Roadside Ditch Stabilization
Best Management Practice

Roadside ditches collect a wide range of pollutants from fecal coliform bacteria to petroleum hydrocarbons to heavy metals from roads, parking lots and construction sites. Unvegetated roadside ditches erode and are sources of sediment. Pollutants attach themselves to sediments and are transported throughout the watershed, degrading the water quality of receiving streams, rivers and ultimately Lake Erie. Roadway departments, challenged by the need to control flooding and provide for motorist safety, are often confronted with how to best stabilize exposed soils within roadside ditches in a cost effective manner following dredging maintenance. Innovative additives to traditional hydro seeding applications such as biostimulants can greatly enhance erosion control protection by shortening the germination time and increasing yields on applied seed. Check dams and erosion control matting are still necessary best management practices to protect ditch bottoms from erosive high flows.

Biostimulants
For Hydro Seed Enhancement

- Accelerate germination rate by 60%
- Increase yields up to 99%
- Provide micro-nutrients and enzymes for rapid root anchoring and top growth
- Reduce plant stress by allowing water to infiltrate into the root zone where it is available for plant uptake
- Mixed into hydro mulch slurry and applied with hydro

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Biostimulant Advantages

- Encapsulates the seed, enhancing the seed’s ability to transfer both moisture and nutrients from the soil for accelerated and uniform growth
- Enhanced water retention capabilities decrease the amount of watering required for continued growth beyond initial watering or precipitation event
- Ensures rapid, full hydro seed establishment while improving uniform placement and even wetting of the application of seed
- Reduces repellency of mulches, hydro seeding mix and soil
- Improves soil infiltration and hydration, providing long-term moisture to root system

Biostimulant additives can be either synthetic compounds or naturally occurring organic materials like humic acid, seaweed extract or fish emulsion. Naturally occurring biostimulants such as seaweed extract contain hormones, vitamins, amino acids and mineral nutrients that naturally stimulate germination and growth.

Roadside Ditch Stabilization Demonstration Site Product Application Costs

**Bass Lake Road Demonstration Site - Munson Township, Geauga County**
7,000 square feet of disturbed treatment area excavated with a Gradall smooth bucket.
- **Biostimulant Additive:** Seasafe Hydro-Ultra Plus
- Seasafe Hydro-Ultra Plus - Application Rate: 5 gallons per acre recommended
- Product Cost: $38.22 per gallon, $0.004 per square foot of treatment
- BMP biostimulant additive investment to effectively treat hydro seeding application: $30.70.

**Morley Road Demonstration Site - Concord Township, Lake County**
8,000 square feet of disturbed treatment area excavated with a Gradall smooth bucket.
- **Biostimulant Additive:** Quick Stand
- Quick Stand - Application Rate: 5 gallons per acre recommended
- Product Cost: $35.00 per gallon, $0.004 per square foot of treatment
- BMP biostimulant additive investment to effectively treat hydro seeding application: $32.62

For more details on project demonstration sites and results go to:
[http://www.crwp.org/Projects/roadside_ditch_sediment_control.htm](http://www.crwp.org/Projects/roadside_ditch_sediment_control.htm)