures.

Haying and livestock grazing plans, if haying or livestock grazing is used as a needed wildlife management tool, will be developed to allow the establishment, development and management of wetland and associated upland vegetation for the intended wetland and/or wildlife purpose.

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

Added water depth and duration may be utilized as a method to control unwanted vegetation (e.g., reed canarygrass).

REFERENCES

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- Chapter 6: Structures
- Chapter 13: Wetland Restoration, Enhancement, or Creation.

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 - ME-01. Maine Biology Technical Note 2: Nest & den box specifications and designs.
 - ME-03. Maine Biology Technical Note 3: Wetland planting recommendations for Maine.