



CP 21 - Filter Strips

37

percent of reduced runoff by filter strip compared to 100% row crop

10

percent of cropland conversion to filter strips is effective in reducing runoff

ECONOMIC

ADVANTAGES

Filter strips can be placed in low production areas, such as turn rows, if authorized in the Conservation Plan.

Estimated control benefits for the Lakes States region is about \$186 million annually.

Each ton of eroded sediments that are mitigated by filter strips equates to an estimated \$2.87 in off-farm benefits

Just the basics

A filter strip is a narrow band of grasses, legumes, and forbs to reduce sedimentation, nutrients, pesticides and other contaminants from entering a body of water. In addition, filter provide valuable nesting and forage habitat for wildlife. Filter strips that are located on cropland should be placed immediately adjacent and parallel to streams, lakes, ponds, ditches, wetland, or groundwater recharge areas.

CREP policy guidelines

- *Filter Strips will be established according to the Filter Strip (393) standard in the local Field Office Technical Guide (FOTG).*
- *Must be adjacent and parallel to streams, sinkholes and karst areas, wetlands, and permanent bodies of water.*
- *Must be a minimum of 50 feet wide , and a maximum average width of 150 feet.*
- *Limited use of the filter strip as a turn row or crossing area is authorized.*
- *Livestock must be excluded from the filter strip.*
- *Construction and seeding must be completed 12 months of the contract effective date.*

For more information:

Contact:



What is the life cycle of a filter strip?

DESIGN

CONSIDERATIONS

Filter strips should be designed so that water is dispersed evenly across the filter strip following extreme weather events

Constructing features before or after site preparation may be needed to maintain the function of the filter strip. This could include:

- Grading, leveling, or filling may be needed to meet slope requirements.
- Terraces, dikes, berms, trenches or vegetative barriers can be used to treat concentrated flow areas.
- Remove sediment once it accumulates to 6 inches or higher, re-seed if necessary.
- livestock exclusion techniques such as fences, water well, water tank or trough, or pipeline.

See additional design sheets for engineered practices in the local Field Office Technical Guide (FOTG)

SITE PREPARATION

Sample the soil at least six months prior to planting

Soil testing should be done by an accredited laboratory with the North American Proficiency testing program when an MSU laboratory is not used.

Filter strip should be placed downslope from source area contaminants with a slope gradient no greater than 5%

Number 58 Filter Strip Design Tables to determine the flow length needed to design a Filter Strip based on the resource concern identified. Found in the FOTG.

Existing vegetation can be removed using mechanical and/or chemical methods prior to planting

If the site is currently in sod, weed control with a broad-spectrum herbicide in the fall and again in the spring prior to green up and planting.

Contact MSU Extension for herbicide recommendations.

PLANTING GUIDE

Fall and Spring are the best time to plant

Lime and fertilizer can be applied prior to site planting. This is not often needed. The amount of lime should be determined by a buffer pH test.

Use a no-till grass drill for planting. If no drill is available broadcast and aerial seeding is acceptable

A carrier, such as potash, can be used when aerial seeding for even distribution.

Seed no deeper than 1/8th inch.

After seeding, the site must be rolled or cultipacked to ensure proper seed to soil contact when broadcast and aerial seeding is used.

Maintain grasses by burning, mowing, or spot herbicide. Grasses should not be mowed lower than 4 in., native grasses 12 in.

Desired species and stem density for filter strips is found in MI EST Common Seeding Tables of the FOTG

LANDOWNER

OBLIGATION

- Develop a Conservation Plan with USDA approved conservationist.
- Complete all necessary permits before installation.
- Perform periodic management activities according to the Conservation Management Plan.
- Complete seeding of the the practice within 12 months of the effective date of the contract
- Will maintain practice without additional cost-share payments
- Will not hay or graze the practice area

CONTRACT

TASKS

- Complete a soil test to determine appropriate site preparation and desired species
- Use Filter Strip Design Tables to determine flow lengths of the site
- Complete the Implementation Requirements form in the FOTG with client to outline installation requirements and obtain necessary permits.
- Complete 393 job sheet and cost estimate
- Order needed equipment such as a disk, broadcast seeder, seed drill, roller, or cultipacker.
- Layout and stake according to plans and specifications with the client before installation

With only **5 %** of the world's population, the U.S. uses nearly **12 %** of all the nitrogen fertilizer produced globally