



RIPARIAN FOREST BUFFER

Michigan CONSERVATION RESERVE PROGRAM CRP – CP22

Natural Resources Conservation Service (NRCS)

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Photo courtesy of USDA NRCS

WHAT IS A RIPARIAN FOREST BUFFER?

A riparian forest buffer is an area of trees and shrubs located adjacent to streams, lakes, ponds, sinkholes and karst areas, or wetlands. Riparian forest buffers intercept sediment, nutrients, pesticides, and other materials in surface runoff and reduce nutrients and other pollutants in shallow subsurface water flow. Woody vegetation in buffers provides food and cover for wildlife, helps lower water temperatures by shading the water body, stabilizes stream banks, and slows out-of-bank flood flows. In addition, the vegetation closest to the water body provides litter fall and large woody debris important to aquatic organisms. Some trees established or managed in a riparian forest buffer can also provide timber, wood fiber, and/or horticultural products after the CRP contract expires.

ELIGIBILITY

To be eligible for this practice for the Conservation Reserve Program (CRP), the land must have a cropping history (4 out of 6 years from 1996 - 2001) or be considered marginal pastureland. Plus, there must be an existing resource concern present that can be addressed with a Riparian Forest Buffer. If trees are currently present, the site may still be eligible if it is determined they are not functioning as a Riparian Forest Buffer, and additional trees will be planted.

If wildlife habitat is the only resource concern, the site is not eligible for CRP. However, the site may be eligible for a Riparian Forest Buffer through other USDA cost-share programs.

CRP POLICY

CRP Riparian Forest Buffers will be installed according to the Riparian Forest Buffer Standard (391) in the local Field Office Technical Guide (FOTG).

CRP Riparian Forest Buffers installed on **Cropland** are eligible adjacent and parallel to streams, sinkholes and karst areas, wetlands, and permanent bodies of water such as lakes/ponds. On **Marginal Pastureland**, Riparian Forest Buffers are only eligible along streams and **permanent** bodies of water.

For the Conservation Reserve Program, Riparian Forest Buffers will be a minimum of 35 feet from the edge of the eligible body of water, and a maximum of 180 feet from the edge of the eligible water body.

CRP riparian forest buffers will consist of 2 zones at a minimum, and may require a 3rd zone if concentrated flow conditions are present. Zone 1 will consist of trees/shrubs and extend a **minimum** of 15 feet from the edge of the body of water; this zone creates a stable ecosystem adjacent to the body of water. Zone 2 will also consist of trees/shrubs and extend a **minimum** of 20 feet from the edge of zone 1; this zone is important for sequestering nutrients, pesticides, sediment, etc. Zone 3 is only eligible for concentrated flow conditions, and will be planted to grasses and forbs and will be a **maximum** of 20 feet from the edge of zone 2; this zone provides sediment and nutrient filtering, and converts concentrated flow to sheet flow.

The entire width of the riparian forest buffer must be established to trees and/or shrubs, except the outer 20 feet may be planted to grasses if necessary for concentrated flow conditions.

Tree and shrub species selected for the buffer will be adapted to the site conditions (see Conservation Tree/Shrub Suitability Groups in Sect. II of FOTG) and meet the standards in the local FOTG. Only viable, high quality planting stock will be used.

INSTALLATION

It is essential to prepare a weed-free and firm seedbed before planting the trees and shrubs, and cost-share is authorized for this component. It may be necessary to prepare the site the fall before planting the trees in the spring using tillage, herbicides, etc. Contact your local Michigan State University (MSU) Extension Agent for

specific herbicide recommendations. **All herbicides will be applied according to the label.**

Plantings using bare-rooted stock and non-rooted cuttings should be completed in the spring after the ground thaws, but no later than June 1; or planted in the fall after October 1 until the ground freezes when soil moisture is adequate. Containerized and balled and burlap stock may be planted between October 1 and June 1 as local soil moisture and weather conditions permit. Direct seeding will be completed from October 1 through April 30 as local soil moisture and weather conditions permit

If the site is suitable, the landowner can choose to establish the trees through **Natural Regeneration**. **No cost-share is available with this option**; but, if after 2 years natural regeneration does not adequately stock the site, the trees must be planted **without** cost-share.

Weed Control is also important to ensure survival and maximum growth of the trees after they are planted. Cost-share is authorized for one weed control application within 24 months after the trees are planted. A 2 ft radius around each tree should remain weed-free to maximize tree growth. **Mowing is not allowed for weed control for trees.**

Livestock will be excluded from all CRP buffers. Cost-share is authorized for fencing, alternative water sources, and livestock crossings if necessary.

CONSIDERATIONS

For optimum wildlife habitat, plant a variety of trees and shrubs including those likely to produce den cavities and provide food.

Following is a list of trees and shrubs referenced in the 391 Standard in the FOTG that are considered Excellent for upland wildlife cover, large cavity potential, and/or fruit and nut production. Consult the FOTG for more information and other species.

Tree Species	Mature Ht (ft)	Flooding Tolerance	Wildlife Suitability
Basswood	75	L	H
Cherry, Black	70	L	H
Cottonwood	90	H	H
Cranberry, Highbush	15	H	H
Dogwood, Red-osier	12	H	H
Dogwood, Silky	12	H	H
Maple, Sugar	80	L	H
Oak, Bur	70	H	H
Oak, Red	80	L	H
Oak, White	70	L	H
Oak, Swamp White	70	M	H
Sycamore	90	H	H
Walnut, Black	80	M	H

Wildlife – H = Excellent cover, large cavity potential, and/or high quality fleshy fruit or nut production.

Flooding – H = Able to survive deep flooding for 1 growing season. M = Able to survive flooding or saturated soil for 30 consecutive days during the growing season. L = not tolerant of flooding or saturated soil.

OPERATION AND MAINTENANCE

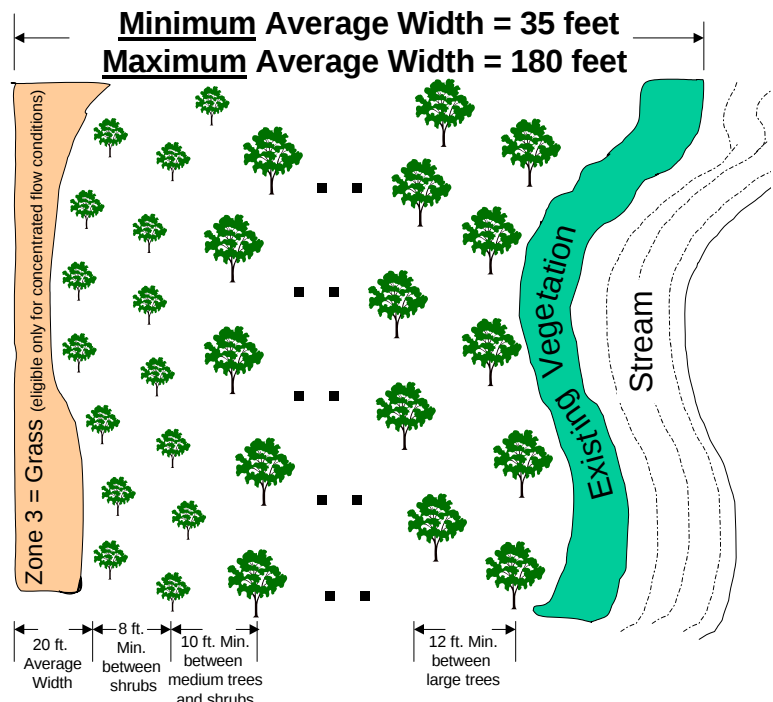
Noxious weeds and other undesirable plants, insects, and pests need to be controlled, including such maintenance as necessary to avoid detrimental effects to the riparian forest buffer and surrounding land.

After the Final Status Review, maintain the stand 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. Maintenance activities are allowed only when the trees are dormant. If maintenance activities are needed at times other than these, the FSA County Committee **must** approve the maintenance activity **prior to** the activity occurring.

The riparian forest buffer should be inspected on a seasonal basis and following major storm and runoff events. Any damages or sediment accumulation that would adversely impair the function of the buffer must be corrected immediately, at the landowner's expense.

Replacement of dead trees and shrubs will be needed to ensure at least 80% of the trees are living. The landowner is responsible for replacement costs.

Below is a typical layout and design of a CRP Riparian



Forest Buffer. Note: other designs may also be eligible for CRP. See the attached plan and plan map.

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RIPARIAN FOREST BUFFER DESIGN WORKSHEET CRP CP-22

Landowner:

County:

Farm:

Tract:

Field(s):

Width / Acres:

Date:

REQUIREMENTS

DESIGN CONSIDERATIONS:

(Soils information is based on the FOTG, Section II-Forestry Interpretations)

Predominant Soil Type(s):

= Site Index (with planned species):

RECOMMENDED SPECIES		TOTAL # NEEDED	RECOMMENDED SPACING	
Row #'s:	=		Within Row #'s	: ft
Row #'s:	=		Between Row #'s	: ft
Row #'s:	=		Within Row #'s	: ft
Row #'s:	=		Between Row #'s	: ft
Row #'s:	=		Within Row #'s	: ft
Row #'s:	=		Between Row #'s	: ft
Row #'s:	=		Within Row #'s	: ft
Row #'s:	=		Between Row #'s	: ft

ZONE 3 =

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NOTES =

BEFORE PLANTING:

☐ Permanent Fence: : _____ ft = (see the attached design)
 ☐ Pipeline: _____ ft = (see design)

☐ Water Source:
 ☐ Livestock Crossing: (see design)

☐ Water Facilities(s):

☐ Herbicide₁ (per label): Dates =

☐ Herbicide₂ (per label): Dates =

☐ Tillage: Dates =

☐ Temporary Seeding:

☐ Structures, Grading, Leveling, Filling – See the attached Design Sheet.

☐ Other:

PLANTING METHOD in Year

☐ Tree Planting Method: :

(If unforeseen circumstances prohibit the planting of the trees/shrubs by this date, please contact our office as soon as possible)

☐ Other:

POST-PLANTING MAINTENANCE for Pest Control

☐ Maintain a 3-ft. weed & grass-free radius for up to 3 years around each tree for optimal growth*

☐ Herbicide (per label):* Date =

☐ Other:*

****NOTE:** after the Final Status Review has been issued, other maintenance activities will be conducted outside the primary nesting season (May 1st – August 1st), and weeds will be treated on a “spot” basis only, unless prior approval is granted by the County Committee.

LOCATION AND LAYOUT SKETCH & ADDITIONAL INFORMATION

ADDITIONAL INFORMATION: