



United States
Department of
Agriculture

Soil
Conservation
Service

Columbia,
Missouri



Urban Conservation Tips



Waterways and Lined Channels

Description

A waterway is a natural or constructed channel that transports water over land without causing soil erosion. Waterways are used to carry concentrated, flowing surface water to adequate outlets. Gullies form in areas where waterways are needed if the areas are not protected from the moving water.

Most often, vegetation in a waterway is all that is needed to control the runoff. But if the flowing water causes erosion in the waterway, linings of cast-in-place concrete, riprap, gabions (rock-filled wire baskets) or similar permanent linings should be used.

Construction

If lined channels are necessary, it is important to install the lining according to the manufacturer's or engineer's guidelines. The following tips will help you get good results from vegetated waterways.

- * Use fiber mats or temporary check dams to protect the waterway from soil erosion until the vegetation is established.
- * Make sure the bottom of the waterway is smooth with no falls, especially at the bottom.
- * Save topsoil, and spread it over the finished waterway. It is easier to establish vegetation in good soil.
- * Before seeding, apply lime and fertilizer to the waterway according to the results of a soil test, available from the University of Missouri Extension Service.
- * Use a type of vegetation that is suitable for the soil and moisture conditions at the site.
- * Remove brush and debris from the waterway. Don't bury it in the waterway. Decomposition of buried material causes settlement.
- * Try to avoid destroying

important woody cover for wildlife when installing a waterway.

Maintenance

A high fertility program, including heavy nitrogen fertilization, helps grass compete with weeds and legumes, and maintain a thick, vigorous stand.

Control weeds and brush by cutting them or by using herbicides. Contact your local University of Missouri Extension Service office for herbicide recommendations.

To prevent the grass from being smothered from accumulated growth, keep the grass cut to a moderate height. Mow frequently enough so that the grass clippings do not smother the grass.

Gullies can be caused by construction irregularities, by sediment deposits, by using the waterway as a pathway or play area and by unstable outlets that drop off at the lower end of the waterway. Control unstable outlets by grading and seeding them.

Gullies must be filled and reseeded or covered with sod. Material used to fill gullies must be well compacted. Overfilling slightly will allow for settling, and will divert water somewhat until the new grass is established. Sediment deposits should be removed before they damage the grass.

Where To Get Help

For more information about constructing and maintaining waterways and lined channels, contact your local Soil Conservation Service office.



