

CROSS WIND TRAP FILTER STRIP FOR WILDLIFE

CONSERVATION DESIGN SHEET

AGRONOMY SERIES May 1997



Natural Resources Conservation Service

Michigan



Cross wind trap filter strip installed along drainage ditch

What is a Cross Wind Trap Filter Strip?

It is a strip of herbaceous cover resistant to wind erosion, established along the upwind edge of a surface drainage ditch to reduce non-point source sedimentation and pollution of surface waters in the ditch where the strip and ditch run across the prevailing wind direction.

How Do Wind Trap Filter Strips Enhance Wildlife Habitat ?

Cross wind trap filter strips create multi-season wildlife food and cover resources as well as connects other habitats as a more secure travel corridor. The minimum width of a Cross Wind Trap Filter Strip for wildlife is thirty (30) feet. Wider strips may be necessary depending upon the size of the sediment contributing area, field soil types, and the sensitivity of the water body being protected.

How Do Annual Plantings At The Leading Edge Benefit Wildlife ?

Trap strips that have plant height and diversity will:

- *provide additional food and cover for wildlife
- *protect warm season grass plantings
- *create habitat diversity
- *allow annual leveling of accumulated wind blown soil

Where to Get More Assistance:

Additional local assistance may be obtained from the local office of a Michigan Conservation District or the USDA Natural Resources Conservation Service (NRCS) office at:

Seed Mixture Recommendation Within the Cross Wind Trap Filter Strip (as checked):

GRASSES:	RATE/ TOTAL
<input type="checkbox"/> Dakota Switchgrass	6 lbs/ac _____
<input type="checkbox"/> Pathfinder Switchgrass	6 lbs/ac _____
<input type="checkbox"/> Timothy	3 lbs/ac _____
<input type="checkbox"/> Orchardgrass	3 lbs/ac _____
<input type="checkbox"/> Vernal Alfalfa	3 lbs/ac _____
<input type="checkbox"/> Clover (ladino, alsike, white dutch medium red or ladino)	3 lbs/ac _____
<input type="checkbox"/> Meadow Foxtail	15 lbs/ac _____
<input type="checkbox"/> Orchardgrass	5 lbs/ac _____
<input type="checkbox"/> Mackinaw Birdsfoot Trefoil	5 lbs/ac _____
<input type="checkbox"/> Intermediate Wheatgrass	12 lbs/ac _____
<input type="checkbox"/> Perennial Ryegrass	10 lbs/ac _____

ANNUAL FOOD STRIPS NEXT TO FILTER

<input type="checkbox"/> Sudangrass	25 lbs/ac _____
<input type="checkbox"/> Hybrid Sudangrass	25 lbs/ac _____

TOTAL: _____

Recommended Seeding Dates: _____

[See MSU Bulletin E-2107 "Seeding Practices for Michigan Crops" for recommended seeding dates, seeding depths, and other establishment guidance]

Trap Filter Area Soil Test Date: _____

Fertilizer Recommendations:

Type: _____ **lb/ac:** _____

Type: _____ **lb/ac:** _____

[Fertilizer is to be applied according to needs determined from a recent soils test taken in the trap filter area. All phosphorus is to be incorporated to prevent phosphorus movement to the surface waters of the adjacent drainage ditch (except in no-till seedings). Nitrogen applications will be delayed until after plant emergence and establishment to minimize nitrogen losses due to leaching or runoff to the adjacent drainage ditch.]

Other Considerations:

A number of environmental effects will occur with the design and establishment of a Cross Wind Trap Filter Strip along the berm of a drainage ditch. A consideration of these effects will allow for incorporation of companion planning elements to achieve an ecosystem-wide conservation plan for the area in which the trap filter strips are to be established. Effects which may be considered include: wind erosion (calculated), soil deposition causing offsite damage, stream conveyance capacity, stream restricted capacity, pesticides in surface water, nitrate-N leaving field, nitrate-N in surface water, total phosphorus leaving field, total

phosphorus in surface water, nutrients and organics in surface water, suspended sediment/turbid surface water, stream fish population, stream benthic invertebrates, air quality-other.

Maintenance:

Established vegetation in the Cross Wind Trap Filter Strip, or plant residue, is to be maintained at a minimum height of 12 inches and at a minimum stem density of between 75 - 100 stems per square foot during those periods in which wind erosion is expected to occur, i.e:

- Winter
- Spring
- Summer
- Fall

Control of invading weeds will be by mowing or by spot herbicide treatment as indicated:

<u>Type of Weed</u>	<u>Type of Control</u>
Canada & Bull Thistle	_____
Perennial Sow Thistle	_____
Russian Knapweed	_____
Spotted Knapweed	_____
Quackgrass	_____
Horseweed	_____
Prickly Lettuce	_____
Hemp Dogbane	_____
Milkweed	_____
Others	_____

Travel lanes and field headlands are not to be included within the minimum designed trap filter strip width, except as indicated:

Entrapped soil sediments are to be removed from the trap filter strip area and spread onto the adjacent field when the depth of those sediments begin to impede the ability of the established vegetation to trap additional sediment. This usually occurs when sediments reach a depth of 6" in the trap filter area.

For More Information:

Additional information about the design and function of Cross Wind Trap Filter Strips may be obtained from the world wide web: (<http://www.mi.nrcs.usda.gov>). Also see FOTG Conservation Standard Cross Wind Trap Strip Filter 589C.

This Conservation Information Sheet

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Reference/File Indexes

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References:

- USDA-NRCS National Agronomy Manual
- USDA-NRCS RUSLE Handbook
- USDA NRCS (MI) Conservation Practice Associations:
 - # 386 Field Border
 - # 393 Filter Strip
 - #589C Cross Wind Trap Strips
- USDA NRCS (MI)Standards & Specification Associations:
 - N/A
- USDA NRCS (MI) Associated Conservation Sheets:
 - Cross Wind Trap Filter Strip for Wildlife

FOCS (MI) Reference Number:

CS _____

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