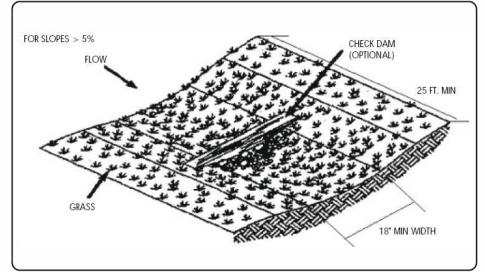
BMP: Biofilters BF



CONSIDERATIONS

- Soils
- Area Required
- Slope
- Water Availability
- Aesthetics
- ☐ Hydraulic Head
- □ Environmental Side Effects

WEBER COUNTY

ENGINEERING DEPARTMENT

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DESCRIPTION:

Biofilters are of two general types: vegetated channel and vegetated filter strip. The vegetated channel is sloped like a standard storm drain channel; the stormwater is treated as it passes through the channel. With filter strips the flow is distributed broadly along the width of the vegetated area.

APPLICATION:

- ► Comparable performance to wet ponds and constructed wetlands.
- Limited to treating a few acres.

INSTALLATION/APPLICATION CRITERIA:

- ▶ Limited to treating a few acres and availability of water during dry season.
- ► The surface area must be defined.
- ▶ The minimum width for a swale is determined by Mannings Equation.
- ▶ Minimum length of a strip is 10 feet.
- ▶ The longitudinal slope must not exceed 5%.
- ▶ Use a flow spreader and energy dissipator at the entrance of a swale.
- ▶ Good soils are important to achieve good vegetation cover.

LIMITATIONS:

- ▶ Poor performance has occurred but this appears to be due to poor design.
- May be limited to areas where summer irrigation is feasible.
- ► Can be difficult to maintain sheet flow in strips.
- Can be difficult to avoid channelization in swales.
- ► Cannot be placed on steep slope.
- Area required may make infeasible on industrial sites.
- ▶ Proper maintenance required to maintain health and density of vegetation.
- ▶ Limited to treating a few acres and availability of water during dry season.

MAINTENANCE:

- ▶ Make sure soils are suitable for healthy vegetation.
- ▶ Level cross-section and even longitudinal slope for swales.
- Any damage to the channel such as rutting must be repaired with suitable soil, properly tamped and seeded.

TARGETED POLLUTANTS

- Sediment
- Nutrients
- Heavy Metals
- ▼ Toxic Materials
- Oxygen Demanding Substance
- ☑ Oil & Grease
- □ Bacteria & Viruses
- High Impact
- Medium Impact
- □ Low or Unknown Impact

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- □ Training
- High
- Medium
- □ Low