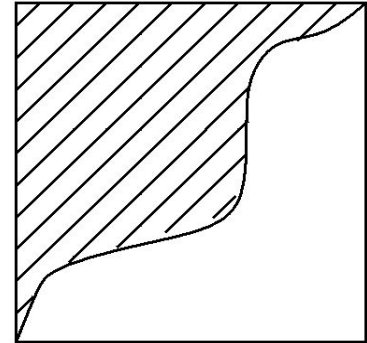


**EC-7 HYDROSEEDING**

For assistance, contact the District Environmental Planners and the Roadside Program Administrator at ITD Headquarters Maintenance Section.

Refer to: ITD Standards and Specifications for Highway Construction, Sections 621 and 711.



**Standard Symbol**

**Definition and Purpose**

Hydroseeding typically consists of applying a mixture of mulch (which includes wood fiber, rice, straw, compost and wood combination, or other natural fibers), seed, fertilizer, soil amendments, and stabilizing emulsion with hydro-mulch equipment. The mulch and stabilizing emulsion temporarily protects exposed soils from erosion by water and wind while the seed germinates and establishes permanent cover.

**Appropriate Applications**

Hydroseeding is applied on disturbed areas requiring temporary protection until permanent vegetation is established or disturbed areas that must be disturbed again following an extended period of inactivity.

**Limitations**

- Hydroseeding may be used alone only when there is sufficient time in the season to ensure adequate vegetation establishment and coverage to provide adequate erosion control. Otherwise, hydroseeding must be used in conjunction with a soil stabilizer or mulching.
- Hydroseeding alone may not be adequate to protect steep slopes.

**Design Parameters**

- In order to select appropriate hydroseeding mixtures, an evaluation of site conditions shall be performed with respect to:

BMP Objectives	
<input type="checkbox"/>	Perimeter Control
<input checked="" type="checkbox"/>	Slope Protection
<input checked="" type="checkbox"/>	Borrow and Stockpiles
<input checked="" type="checkbox"/>	Drainage Areas
<input type="checkbox"/>	Sediment Trapping
<input type="checkbox"/>	Stream Protection
<input checked="" type="checkbox"/>	Temporary Stabilizing
<input checked="" type="checkbox"/>	Permanent Stabilizing

- Soil types and conditions
  - Maintenance requirements
  - Site topography
  - Sensitive adjacent areas
  - Season and climate
  - Water availability
  - Vegetation types
  - Plans for permanent vegetation
- Selection of hydroseeding mixtures shall be approved on a project by project basis by a landscape architect or revegetation specialist.

The following steps shall be followed for implementation:

- Hydroseeding is accomplished using a multi-step process. The multi-step process ensures maximum direct contact of the seeds to soil. When applying the mixture of fiber, seed, etc., the seed rate shall be increased to compensate for damage to seed from the hydroseeding equipment or seeds having inadequate direct contact with the soil.
- Prior to application, the slope, fill area, or area to be seeded shall be roughened with the furrows trending along the contours.
- A mulch shall be applied to keep seeds in place and to moderate soil moisture and temperature until the seeds germinate and grow.
- Each seed bag shall be delivered to the site sealed and clearly marked with species, purity, percent germination, dealer's guarantee, and dates of test. This documentation shall be provided to the Engineer. The container shall be labeled to clearly reflect the amount of Pure Live Seed (PLS) contained. All legume seed shall be pellet-inoculated. Inoculant sources shall be species-specific and shall be applied at a typical rate of 2 kg of inoculant per 100 kg of seed (2 percent inoculant by weight).
- Hydroseeding mulch (not including straw mulch, see straw mulch section of EC-9) mixture shall be applied so that seeds and soil are completely covered and there are no visible signs of soil or seeds exposed. The mulch mixture shall be applied at a rate that covers a minimum of 85% of the soil surface. Slurry shall be applied so that it does not run off the soil or down the slope.
- Fertilizer shall be pelleted, granular, or soluble form.
- Follow-up applications shall be made as needed to cover weak spots and to maintain adequate soil protection.
- Over-spray onto the travel way, sidewalks, lined drainage channels and existing vegetation shall be avoided.

### **Maintenance and Inspection**

- Conduct inspections as required by the NPDES permit or contract specifications.

- All seeded areas shall be re-seeded, fertilized, and mulched within the planting season, using not less than half the original application rates. Any temporary revegetation efforts that do not provide adequate cover must be reapplied as required.
- The Contractor is responsible for maintaining all slopes to prevent erosion.