



# Wetland Enhancement (ACRE)

Code 659

## Montana Conservation Practice Specification Sheet

### GENERAL SPECIFICATION

Wetland Enhancement shall be planned and installed in accordance with the Field Office Technical Guide (FOTG), Section IV, Practice Standard. This document provides additional parameters, references, recommendations, and requirements for developing site-specific plans for this practice.

### PURPOSE

The purpose of this practice is the modification of the hydrologic condition, hydrophytic plant communities, and physical habitat components of a wetland for the purpose of favoring specific wetland functions or values.

### HYDROLOGY RESTORATION

An appropriate water supply for the wetland type and functions must be available to provide for the needs of the wetland being enhanced.



The following Field Office Technical Guide (FOTG), Section IV, Practice Standards, Specifications, and Job Sheets will be used as appropriate:

Channel Bed Stabilization	(Code 584)	Critical Area Planting	(Code 342)
Dam, Diversion	(Code 348)	Dike	(Code 356)
Fish Passage	(Code 396)	Fish Screen	(Code 700)
Grade Stabilization Structure	(Code 410)	Open Channel	(Code 582)
Pond	(Code 378)	Streambank and Shoreline Protection	(Code 580)
Structure for Water Control	(Code 587)	Stream Habitat Improvement and Management	(Code 395)
Wetland Wildlife Habitat Management	(Code 644)		

Refer to the Engineering Field Handbook, Chapter 13, "Wetland Restoration, Enhancement, and Creation," and Chapter 6, "Structures," for additional design information. Also, refer to the Field Office Technical Guide (FOTG)—Montana Construction Specifications and the National Handbook of Conservation Practices—Construction Specifications for Montana. Existing drainage systems will be utilized, removed, or modified as needed to achieve the intended purpose.

### SURFACE DRAINAGE REMOVAL

The fill for channel blocks will be crowned a minimum of one foot above the top of the lowest existing channel bank to account for settlement and to prevent concentrated flow over the channel block.

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### GRADE STABILIZATION STRUCTURE and WATER CONTROL STRUCTURE

Fire resistant materials will be used for exposed portions of structures where vegetation will be maintained by burning.

### DUGOUTS

Dugouts and potholes will meet criteria for FOTG, Section IV, Practice Standards and Specifications, Wetland Wildlife Habitat Management (Code 644).

Wetland dugouts may be used to enhance wetlands. A wetland dugout is a constructed shallow depression area. Side slopes shall be shaped to a stable grade. All excavated material shall be spread on non-wetland sites, or will be hauled off-site. No spoil will be allowed in any drainage path.

Potholes may be enhanced through blasting, excavation, or by restoring the hydrology to existing depression areas. Blasting is to be done by experienced personnel in accordance with federal, state, and local regulations.

### VEGETATION RESTORATION

Preference shall be given to native wetland plants with localized genetic material. Plant materials collected or grown from material collected within the same MLRA as the site is considered local. Woody vegetation may need protection from beavers until established.

For forested wetland plantings, dormant pole plantings may be used for cottonwood and willow establishment. Seed planting rates and site preparation will meet the criteria of FOTG, Section IV, Practice Standards and Specifications; seed viability will be determined prior to planting.

A vegetative buffer zone will be established in areas surrounding the wetland. The buffer will act as a filter for sediment and debris. The buffer zone must be wide enough to adequately filter overland runoff from the surrounding uplands.

Planning for vegetation must begin early in the overall wetland planning process. Species selection can be effected by many factors of the design, construction, and site.

Changes in management may meet the cooperators' objectives for restoring or enhancing the wetland without implementing accelerating practices such as seeding or planting and should be considered.

Dikes, pond embankments and other engineering structures installed in association with this practice may have non-hydric soil and require vegetation for site stabilization. Refer to FOTG, Section IV, Practice Standards and Specifications, Critical Area Planting (Code 342) for vegetation considerations.

Specify required management of water and/or animals before seeding/planting is implemented.

### WETLAND FUNCTIONAL ANALYSIS

A functional assessment (MDT, Montana Wetland Assessment Method) will be performed on the site prior to enhancement. The assessment shall also be done on a suitable reference area, if available, to later evaluate the success of the enhancement effort.

Enhancement goals and objectives shall include targeted natural wetland functions for the wetland type and the site location as determined by the functional assessment and reference site data.

**PLANS AND SPECIFICATIONS**

Specifications for this practice will be prepared for each site. Specifications shall be recorded using approved specification sheets, job sheets, narrative statements in the conservation plan, or other documentations. Requirements for the operation and maintenance of the practice shall be incorporated into site specifications.

**OPERATION AND MAINTENANCE**

The functional integrity of the enhanced wetland will be maintained.

Structures built to modify the wetland will be inspected each year for the life of the practice. Water control structures will be inspected for wear and damage so that the designed amount of water is retained in the wetland and/or delivered to the wetland. Embankments must maintain designed water levels without leakage.

Hydrology of the designed wetland must not be altered.

Functions of the designed wetland will be evaluated and maintained for the life of the practice.

**REFERENCES**

Hammer, D.A. 1992. "Creating Freshwater Wetlands." Lewis Publishers, Inc., Chelsea, MI. p. 298.

Mitsch, J.W. and J.G. Grosselink. 1993. "Wetlands." Second Edition. Van Nostrand Reinhold, New York. p. 722.

**ADDITIONAL SPECIFICATIONS AND NOTES**

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