

Part I. Potential Wildlife Uses

This supplement provides design and management options for land users and planners seeking to enhance filter strips for wildlife.

Filter strips established adjacent to drainage ditches, streams, lakes, ponds, seeps, or other wetland habitats potentially provide many benefits to onsite and offsite aquatic habitats. These benefits to aquatic habitats may include improved water quality, reduced soil erosion, stabilized stream banks, improved floodplain function, and recharge of groundwater aquifers.

Properly designed and maintained filter strips potentially provide feeding, nesting, fawning, and resting habitat for wildlife. They also may serve as important travel corridors that allow animals to move safely between habitats.

Part II. Planning and Design Considerations

Site Considerations

- Landowner's wildlife objectives
- Proximity to available water and other required habitats
- Adjacent land uses
- Soil qualities (texture, depth, moisture content, etc.).
- Width and length of filter strip and ability to accommodate desired wildlife species
- Special wildlife resources (e.g., threatened or endangered species)

Design Considerations

Fish and wildlife design considerations in Northern Plains agricultural landscapes include: (1) fish-wildlife habitat goals; (2) filter strip width and length; (3) wildlife habitat



value of plants; (4) plant selection to create nonuniform vegetative structure; (5) adjacent land uses; and (6) opportunities to link adjacent fish and wildlife habitats.

If disturbance is frequent and pervasive, then opportunities to manage filter strips for wildlife are greatly limited. For example, untimely mowing or post harvest grazing of adjacent crop residues may eliminate fall and winter cover value of the filter strip. Attention must focus on those situations where disturbance will be infrequent or will be timed to be consistent with the habitat needs of the desired wildlife species.

Wider buffers with nonuniform stands of different plant types (grasses and forbs), will supply more potential habitat and attract more species of wildlife than narrow buffers comprised of a single species.

If the goal is to provide wildlife with secure travel corridors and year-round cover, it is important to use mixes of grasses and forbs with stiff stems and higher resistance to lodging. Some species, such as smooth brome grass, do not stand up as well to adverse weather, so their value as winter cover is reduced. Nonetheless, mixes of introduced grasses and forbs may provide excellent cover for nesting, brood-rearing, or fawning if stands are properly managed and maintained. Aggressive introduced plants may outcompete other important plants and should be used cautiously in developing wildlife habitat.

Recommended widths of filter strips for travel corridors is 50 feet, with a minimum of 36 feet. The recommended width for nesting and escape cover is 100 feet. Larger widths are generally recommended to help reduce predator impacts.

Maintenance Considerations

The amount of maintenance required and the method used to maintain vegetation depends on wildlife goals and types of vegetation established in the filter strip. For example, maintenance requirements for intermediate wheatgrass and alfalfa will be different from that for plantings of native grasses and forbs.



Similarly, cool season and warm season plantings will have different timing for maintenance. Management should serve to maintain the viability of the vegetative community, its structure, and interspersion. Management should minimize disturbance to wildlife, especially during the reproductive period.

Managed disturbances necessary for maintaining vegetation or filter strip function, such as mowing, selective herbicide treatment or grazing, should be delayed until after August 1, to avoid disturbing birds during the primary nesting season.

Use of chemical pesticides may disrupt the food web, and use of such products should be carefully planned. Mowing at night causes high mortality of wildlife and should be avoided.

Natural disturbance factors in the prairie grasslands included fires, that occurred at three to five year intervals in the tall grass prairie and at three to ten year intervals in the mixed grass prairie. Fire at similar intervals is also an appropriate management tool for filter strips established with native vegetation. Treating a portion of the area each year is preferable to treating the entire area in the same year.

Timing of burns is an important consideration. Burning in spring before May 1 is commonly recommended to avoid most of the nesting season. Fall burns eliminate winter cover, however fall burning is recommended to maintain the forb

component of filter strips and enhance their value for pollinating insects and young birds.

Before conducting a prescribed burn, have a qualified professional develop a prescribed burning plan for your area. Maintenance schedules for filter strips should be adjusted to account for activities occurring on adjacent areas.

For example, if nearby grasslands are hayed or grazed, displaced nesting birds may attempt to renest in filter strips. Delaying treatments beyond conventional dates may be necessary to accommodate these late nesting birds.

Part III. Recommended Plants

Develop a seed mix from the species approved for this practice in the *South Dakota Technical Guide*. Select plants that are suited to the soil and major land resource area, using range site, ecological site, or pasture suitability group.

Part IV. Specifications Sheet

Use form SD-CPA-26, *Wildlife Habitat Management*, to document the wildlife species that the land user wishes to benefit and to document how and where the species' required habitats are to be established and/or maintained. Follow specification requirements for the practice "Filter Strips" as outlined in the *South Dakota Technical Guide*.



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