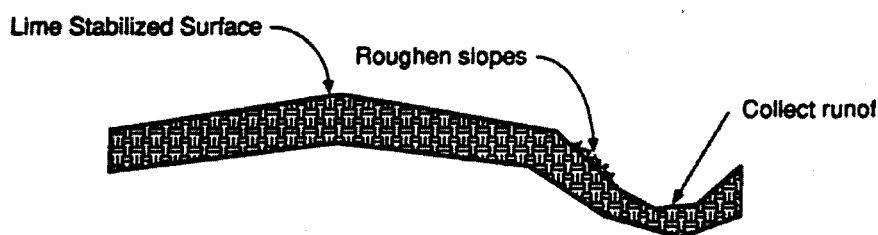


Lime Stabilization Management



DESCRIPTION

Lime stabilization is used extensively in the North Central Texas region to stabilize pavement subbases for roadways, parking lots, and other paved surfaces, and as a subgrade amendment for building pad sites. Hydrated lime is applied to the soil and mixed through disking and other techniques, then allowed to cure. This practice will reduce the potential for runoff to carry lime offsite, where it may impact aquatic life by changing the pH balance of streams, ponds, and other water bodies.

PRIMARY USE

This BMP should be implemented when lime is required for soil stabilization.

APPLICATIONS

Lime stabilization can be used under a variety of conditions. The engineer should determine the applicability of lime stabilization based on site conditions such as available open space, quantity of area to be stabilized, proximity of nearby water courses and other BMPs employed at the site. The use of diversion dikes and interceptor swales (see appropriate fact sheets) to divert runoff away from areas to be stabilized can be used in conjunction with these techniques to reduce the impact of the lime.

DESIGN CRITERIA

- The contractor shall limit lime operations to that which can be thoroughly mixed and compacted by the end of each workday.
- No traffic other than water trucks and mixing equipment shall be allowed to pass over the spread lime until after completion of mixing.
- Areas adjacent and downstream of stabilized areas shall be roughened to intercept lime from runoff and reduce runoff velocity.
- Geotextile fabrics such as those used for silt fence should not be used to address lime since the grain size of lime is significantly smaller than the apparent opening size of the fabric.
- For areas for which phasing of lime operations is impractical, use of a curing seal such as Liquid Asphalt, Grade MC-250 or MC-800 applied at a rate of 0.15 gallons per sq. yd. of surface can be used to protect the base.
- Use of sediment basins with a significant (>36 hour) drawdown time is encouraged for large areas to be stabilized (see S-6, Sediment Basin).
- Provide containment around lime storage, loading, and dispensing areas.

LIMITATIONS

Lime stabilization can be part of an overall plan to reduce pollutants from an active construction site. In the case of pollution due to lime, prevention of contamination is the only effective method to address this pollutant. Proper application and mixing along with avoiding applications when there is a significant probability of rain will reduce lime runoff.

Applications

- Perimeter Control
 - Slope Protection
 - Sediment Trapping
 - Channel Protection
 - Temporary Stabilization
 - Permanent Stabilization
 - Waste Management
- Housekeeping Practices

Targeted Constituents

- Sediment
- Nutrients Toxic Materials
- Oil & Grease
- Floatable Materials
- Other Construction Wastes

Implementation Requirements

- Capital Costs
- Maintenance
- Training
- Suitability for Slopes > 5%

Legend

- Significant Impact
- Medium Impact
- Low Impact
- ? Unknown or Questionable Impact

M-6



North Central Texas
Council of Governments