

Indiana – March 2007 (ver. 1.0)

Wetland Restoration, Non-Floodplain Program Job Sheet



WHAT IS A WETLAND RESTORATION?

Wetland Restorations are applicable in areas that used to be wetlands, but have been converted to agricultural uses. Wetlands in Indiana include open water, marsh, wet meadow, shrub and forested habitats. An important component of wetland restorations is the upland areas surrounding the wetland which provide a “buffer”. Restoring wetlands and their adjacent upland buffers provide soil erosion protection and water quality enhancement, as well as habitat for a variety of wildlife, especially waterfowl, upland game birds and songbirds.

WHERE PRACTICE APPLIES

On fields that meet eligibility requirements for the Conservation Reserve program (CRP) as determined by the Farm Service Agency (FSA). **Note: Sites that meet the requirements for CP27/CP28 are not eligible for CP23A.**

CRP POLICY

For Wetland Restoration (Non-Floodplain):

- The portion of the site being restored to wetland must have hydric (wetland) soils that are not located in the 100-year floodplain of a permanent river/stream.
- As determined by NRCS, an upland buffer with a maximum ratio of four (4) buffer acres to each restored wetland acre (i.e. 4:1 ratio) may be

enrolled to protect water quality and provide wildlife habitat.

- Upland buffers must be planted to either:
 - a) Native warm season grasses, forbs and legumes,
 - b) Cool season grasses and legumes, or
 - c) Native trees and shrubs.

RESTORATION OF HYDROLOGY

- The hydrology of the site must be restored to the level determined by the producer in consultation with the Natural Resources Conservation Service (NRCS).
- The site must be technically suitable for wetland restoration. The level of hydrology restoration allowed will be based on the best available evidence of what the original hydrology of the site was like prior to alteration.
- Wetland Restorations will be established according to the Wetland Restoration (657) Standard in the NRCS electronic Field Office Technical Guide (eFOTG).
- The minimum allowable level of restoration is that which will restore enough hydrology to sustain characteristic hydrophytic (wetland) plants within the entire CP23 area. The desired level of hydrology restoration should be based on the best available evidence of what the original hydrology of the site was like prior to alteration.
- The hydrology of the site should be completed prior to establishing the vegetation in the buffer.
- If surface or sub-surface drainage exists, these must be “plugged” according to the Wetland Restoration (657) Standard.
- Digging, dredging, macrotopography, dikes, etc. are not authorized unless it is documented that the wetland was altered by grading, filling, etc. and these activities are needed to restore the original hydrology.
- Neither Wetland Enhancements nor Wetland Creations are eligible under CRP CP23.

WETLAND PLANTING

In most cases, vegetation in the wetland area will be allowed to re-vegetate naturally. When regeneration of a diverse and native plant community is unlikely to occur within three (3) years, a planting plan will be developed.

BUFFER PLANTING

Plant the vegetation according to the attached plan/design sheet. Any changes to these specifications should be approved by NRCS.

All construction and seeding must be completed within 12 months of contract approval to remain in compliance. If circumstances beyond the landowner's control prohibit completion within the first 12 months, the local FSA County Committee may approve an extension to the next construction and planting season.

Grasses and Trees - Site Preparation: It is very important to plant the vegetation into a weed-free seedbed. Weed control efforts should begin prior to planting, and may require multiple applications in both the fall and spring prior to planting. Use herbicides or tillage (however do not use spring tillage for tree planting) to eliminate competing vegetation. If necessary for erosion control, seed a temporary cover. Eliminate the temporary vegetation at planting time with tillage or herbicides.

Contact your local Purdue University Extension Agent for specific herbicides to use. **Apply all herbicides according to the label.**

Lime and Fertilizer (Introduced Grasses): Apply lime and fertilizer according to a recent (less than four years old) soil test for establishment of introduced grasses.

Lime and Fertilizer (Native Grasses): Lime and fertilizer should not be applied to native grasses at establishment unless a current soil test shows phosphorus (P) and potassium (K) are in the deficient range or the pH is 6.1 or less. Do not apply any nitrogen (N) during establishment to minimize weed competition.

Seed preparation: Inoculate legume seed before seeding with the proper Rhizobia bacteria specific for the species. Re-inoculate seed if it was pre-inoculated more than 60 days prior to seeding. Be careful not to blend seed of varying size, shape and weight as this can make calibration of equipment and seeding uniformity difficult.

Grass Seeding Dates:

Species/Mix	IN Seeding Dates	Dormant Seeding Dates*
Cool Season Grasses	3/1-5/15 or 8/1-9/15	12/1-3/1
Legumes	3/1-5/15 or 8/1-9/15	12/1-3/1
Warm Season Grasses	4/1-6/15	12/1-4/1
Forbs	4/1-6/15	12/1-4/1

*Increase seeding rates by 25% dormant seeding. Broadcasting of warm season grasses should only be done into a prepared seedbed with protection from erosion as a consideration.

No-Till seeding: Use a no-till drill to reduce the risk of erosion and possible loss of seedlings. Ensure the drill is designed to handle the seed being planted (especially important for native grasses). Your local Soil and Water Conservation Districts may be able to assist in locating equipment. Set the drill to provide an ideal planting depth of no more than ¼ inch unless otherwise directed. Seeding native grasses deeper than ¼ inch will lead to potential failure. Soils that are too wet or too dry can also cause improper seed placement.

Conventional Seeding: Use a drill with seven (7) or less row spacing or a culti-packer seeder, designed for the seed to be planted. The seedbed should be worked to a minimum depth of three (3) inches and firmed before seeding. Grass seed should be drilled uniformly and seeded no more than 1/2 inch deep.

Broadcast Seeding: Seed may be broadcast if completed in a uniform manner. Pre-mixing the seed with 200 lbs. per acre of pelletized lime and utilizing an airflow applicator is also effective. Seedbeds should be worked to a minimum depth of three (3) inches and firmed before seeding. The seedbed should be culti-packed before and after seeding. It is acceptable to see up to ⅓ of the seed on the soil surface. Wind speed should be 15 m.p.h. or less when broadcasting.

Weed Control During Establishment Period: Mow, burn, or apply herbicides as needed to control unwanted vegetation until a **Final** Status Review is issued, or for a maximum of 3 years after planting. Mow when competing weeds are taller than the planted vegetation, and at a height above the planted vegetation.

Trees and Shrubs

Planting: Plant trees according to the attached Specifications Sheet.

Bare rooted stock (seedlings) shall not be planted when the soil is frozen or dry and will be planted with the root collars approximately at or slightly below the ground line.

Bare rooted stock shall be planted in the spring after the ground thaws, but no later than June 1. It is important that tree species are randomly planted throughout the site and not planted with like species unless otherwise indicated in the planting plan.

Weed Control During Establishment Period: For information on herbicide controls, contact a local consultant or Purdue Extension Specialist. Always apply herbicides according to labeled directions.

Weed Control After Establishment Period: Weed control is also important to ensure survival and maximum growth of the trees after they are planted. Nine (9) ft² around each tree should remain weed-free to maximize tree growth. Mowing is not recommended for weed control for trees.

CRP cost share is authorized for one weed control application within 24 months after planting trees.

OPERATION AND MAINTENANCE

Noxious weeds and other undesirable plants, insects, and pests shall be controlled, including such maintenance as necessary to avoid detrimental effects to the surrounding land.

After the Final Status Review or 3 years (whichever comes first), maintain the planting according to your CRP conservation plan. Maintenance activities are allowed only on a spot basis and only if necessary to maintain stand health, maintain stand diversity, or control pests that will damage the CRP cover or adjacent lands. Burning must be in accordance with a prescribed

burn plan. MOWING and other maintenance activities are NOT authorized between April 1 to August 1 to protect ground-nesting wildlife (i.e. - the Primary Nesting and Brood-Rearing season). If maintenance activities are needed during these times, the FSA County Committee **must** approve the maintenance activity **prior to** the activity occurring. Native grasses will not be mowed lower than 12 inches, and non-native grasses lower than four (4) inches.

Mowing for generic weed control or for cosmetic purposes is prohibited.

Exclude all acres from haying and grazing year round, unless authorized. Fences may need to be constructed and maintained to exclude livestock throughout the entire year.

The contract area cannot be used for field roads or other uses that will damage or destroy the cover.

MID-CONTRACT MANAGEMENT

All new CRP contracts must have mid-term contract management activities scheduled that will ensure plant diversity, wildlife habitat, and protection of soil and water resources. Management activities that will ensure these benefits include: prescribed burning (according to an approved burn plan), strip disking, strip spraying, and inter-seeding of forbs and legumes. All management activities must be performed according to NRCS Standards and Specifications as found in the FOTG, and CRP policy. **Mid-management job sheets can be found at:**

<http://www.in.nrcs.usda.gov/programs/CRP/crphomepage.html>.

OTHER MANAGEMENT CONSIDERATIONS

For optimum wildlife habitat, plant a diversity of grasses, legumes, and wildflowers. These mixtures will provide winter and nesting cover and food for a variety of wildlife. When mowing is necessary, restrict mowing to July 15-Aug 20 to allow re-growth for winter cover.

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CRP Wetland Restoration, Non-Floodplain (CP-23A) SPECIFICATIONS SHEET

Landowner:				County:			
Farm:	Field(s):	Wetland Acres:	Buffer Acres:	Grasses:	Firebreak:	Date:	
Tract:				Trees:	Shrubs:		

RECOMMENDED SPECIES and SEEDING RATE (PLS #/ac = Pure Live Seed Pounds per Acre)

	NATIVE MIX <small>(see map for location)</small>	RATE PLS#/ac	Total = <small>(Rate X Acres)</small>		NON-NATIVE MIX <small>(see map for location)</small>	RATE PLS#/ac	Total = <small>(Rate X Acres)</small>
<input type="checkbox"/>			0.00 Lb.	<input type="checkbox"/>			0.00 Lb.
			0.00 Lb.				0.00 Lb.
			0.00 Lb.				0.00 Lb.
			0.00 Lb.				0.00 Lb.
			0.00 Lb.				0.00 Lb.

	SHRUBS <small>(see map for location)</small>	RATE No./acre	Total = <small>(Rate X Acres)</small>		TREES <small>(see map for location)</small>	RATE No./acre	Total = <small>(Rate X Acres)</small>
<input type="checkbox"/>			0 No.	<input type="checkbox"/>			1 No.
			0 No.				2 No.
			0 No.				3 No.
			4 No.				0 No.
			5 No.				0 No.
			6 No.				0 No.

	Species/Activity	Rate Lb./acre	Total = <small>(Rate X Acres)</small>
<input type="checkbox"/> Firebreaks:			0.00 Lbs.
			0.00 Lbs.

Establish a Bare-Ground Firebreak by disking the Fall & Spring prior to Prescribed Burning
Disked areas will be re-seeded after each Prescribed Burn

Wetland Vegetation:	<input type="checkbox"/> The Wetland Area will be allowed to revegetate naturally <input type="checkbox"/> The Wetland Area will need to be established according to the attached plan.
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NOTES:

Recommended Wildflowers include:

Dike and Spillway Seeding (acres)

All rates are in Pure Live Seed (PLS)

	DIKE GRASS MIX <small>(see map for location)</small>	Rate Lb./acre	TOTAL = <small>(RATE X Acres)</small>		SPILLWAY GRASS MIX <small>(see map for location)</small>	Rate Lb./acre	TOTAL = <small>(RATE X Acres)</small>
<input type="checkbox"/>			0.0 Lb.	<input type="checkbox"/>			7.0 Lb.
			0.0 Lb.				8.0 Lb.
			0.0 Lb.				9.0 Lb.
			0.0 Lb.				10.0 Lb.

Recommended additional wildflowers include:

Site Preparation - BEFORE Planting in Year:

<input type="checkbox"/> Herbicide (per label):	Dates:
<input type="checkbox"/> Herbicide (per label):	Dates:
<input type="checkbox"/> Herbicide (per label):	Dates:
<input type="checkbox"/> Tillage:	
<input type="checkbox"/> Prescribed Burning:	
<input type="checkbox"/> Temporary Seeding:	-
<input type="checkbox"/> Other:	
NOTES:	

Planting Year:

<input type="checkbox"/> Planting Method for Grasses:	Date: See Seeding Dates on Page 2
<input type="checkbox"/> Planting Method for Trees and Shrubs:	Date: See Planting Dates on Page 2
<input type="checkbox"/> Planting Method for Firebreak:	Date: See Seeding Dates on Page 2
If unforeseen circumstances prohibit planting by this date, please contact the local NRCS office as soon as possible.	
NOTES:	

Post-Planting Maintenance

Mowing: BEFORE final Status Review, or up to three (3) years after planting, mow to a minimum height of six (6) to eight (8) inches high when the weeds are 12 inches taller than the planted grasses as needed

*AFTER final Status Review, mow to a minimum height of six (6) to eight (8) inches

Herbicide* (per label):

Other:

*NOTE: After the final Status Review has been issued, weed control and other maintenance activities will not occur between April 1 - August 1, and will occur on a "spot" basis only, unless prior approval is granted by the FSA County Committee.

Mid-Contract Management Starting In Year:

Prescribed Burning: according to an approved burn plan Burning will not occur more than once every three (3) years on the same acreage.

Strip Spraying: Spraying will not occur more than once every three (3) years on the same acreage.

Strip Disking: Disking will not occur more than once every three (3) years on the same acreage.

Inter-seeding: Inter-seeding will not occur more than once every three (3) years on the same acreage.

The Specific Mid Contract Management Activity will be decided by the participant in the scheduled year based on condition of the vegetation, site considerations, capabilities of the participant, etc.
Treatment will not occur more than once every three (3) years on the same acreage. Reimbursement will be dependant on the activity(s) performed based on local FSA Not-To-Exceed rates.

For CRP Mid-contract Management job sheets see:
<http://www.in.nrcs.usda.gov/programs/CRP/crphomepage.html>

Hydrology Restoration in Year:

ORIGINAL HYDROLOGY &/or WETLAND FUNCTIONS WERE ALTERED BY:	AND WILL BE RESTORED BY: (see the attached map and engineering design for details)
<input type="checkbox"/> Subsurface drain tile	<input type="checkbox"/> Plugging feet of subsurface drain tile <input type="checkbox"/> *Installing feet of dike to retain surface water
<input type="checkbox"/> Surface drains	<input type="checkbox"/> Installing ditch plugs <input type="checkbox"/> *Installing feet of dike to retain surface water
<input type="checkbox"/> Grading / leveling / fill	<input type="checkbox"/> *Removing cubic yards of fill
<input type="checkbox"/> Traditional agricultural activities (Farmed Wetlands)	<input type="checkbox"/> No longer farming <input type="checkbox"/> Seeding the area to native vegetation (see page 4)
<input type="checkbox"/> Other:	<input type="checkbox"/> Other:

***NOTE:** Documentation must be included that shows the wetland was altered by grading, filling, etc., and that digging, dredging, macrotopography, dikes, etc. are needed to restore the original hydrology.

Additional Information