

# Disturbed Sites & Steep Slopes

## FAST FACTS

Disturbed Sites & Steep Slopes have various soil types and conditions typically distinguished by lower quality soils and a predisposition to runoff and erosion. Examples: Landfills, surface mines, road cuts, or construction sites.



## SITE PREPARATION

Eradicate existing vegetation by having a licensed spray technician apply an approved herbicide. Perennial weeds not addressed before establishment will be difficult to remove later. Whenever possible, regrade the site to reduce slope and build diversions to reduce erosion and minimize seed loss.

For areas with slope greater than 3:1, final tracking should be perpendicular to the slope. The tracks will aid in reducing erosion and retaining seed and moisture.

Mulching with straw, hydromulch, or straw/coconut fiber mats is recommended on these sites to protect the seed from drying out or washing away. For areas steeper than 3:1, the use of erosion control blankets or flexible growth medium (e.g., Flexterra®) is recommended. When using erosion control blankets, be sure they are toed in at the top of the slope.



### HABITAT

*Various soils with exposed clay, sand, and rock outcropping without topsoil as a result of construction; generally populated with upland species.*



### FERTILITY

*Typically low in fertility; therefore, adding topsoil or organic matter (compost) can be very beneficial. Check soil pH and select species adapted to that pH. Add lime and fertilizer as recommended by soil analysis. Incorporate amendments into the soil in a way that will leave the soil rough and minimize soil erosion and rapid runoff (e.g., tracking). If there is a weed problem, fertilizing is not recommended.*



### SEEDING METHOD

*Hand seed, broadcast seed, hydroseed, or drill seed. For areas with slope less than 3:1, cover the seed 1/8"-1/4" deep by dragging with a spring-tooth harrow or firmly pressing the seed into the soil using a cultipacker, lawn roller, or ATV.*



ERNMX-181 Native Steep Slope mix with Annual Ryegrass in Morgantown, West Virginia.



A one-year-old Big Bluestem (*Andropogon gerardii*) meadow at Fishkills Landfill on Staten Island, New York.



This wetland was constructed on a former mine site.

## GROWING SEASON MAINTENANCE

### FIRST GROWING SEASON

Post-planting maintenance will provide improved results if the ground is not too rough or steep. Whenever canopy height (overall vegetation) reaches 18"-24", use a brush hog mower or string trimmer to trim the meadow to 8". Trimming reduces competition by fast-growing weeds for sunlight, water, and nutrients needed by slower growing perennial natives. A lawn mower is not recommended as the mower height will be too low and native seedlings will be killed.

If bioengineering materials were used on the site, mowing should be above the new growth of these materials. Trimming should cease by mid-September.

Problem weeds should be hand pulled or spot sprayed with an approved herbicide, such as Roundup®, Rodeo®, Garlon®, Garlon® 3A, Sonora™, or Milestone®. Be vigilant in controlling vines or thorny plants if they were not part of the mix. These are more easily pulled early than after two to three months of growth. Examples include bindweed, blackberry, multiflora rose, mile-a-minute, and Japanese hops. Be equally vigilant in the control of other invasive species, such as autumn olive, Canada thistle, and mugwort.

### SECOND & SUBSEQUENT GROWING SEASONS

Prior to new spring growth reaching 2" (e.g., shortly after forsythia or redbud blooms), trim any material standing from the previous year close to the ground (approximately 2") on sites that are not too rough or steep. This will allow the soil to warm more quickly, stimulating emergence and growth of native plants and reducing the likelihood of shrub invasion.

If bioengineering materials were used on the site or seed of shrubs/trees were part of the mix, the site should not be trimmed after the establishment year.

Problem weeds should be hand pulled or spot sprayed with an approved herbicide, such as Roundup®, Rodeo®, Garlon®, Garlon® 3A, Sonora™, or Milestone®. Be vigilant in controlling vines or thorny plants if they were not part of the mix. These are more easily pulled early than after two to three months of growth. Examples include bindweed, blackberry, multiflora rose, mile-a-minute, and Japanese hops. Be equally vigilant in the control of other invasive species, such as autumn olive, Canada thistle, and mugwort.

### SPECIAL CIRCUMSTANCES - SECOND GROWING SEASON

If there is a heavy infestation of ragweed or foxtail in the second growing season, trim the meadow to 8". Trimming should cease by mid-September. However, vegetation allowed to grow without mowing provides more protection for wildlife and aids in erosion control.



A steep slope and retaining wall utilizing ERNMX-181 Native Steep Slope Mix with Annual Ryegrass at the Millcreek Mall in Lancaster, Pennsylvania.



Seedlings from a steep slope mix poking through an erosion control blanket.



#### DISTURBED SITES & STEEP SLOPES SEED MIXES

<b>ERNMX-101</b>	Non-Native Ernst Best Strip Mine & Gas Production Mix
<b>ERNMX-102-1</b>	Pipeline Mix with Switchgrass
<b>ERNMX-103</b>	Non-Native Good Value Mine Mix
<b>ERNMX-104</b>	Quick Erosion Control Cover Mix
<b>ERNMX-109</b>	Crownvetch Seeding Mix (Naturalized)
<b>ERNMX-110</b>	Ernst Native Biomass Mix for Strip Mines & Natural Gas Production Sites
<b>ERNMX-111</b>	Ernst Native Habitat Mix for Strip Mines
<b>ERNMX-181</b>	Native Steep Slope Mix with Annual Ryegrass

Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not. See "Disclaimer," p. 15. For "Expectations of Native Species," see p. 12.

