

# GRASSED INFILTRATION SWALES

What are they? They are grassed depressions in the ground designed to collect stormwater runoff from streets, driveways, rooftops, and parking lots.

Stormwater carries pollutants such as grease, oils, gas, bacteria, fertilizers, and pesticides. The soil and sod in the swale act as a filter, pulling the pollutants out as the stormwater passes through. The water then infiltrates to recharge our groundwater supplies, including the Spokane Valley–Rathdrum Prairie Aquifer.

Most swales are found at the front of the yard, next to the street or sidewalk. Stormwater enters swales through openings in the curb (i.e. curb cuts), under sidewalks, or culverts. The water should infiltrate through a swale within about 24 to 48 hours. Grass may begin to die if it is under water for more than 72 hours.

Swales can contain drywells with an elevated metal grate cover. The drywell receives overflow from the swale in larger storm events. A swale with a drywell should have a floor elevation six inches (6") below the top of the drywell grate.

FOR MORE INFORMATION ABOUT  
STORMWATER EASEMENTS,  
STORMWATER SWALES, OR  
STORMWATER MANAGEMENT  
IN SPOKANE COUNTY,  
CONTACT:



**Spokane County Stormwater Utility**

1026 West Broadway Avenue  
Spokane, WA 99260-7284  
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SPOKANE COUNTY

## HOMEOWNER'S GUIDE TO

## GRASSED INFILTRATION SWALES

# SWALE MAINTENANCE

All swales need regular maintenance. Taking good care of your swale is the best way to avoid the expense of repair or renovation! Several measures can be taken before renovation becomes necessary. These include:



- ▶ Keeping the grass in your swale regularly mowed between three (3) and six (6) inches long.
- ▶ Core-aerating grass in your swale at least once a year to help break up any silt that has washed in. Aeration promotes healthy grass and roots, and will help facilitate infiltration.
- ▶ Making sure inlets are not blocked with built-up grass, sediment, or debris. This includes keeping the sod at least two inches lower than the concrete curb cut or apron, so that stormwater is allowed to flow freely from the street into your swale.
- ▶ If your swale has a drywell or culvert, making sure these facilities are also kept open, and not blocking stormwater flow.
- ▶ Replacing patches of grass die-off as soon as possible. Removing the dead grass, rototilling, applying new topsoil, and then reseeding helps increase the life of your swale.



# DOES YOUR SWALE HAVE A PROBLEM?

Swales can retain stormwater rather than allow infiltration through the soil for a number of reasons:



- ▶ Adding new soil over existing soil, followed by sod, causes soil layering and reduces infiltration.
- ▶ Silt that washes into the swale from your yard, driveway, or the road can clog the soil in the swale floor. Sand placed on the roads in the winter likely also reaches your swale.
- ▶ Using your swale as a play area for children, or driving through or parking on it compacts the soil and reduces infiltration.
- ▶ Paint, mortar, or concrete left over from construction that is washed into your swale reduces infiltration, as well as changes the treatment capacity of the soil.
- ▶ Back-to-back storm events may cause the soil to become oversaturated. Most swales should be able to withstand frequent storms. It's possible that more time is needed for the water in the swale to infiltrate completely.
- ▶ During summer months, over-irrigating your lawn causes standing water in the swale. It is important to apply only the water that is needed for a healthy lawn!