

Riparian Forest Buffer

Conservation Practice Job Sheet

AK-391



Definition

An area of predominantly trees and/or shrubs located adjacent to and up-gradient from watercourses or water bodies.

Purpose

- Create shade to lower water temperatures to improve habitat for aquatic organisms.
- Provide a source of detritus and large woody debris for aquatic and terrestrial organisms.
- Create wildlife habitat and establish wildlife corridors.
- Reduce excess amounts of sediment, organic material, nutrients and pesticides in surface runoff and reduce excess nutrients and other chemicals in shallow ground water flow.
- Provide a harvestable crop of timber, fiber, forage, fruit, or other crops consistent with other intended purposes.

- Provide protection against scour erosion within the floodplain.
- Restore natural riparian plant communities.
- Moderate winter temperatures to reduce freezing of aquatic over-wintering habitats.
- To increase carbon storage

Where Used

On areas adjacent to permanent or intermittent streams, lakes, ponds, wetlands and areas with ground water recharge that are capable of supporting woody vegetation

Conservation/Forest Management Planning

System approach (landscape)

Forested Landscape (timber production)

Forested Landscape (wildlife land)

Agricultural Landscape (agricultural land)

Contour Farming (330), Diversions 362, Filter Strip (393), Field Border (386), Site Preparation, (490) Terrace (600) and other practices that will create and promote sheet flow through the forested section of the riparian forest buffer.

Suburban/Developing Landscape (urban land)

Tree and shrub establishment practices should include the following consideration and documentation:

- field map and soil map
- time to economic or functional maturity
- expected products and yield
- recommended nutrient rates, form, timing, and method of application
- location of designated sensitive areas
- guidelines for maintenance
- current and expect stocking levels
-

Successful Practice Implementation

Tree and shrub establishment success is directly linked to the following factors.

- a) The quality of the plant material being used.
- b) The time and effort expended on site preparation.

- c) Care of the planting stock from the time received to the time placed on the site.

Tree and Shrub Establishment Considerations

- Species will be adapted to soil-site conditions.
- Species will be suitable for the planned purpose.
- Species indigenous to the area will be used when ever possible.
- Planting and seeding rates will be adequate to accomplish the intended purpose.
- Planting dates will reflect the time needed to ensure maximum plant survival.
- Seedling stock will be free of diseases, mold, and damage and will have well-developed root systems.

Guidelines for Operation and Maintenance

- Reasonable means for protection of the new plants will be followed.
- High value specimens may require fencing and protection from moose and cattle.
- Weed control should be used if the initial site preparation did not reduce plant competition.
- Irrigation maybe needed during establishment.
- Fertilization may also be needed after establishment.
- Inspect periodically for insects and diseases and take appropriate actions for control and suppression
- Replant as needed in order to meet the purpose of the practice.

Riparian Forested Buffer Establishment of Vegetation

Landuser _____
 Assisted by _____

Field _____
 Date _____

Landscape type buffer is planned for: (Forested timber production) (Forested wildlife) (Agricultural) (Urban/Developing)

PURPOSE (Check all that apply)	
Create shade to lower water temperatures <input type="checkbox"/>	Restore natural riparian plant communities <input type="checkbox"/>
Moderate winter temperatures to reduce freezing of aquatic over-wintering habitats <input type="checkbox"/>	Provide protection against scour erosion within the floodplain <input type="checkbox"/>
Create wildlife habitat and establish wildlife corridors <input type="checkbox"/>	Provide a source of detritus & large woody debris <input type="checkbox"/>
Reduce excess amounts of sediment, organic material, nutrients and pesticides in surface runoff and reduce excess nutrients and other chemicals in shallow ground water flow. <input type="checkbox"/>	Provide a harvestable crop of timber, fiber, forage, fruit, or other crops consistent with other intended purposes <input type="checkbox"/>
	To increase carbon storage <input type="checkbox"/>

Table 1. Field Conditions

Soil Mapping Units	Adjacent Water Body – Name and type					Seasonality	
	Name	Lake /Pond	River/ Stream	Wetlands	Ground water recharge area	Permanent	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Intermittent	<input type="checkbox"/>

ACRES	Right bank (looking up stream)	Left Bank (looking up stream)	Total Length	
		Length	Length	
		Average width	Average width	

Table 2. Methods of Establishment, Operation and Supporting Practices

Practice Utilized in Establishment	Practice Code	Check if Planned	Units Planned	Zone Practice is planned	Specs. Or Job sheet attached
Animal Trails and Walkways	575	<input type="checkbox"/>	(Feet)		
Critical Area Planting	342	<input type="checkbox"/>	(acres)		
Early Successional Habitat Development/Management	647	<input type="checkbox"/>	(acres)		
Fence	382	<input type="checkbox"/>	(feet)		
Prescribed Grazing	528A	<input type="checkbox"/>	(acres)		
Filter Strip	393	<input type="checkbox"/>	(acres)		
Riparian Herbaceous Cover	390	<input type="checkbox"/>	(acres)		
Tree/Shrub Establishment	612	<input type="checkbox"/>	(acres)		
Use Exclusion	472	<input type="checkbox"/>	(acres)		
Forest Site Preparation	490	<input type="checkbox"/>	(acres)		
Other (list)		<input type="checkbox"/>			
		<input type="checkbox"/>			

Table 3. Zone Specifications

Zone #	Vegetative Cover	Width	Stocking
1			
2			
3			

Riparian Forested Buffer

STREAMBANK RESTORATION SPECIFICATIONS

Landuser _____
 Assisted by _____

Field _____
 Date _____

Table 4. Techniques

Technique	U	REVEGETATION /Stabilization TECHNIQUES (Check apply)		Technique	Installed
		Units	Installed		
#1 Live Staking	Number of plants		<input type="checkbox"/>	#9 Tree Planting (attach Tree/shrub Planting Job Sheet)	<input type="checkbox"/>
#2 Bundles (Fascines)	Number of bundles and length		<input type="checkbox"/>	#10 Shrubs (attach Tree/shrub Planting Job Sheet)	<input type="checkbox"/>
#3 Live Siltation	Yards (40 plants per yd)		<input type="checkbox"/>	#11 Grass (attach Seeding Plan)	<input type="checkbox"/>
#4 Brush Mat	Sq. Yards (4 inches thick)		<input type="checkbox"/>	#12 Vegetated Cribbing (attach engineering design)	<input type="checkbox"/>
#5 Brush Layering	Yards (25 plants per yd)		<input type="checkbox"/>	#13 Coir Logs (attach design)	<input type="checkbox"/>
#6 Hedge Brush Layering	Yards (25 plants per yd)		<input type="checkbox"/>	#14 Spruce Tree Revetment (attach design)	<input type="checkbox"/>
#7 Grass Rolls	Linear Feet		<input type="checkbox"/>	#15 Root Wads (attach design)	<input type="checkbox"/>
#8 Vegetative Mats	Sq. Yards		<input type="checkbox"/>	#16 Elevated Walkways (attach engineering design)	<input type="checkbox"/>

Streambank Revegetation Zones

Adapted from Stream Bank Revegetation and Protection, Technical Report 98-3, AK DNR Fish and Game

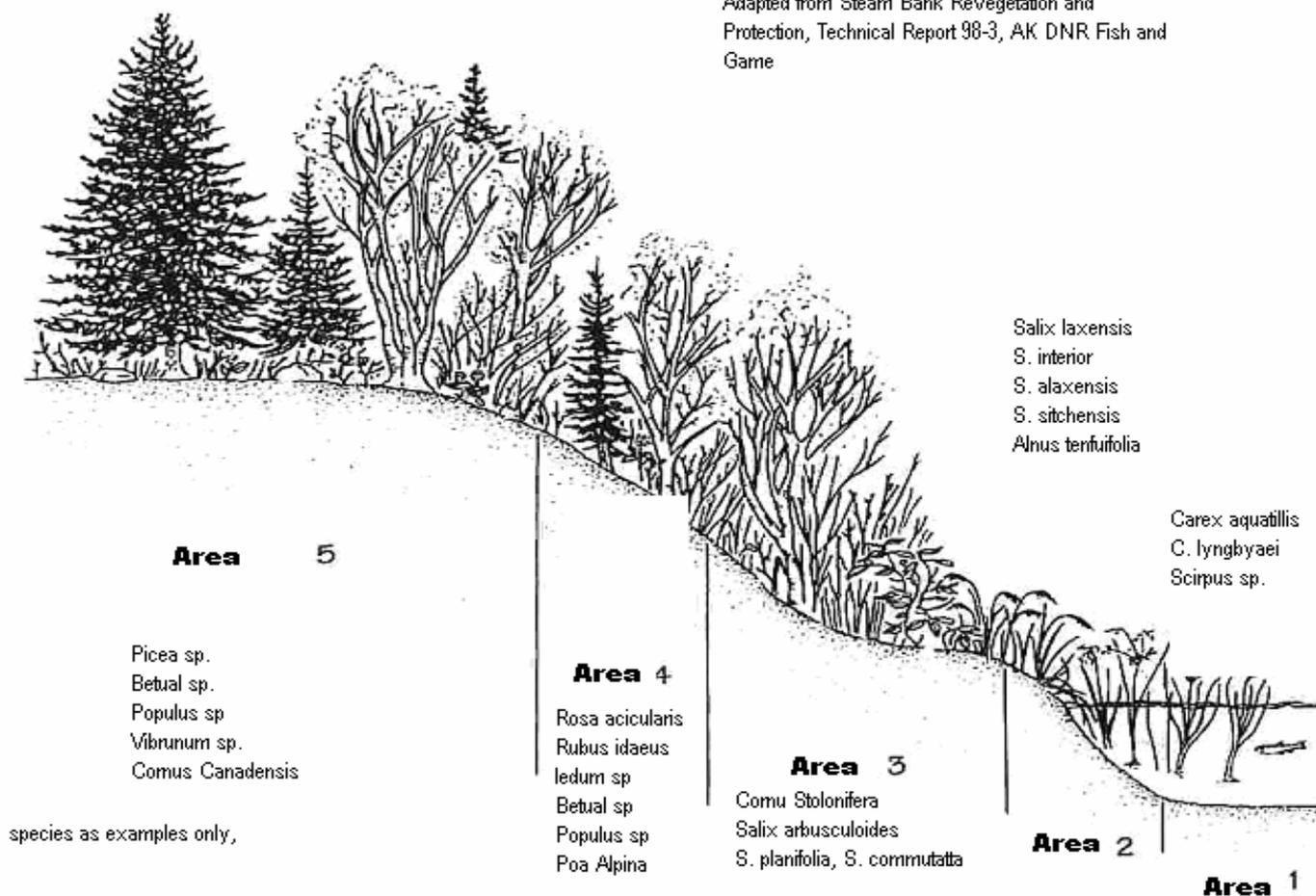


Table 5. Planting-establishment Prescriptions

Soil Mapping Units or texture	Stream Bank Revegetation Areas (see diagram above)				
	Techniques (above #)	Installed Units	Species (see below)	Spacing	Total Number
Area 1 <input type="checkbox"/>					
Area 2 <input type="checkbox"/>					
Area 3 <input type="checkbox"/>					
Area 4 <input type="checkbox"/>					
Area 5 <input type="checkbox"/>					

Plant specification notes:

Plant Material Specifications			
Area 1	Option A	Option B	Option C
Species			
Stocking Rate - lbs/ac			
Min ht			
Max ht			
Total amount needed for operation			
Plant Material Specifications			
Area 2	Option A	Option B	Option C
Species			
Age			
Caliper min./stocking rate lbs /ac			
Min ht			
Max ht			
Total amount needed for operation			
Plant Material Specifications			
Area 3	Option A	Option B	Option C
Species			
Age			
Caliper min.			
Min ht			
Max ht			
Total amount needed for operation			
Plant Material Specifications			
Area 4	Option A	Option B	Option C
Species			
Age			
Caliper min.			
Min ht			
Max ht			
Total amount needed for operation			
Plant Material Specifications			
Area 5	Option A	Option B	Option C
Species			
Age			
Caliper min.			
Min ht			
Max ht			
Total amount needed for operation			

Riparian Forest Buffer Management of Existing Vegetation

Land user _____ Field _____

Assisted by _____ Date _____

Landscape type buffer is planned for: () Forested timber production, () Forested wildlife, () Agricultural, () Urban/Developed

PURPOSE (Check all that apply)	
Create shade to lower water or maintain temperatures	Restore riparian plant communities
Provide a source of detritus & large woody debris	Reduce pesticide drift entering the water body
Create wildlife habitat and establish wildlife corridor	Provide a source of detritus & large woody debris
Reduce excess amounts of sediment, organic material, nutrients and pesticides in surface runoff and reduce excess nutrients and other chemicals in shallow ground water flow	To increase carbon storage
	Other

Table 1. Field Conditions

Soil Mapping Units	Adjacent Water Body – Name and type				Seasonality
		Name:			
	Lake/pond	River/stream	Wetlands	Groundwater recharge area	Intermittent
Acres	Right bank (looking up stream)		Left Bank (looking up stream)		Total Length
	Length:		Length:		
	Average width:		Average width:		

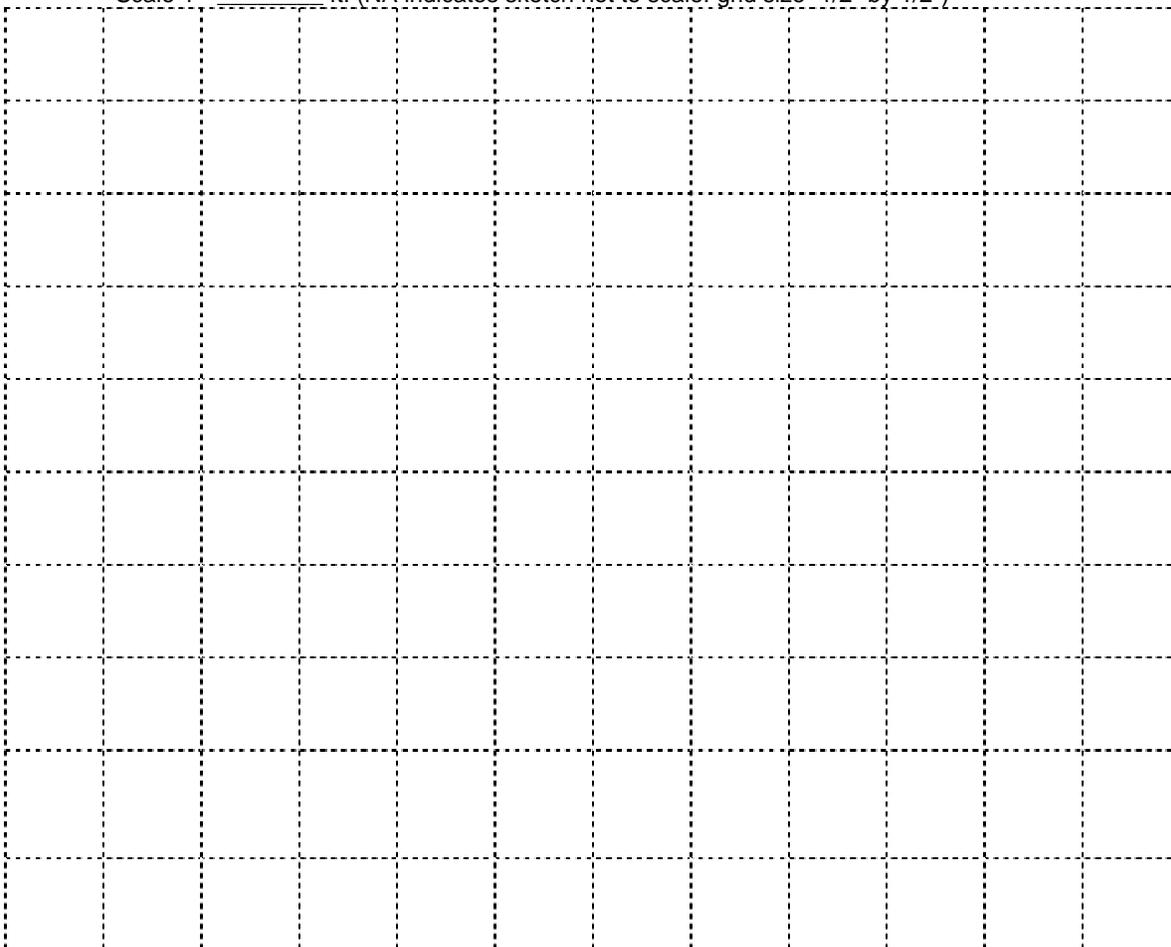
Table 2. Evaluation of Buffer and Methods of Enhancement, Operation and Supporting Practices

Zone # or area	Vegetative cover, species	Check if cover is adequate	Deficiency in cover or stocking	Practices planned	Specs. or job sheet attached to meet stocking and cover

Forest Buffer – Job Sketch

Draw or sketch the field, showing any sensitive areas and required setback zones. Inside each sketched field, enter total field acres and net application acres. Other relevant information, such as complementary practices or adjacent field or tract conditions may be included.

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



Perform the following operations and maintenance:
Replant when required to meet the intended purpose or intent.
Supplemental water when required, or as needed
Inspect plants periodically and protect from adverse impacts such as insects, diseases or competing vegetation
Protect from fire and damage from livestock or wildlife
Periodic application of nutrients may be needed to maintain plant vigor.
Additional specifications and notes:

This plan was developed based on the requirements of the current NRCS standard and any applicable Federal, state, or local regulations or policies. Changes in any of these regulations may necessitate a revision of the plan.

Design Certification

I certify that the above design meets NRCS standards and specifications:

Permits required ? Yes _____ No _____ (attach copy if applicable)

Acres Planned _____ Linear Feet Planned _____

Planner _____ Date _____

I have reviewed this plan and agree to install as designed.

Cooperator _____ Date _____

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication program information (Braille, large print, audiotape, etc.) should contact the USDA Target Center (202) 720-2600 (voice and TDD).

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C., 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal opportunity employer.

APPLICATION / CERTIFICATION

Acres Planned _____ **Acres Applied** _____

Linear Ft. Planned _____ **Linear Ft. Applied** _____

Program _____ **Contract #** _____

I certify that the above installation meets NRCS standards and specifications indicated in the attached AK-391 Jobsheet:

YES

No

Planner _____ **Date** _____

Recommendations and Comments:

Operation & Maintenance

Periodic monitoring of this practice is essential to determine 1) if production and ecological goals are being met, 2) if facilitating practices are installed, maintained, and adequate, and 3) if modifications are needed.