

Filter Strip



General Maintenance

Trash and Debris Removal

Remove trash and debris after rain of more than one inch.

Vegetation Height

Maintain filter strip at no less than six to eight inches in height. Maintain surrounding vegetation at three-inch height.

Vegetation Maintenance

Remove woody/invasive vegetation.

Annual Maintenance

Sediment Removal

Remove sediment from upslope edge of filter strip.

Spring/Fall Cleanup

Cut back excess growth in spring. Remove excessive leaf litter in fall.

Level Spreader

Assess level spreader. Remove sediment and repair holes or bare ground.

Long-term Maintenance

Every Five Years

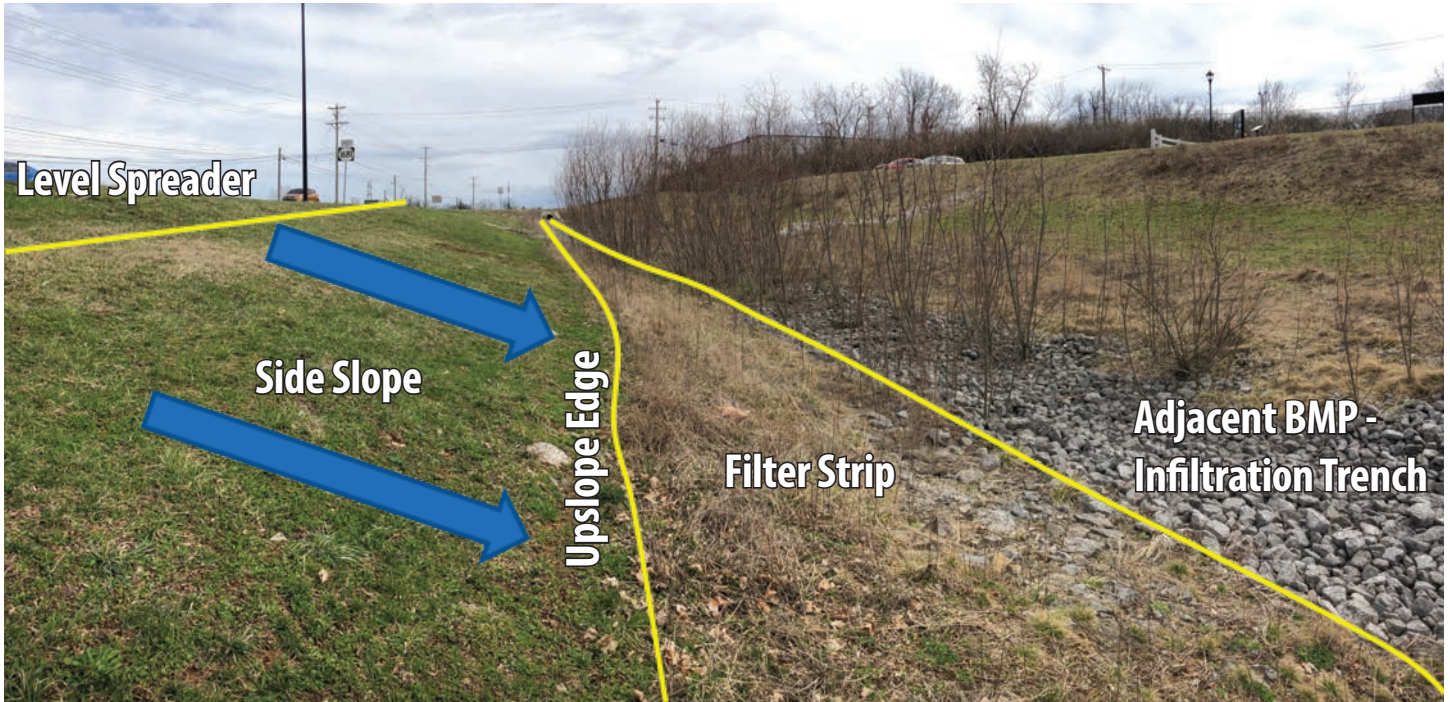
Assess level spreader. Remove sediment, aerate soil, and regrade to original slope, if needed. Assess vegetation. Revegetate and modify plantings as necessary.

Filter strips are planted and maintained strips of vegetation designed to provide pretreatment of stormwater runoff before it flows into adjacent best management practices (BMPs). Gently sloped, the dense vegetation within the strip reduces the speed of stormwater. This allows for the capture of sediment as stormwater from impervious surfaces passes through the filter strip.

Filter Strip Potential Issues

Issue	What Causes It?	Remediation
Gullies or bare ground appears in or upslope of the filter strip.	Erosion/concentrated stormwater runoff	Remove debris or sediment upslope of filter strip. Regrade level spreader and replant ground cover. Apply one-time fertilizer and water until vegetation is established.
Trash or debris is present.	Stormwater runoff	Remove trash and debris.
Water is flowing around filter strip.	Debris or sediment on upslope edge	Remove debris or sediment on upslope edge.
Dead, diseased, or dying vegetation is present.	Soils, hydrology, toxins in stormwater runoff, disease, incompatible plants for conditions	Determine cause (soil pH, compaction, disease), remedy, and replant appropriate vegetation.
Ruts are present in filter strip.	Mowing when filter strip is wet	Fill in ruts and replant appropriate ground cover.
Sediment builds up on filter strip.	Stormwater runoff with heavy sediment load	Remove sediment. Aerate soil in filter strip. Replant vegetation.
Woody plants are present along the side slope.	Suitable habitat	Harvest nuisance vegetation. If herbicide is necessary, do not apply before rain.

Parts of a Filter Strip



Common Issues



Stormwater erosion is present on the side slope preceding the filter strip. This is evidence of mowing when wet or cutting the turf preceding the filter strip too short.



Trash has accumulated on the upslope side of the filter strip. Trash and debris should be removed after rainfall greater than one inch.



The presence of a gully in the side slope indicates concentrated flow. This indicates improper grading or possibly level spreader failure.

Filter Strip Inspection and Maintenance Checklist

Site name:			
Location:			
Inspector name(s):		Inspection date:	
Rain in previous six hours? <input type="checkbox"/> Y <input type="checkbox"/> N If yes, record amount and timing:			
Current weather conditions:			
Flow or water observed? <input type="checkbox"/> Y <input type="checkbox"/> N If yes, record appearance:			
Inspection item	Yes	No	If no, explain location, extent of issue, and/or maintenance performed.
General Inspection			
Site is accessible.			
Area is clean of trash, debris, grass clippings, etc.			
Filter strip vegetation is maintained at or above six to eight inches in height, and surrounding area is maintained at three inches or less.			
Woody (trees or shrubs) or invasive plants are absent.			
Ruts are absent, both in and around filter strip.			
Erosion is not evident.			
Water flow is dispersed through the strip, with no evidence of water going around the structure.			
Sink holes, animal burrows, and instability are absent.			
Filter strip is dry (not applicable less than six hours after rain).			
Dead, diseased, or dying vegetation is absent.			
Sediment			
Sediment accumulation is absent on or around level spreader.			
Sediment accumulation is absent upslope of the filter strip.			
Level Spreader Condition			
Level spreader is in good condition. Erosion and sediment accumulation are absent.			
Level spreader functions as designed.			

Glossary

BMP: Best management practice.

Erosion: Process by which soil and material is washed away by high volumes of stormwater.

Infiltration: Flow of water from ground surface into the underlying soil or sediment.

Invasive plants: Plant species that tend to spread out of control (e.g., Japanese honeysuckle).

Level spreader: An area above a slope consisting of gravel, cement, or the pavement edge, constructed at zero-percent grade, that functions to spread concentrated water flow into dispersed sheet flow. If present, a gravel level spreader may be covered by turfgrass.

Sediment: Fine material that is carried by stormwater and is deposited as the flow of water slows.

Side slope: The slope on the sides of a channel, draining stormwater runoff to the channel.

Turf reinforcement mats: Woven, synthetic-fiber mats that provide temporary cover for bare soil, protection against stormwater erosion, and long-term vegetation support.

Upslope: Toward the highest point on the slope.

References

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