



## APPENDIX K

### LARIMER COUNTY RECLAMATION SEED MIXES BY ECOTYPE

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#### Life History Codes used in Seed Mixes

NPF = Native Perennial Forb (e.g., insect pollinated wildflower).

NBF = Native biennial forb.

NAF = Native annual forb.

NPG-L = Native perennial grass or grass-like plant

Table K-1: Bioswale Seed Mix.  
Used in Larimer County Bureau of Reclamation administered properties.

Scientific Name	Common Name (USDA)	Cultivar or Ecotype	Life History	Pounds PLS Needed
<i>Sporobolus airoides</i>	Alkali sacaton	VNS	NPG-L	0.75
<i>Verbena hastata</i>	Blue vervain	VNS	NPF	1.00
<i>Rhudbeckia hirta</i>	Blackeyed Susan	VNS	NPF	1.00
<i>Glyceria striata</i>	Fowl mannagrass	VNS	NPG-L	1.00
<i>Nassella viridula</i>	Green Needlegrass	Lodorm	NPG-L	7.00
<i>Distichlis spicata</i>	Inland saltgrass	VNS	NPG-L	3.00
<i>Helianthus nuttallii</i>	Nuttal's sunflower	VNS	NPF	12.0
<i>Dalea pupurea</i>	Purple prairie clover	VNS	NPF	4.00
<i>Triticum aestivum x Secale cereale</i>	Quickguard	Quickguard	cover crop	15.0
<i>Elymus trachycaulus ssp. Trachycaulus</i>	Slender wheatgrass	San Louis	NPG-L	11.0
<i>Elymus trachycaulus</i>	Slender wheatgrass	First strike	NPG-L	11.0
<i>Panicum Virgatum</i>	Switchgrass	Neb. 28, Blackwell	NPG-L	2.50
<i>Monarda fistulosa</i>	Wild bergamot	VNS	NPF	1.00
<i>Achillea millefolium</i>	Yarrow	Occidentalis	NPF	1.00

PLS = Pure Live Seed. Due to low mix weight, buffer with rice hauls. If broadcasting use 2X seeding rate

Table K-2: Grassland Mix < 6,000 ft a.s.l.

Scientific Name	Common Name (USDA)	Cultivar or Ecotype	Life History	Pounds PLS Needed
<i>Pascopyrum smithii</i>	Western wheatgrass	Arriba	NPG-L	0.80
<i>Bouteloua barbata</i>	Sideoats grama	Vaughn	NPG-L	0.50
<i>Bouteloua gracilis</i>	Blue grama	Lovington	NPG-L	0.06
<i>Nassella viridula</i>	Green needlegrass	Lodorm	NPG-L	0.75
<i>Panicum Virgatum</i>	Switchgrass	Neb. 28, Blackwell	NPG-L	0.15
<i>Andropogon gerardii</i>	Big bluestem	Kaw, Bison, Champ	NPG-L	0.39
<i>Schizachyrium scoparium</i>	Little bluestem	Pastura, Blaze	NPG-L	0.35
<i>Sporobolus cryptandrus</i>	Sand dropseed	Borden	NPG-L	0.03
<i>Bouteloua dactyloides</i>	Buffalograss	Sharps, Cody, Bowie	NPG-L	1.0
<i>Sporobolus airoides</i>	Alkali sacaton	Salado	NPG-L	0.04
<i>Elymus trachycaulus ssp. Trachycaulus</i>	Slender wheatgrass	San Louis	NPG-L	0.88
<i>Achillea millefolium</i>	Yarrow	Occidentalis	NPF	0.03
<i>Dalea purpurea</i>	Purple prairie clover	Kaneb	NPF	0.40
<i>Gaillardia aristata</i>	Blanket flower	Meriwether	NPF	0.40
<i>Ratiba columnifera</i>	Prairie coneflower	Stillwater	NPF	0.06
<i>Linum lewisii</i>	Blue flax	Maple Grove	NPF	0.27
<i>Cleome serrulata</i>	Rocky Mountain bee plant	Pursh	NPF	0.72
<i>Penstemon strictus</i>	Rocky Mountain penstemon	Bandera	NPF	0.15
<i>Monarda fistulosa</i>	Wild bergamot	CO Ecotype (or VNS)	NPF	0.05
<i>Ratiba columnifer</i>	Mexican hat	VNS	NPF	0.07
<i>Sphaeralcea coccinea</i>	Scarlet globemallow	VNS	NPF	0.10
<i>Triticum aestivum x Secale cereale</i>	Quickguard	Quickguard	cover crop	15.00

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Table K-3: Foothills Seed Mix < 6,000 – 7,500 ft a.s.l.

Scientific Name	Common Name (USDA)	Cultivar or Ecotype	Life History	Pounds PLS Needed
<i>Bouteloua gracilis</i>	blue grama	Fremont CO ecotype	NPG-L	0.32
<i>Cleome serrulata</i>	Rocky Mountain beeplant	CO Ecotype (or VNS)	NAF	0.84
<i>Bouteloua curtipendula</i>	sideoats grama	Niner	NPG-L	2.52
<i>Coreopsis tinctoria</i>	plains coreopsis	CO Ecotype (or VNS)	NBF	0.10
<i>Elymus elymoides</i>	squirreltail	Pueblo or Wapiti	NPG-L	2.50
<i>Elymus trachycaulus</i>	slender wheatgrass	Pryor or First Strike or San Luis	NPG-L	4.63
<i>Festuca arizonica</i>	Arizona fescue	Redondo	NPG-L	0.80
<i>Gaillardia aristata</i>	blanketflower	CO Ecotype (or VNS)	NPF	0.51
<i>Helianthus annuus</i>	common sunflower	CO Ecotype (or VNS)	NAF	0.83
<i>Monarda fistulosa</i>	wild bergamot	CO Ecotype (or VNS)	NPF	0.10
<i>Pascopyrum smithii</i>	western wheatgrass	Arriba	NPG-L	5.05
<i>Poa secunda</i>	Sandberg bluegrass	Sims Mesa or High Plains	NPG-L	0.37
<i>Pseudoroegneria spicata</i>	bluebunch wheatgrass	Anatone	NPG-L	2.87
Quickguard	Quickguard	Quickguard	cover crop	3.42

PLS = Pure Live Seed. Due to low mix weight, buffer with rice hauls. If broadcasting use 2X seeding rate

Acceptable Alternatives (Foothills Seed Mix)			
Scientific Name	Common Name (USDA)	Cultivar or Ecotype	Life History
<i>Achillea lanulosa var. occidentalis</i>	Western yarrow	Eagle or Yakima	NPF
<i>Achnatherum hymenoides</i>	Indian ricegrass	Paloma	NPG-L
<i>Adenolinum lewisii</i>	Lewis flax	CO ecotype or Maple Grove	NPF
<i>Artemisia frigida</i>	prairie sagewort	CO Ecotype preferred	NPF
<i>Bouteloua curtipendula</i>	sideoats grama	Niner	NPG-L
<i>Dalea candida</i>	white prairie clover	CO Ecotype preferred	NPF
<i>Dalea purpurea</i>	purple prairie clover	Kaneb or Stephanie	NPF
<i>Festuca idahoensis</i>	Idaho fescue	Trident	NPG-L
<i>Helianthus petiolaris</i>	prairie sunflower	CO Ecotype (or VNS)	NAF
<i>Nassella viridula</i>	green needlegrass	Cucharas	NPG-L
<i>Poa fendleriana</i>	muttongrass	Ruin Cyn	NPG-L
Regreen	Regreen	Regreen	cover crop
<i>Symphotrichum laeve</i>	smooth blue aster	CO Ecotype (or VNS)	NPF
<i>Achillea lanulosa var. occidentalis</i>	Western yarrow	Eagle or Yakima	NPF
<i>Achnatherum hymenoides</i>	Indian ricegrass	Paloma	NPG-L
<i>Adenolinum lewisii</i>	Lewis flax	CO ecotype or Maple Grove	NPF
<i>Artemisia frigida</i>	prairie sagewort	CO Ecotype preferred	NPF
<i>Bouteloua curtipendula</i>	sideoats grama	Niner	NPG-L

Table K-4: Lower Montane Seed Mix < 7,501 – 8,500 ft a.s.l.

Scientific Name	Common Name (USDA)	Cultivar or Ecotype	Life History	% mix	Pounds PLS Needed
<i>Adenolinum lewisii</i>	Lewis flax	CO Ecotype or Maple Grove	NPF	2.0	0.32
<i>Bouteloua gracilis</i>	blue grama	Fremont CO ecotype	NPG-L	8.0	0.52
<i>Cleome serrulata</i>	Rocky Mountain beeplant	CO Ecotype (or VNS)	NAF	2.0	0.84
<i>Elymus elymoides</i>	squirreltail	Pueblo or Wapiti	NPG-L	10.0	2.50
<i>Elymus trachycaulus</i>	slender wheatgrass	Pryor or First Strike or S	NPG-L	14.0	4.63
<i>Festuca arizonica</i>	Arizona fescue	Redondo	NPG-L	10.0	1.00
<i>Gaillardia aristata</i>	blanketflower	CO Ecotype	NPF	3.0	0.77
<i>Pascopyrum smithii</i>	western wheatgrass	Arriba	NPG-L	14.0	5.89
<i>Poa secunda</i>	Sandberg bluegrass	Sims Mesa or High Plains	NPG-L	12.0	0.55
<i>Pseudoroegneria spicata</i>	bluebunch wheatgrass	Anatone	NPG-L	8.0	3.28
Quickguard	Quickguard	Quickguard	Cover Crop	1.0	3.42
<i>Rudbeckia hirta</i>	blackeyed Susan	CO ecotype	NBF	3.0	0.09
<i>Bromus marginatus</i>	mountain brome	Cold Springs Ecotype	NPG-L	12.0	6.85
<i>Penstemon strictus</i>	Rocky Mountain penstemon	Bandera	NPF	1.0	0.11

PLS = Pure Live Seed. Due to low mix weight, buffer with rice hauls. If broadcasting use 2X seeding rate

Acceptable Alternatives (Lower Montane Mix)			
Scientific Name	Common Name (USDA)	Cultivar or Ecotype	Life History
<i>Elymus lanceolatus ssp. lanceolatus</i>	thickspike wheatgrass	Critana	NPG-L
<i>Achillea lanulosa var occidentalis</i>	Western yarrow	Eagle or yakima	NPF
<i>Achnatherum hymenoide</i>	indian ricegrass	Paloma	NPG-L
<i>Achnatherum robustum</i>	sleepy grass	0	NPG-L
<i>Artemisia frigida</i>	prairie sagewort	CO Ecotype preferred	NPF
<i>Erigeron speciosus</i>	aspen fleabane	CO Ecotype (or VNS)	NPF
<i>Festuca idahoensis</i>	Idaho fescue	Trident	NPG-L
<i>Helianthus petiolaris</i>	prairie sunflower	CO Ecotype (or VNS)	NAF
<i>Heliomeris multiflora</i>	showy goldeneye	CO Ecotype (or VNS)	NPF
<i>Hesperostipa comata</i>	needl-n-thread	CO Ecotype or Bluebuckle	NPG-L
<i>Koeleria macranth</i>	prairie junegrass	Sims Mesa	NPG-L
<i>Penstemon virgatus</i>	Front Range beardtongue	CO Ecotype (or VNS)	NPF
<i>Poa fendleriana</i>	muttongrass	Ruin Cyn	NPG-L
<i>Regreen</i>	Regreen	Regreen	Cover Crop
<i>Symphyotrichum laeve</i>	smooth blue aster	CO Ecotype (or VNS)	NPF
<i>Chamerion angustifolium</i>	fireweed	CO Ecotype (or VNS)	NPF

Table K-5: Upper Montane Seed Mix < 9,501 – 10,500 ft a.s.l.

Scientific Name	Common Name (USDA)	Cultivar or Ecotype	Life History	% mix	Pounds PLS Needed
<i>Elymus trachycaulus</i>	slender wheatgrass	Pryor or First Strike or S	NPG-L	16.0	5.77
<i>Poa secunda</i>	Sandberg bluegrass	Sims Mesa or High Plains	NPG-L	14.0	0.70
Quickguard	Quickguard	Quickguard	Cover Crop	1.0	3.73
<i>Bromus marginatus</i>	mountain brome	Cold Springs Ecotype	NPG-L	16.0	9.96
<i>Deschampsia cespitosa</i>	tufted hairgrass	Peru Creek	NPG-L	14.0	0.37
<i>Elymu glaucus</i>	blue wildrye	Elkton	NPG-L	10.0	3.89
<i>Festuca saximontana</i>	Rocky Mountain fescue	CO Ecotype preferred	NPG-L	12.0	0.52
<i>Trisetum spicatum</i>	spike trisetum	CO Ecotype preferred	NPG-L	12.0	0.25
<i>Festuca idahoensis</i>	Idaho fescue	Trident	NPG-L	5.0	0.58

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Acceptable Alternatives (Upper Montane Mix)			
Scientific Name	Common Name (USDA)	Cultivar or Ecotype	Life History
<i>Erigeron speciosus</i>	aspen fleabane	CO Ecotype (or VNS)	NPF
<i>Heliomeris multiflora</i>	showy goldeneye	CO Ecotype (or VNS)	NPF
<i>Koeleria macranth</i>	prairie junegrass	Sims Mesa	NPG-L
<i>Poa fendleriana</i>	muttongrass	Ruin Cyn	NPG-L
Regreen	Regreen	Regreen	Cover Crop



## References

Larimer County Natural Resources Department, 2021. *[Seed Mixes, BMPs and Guidelines for Seeding and Mulching in the Cameron Peak Burn Area](https://www.larimer.gov/naturalresources/weeds)*. Available at: <https://www.larimer.gov/naturalresources/weeds>