NRCS Natural Resources Conservation Service

Riparian Herbaceous Cover

Conservation Practice Job Sheet *AK-390*

Definition

Riparian herbaceous cover consists of grasses, grass like plants, and soft-stemmed forbs which provide ground cover, and understory vegetation along lake, pond, wetland or stream and river course fringes, as well as in suitable sites inside core riparian zones.

Purpose

Riparian areas serve the following functions:

- Riparian areas provide habitat (food, shelter and water) for aquatic and terrestrial organisms.
- Intercept direct solar radiation, create shade and increase the depth to width ratio to help maintain or restore suitable water temperatures for fish and other aquatic organisms while providing a milder microclimate for wildlife.
- Improve and protect water quality by reducing the amount of sediment and other pollutants, such as pesticides, organic, and nutrients in surface runoff as well as nutrients and chemicals in shallow ground water flow.
- Provide food, in the form of plant detritus, for aquatic insects which are important food items for fish.
- Help stabilize the channel bed and streambank.
- To serve as corridors to provide landscape linkages between existing habitats.
- Provide room for watercourses to establish geomorphic stability.
- To manage existing riparian herbaceous habitat to improve or maintain desired plant communities.
- Increase net carbon storage in the biomass and soil.

Where used

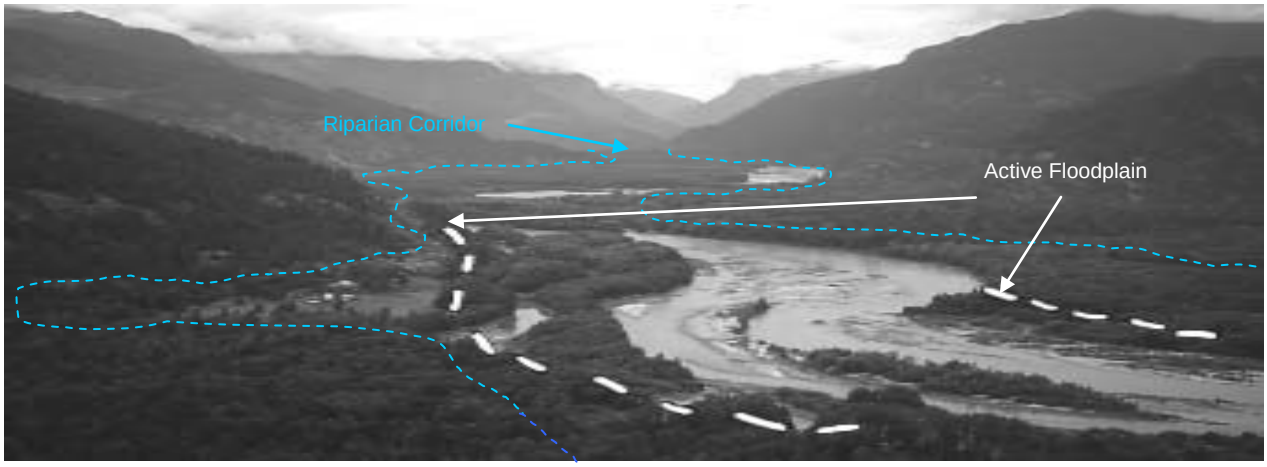
Along watercourses or on the fringe of water bodies where the natural plant community is dominated by herbaceous vegetation.

Where the ecosystem has been altered and the potential natural plant community has changed or has been converted to cropland, pastureland, grazing land, etc.

Resource management system

Riparian herbaceous cover is normally established concurrently with other practices as part of a resource management system for a conservation management unit. For example,

when used in conjunction with riparian forest cover, streambank and shoreline protection, and early successional habitat development and management it can act together to improve steam channel stability, create flood water soil deposition areas, enhance soil stability, and provide a wide variety of wildlife habitat food and cover.



Active floodplain on the Squamish River, British Columbia. Active floodplains are flooded every 1–5 years on average.

Riparian herbaceous cover is/ can be transitional early-successional stage colonizing vegetation. It pioneers sites of disturbance or new stable sediment deposition, according to soil saturation conditions and/ or stream or lake flooding and water levels. Plants distribute and establish according to the plants soil, shade and water tolerances and requirements. The morphogy of the riparian vegetative corridor is controlled by time and both upslope off-site conditions as well as changes in the lake or stream, flow and floodplain of the contributing water source.

Wildlife

Grasses and other herbaceous vegetation are used as food and cover by mammals small and large, such as moose, bears, birds, voles, mice, ground squirrels, and hare's which feed on stems, seeds and flowers. Waterfowl and other birds nest in dense grass growth. Riparian herbaceous plants provide an important food and cover source for a diverse variety of insects, including important pollinators. These insects form the base invertebrate protein source for innumerable increasing trophic level species.

Plant Diversity

Heterogeneity of species composition, vertical and horizontal structure, and density within the stream corridor is an important design consideration. The plants that make up the stream corridor, their forms and diversity affect function, especially at the reach and site scales. Stratification of herbaceous vegetation affects wind, shading, invertebrate and avian diversity, and plant growth. Typically, vegetation at the edge of the stream is very different from the vegetation that occurs within the interior of the riparian corridor. The topography, aspect, soil, and hydrology of the corridor provide several naturally diverse layers and types of vegetation.

The difference between edge and interior vegetative structure are important design considerations. An edge that gradually changes from the stream corridor into the adjacent ecosystems will soften environmental gradients and minimize associated disturbances. These transitional zones encourage species diversity, and buffer variable nutrients and energy flows. Conditions of naturally occurring edge vegetation should be restored through design. The plant community and landform of a restored edge should reflect the structural variations found in a reference corridor reach. To maintain connectivity and contiguous cover at the edge of the small gaps, taller vegetation should be planted to continue through the gap. If the gap is wider than can be breached by the tallest or widest vegetation, a more gradual edge may be appropriate.

Operation and maintenance

For plantings to function properly, access by livestock and certain wildlife may/ must be

managed year-round (use exclusion and fencing), if they present a problem.

Remedial maintenance can be/ is triggered by the results of a minimum of one annual inspection. An inspection report should identify and prioritize maintenance needs that are not emergencies, but that require a scheduled treatment to improve vigor of the planting, remove or control unwanted species or treat another identified resource need on the site.

Emergency maintenance requires immediate mobilization to repair damage or prevent hazardous conditions. It may include measures to temporarily stabilize a situation so that replacement of plants or other physical manipulation can be performed to retrain the site to its original (or a contingency) design intent.

Specifications

Care should be taken to select herbaceous species adapted to the slope, landform and moisture gradient of the planting, renovation or regeneration site. Create or maintain a minimum open canopy above the practice installation site of 80% during the establishment and desired practice benefit period.

Except to facilitate blending, minimize disturbance to adjacent areas to the site. Fencing may be required to facilitate stand establishment, health and vigor if grazing animals, wildlife or unwanted foot or vehicular traffic, or other disturbances is present.

Avoid any sensitive wildlife habitat or plant areas or threatened or endangered species and their designated critical habitat.

Every effort to should be made to prevent erosion. Erosion and sediment controls, if required, should be installed or established during initial preparation, or as a part of ongoing adjacent land management practices. Physical screening may be necessary when treatment sites exist on slopes or which otherwise might contribute to erosion offsite.

Where the scope of the project is so small that no official erosion control plans have been prepared, control measures should be appropriate to the site, installed promptly, and maintained.

Depending on existing site conditions and the project goals, seeding and plant establishment may require seed bed preparation ranging from merely mowing and broadcasting a native legume seed, or light to medium tilling to regenerate an existing seed or plant source/ community, to clean tilling the site with debris removal to facilitate a direct seeding. When direct seeding, insure removal of organic over overburden to establish seed to mineral soil contact.

The riparian herbaceous cover component of a conservation plan shall be prepared in accordance with the criteria of the NRCS 390 Standard and shall describe the requirements for applying the practice to achieve its intended purpose(s).

Minimum Documentation Components:

- plan map
- soil map
- topographic maps
- location of sensitive resources and setbacks
- operation and maintenance requirements
- NRCS-CPA-52
- NRCS Seeding Specification Worksheet
- alternative conservation practices and treatments that address establishment of native herbaceous vegetation for the purposes of seral stage and wildlife habitat development

Site-specific requirements are listed on the specifications sheet. Additional provisions are entered on the job sketch sheet. Specifications are prepared in accordance with the NRCS Field Office Technical Guide. See practice standard Riparian Herbaceous Cover, code 390.

Typical native herbaceous understory in woody canopy-free riparian area of South-Central Alaska

Riparian Herbaceous Cover

SEEDING SPECIFICATION WORKSHEET

Client: _____ **Contract Item Number:** _____
Unit: _____ **Treatment Acres:** _____
Location: _____ **Date:** _____
Farm Number: _____ **Tract(s):** _____ **Field(s):** _____
Permits Required (attach copies) _____
Soil Component _____ **Texture** _____ **Drainage Class** _____
Soil Component _____ **Texture** _____ **Drainage Class** _____
Soil Component _____ **Texture** _____ **Drainage Class** _____

PURPOSE: Seeding may be applied as part of a conservation management system to accomplish a management objective or as a facilitative activity that treats the soil, water, air, plant, animal and human resource concerns. SEEDINGS MUST BE PLANNED IN ACCORDANCE WITH APPROPRIATE STANDARDS

Plan Objectives (Identify which practice purpose (s) this practice addresses; include description of desired plant community): _____

Utilize continuation sheets or attachments to provide more detailed information as needed.

1. Identify if project is; Site Regeneration _____ Interseeding _____ Direct Seeding _____

2. Seedbed Preparation: _____

3. Seeding Operations Planned seeding date: _____
Drill: _____ Spacing: _____ Depth: _____ Carrier: _____
Broadcast – Rake/Harrow/Mulch/etc: _____

Cover or Nurse Crop (Kind/Rates): _____

Irrigation (Replant/ Post plant/ Scheduling): _____

4. Weed and Pest Control: _____

_____

_____

5. Establishment Protection (identify livestock or wildlife exclusion or deferment requirements where necessary): _____

_____

_____

6. Management Recommendations (identify livestock prescribed grazing plan if applicable): _____

_____

_____

7. Species and Pure Live Seed (PLS) Seeding Rates

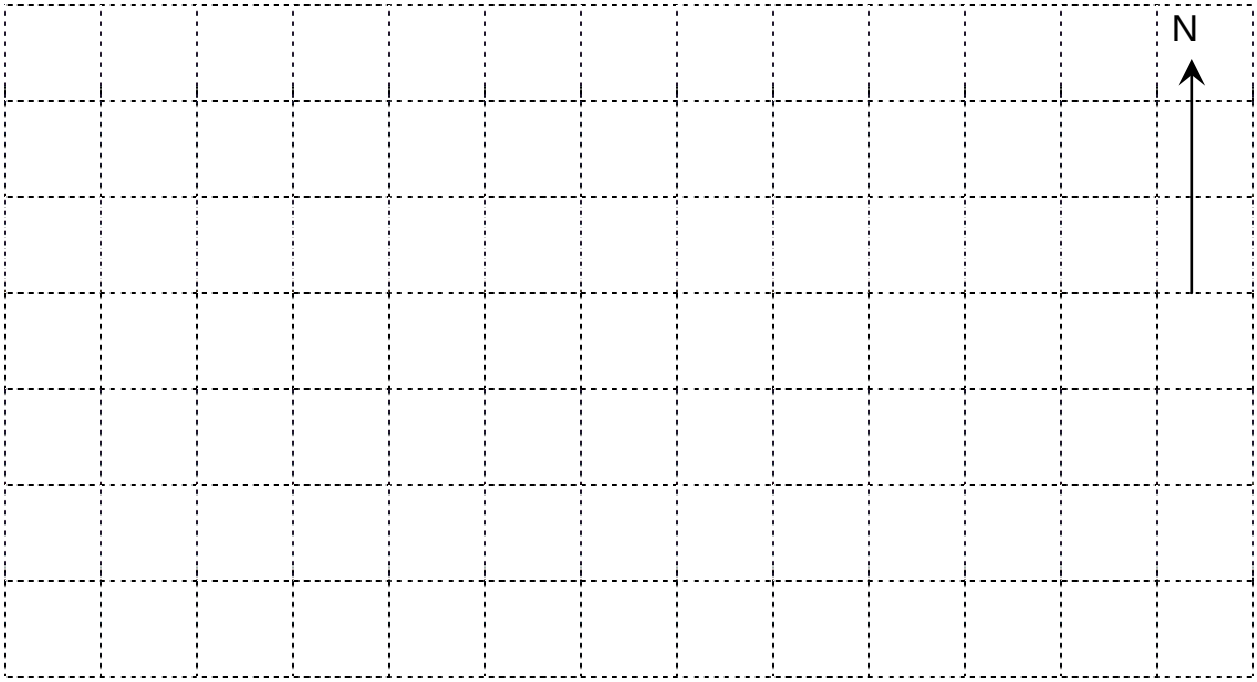
1	2	3	4	5	6	7
Species	**Cultivar**	**Full PLS Rate***	**% Mix Desired**	**Rate/Acre (3 x 4)**	**Acres**	**Lbs. PLS (5 x 6)**

(*Column 3 requires purity and germination to be previously calculated for pls*)

Riparian Herbaceous Cover Design/ Layout Drawing

Prepare a plan view or attach an aerial photo delineating the project site(s) and any other relevant information, complementary practices and measures, or additional features which would serve to locate and effectively describe the treatment site.

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



Additional Specifications and Notes:

Planner_____ Date_____

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

SEEDING APPLICATION/ CERTIFICATION WORKSHEET

Name of Reviewer_____Date**:**_____
Conservation Practice (from Alaska Field Office Technical Guide)_____
Landowner_____ Phone_____
Permits acquired? Yes_____ No _____ (attach copy if applicable)
Location (GPS or legal description)_____

Seedbed preparation according to plan design? Yes_____ No_____
(reason for deviation if any)_____
_____

Seeding method according to plan design? Yes_____ No_____
(reason for deviation if any)_____
_____
_____

Seeded species according to design and amounts (attach copy of seed tags)?
Yes_____ No_____
(reason for deviation if any)_____
_____
_____

Date Seeded:_____ Acres planted:_____
Fertilizer Applied:_____
Weed/Pest Control:_____
_____
_____

Initial Stand Establishment:_____
_____

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.

Does the practice as installed successfully fulfill the practice objectives?
☐ YES ☐ NO

Is the practice a part of a larger conservation treatment or RMS plan?
☐ YES ☐ NO

Is follow-up needed? ☐ YES ☐ NO

Will/ has scheduled operation maintenance be performed as prescribed?
☐ YES ☐ NO

Certification

I certify that the above practice meets NRCS standards and specifications:
☐ YES ☐ No

If NO, action(s) required to correct deficiencies _____

_____

_____

_____

_____

_____

_____

Checkout Official: _____ Date: _____
(Checked & certified)

Field Office location or business address:

_____

_____

_____

Phone: _____

Remedial actions required to correct certification deficiencies have been performed, I now certify the practice meets all NRCS standards and specifications.

Checkout Official: _____ Date: _____
(Checked & certified)

Field Office location or business address:

_____

_____

_____

Phone: _____

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