

3.7 ROCK CHUTES AND FLUMES



Figure 3.12. Flume (Source: Urban Resources and Borderland Alliance Network)

Overview

Description: A device to carry water in an open structure to a lower level without erosion.

Problem identification: Permanent control devices are required to convey runoff along the bottom of slopes without causing erosion and sedimentation. These devices must reduce velocities and maintain discharge.

Design Purpose: To carry storm water runoff on a permanent basis without erosion.

Associated practices: Used with other control measures to dispose of storm water runoff.

Installation: A variety of materials can be used, depending on the volume of water that needs to be transported. For a small volume of water, a sod flume can perform satisfactorily. Other materials include half-round pipe, riprap underlaid with filter fabric, and paved flumes. Each needs to be constructed on firm, well-compacted soil.

Maintenance/inspection: All types of flumes need to be inspected after precipitation events for any necessary repairs or adjustments.

Design life: Permanent.

Estimated cost: Sod costs \$49.00 per square (2004); riprap costs \$32.20 per ton (2004).