

## RIPARIAN FOREST BUFFER

391

**Conservation Practice Job Sheet**

\_\_\_\_\_  
EQIP/WHIP Participant

\_\_\_\_\_  
EQIP/WHIP Contract

Riparian forest buffers are designed to protect existing forest cover along streams, creeks, rivers, lakes, ponds and other waterbodies or to enhance forest cover along these water sources where tree cover is inadequate or absence.

| Purpose (check all that apply)  |   |
|---|---|
| <input type="checkbox"/> Create shade to lower water temperature/improve aquatic habitat  | <input type="checkbox"/> Provide a harvestable crop of timber, fiber, forage, fruit, or other tree-related crops consistent with other purposes |
| <input type="checkbox"/> Provide large woody debris for aquatic/terrestrial organisms   | <input type="checkbox"/> Provide protection against erosion within the floodplain   |
| <input type="checkbox"/> Create wildlife habitat and establish wildlife corridors   | <input type="checkbox"/> Restore natural riparian plant communities   |
| <input type="checkbox"/> Reduce excess sediment, organic material, nutrients, pesticides in surface runoff and excess nutrients/chemicals in shallow groundwater flow | <input type="checkbox"/> Provide stability of the streambank  |
|   | <input type="checkbox"/> Other  |

The riparian forest buffer can be viewed as having 3 zones. Zone 1 is the first 15 feet from the edge of the stream or waterbody outward. Zone 1 should be a stable area that does not have any tree harvesting or disturbance. Zone 2 starts at the end of Zone 1 and moves outward to a minimum of 35 feet from the edge of the stream or waterbody. Zone 2 can be managed to provide timber, wood fiber or other products. Some selective harvesting can occur in Zone 2 but the area should remain with some tree cover. **The minimum width of a Stream Side Buffer or Riparian Buffer is 50 feet, Zone 1 plus Zone 2.** The buffer should be increase if the water is being used for a municipal water source or is a large stream or river carrying a lot of water. The third zone, Zone 3 is used when excessive water flows, erosion and sediment from upslope areas are anticipated. Zone 3 generally consists of herbaceous plants or grass and assists the other zones in reducing sediments from entering the waterbody and is used in cropland or pastures.

| Layout   |                          |   |
|--|--------------------------|---|
| Water body/course type and name, other:  |                          |   |
| Minimum buffer zone widths (ft) – specify left and right of stream [facing upstream/downstream (circle appropriate one)] for a two-side buffer; use left only for water bodies, such as lakes and ponds; include herbaceous species in zone 3 notes or refer to other jobs sheets. |                          |   |
| Zone 1   | Zone 2                   | Zone3                                       |
| Left: _____ Right: _____   | Left: _____ Right: _____ | Left: _____ Right: _____                    |
| Notes: _____   | Notes: _____             | Notes (or refer to other job sheets): _____ |
| Buffer zone length (ft): _____   |                          |   |
| Additional location and layout requirements: _____   |                          |   |

Select trees that are suited for the location. Plant trees that naturally grow in the area as these will have a much greater chance to survive and grow. If you need to plant trees, this provides an opportunity to increase plant diversity and improve wildlife habitat.

| Woody Plant Materials Information |              |                              |                 |                             |
|-----------------------------------|--------------|------------------------------|-----------------|-----------------------------|
| Species/cultivars:                | Plants/acre: | Kind of stock <sup>1</sup> : | Planting dates: | Avg. Spacing <sup>2</sup> : |
| <b>Zone # 1</b>                   |              |                              |                 |                             |
| 1                                 |              |                              |                 |                             |
| 2                                 |              |                              |                 |                             |
| 3                                 |              |                              |                 |                             |
| 4                                 |              |                              |                 |                             |
| <b>Zone # 2</b>                   |              |                              |                 |                             |
| 1                                 |              |                              |                 |                             |
| 2                                 |              |                              |                 |                             |
| 3                                 |              |                              |                 |                             |
| 4                                 |              |                              |                 |                             |

<sup>1</sup> Bareroot, Container, Cuttings, Seed; <sup>2</sup> Spacing between plants to achieve plants/acre.

| Herbaceous Plants:                        |                               |               |        |                                   |
|---|-------------------------------|---------------|--------|-----------------------------------|
| Planting Date:                            |                               |               |        |                                   |
| Species of herbaceous plant(s):<br>Zone#3 | In-Row, Broadcast or drilled: | Rate (lbs/ac) | Acres: | Total pounds needed for practice: |
| 1   |                               |               |        |                                   |
| 2   |                               |               |        |                                   |
| 3   |                               |               |        |                                   |
| 4   |                               |               |        |                                   |
| 5   |                               |               |        |                                   |

**NRCS will:**

Assist participants in preparing a plan for planting including tree/shrub species selection, planting density and spacing, methods of planting and timing. Additional information can be obtained from a local Technical Service Provider or the Texas Forest Service.

Assist the participant with the development of plans for supporting practices such as tree/shrub site preparation (490), prescribed burning (338), and herbaceous weed control (315).

Measure and certify practice in conjunction with the Texas Forest Service or appropriate TSP.

**Participant will:**

- \_\_\_\_\_ Plant appropriate species at the selected spacing during the planting season.
- \_\_\_\_\_ Protect new seedlings from grazing until the trees/shrubs reach heights where the top cannot be chewed off.
- \_\_\_\_\_ Follow NRCS Standards and Specification for all cost shared practices including tree/shrub planting, tree/shrub site preparation, prescribed burning, and herbicide treatments.

**\*\*Payment will be made upon completion of the planting operation and post-operation check-out by NRCS personnel, an approved Technical Service Provider or the Texas Forest Service.**

*Tree planting stock that is dormant may be stored temporarily in a cooler or protected area. Keep seedlings out of direct sunlight and plant seedlings as soon as possible for the best results.*

Site Preparation

*Remove debris, smooth lands surface as needed and control competing vegetation to allow enough sunlight for grass or tree planting. Follow Tree/Shrub Site Prep 490 guidelines*

Planting Methods

*For container and bareroot stock, plant stock to a depth even with the root collar in holes deep and wide enough to fully extend the roots. Pack the soil firmly around each plant. Follow Tree/Shrub Establishment 612 guidelines*

Operation and Maintenance

*Inspect the riparian buffer periodically and protect the trees from damage so proper function is maintained. Replant trees if survival is not sufficient to reach the targeted trees per acre. Leave woody debris and snags to provide wildlife cover.*

Additional comments:

|  |
|--|
|  |
|  |
|  |
|  |
|  |

**Participant *\*\*Please READ\*\****

I understand the requirements of the practice and my questions concerning the practice have been answered. I further understand that a failure to adhere to the above requirements may jeopardize any and all payments.

\_\_\_\_\_  
Participant Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
NRCS personnel

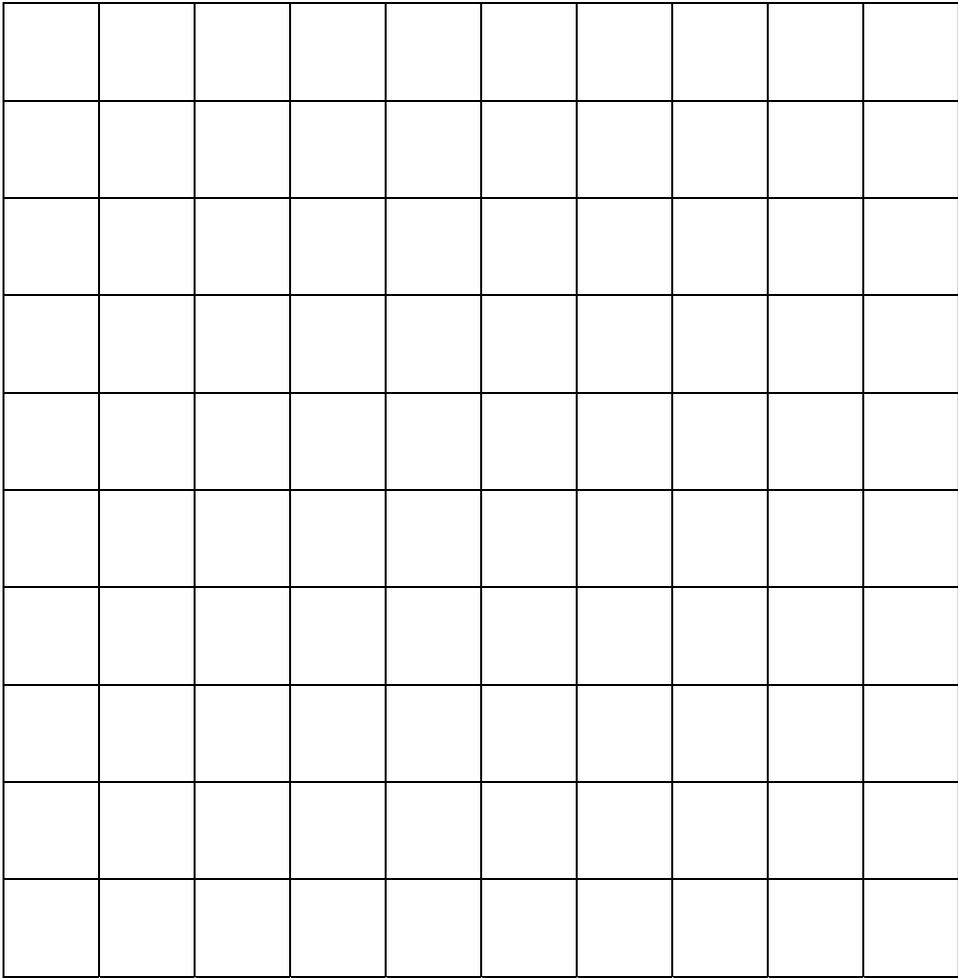
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Date

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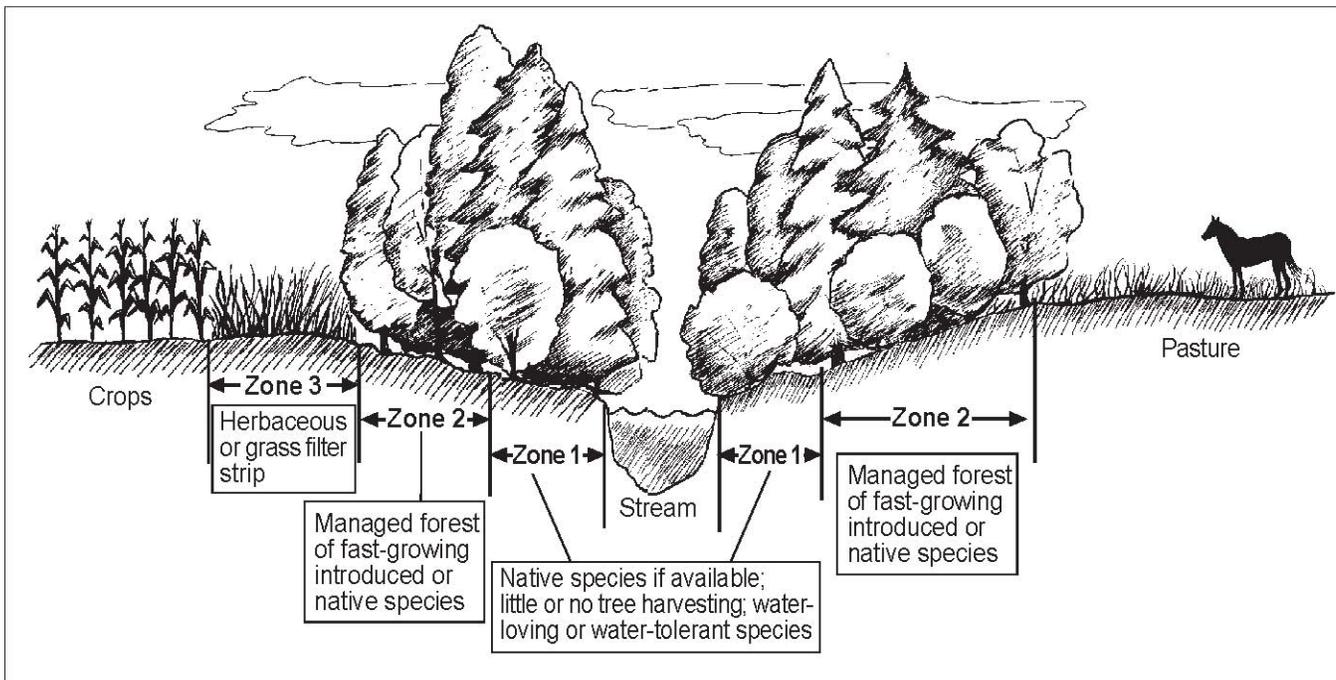
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If needed, an aerial view or a side view of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included. A ToolKit map may be used to show the location and layout of the area to be site prepared.

Scale 1"= \_\_\_\_\_ ft. (NA indicates sketch not to scale: grid size=1/2" by 1/2")



1"= \_\_\_\_\_ ft. (NA indicates sketch not to scale: grid size=1/2" by 1/2")



A riparian forest buffer includes a zone 1, the area closest to the stream or waterbody, and a zone 2, the area adjacent to and up gradient of zone 1. Trees and shrubs in zone 1 provide important wildlife habitat, litter fall for aquatic organisms, large wood that can fall into the stream or waterbody, and shading to lower water temperature. This zone helps stabilize streambanks and shorelines. Trees and shrubs in zone 2 (along with zone 1) intercept sediment, nutrients, pesticides, and other pollutants in surface and subsurface water flows. Zone 2 can be managed to provide timber, wood fiber, and horticultural products. Partial tree cutting is allowable in buffer zone 2 provided 50 square feet of evenly distributed basal area remains after the harvest. A third zone, zone 3, is established if periodic and excessive water flows, erosion, and sediment from upslope fields or tracts are anticipated generally associated with cropland or pastures. Zone 3 generally consists of herbaceous plants or grass and a diversion or terrace, if needed. This zone provides a “first line of defense” to assure proper functioning of zones 1 and 2.



Good examples of Riparian Forest Buffers where the main creek and smaller tributaries are protected by buffer trees.