

DESCRIPTION:

Level spreaders are devices used at storm water outlets to spread out collected storm water flows into sheet flow (runoff that flows over ground surface in a thin, even layer). Typically, a level spreader consists of a depression in the soil surface that spreads the flow onto a flat area across a gentle slope. Level spreaders then release the storm water flow onto level areas stabilized by vegetation to reduce speed and increase infiltration.

APPLICATION:

Level spreaders are most often used as an outlet for temporary or permanent storm water conveyances or dikes. Runoff that contains high sediment loads should be treated in a sediment trapping device prior to release into a level spreader.

INSTALLATION/APPLICATION CRITERIA:

- ▶ The length of the spreader depends upon the amount of water that flows through the conveyance.
- ▶ Larger volumes of water need more space to even out.
- ▶ Level spreaders are generally used with filter strips (see Filter Strips BMP).
- ▶ The depressions are seeded with vegetation (see Permanent & Temporary Seeding BMP).
- ▶ Level spreaders should be constructed on natural soils and not on fill material.
- ▶ The entrance to the spreader should be level so that the flow can spread out evenly.
- ▶ Level Spreader should have a grade of 0%; minimum width should be 6'.

LIMITATIONS:

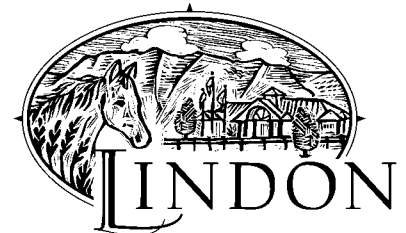
- ▶ Can easily develop "short circuiting" (concentration of flows into small streams instead of sheet flow over the spreader) because of erosion or other disturbance.
- ▶ Cannot handle large quantities of sediment-laden storm water.

MAINTENANCE:

- ▶ The spreader should be inspected after every storm event to check for damage.
- ▶ If ponding or erosion channels develop, the spreader should be regraded.
- ▶ Dense vegetation should be maintained and damaged areas reseeded as needed.

CONSIDERATIONS

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



Adapted from Salt Lake County BMP Fact Sheet

TARGETED POLLUTANTS

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

- High Impact
- Medium Impact
- Low or Unknown Impact

IMPLEMENTATION REQUIREMENTS

- Capital Costs
- O&M Costs
- Maintenance
- Training

- High Medium Low