

# After the Flood - Seeding Grasses

## USDA Natural Resources Conservation Service - North Dakota

This publication addresses site preparation and revegetation of riparian areas to desirable grass species. Native grasses minimize competitive moisture stress to existing trees, grass maintenance, and watering requirements. These seeding recommendations are for pastures, woodlands, and “back areas” - not necessarily house yards.

Long duration flooding has damaged some tree roots making these trees more prone to blowdown. Be safe and avoid working in the woods in high winds.

Extended flood water inundation has killed smooth brome grass, Kentucky bluegrass, and many herbaceous plants. The loss of the sod-forming grasses can be beneficial by exposing bare mineral soil to seeds of riparian tree species. Seeding desirable grass species is also easier without growing sod. If young diverse tree cover is the goal, refer to the fact sheet *After the Flood - Managing Tree Regeneration*.

Seeding success will be impacted by differences in topographic features, shading of existing forest cover, weed pressure, and soils deposited by the flood waters. Suggested seed mixes for shade and full sun are listed in Tables 1 and 2, respectively. Proper seedbed preparation and seeding techniques are found in the Herbaceous Vegetation Establishment Guide of the Field Office Technical Guide ([http://efotg.sc.egov.usda.gov/references/public/ND/Herbaceous\\_Veg\\_Est\\_Guide.pdf](http://efotg.sc.egov.usda.gov/references/public/ND/Herbaceous_Veg_Est_Guide.pdf)). Weed control before and after seeding is essential.



**Seeding with a no-till drill  
into chemically fallowed sod**

Areas that did not receive deposits of sand or silt can be seeded with traditional methods. Layers of sand less than 4 inches deep can be mixed with the underlying soil surface and seeded. Fresh, deep sand dunes may take several years before they are stable enough to support vegetation. Stabilizing a sand dune may be accomplished by covering with woody brush, erecting snow fences, or establishing tall grass vegetation or shrubs on good soils adjacent to the dunes.

### Steps for Revegetation

- Clear debris that will hinder site preparation and seeding.
- Control weeds by shallow tillage (less than 2 inches) or with herbicides. Refer to *After the Flood – Managing the Weeds*.
- Successful grass seeding requires good seed to soil contact which can be provided by broadcasting, seeding, and rolling; seeding with no-till drills; or hydromulching.
  - The Herbaceous Vegetation Establishment Guide describes proper seeding techniques (see the link above).
  - For areas where access is limited, hydroseeding may be appropriate. Unlike conventional hydroseeding, native grass seed should be broadcast with the hydromulch sprayed on top after seeding. When mixed together, too much of the seed is trapped in the mulch and never makes contact with the soil.
- Follow-up weed control after seeding helps ensure a successful seeding. Weeds can be controlled by mowing or herbicide. Many herbicides approved for use on grasses can injure newly emerged grasses. Be sure to follow label directions.
- In the following tables, seed mixes show the pounds of pure live seed (PLS) needed per acre.



**Sideoats grama seeded between tree rows**

Table 1. Seed Mix for Shade and Partial to Full Sun (seed by May 20)		
Percent of Mix	Species	PLS lb/ac*
20%	Canada wildrye	1.3
40%	Green needlegrass	2.4
40%	Western wheatgrass	3.2

\*The above listed seeding rates are appropriate when a grass drill can be used. If the seed will be broadcast seeded, the rates should be increased by 50%.

Table 2. Seed Mix for Full Sun (seed from May 10-June 25)		
Percent of Mix	Species	PLS lb/ac*
10%	Sand bluestem	1.0
20%	Sideoats grama	1.2
20%	Little bluestem	0.8
20%	Western wheatgrass	1.6
10%	Prairie sandreed	0.4
20%	Canada wildrye	1.3

\*The above listed seeding rates are appropriate when a grass drill can be used. If the seed will be broadcast seeded, the rates should be increased by 50%.

**Additional seeding guidelines are found in the following:**

- *Five Keys to Successful Grass Seeding* summarizes the steps to a successful seeding. <http://www.plant-materials.nrcs.usda.gov/pubs/ndpmcbr04959.pdf>
- *Herbaceous Vegetation Establishment Guide* explains techniques that could be used for a successful grass seeding. Also included are seeding mixes beyond those listed in this document. [http://efotg.sc.egov.usda.gov/references/public/ND/Herbaceous\\_Veg\\_Est\\_Guide.pdf](http://efotg.sc.egov.usda.gov/references/public/ND/Herbaceous_Veg_Est_Guide.pdf)
- *Warm-Season Grass Cover Between Tree Rows* discusses the advantage of seeding short-statured warm-season grasses between existing trees. Though intended for windbreaks, the techniques are appropriate in and around existing native trees. Grass species in this document would not be appropriate on sandy flood deposits. Refer to the *Herbaceous Establishment Guide* for soil/species compatibility. <http://www.plant-materials.nrcs.usda.gov/pubs/ndpmctn6468.pdf>

**This publication is part of a series that addresses management of the after effects of flooding in riparian areas. The series includes:**

*After the Flood - Managing Tree Regeneration*  
*After the Flood - Seeding Grasses*  
*After the Flood - Managing Weeds*  
*After the Flood - References*

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