



United States Department of Agriculture
Natural Resources Conservation Service

Water Quality and Wildlife Enhancement Activity – ANM05- Extending Riparian Forest Buffers for Water Quality Protection and Wildlife Habitat



Extend existing buffers

Where existing buffers are utilized, extend them to gain more efficiency in intercepting overland flow and reducing the transport of nutrients, pesticides and agro-chemicals.

Land Use Applicability

This enhancement is applicable on cropland and pasture land.

Benefits

Widening existing conservation buffers (e.g., filter strips, riparian buffers, grassed waterways, field borders) that currently meet NRCS conservation practice standard criteria can provide food and cover for native and game species as well as enhancing aquatic habitat by providing shade, input of wood or carbon to the stream, and stabilizing streambank conditions. Additionally, these extended buffers offer more surface area to filter out sediments and agro-chemicals.

Riparian habitats are important transition zones between terrestrial landscapes and aquatic zones. Wildlife species utilize these transition zones because they provide a unique combination of cover, access to water and often provide important travel corridors. Extending existing buffers not only enhances wildlife habitat but it increases the effectiveness of water quality protection they provide to the streams.

Criteria for Extending Existing Buffers

Existing buffers must meet minimum state requirements for width. Extend the existing buffer for a total of 60 feet or more to enhance habitat and water quality functions.

The extended buffer must be composed of at least 5 species of non-noxious, wildlife friendly grasses, perennial forbs, shrubs, and/or trees best suited to site conditions. Include species that provide pollinator food and habitat where possible.

- All site preparation and plant establishment shall be accomplished according to the appropriate NRCS conservation practice standard criteria and specifications.
- Forested riparian buffers shall consist of a diversity of tree and shrub species of which the majority are capable of producing fruit or nuts and trees which, when mature, will achieve heights of at least 60 feet and 60% canopy closure.
- Any use of the buffer must not compromise its intended purpose.
- To the extent possible the buffer areas and extended buffer areas will be vegetated to increase overland flow interception and increase water quality values of the stream or water body.



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For full implementation of this enhancement, continuous buffers must be used on all lands adjacent to streams, lakes and ponds where annual crops are produced.

Operation and Maintenance:

- Once established, buffers must not be mowed, disked, grazed, or otherwise disturbed, until after the primary wildlife ground nesting period has ended.
- Buffers will be regularly maintained for its intended purpose through the life of the contract. This includes any removal of vegetation, including grazing.
- Grazing is allowed if a grazing management plan is used that protects the integrity, diversity and function of the riparian area.
- Buffers will have a wildlife management plan to maintain established plant communities through the life of the contract. The wildlife plan will maintain the plant community and its structural diversity and provide habitat for intended species, remove duff, and control woody vegetation.

Documentation Requirements

1. A map showing the location and size of enhanced riparian forest buffers.
2. Documentation of the type and rates of vegetation planted in the new riparian forest buffers.



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IDAHO ADDENDUM 2009

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Additional guidance for extending existing riparian forest buffers:

Existing riparian forest buffers must meet NRCS Practice Standard 391 minimum width requirement, which is **35 feet for water quality improvement**, and varies for other purposes. The buffer will be extended to at least 60 feet wide.

Wildlife Friendly Species

Wildlife friendly grass and forb species include all native perennial plant species typically represented by a diverse mixture as described in the representative ecological site description. Native grass species typically include bluebunch wheatgrass, Idaho fescue, Sandberg bluegrass, big bluegrass, Thurber needlegrass, slender wheatgrass, thickspike wheatgrass, western wheatgrass, and basin wildrye. On sandy sites, consider sand dropseed and Indian ricegrass. Consider native forbs and legumes such as western yarrow, arrowleaf balsamroot, buckwheat, flax, milkvetch, lupine, American vetch, penstemon and tapertip hawksbeard. Introduced grass species could include redtop, orchardgrass, meadow brome, creeping foxtail, meadow foxtail, intermediate wheatgrass, pubescent wheatgrass, tall wheatgrass, and Russian wildrye. Introduced forbs and legumes include alfalfa, small burnet, clover (multiple species), sainfoin, cicer mikvetch and yellow sweetclover. Native shrubs include chokecherry, golden current, shrubby cinquefoil, juniper, serviceberry, woods rose, silver buffaloberry, redosier dogwood, and native willows (multiple species). Native trees include cottonwood, water birch, quaking aspen, Douglas and black hawthorn, and tree willows. Introduced woody species include Nanking cherry, cotoneaster and Siberian peashrub, but are not generally recommended in riparian forest buffer plantings. **Any use of the riparian forest buffer must not compromise its original intended purpose.**

For additional information, refer to the following documents:

Idaho NRCS Plant Materials Technical Note 23, *How to Plant Willows and Cottonwood for Riparian Restoration*. ftp://ftp-fc.sc.egov.usda.gov/ID/programs/technotes/planting_willowsa.pdf

Idaho NRCS Plant Materials Technical Note 24, *Grass, Grass-like, Forb, Legume and Woody Species for the Intermountain West*. ftp://ftp-fc.sc.egov.usda.gov/ID/programs/technotes/tn24_seedspecies

Idaho NRCS Plant Material Technical Note 24, Supplement: *Intermountain Planting Guide*, USDA-ARS Forage and Range Research Lab/Utah State Extension, AG 510.
<ftp://ftp-fc.sc.egov.usda.gov/ID/programs/technotes/tn24supplement>.

Idaho NRCS Plant Materials Technical Note 32, *Native Shrubs and Trees for Riparian Areas*. ftp://ftp-fc.sc.egov.usda.gov/ID/programs/technotes/riparian_woodys.pdf

Idaho NRCS Plant Materials Technical Note 38, *Wetland Species and Grasses for Riparian Areas*. ftp://ftp-fc.sc.egov.usda.gov/ID/programs/technotes/herb_wetland_plants.pdf

Idaho NRCS Plant Materials Technical Note 43, *Tree Planting Care and Management*.
ftp://ftp-fc.sc.egov.usda.gov/ID/programs/technotes/treecare_1007.pdf

USDA Forest Service, Rocky Mountain Research Station. *Riparian Buffer Design Guidelines for Water Quality and Wildlife Habitat Functions on Agricultural Landscapes in the Intermountain west*. General Technical Report GTR-203.
www.fs.fed.us/rm/pubs/rmrs_gtr203.pdf

USDA Forest Service, Southern Research Station. *Conservation Buffers: Design Guidelines for Buffers, Corridors and Greenways*. General Technical Report SRS-109.
http://www.unl.edu/nac/bufferguidelines/docs/conservation_buffers.pdf.

Site preparation and plant establishment must meet NRCS Practice Standard 391 requirements.