Filter Strips

Conservation Practice Job Sheet *393*

Natural Resources Conservation Service (NRCS) **March 2002**

Landowner _____

Definition

A filter strip is an area of grass or other permanent vegetation used to reduce sediment, organics, nutrients, pesticides, and other contaminants from runoff and to maintain or improve water quality.

Purpose

Filter strips intercept undesirable contaminates from runoff before they enter a waterbody. They provide a buffer between contaminant source, such as crop fields, and waterbodies, such as streams and ponds. Filter strips slow the velocity of water, allowing the settling out of suspended soil particles, infiltration of runoff and soluble pollutants, adsorption of pollutants on soil and plant surfaces, and uptake of soluble pollutants by plants.

Secondary benefits:

- Forage – onfarm use or cash crop
- Field borders
- Turnrows and headlands
- Access
- Aesthetic

Where used

- At the lower edge of crop fields or in conjunction with other conservation practices.
- On fields along streams, ponds, lakes, and drainageways.
- As part of a riparian forest buffer system.
- Where there is sheet or uniform shallow flow (avoid concentrated flow).
- As part of an agricultural waste management system.
- When they can be installed on the approximate contour.
- Where conservation practices reduce soil losses to acceptable level.
- In conjunction with conservation practices on the contributing area to reduce sources of contaminants.
- On slopes less than 10 percent.

Conservation Management System

Filter strips are normally established as part of a conservation management system to address the soil, water, air, plant, and animal needs and the owner's objectives. It is important to plan the conservation crop rotation, nutrient and pest management, crop residue management, and other cropland practices. Filter strips can also provide forage production and improve farm aesthetics. They are most effective when used in combination with other agronomic or structural practices to provide conservation benefits.

Wildlife

Filter strips can enhance wildlife objectives depending on the vegetative species used and management practiced. Consider using native or adapted vegetative species that can provide food and cover for important wildlife. Delay mowing of filter area until after the nesting season.

Specifications

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 Filter Strip (393).

Operation and Maintenance

- Mow (and harvest if possible) filter strip grasses several times a year to encourage dense vegetative growth. For ground nesting wildlife, care should be taken to avoid mowing during nesting periods.
- Control undesirable weed species.
- Inspect and repair after storm events to fill in gullies, remove flow disrupting sediment accumulation, reseed disturbed areas, and take other measures to prevent concentrated flow in the filter strip.
- Lime and fertilize to soil test recommendations.
- Exclude livestock and vehicular traffic from filter strip during wet periods of the year since filter strips rely on infiltration for reducing contaminants. It is recommended that this type of traffic be excluded at all times to the extent that is practical.
- Restoration is required once the filter strip has accumulated so much sediment that it is no longer effective.

Filter Strips – Specifications Worksheet

Landowner _____ Field Number _____

Purpose (check all the apply)	
☐ Collect sediment	☐ Pollutant filtration
☐ Increase infiltration	☐ Other (specify):

Filter Strip Layout	Filter Strip 1	Filter Strip 2	Filter Strip 3
Strip width (ft)			
Strip length (ft)			
Area of filter strip (ac)			
Slope (%)			
Species #1			
Species #2			
Species #3			
Seeding rate (PLS) (lb/acre)			
Lime (tons/acre)			
N (lb/acre)			
P_2O_5 (lb/acre)			
K_2O (lb/acres)			

Site Preparation
Prepare firm seedbed. Apply lime and fertilizer according to recommendations.
Planting Method(s)
Drill grass and legume seed inches deep uniformly over area. Establish stand of vegetation according to recommended seeding rate. If necessary, mulch newly seeded area with tons per acre of mulch material. May seed small grain as a companion crop at the rate of pounds per acre, but clip or harvest before it heads out.
Maintenance
Maintain original width and depth of the grass area. Regularly remove debris and sediment from filter area. Harvest, mow, reseed, and fertilize to maintain good vegetation. Inspect periodically after every major storm and repair any eroding areas.

Filter Strips – Job Sketch

If needed, an aerial view or a side view of the filter strips field layout can be shown below. Other relevant information, such as complementary practices, adjacent field or tract conditions, the positioning of strips across a field, including structures and crop types, and the positioning of multiple or single row sets across a field or tract, and additional specifications may be included.

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

Additional Specifications and Notes: