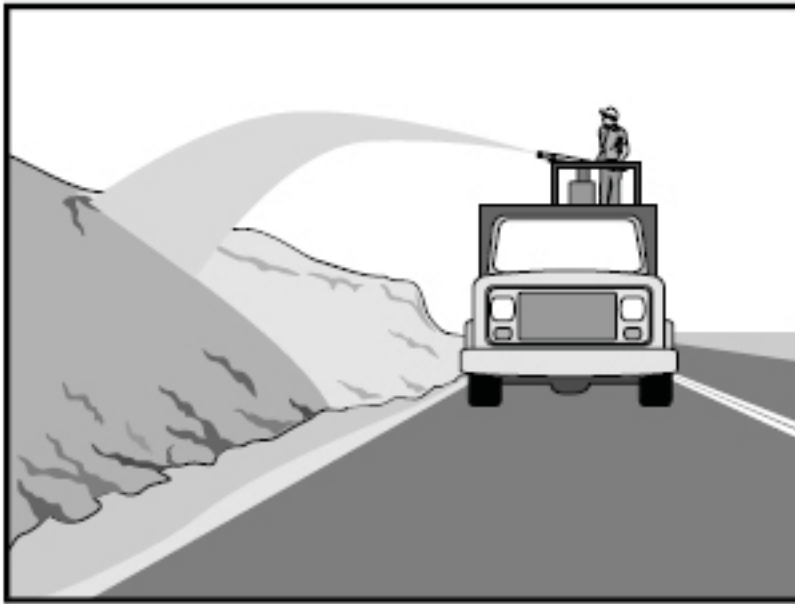


Hydroseeding



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Hydroseeding involves the application of a mixture of wood fiber, seed, fertilizer, and a stabilizing emulsion with hydromulch equipment to temporarily protect exposed soils from erosion. Hydroseeding may be used alone, but research has shown that for maximum effectiveness, hydroseeding should be used in conjunction with another BMP such as mulching. In a study done by Megahan et al (2001), hydroseeding used with mulch decreased erosion rates on alluvial soils by nearly 60%.

Usage

- it is important to evaluate the site before hydroseeding with respect to soil conditions, site topography, season, vegetation types, maintenance requirements, sensitive adjacent areas, water availability, and plans for permanent vegetation
- PAM can be used as an additive in a hydroseeding mix and applied when final grade is established
- in critical areas where native plants should be established. Native plants have advantages over non-native plants: while they may be slower to establish, they will not require as much maintenance in the long run compared to non-native species. Since they are already acclimated to the area, native plants may not require as much maintenance. When selecting plant species, preference should be given to those plants with deeper root systems as they are more effective at reducing erosion.

(See the USDA Natural Resources Conservation Service for information on seed mixes)

Benefits

- faster than conventional methods of seed dispersal
- ensures better germination
- when hydromulch contains a tackifier, hydroseeding is a very effective BMP on steep slopes
- research has shown that hydroseeding can be used with success in reestablishing native plants in an area

Estimated Cost

\$300-\$1600/ac, depending on the type of slope, type of soil, composition of seed and mulch mixes, and whether or not PAM is used

Alternatives

- PAM (p. 2-2)
- Geotextiles (p. 2-6)
- Mulching (p. 2-10)
- Seeding (p. 2-14)
- Sodding (p. 2-18)

Notes:

Limitations

- steep slopes may be difficult to protect; it is recommended that a tackifier be used
- can be used only when there is sufficient time in the season to ensure vegetation establishment
- may have to be irrigated during dry periods

Installation Tips

- prior to application, roughen the area to be seeded with furrows along slope contours. Furrows should be 18 – 24 inches deep. To ensure adequate germination, apply a 10-inch layer of organic compost over the furrows
- do not use hydroseeding if it will have to be removed – this is a permanent BMP
- a hydroseed mixture does not always need fertilizer, especially if the mixture is comprised of native plants
- apply a mulch (or hydromulch) after seeding to keep seeds in place until they germinate. Hydromulch and hydroseed should be applied in separate applications. The application of mulch aids in seed germination
- follow up applications may be needed to cover weak spots and maintain soil protection
- avoid over-spraying onto roads, sidewalks, drainage channels, or existing vegetation

Maintenance

- inspect BMPs prior to anticipated rain events, daily during rain events, and after each rain event
- inspect at least once every two weeks during dry periods
- if irrigation systems are used, inspect systems every two weeks
- if seeds do not germinate or germinate and die, the area must be reseeded

Vendors

See Appendix pages F9-F10

References

Barr Engineering Co. 2001. Minnesota Urban Small Sites BMP Manual.

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