BMP: Biofilters

**FOR SLOPES < 5%**

**FLOW**

**CHECK DAM (OPTIONAL)**

25 FT. MIN

18' MIN WIDTH

**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 storm water 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:**
- 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 dissipater at the entrance of a swale.
- Good soils are important to achieve good vegetation cover.

**LIMITATIONS:**
- Good performance depends upon good 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.

**CONSIDERATIONS**
- Soils
- Area Required
- Slope
- Water Availability
- Aesthetics
- Hydraulic Head
- Environmental Side Effects

**TARGETED POLLUTANTS**
- Sediment
- Nutrients
- Heavy Metals
- Toxic Materials
- Oxygen Demanding Substances
- Oil & Grease
- Floatable Materials
- Bacteria & Viruses

**IMPLEMENTATION REQUIREMENTS**
- High Impact
- Medium Impact
- Low or Unknown Impact

**JUB Engineers, Inc.**

Lindon City Storm Water Management Program–2003