

# CITY OF FORT COLLINS

## NATIVE SEED MIX NOTES

1. PREPARE SOIL AS NECESSARY AND APPROPRIATE FOR NATIVE SEED MIX SPECIES THROUGH AERATION AND ADDITION OF AMENDMENTS, THEN SEED IN TWO DIRECTIONS TO DISTRIBUTE SEED EVENLY OVER ENTIRE AREA. DRILL SEED ALL INDICATED AREAS AS SOON AS POSSIBLE AFTER COMPLETION OF GRADING OPERATIONS.
2. IF CHANGES ARE TO BE MADE TO SEED MIX BASED ON SITE CONDITIONS THEN APPROVAL MUST BE PROVIDED BY CITY ENVIRONMENTAL PLANNER.
3. APPROPRIATE NATIVE SEEDING EQUIPMENT WILL BE USED (STANDARD TURF SEEDING EQUIPMENT OR AGRICULTURE EQUIPMENT SHALL NOT BE USED).
4. DRILL SEED APPLICATION RECOMMENDED PER SPECIFIED APPLICATION RATE TO NO MORE THAN ½ INCH DEPTH (OR APPROPRIATE DEPTH FOR SELECTED SPECIES). FOR BROADCAST SEEDING INSTEAD OF DRILL SEEDING METHOD DOUBLE SPECIFIED APPLICATION RATE. REFER TO NATIVE SEED MIX TABLE FOR SPECIES, PERCENTAGES AND APPLICATION RATES.
5. PREPARE A WEED MANAGEMENT PLAN TO ENSURE THAT WEEDS ARE PROPERLY MANAGED BEFORE, DURING AND AFTER SEEDING ACTIVITIES.
6. AFTER SEEDING THE AREA SHALL BE COVERED WITH CRIMPED STRAW, JUTE MESH, OR OTHER APPROPRIATE METHODS.
7. WHERE NEEDED, TEMPORARY IRRIGATION SHOULD BE PROVIDED UNTIL SEED IS ESTABLISHED. IF IRRIGATION IS USED, THE IRRIGATION SYSTEM FOR SEEDED AREAS SHALL BE FULLY OPERATIONAL AT THE TIME OF SEEDING AND SHALL ENSURE 100% HEAD-TO-HEAD COVERAGE OVER ALL SEEDED AREAS. ALL METHODS AND REQUIREMENTS IN THE APPROVED IRRIGATION PLAN SHALL BE FOLLOWED.
8. CONTRACTOR SHALL MONITOR SEEDED AREA FOR PROPER IRRIGATION, EROSION CONTROL, GERMINATION AND RESEEDING AS NEEDED TO ESTABLISH COVER.
9. THE APPROVED SEED MIX AREA IS INTENDED TO BE MAINTAINED IN A NATURAL LIKE LANDSCAPE AESTHETIC. IF AND WHEN MOWING OCCURS IN NATIVE GRASS SEED MIX AREAS DO NOT MOW LOWER THAN 6 TO 8 INCHES IN HEIGHT TO AVOID INHIBITING NATIVE PLANT GROWTH.
10. NATIVE SEED AREA WILL BE CONSIDERED ESTABLISHED WHEN SEVENTY PERCENT VEGETATIVE COVER IS REACHED WITH NO LARGER THAN ONE FOOT SQUARE BARE SPOTS AND/OR UNTIL DEEMED ESTABLISHED BY CITY PLANNING SERVICES AND EROSION CONTROL.
11. THE DEVELOPER AND/OR LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ADEQUATE SEEDLING COVERAGE AND GROWTH AT THE TIME OF FINAL STABILIZATION, AS DEFINED BY STATE AND LOCAL AGENCIES. IF FINAL STABILIZATION IS NOT ACHIEVED TO THE SATISFACTION OF THE AGENCY, THE DEVELOPER AND/OR LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ADDITIONAL CORRECTIVE MEASURES TO SATISFY FINAL VEGETATIVE REQUIREMENTS FOR CLOSEOUT.

<b>DETENTION BASIN MIX</b>			
	<b>Common Name</b>	<b>Scientific Name</b>	<b>lbs/PLS/ Acre</b>
Wildflowers	Plains coreopsis	<i>Coreopsis tinctoria</i>	0.17
	White prairie clover	<i>Dalea candida</i>	0.65
	Purple Prairie Clover	<i>Dalea purpurea</i>	0.81
	Indian blanketflower	<i>Gaillardia aristata</i>	1.85
	Mexican hat	<i>Ratibida columnifera</i>	0.2
Grasses	Indian Ricegrass	<i>Achnatherum hymenoides</i>	1.13
	Sideoats Grama	<i>Bouteloua curtipendula</i>	1.15
	Buffalograss	<i>Bouteloua dactyloides</i>	3.27
	Blue Grama	<i>Bouteloua gracilis</i>	0.25
	Inland Saltgrass	<i>Distichlis stricta</i>	0.35
	Bottlebrush squirreltail	<i>Elymus elymoides</i>	0.95
	Streambank wheatgrass	<i>Elymus lanceolatus ssp. lanceolatus</i>	1.36
	Prairie Junegrass	<i>Koeleria macrantha</i>	0.08
	Western Wheatgrass	<i>Pascopyrum smithii</i>	1.61
	Little Bluestem	<i>Schizachyrium scoparium</i>	0.7
		<b>Total for Detention Basin Mix</b>	<b>14.54 lbs/PLS/Acre</b>
Substitutes	<b>ACCEPTABLE SUBSTITUTES FOR WILDFLOWERS</b>		
	Blue flax ( <i>Linum lewisii</i> ) 0.83 lbs/PLS/Acre		
	Black-eyed Susan ( <i>Rudbeckia hirta</i> ) 0.14 lbs/PLS/Acre		
	Prairie aster ( <i>Machaeranthera tanacetifolia</i> ) 0.49 lbs/PLS/Acre		
	<b>ACCEPTABLE SUBSTITUTES FOR GRASSES</b>		
	Salt and pepper grass ( <i>Deschampsia caespitosa</i> ) 0.07 lbs/PLS/Acre		
	Six weeks fescue ( <i>Vulpia octoflora</i> ) 0.19 lbs/PLS/Acre		
Slender wheatgrass ( <i>Elymus trachycaulus</i> ) 1.36 lbs/PLS/Acre			
Requirements	<p>*Contractor is responsible for locating and purchasing all species listed in mix. If a species can't be located, contractor must replace each missing species with the acceptable substitutions (listed above). Contractor is responsible for providing seed tags to appropriate City staff. This mix is based on 70 seeds/ square foot and is only calculated for one acre. This mix is based on the contractor using a drill seed application. Mix should be doubled if hand broadcasted. Contractor is responsible for calculating the appropriate seed amounts to purchase. Please note that the pounds per acre are in PLS (Pure Live Seed) and must be ordered that way. All materials furnished shall be free of Colorado State noxious weeds as defined in Article III, Section 21-40 of the Code of the City of Fort Collins.</p>		

<b>UPLAND MIX</b>			
	<b>Common Name</b>	<b>Scientific Name</b>	<b>lbs/PLS/Acre</b>
<b>Wildflowers</b>	Plains coreopsis	<i>Coreopsis tinctoria</i>	0.17
	Purple Prairie Clover	<i>Dalea purpurea</i>	0.81
	Indian blanketflowe	<i>Gaillardia aristata</i>	1.85
	Rocky. Mtn. penstemon	<i>Penstemon strictus</i>	0.35
	Mexican hat	<i>Ratibida columnifera</i>	0.2
<b>Grasses</b>	Indian ricegrass	<i>Achnatherum hymenoides</i>	1.13
	Sideoats grama	<i>Bouteloua curtipendula</i>	1.15
	Buffalograss	<i>Bouteloua dactyloides</i>	3.27
	Blue grama	<i>Bouteloua gracilis</i>	0.25
	Bottlebrush squirreltail	<i>Elymus elymoides</i>	0.95
	Prairie Junegrass	<i>Koeleria macrantha</i>	0.08
	Green needlegrass	<i>Nassella viridula</i>	1.01
	Switchgrass	<i>Panicum virgatum</i>	0.71
	Western Wheat	<i>Pascopyrum smithii</i>	1.61
	Sand dropseed	<i>Sporobolus cryptandrus</i>	0.04
		<b>Total for Upland Mix</b>	<b>13.58 lbs/PLS/Acre</b>
<b>Substitutes</b>	<b>ACCEPTABLE SUBSTITUTES FOR WILDFLOWERS</b>		
	Fringed sage ( <i>Artemisia frigida</i> ) 0.03 lbs/PLS/Acre		
	Blue flax ( <i>Linum lewisii</i> ) 0.41 lbs/PLS/Acre		
	Prairie aster ( <i>Machaeranthera tanacetifolia</i> ) 0.25 lbs/PLS/Acre		
	<b>ACCEPTABLE SUBSTITUTES FOR GRASSES</b>		
	Canada wildrye ( <i>Elymus canadensis</i> ) 1.59 lbs/PLS/Acre		
	Inland saltgrass ( <i>Distichlis stricta</i> ) 0.35 lbs/PLS/Acre		
Mountain muhly ( <i>Muhlenbergia montana</i> ) 0.11 lbs/PLS/Acre			
<b>Requirements</b>	<p>*Contractor is responsible for locating and purchasing all species listed in mix. If a species can't be located, contractor must replace each missing species with the acceptable substitutions (listed above). Contractor is responsible for providing seed tags to appropriate City staff. This mix is based on 70 seeds/ square foot and is only calculated for one acre. This mix is based on the contractor using a drill seed application. Mix should be doubled if hand broadcasted. Contractor is responsible for calculating the appropriate seed amounts to purchase. Please note that the pounds per acre are in PLS (Pure Live Seed) and must be ordered that way. All materials furnished shall be free of Colorado State noxious weeds as defined in Article III, Section 21-40 of the Code of the City of Fort Collins.</p>		

<b>ALKALINE MIX</b>			
	<b>Common Name</b>	<b>Scientific Name</b>	<b>lbs/PLS/ Acre</b>
<b>Wildflowers</b>	Fringed sage	<i>Artemisia frigida</i>	0.05
	Purple Prairie Clover	<i>Dalea purpurea</i>	0.81
	Annual sunflower	<i>Helianthus annuus</i>	4.13
	Blue flax	<i>Linum lewisii</i>	0.83
	Mexican hat	<i>Ratibida columnifera</i>	0.2
<b>Grasses</b>	Sideoats Grama	<i>Bouteloua curtipendula</i>	1.15
	Buffalograss	<i>Bouteloua dactyloides</i>	3.27
	Blue Grama	<i>Bouteloua gracilis</i>	0.25
	Inland Saltgrass	<i>Distichlis stricta</i>	0.35
	Bottlebrush squirreltail	<i>Elymus elymoides</i>	0.95
	Slender Wheatgrass	<i>Elymus trachycaulus</i>	1.36
	Giant mannagrass	<i>Glyceria grandis</i>	0.14
	Switchgrass	<i>Panicum virgatum</i>	0.71
	Western Wheatgrass	<i>Pascopyrum smithii</i>	1.61
	Alkali Sacaton	<i>Sporobolus airoides</i>	0.11
		<b>Total for Alkaline Mix</b>	<b>15.92 lbs/PLS/Acre</b>
<b>Substitutes</b>	<b>ACCEPTABLE SUBSTITUTES FOR WILDFLOWERS</b>		
	Indian blanketflower ( <i>Gaillardia aristata</i> ) 1.85 lbs/PLS/Acre		
	Prairie aster ( <i>Machaeranthera tanacetifolia</i> ) 0.49 lbs/PLS/Acre		
	Scarlet globemallow ( <i>Sphaeralcea coccinea</i> ) 0.61 lbs/PLS/Acre		
	<b>ACCEPTABLE SUBSTITUTES FOR GRASSES</b>		
	Canada wildrye ( <i>Elymus canadensis</i> ) 1.60 lbs/PLS/Acre		
	Nuttall's alkaligrass ( <i>Puccinellia airoides</i> ) 0.15 lbs/PLS/Acre		
<b>Requirements</b>	Prairie cordgrass ( <i>Spartina pectinata</i> ) 1.00 lbs/PLS/Acre		
	<p>*Contractor is responsible for locating and purchasing all species listed in mix. If a species can't be located, contractor must replace each missing species with the acceptable substitutions (listed above). Contractor is responsible for providing seed tags to appropriate City staff. This mix is based on 70 seeds/ square foot and is only calculated for one acre. This mix is based on the contractor using a drill seed application. Mix should be doubled if hand broadcasted. Contractor is responsible for calculating the appropriate seed amounts to purchase. Please note that the pounds per acre are in PLS (Pure Live Seed) and must be ordered that way. All materials furnished shall be free of Colorado State noxious weeds as defined in Article III, Section 21-40 of the Code of the City of Fort Collins.</p>		

<b>MESIC MIX</b>			
	<b>Common Name</b>	<b>Scientific Name</b>	<b>lbs/PLS/ Acre</b>
Wildflowers	Smooth aster	<i>Aster laevis</i>	0.19
	White prairie clover	<i>Dalea candida</i>	0.65
	Purple Prairie Clover	<i>Dalea purpurea</i>	0.81
	Indian blanketflower	<i>Gaillardia aristata</i>	1.85
	Black-eyed Susan	<i>Rudbeckia hirta</i>	0.14
Grasses	Big Bluestem	<i>Andropogon gerardii</i>	1.3
	Salt and pepper grass	<i>Deschampsia caespitosa</i>	0.07
	Inland Saltgrass	<i>Distichlis stricta</i>	0.35
	Streambank wheatgrass	<i>Elymus lanceolatus ssp. lanceolatus</i>	1.36
	Switchgrass	<i>Panicum virgatum</i>	0.71
	Western Wheatgrass	<i>Pascopyrum smithii</i>	1.61
	Fowl bluegrass	<i>Poa palustris</i>	0.18
	Little Bluestem	<i>Schizachyrium scoparium</i>	0.7
	Yellow Indiangrass	<i>Sorghastrum nutans</i>	1.38
Prairie Cordgrass	<i>Spartina pectinata</i>	1	
		<b>Total for Mesic Mix</b>	<b>12.31 lbs/PLS/Acre</b>
Substitutes	<b>ACCEPTABLE SUBSTITUTIONS FOR WILDFLOWERS</b>		
	Mexican hat ( <i>Ratibida columnifera</i> ) 0.10 lbs/PLS/Acre		
	Marsh sunflower ( <i>Helianthus nuttallii</i> ) 0.56 lbs/PLS/Acre		
	Beebalm ( <i>Monarda fistulosa</i> var. <i>menthifolia</i> ) 0.09 lbs/PLS/Acre		
	<b>ACCEPTABLE SUBSTITUTIONS FOR GRASSES</b>		
	American sloughgrass ( <i>Beckmannia syzigachne</i> ) 0.20 lbs/PLS/Acre		
	Alkali sacaton ( <i>Sporobolus airoides</i> ) 0.11 lbs/PLS/Acre		
Prairie sandreed ( <i>Calamovilfa longifolia</i> ) 0.67 lbs/PLS/Acre			
Requirements	<p>*Contractor is responsible for locating and purchasing all species listed in mix. If a species can't be located, contractor must replace each missing species with the acceptable substitutions (listed above). Contractor is responsible for providing seed tags to appropriate City staff. This mix is based on 70 seeds/ square foot and is only calculated for one acre. This mix is based on the contractor using a drill seed application. Mix should be doubled if hand broadcasted. Contractor is responsible for calculating the appropriate seed amounts to purchase. Please note that the pounds per acre are in PLS (Pure Live Seed) and must be ordered that way. All materials furnished shall be free of Colorado State noxious weeds as defined in Article III, Section 21-40 of the Code of the City of Fort Collins.</p>		

<b>WETLAND MIX</b>			
	<b>Common Name</b>	<b>Scientific Name</b>	<b>lbs/PLS/ Acre</b>
Wildflowers	Marsh sunflower	<i>Helianthus nuttallii</i>	1.51
	Pennsylvania smartweed	<i>Polygonum pennsylvanicum</i> ( <i>Persicaria pennsylvanica</i> )	3.13
	Goldenglow daisy	<i>Rudbeckia ampla</i>	1.36
	Blue verbena	<i>Verbena hastata</i>	0.2
Grasses	American sloughgrass	<i>Beckmannia syzigachne</i>	0.39
	Inland Saltgrass	<i>Distichlis stricta</i>	0.67
	Giant mannagrass	<i>Glyceria grandis</i>	0.27
	Fowl bluegrass	<i>Poa palustris</i>	0.35
	Prairie Cordgrass	<i>Spartina pectinata</i>	1.9
Wet Species	Spikerush	<i>Eleocharis palustris</i>	0.42
	Arctic rush	<i>Juncus balticus</i> ( <i>J. arcticus</i> )	0.03
	Hardstem bulrush	<i>Schoenoplectus acutus</i>	0.65
	Alkali bulrush	<i>Scirpus maritimus</i> ( <i>Bolboschoenus maritimus</i> )	1.14
	Common three-square	<i>Schoenoplectus pungens</i>	0.65
		<b>Total for Wetland Mix</b>	<b>12.68 lbs/PLS/Acre</b>
Substitutes	<b>ACCEPTABLE SUBSTITUTES FOR WILDFLOWERS</b>		
	Black-eyed Susan ( <i>Rudbeckia hirta</i> ) 0.19 lbs/PLS/Acre		
	Beebalm ( <i>Monarda fistulosa</i> var. <i>menthifolia</i> ) 0.23 lbs/PLS/Acre		
	If one or more species is unavailable, double the quantity of an available wildflower (In mix above).		
	<b>ACCEPTABLE SUBSTITUTES FOR GRASSES</b>		
	Salt and Pepper grass ( <i>Deschampsia caespitosa</i> ) 0.14 lbs/PLS/Acre		
	Switchgrass ( <i>Panicum virgatum</i> ) 1.35 lbs/PLS/Acre		
	Alkali sacaton ( <i>Sporobolus airoides</i> ) 0.20 lbs/PLS/Acre		
Requirements	<b>ACCEPTABLE SUBSTITUTES FOR WET SPECIES</b>		
	If one or more species is unavailable, double the quantity of an available wet species (In mix above).		
	<p>*Contractor is responsible for locating and purchasing all species listed in mix. If a species can't be located, contractor must replace each missing species with the acceptable substitutions (listed above). Contractor is responsible for providing seed tags to appropriate City staff. This mix is based on 100 seeds/ square foot and is only calculated for one acre. This mix is based on the contractor using a broadcast seed application. Contractor is responsible for calculating the appropriate seed amounts to purchase. Please note that the pounds per acre are in PLS (Pure Live Seed) and must be ordered that way. All materials furnished shall be free of Colorado State noxious weeds as defined in Article III, Section 21-40 of the Code of the City of Fort Collins.</p>		