

STANDARD 332 – CONTOUR BUFFER STRIP SEEDING SPECIFICATIONS
STANDARD 393 – FILTER STRIP SEEDING SPECIFICATIONS
STANDARD 589C – CROSS WIND TRAP STRIP SEEDING SPECIFICATIONS

Refer to the applicable practice standard for design and vegetation criteria.

Acceptable plant species and seeding rates are found in Tables 12 and 13. See Table 23 for a summary of plant species characteristics.

Seeding mixture will result in a minimum 55 seeds/ft² total.

Introduced grass/legume mixtures shall contain no more than one legume component not to exceed the maximum mixture composition in Table 12.

Native forbs may be added to native grass mixtures to enhance the practices for wildlife, pollinators, monarchs and beneficial insects. Forbs can be added to a native species mixture. However, the criteria for pollutant reduction must first be met. Forbs may comprise up to 10% of the mixture. For seedling's ≤ 30 foot wide, and adjacent to cropland where pesticides are applied, forbs or legumes are not recommended. Refer to National Agronomy Technical Note #9 for mitigation recommendations related to pesticide application. Refer to Table 13 for recommended native forbs which are able to withstand sheet flow.

TABLE 12: RECOMMENDED SPECIES FOR CONTOUR BUFFER, CROSS WIND TRAP AND FILTER STRIP SEED MIXTURES										
SPECIES C = COOL SEASON W = WARM SEASON R = RHIZOMATOUS	% Allowed in Mix	Seeds/ft² based on 1.0 PLS lb./Ac 1/	Drought	Flooding	Salts	Wet Soil	Effective Height	Longevity	Rooting Depth	
Native Grasses										
Canada Wildrye C	0-25	2.6	Fair	Fair	Good	No	>12"	Short	M	
Slender Wheatgrass* C	0-25	3.6	Good	Good	Good	No	< 12"	Short	M	
Virginia Wildrye C	0-25	2.2	Fair	Good	Fair	S	>12"	Short	M	
Green Needlegrass C	0-25	4.1	Good	Fair	Fair-Good	No	>12"	Long	D	
Western Wheatgrass*C/R	0-50	2.6	Good	Good	Good-Ex	Yes	>12"	Long	D	
Reed Canarygrass ⁴ C/R			Fair	Excellent	Fair	Yes	>12"	Long	S to M	
Kalms Brome C	0-25	2.9	Fair	Fair	Poor	No	>12"	Short	M	
Fringed Brome C	0-50	3.7	Fair	Fair	Poor	Yes	>12"	Moderate	M	
Switchgrass* W/R	0-100	9.0	Fair	Good	Fair	Yes	>12"	Long	D	
Prairie Cordgrass ⁵ W/R	0-100	4.2	Poor	Excellent	Poor	Yes	>12"	Long	D	
Big Bluestem* W/R	0-50	4.0	Fair	Fair	Fair	No	>12"	Long	D	
Indiangrass* W/R	0-25	4.4	Fair	Good	Fair	No	>12"	Long	M to D	
Sideoats Grama* W/R	0-25	4.1	Good	Poor	Poor	No	< 12"	Long	S to M	
Little Bluestem* W	0-25	6.6	Good	Poor	Poor	No	>12"	Long	D	
Blue Grama	0-25	17.2	Good	Poor	Fair	No	< 12"	Long	S	

TABLE 12: RECOMMENDED SPECIES FOR CONTOUR BUFFER, CROSS WIND TRAP AND FILTER STRIP SEED MIXTURES

SPECIES C = COOL SEASON W = WARM SEASON R = RHIZOMATOUS	% Allowed in Mix	Seeds/ft ² based on 1.0 PLS lb./Ac <u>1</u>	Drought	Flooding	Salts	Wet Soil	Effective Height	Longevity	Rooting Depth	
Introduced Grasses and Legumes²										
Creeping Foxtail* C/R	0-100	17.2	Poor	Good	Poor-Fair	Yes	>12"	Long	S to M	
Smooth Brome ³ C/R	0-100	3.1	Fair	Good	Poor-Fair	No	>12"	Long	S to M	
Redtop ³ C/R	0-100	111.4	Poor	Good	Poor-Fair	Yes	>12"	Short	S to M	
Meadow Brome C	0-100	1.8	Fair	Fair	Poor	No	>12"	Moderate	M	
Int. Wheatgrass* C/R	0-100	2.0	Fair	Fair	Fair-Good	No	>12"	Long	D	
Tall Wheatgrass* C	0-50	1.8	Fair	Good	Good-Ex	Yes	>12"	Moderate	D	
Timothy* C	0-25	29.8	Poor	Good	Poor	Yes	>12"	Short	S to M	
Alfalfa* C	0-25	5.2	Good	Poor	Fair	No	>12"	Moderate	D	
Red Clover* C	0-25	6.3	Fair	Fair	Poor-Fair	No	< 12"	Short	D	
Alsike Clover C	0-25	15.6	Fair	Good	Poor-Fair	Yes	< 12"	Short	D	

***Varietal selection important.** See current edition of Minnesota Varietal Trials for Select Crops.

¹ PLS is Pure Live Seed.

² Do not mix introduced grass species with native grass species.

³ Do not recommend these species adjacent to native prairie.

⁴ Use of Reed Canarygrass is restricted to existing cover and must be approved by the State Resource Conservationist.

⁵ Prairie Cordgrass should not exceed 20% of the mixture when combined with Big Bluestem, Indiangrass or Switchgrass.

Flooding ratings: None <1 week; **Poor** 1-2 weeks; **Fair** 2-4 weeks; **Good** 4-6 weeks; **Excellent** >6 weeks

Soluble salts ratings: **Poor** 0-2 mmhos; **Fair** 3-4 mmhos; **Good** 5-7 mmhos; **Excellent** 8-16 mmhos

Longevity: **Short** 1-4 Years; **Moderate** 5-10 Years; **Long** > 10 Years

Wet soils: **Yes**-tolerates poorly or very poorly drained. **S**-Tolerates somewhat poorly drained sites.

Rooting Depth: Rooting depths are based on typical growing conditions of the species

S (Shallow) = 0-12 inches, **M** (Medium) = 12-24 inches, **D** (Deep) = 24+ inches

TABLE 13: NATIVE FORBS SUITABLE FOR CONTOUR BUFFER, CROSS WIND TRAP AND FILTER STRIPS

The following list identifies native forbs and wildflowers beneficial to wildlife, pollinators, monarchs and other beneficial insects and support higher volumes of water flow and sedimentation.

Common Name	Scientific Name	Bloom Period	Handle sheet flow	Dense stems to slow water flow	Rooting Depth
Canada Goldenrod	<i>Solidago canadensis</i>	Late	Yes	Yes	S
Cup Plant	<i>Silphium perfoliatum</i>	Mid	Yes		D
Giant Goldenrod	<i>Solidago gigantea</i>	Late	Yes		M to D
Giant Hyssop	<i>Agastache foeniculum</i>	Mid	Yes		M
Grass-leaved Goldenrod	<i>Euthamia graminifolia</i>	Late	Yes	Yes	D
Ironweed	<i>Veronia fasciculata</i>	Mid	Yes		D
Joe-Pye Weed	<i>Eupatorium maculatum</i>	Mid	Yes		S
Marsh Milkweed	<i>Asclepias incarnata</i>	Mid	Yes		D
Mountain Mint	<i>Pycnanthemum virginianum</i>	Mid	Yes	Yes	D
New England Aster	<i>Symphyotrichum novae-angliae</i>	Late	Yes		S
Sneezeweed	<i>Helenium autumnale</i>	Late	Yes		S
Stiff Goldenrod	<i>Solidago rigida</i>	Late	Yes		D
Panicled Aster	<i>Symphyotrichum lanceolatum</i>	Late	Yes		S
White Sage	<i>Artemisia ludoviciana</i>	Late	Yes	Yes	D
Wild Bergamot	<i>Monarda fistulosa</i>	Mid	Yes	Yes	D
Yellow Coneflower	<i>Ratibida pinnata</i>	Mid	Yes		M