Vegetated Filter Strips

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Compared to bare land, a dense vegetated buffer has the capacity to reduce runoff to surface waters by 60 to 80%!

What is a filter strip?

A vegetated filter strip is a defined area of vegetation next to a waterway that can filter and capture nutrients, sediment and pathogens in surface runoff coming from grazing and holding areas before the contaminated runoff reaches surface water. Filter strips can be managed to produce feed, grow crops, or provide refuge for beneficial insects. They can include fallow grass, shrubs or trees. Pastures that are already established next to sensitive areas can make excellent filter strips through careful management.

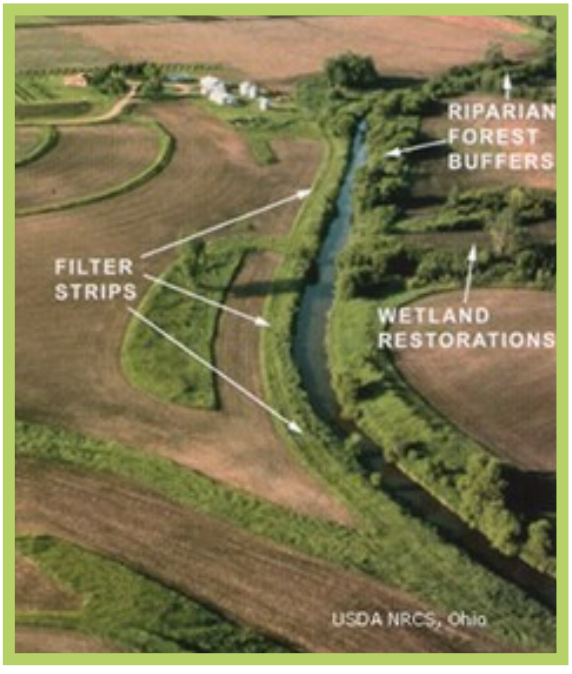
Hedgerows are shrubs or trees along waterways or fence lines. Hedgerows can form a barrier along the sides of waterways to limit access as well as greatly improve filter strips because their deep roots allow greater infiltration of contaminated water compared to grasses. Hedgerows also prevent soil erosion and provide shade to regulate water temperatures. They also benefit local wildlife, increase biodiversity and provide refuge for beneficial insects.

How do filter strips reduce fecal coliform and other pathogens?

Harmful pathogens contained in manure cannot survive dry surfaces and warm temperatures. When exposed to these conditions, fecal coliform bacteria take only a day or so to die. Maintaining healthy filter strips between manure application areas and waterways provides conditions necessary to reduce sediment and excess nutrients from entering the water. This traps bacteria and sediment, while allowing the water to infiltrate the soil.

How wide do filter strips need to be?

For small seasonal confinement areas (e.g. pens, corrals, sacrifice areas, etc.) holding less than 10 animals, the minimum buffer width is 30 m (100 ft) from drinking water sources and 5 m (16 ft) from all other waterways. Holding areas with 10 or more animals should have a 30 m buffer from all waterways. You should also avoid allowing animals in pastures to have access to waterways, especially during wet months when they are at risk of becoming trampled and muddy.



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How are filter strips managed differently from other field areas?

Filter strips can be thought of as “farm with caution zones”, especially when the seasonal potential for runoff is highest (September through March). Careful attention must be paid to managing grazing and manure application so that the filter strip’s capacity to filter bacteria-laden runoff is maximized. Farming practices in filter strip areas must be adjusted in advance of and during periods of the year when the runoff potential is highest (September through March).

Can manure be applied to filter strips?

From October 1 through March 31 manure should not be applied to filter strips. From March 31 through September 31 manure should not be applied within 30 m of drinking water sources and not within 3 m of all other water courses.

How high should grasses be maintained in filter strips?

The filter strips need to be actively growing, with a grass height of at least 8 cm (3 in) in order to continue capturing nutrients and pathogens. Prescribed harvesting of the forage crops within the buffer will maximize environmental benefit. They may be somewhat shorter between March 31 through August 31, but should then be given time to regrow several inches before they are mowed before the wet season begins.

This project was undertaken with the financial support of:
Ce projet a été réalisé avec l’appui financier de :

Environment and Climate Change Canada
Environnement et Changement climatique Canada

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