Post Falls
"Idaho's River City"
Public Works Division

GrassySwales

Grassed Bioinfiltration Swale

Grassed Bioinfiltration Swales (Grassy Swales)

Grassy swales are used in our community to remove pollutants from stormwater prior to infiltrating into our drinking water source, the Spokane Valley-Rathdrum Prairie Aquifer. Stormwater carries pollutants such as bacteria, heavy metals, oils, gas, grease, nitrogen, phosphorus, and pesticides. The grass acts as a filter, pulling pollutants out as the storm water passes through it. The processes of pollutant reduction include: using the nutrients in the stormwater for growth, trapping oils and greases at the surface where microbes can degrade them, and slowing the flow of stormwater causing heavy metal laden sediment to drop out of solution and be trapped in the upper soil profile. Therefore, proper maintenance and repair is more than just aesthetics, it helps to keep our drinking water clean.

MAINTENANCE TIPS FOR THE OWNER

DON'T OVER WATER... **audits show most sprinkler systems are set up to over water by 30 - 40%. Over watering slows or stops water movement through the soils and will destroy the vegetation at the base of the swale.**

MAINTAIN THE GRASS... **keep grass height between 3 and 6 inches and remove grass clippings after mowing.**

DON'T REPLACE THE GRASS WITH ROCKS... **the biological action of treatment is lost when grass is replaced with rock.**

DON'T OVER FERTILIZE... **follow the manufacturer's recommendations for fertilizing to keep the grass just healthy enough. Excessive fertilization simply adds to the pollution problem.**

DON'T DISPOSE OF CHEMICALS IN SWALES OR DRYWELLS... **swales and dry wells have limited treatment capacity and are not intended to treat full strength wastes.**

CORRECT UNANTICIPATED FLOWS... **swales are designed to accept specific amounts of storm water. The equation does not include excess flows such as irrigation systems spraying onto asphalt or concrete. This and other conditions may saturate soils and compromise the function of the swale.**

KEEP INLETS CLEAR... **remove sediment and debris that accumulate at the inlet of swales. Make sure the inlet is clear so stormwater can flow into the swale.**

WATCH FOR GRASS DIE OFF... **remove dead grass, rototill, and re-seed or re-sod. If a large area is affected, remove the saturated soils and replace with a native soil mixed with topsoil and re-seed. Diligent, timely maintenance can help increase the life of the swale.**

SWALES HAVE FAILED IF... **water stands for longer than 72 hours in the base. Ideally, they will drain in 24 hours. If standing water persists and other remedies, such as turning off the irrigation, have been tried, it may just be time to replace the soils.**