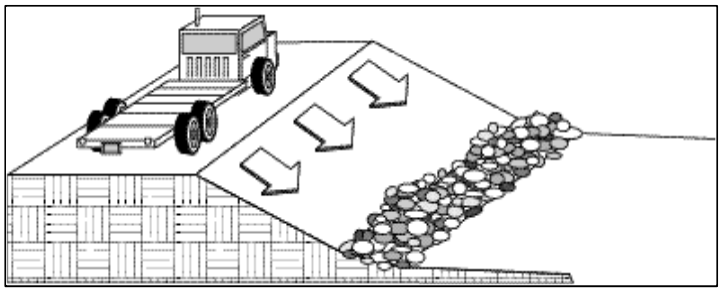


- Erosion Control
- Sediment Control
- Slope and Channel Protection

Description

An erosion and sediment control method used to slow runoff that allows sediments to settle out before the water leaves the site. Rock filter berms are created on level contours to detain and cause ponding of sheet flow to promote sedimentation. A brush barrier, or brush mat, is created of brush that is wrapped in filter cloth and attached to the toe of the slope. Brush and rock filters must be properly anchored to trap sediment and reduce runoff velocity.

Applicability

Brush and rock filters can be used:

- As check dams, if properly anchored (see BMP VR-2);
- Below the toe of slopes;
- Along streams and channels;
- Around spoil areas or below other small cleared areas;
- At sediment traps for culvert and pipe outlets.

The filters are likely to have a significant effect on reducing the sediment load.

Approach and Standards

- Rock filters should use rock sized ¾ to 3 inches in diameter. In areas with greater volume or velocity of water, use larger rocks, and place them in a woven wire sheath that is staked to the ground.
- Filters should be placed on level ground, in areas of sheet or rill flow.
- Allow enough area behind the berm for runoff to pond, allowing settling of sediment.
- Brush collected during site clearing can be used to create a brush filter.

Limitations

- Should not be placed on slopes.
- Limited suitability for runoff coming from slopes greater than 5%.
- Removal may be difficult, especially in landscaped areas.
- Should not be used in drainage areas greater than 5 acres.
- Sufficient space is needed for ponding so flooding does not occur.

Requirements

Maintenance

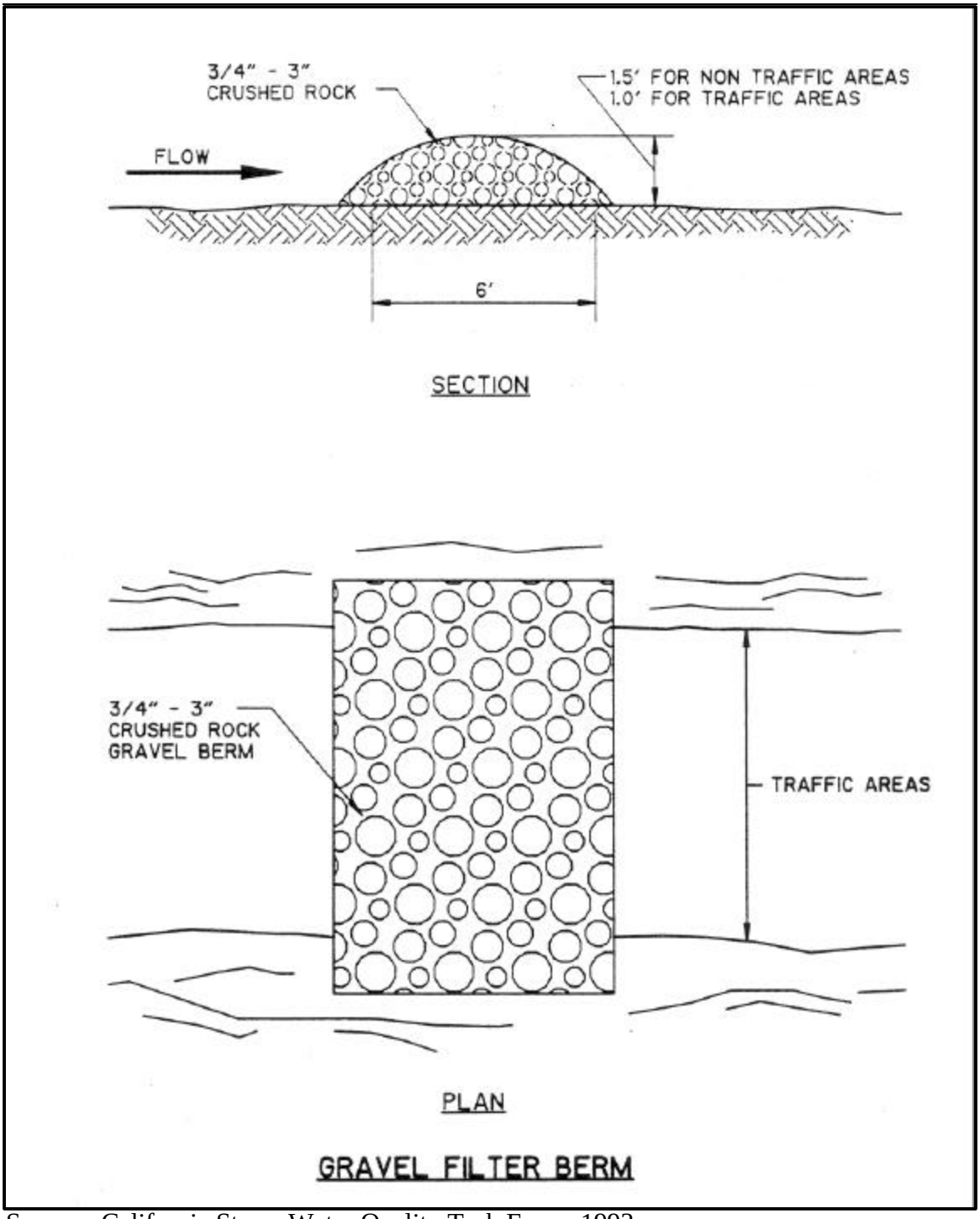
- Filters should be inspected, and repaired if necessary, at least monthly and after each rainfall.
- Sediments should be removed when sediment depth reaches 12 inches or 1/3 of berm height.

Costs

- Staff time for construction, monthly inspection, maintenance, and removal.
- Capital cost of brush filter can be low to moderate if brush from site-clearing is used.
- Capital cost of rock filters can be more expensive since off-site materials and hand construction are necessary.

Training

- Training needs are minimal. Staff should be trained in proper siting, construction, and maintenance of brush or rock filters.



Source: California Storm Water Quality Task Force, 1993.

Note: If "crushed" rock is used with fines then the "filter" will become a "berm," i.e., impermeable. Use drain rock for filter.

References

California Regional Water Quality Control Board, San Francisco Bay Region, *Erosion and Sediment Control Field Manual,* 1998.

California Storm Water Quality Task Force, *Stormwater Best Management Practices Construction Handbook,* ESC53, March, 1993.