

# Business Turf to Native Grass Conversion Incentive Seeding Guidelines and Savings Estimates

## **Conversion Overview**

To encourage business customers to cultivate more attractive, resilient landscapes, Colorado Springs Utilities offers an incentive for converting low-use areas to alternative or native grass species. This is one of the easiest and most cost-effective water and maintenance reduction options available. Such conversions also provide an opportunity for older landscapes to better serve customers and allow more appropriate allocation of water and maintenance resources towards higher priority areas. For areas that have been neglected, native or alternative turfgrasses are a cost-effective way to move to a more attractive, sustainable solution.

Conversion to a native or alternative turfgrass can yield water savings of up to 80 percent over conventionally irrigated Kentucky bluegrass. Achievement of these savings depend on having the ability to monitor and adjust irrigation schedules and maintenance to maximize the goals of the conversion site.

### **Options, Savings and Incentives**

Multiple conversion options are available with different savings and incentive amounts. To select the best conversion type for a site, identify potential uses and evaluate the specific site characteristics using the following specifications as your guide. Each conversion option is detailed below, with comments about suitable uses, relative drought tolerance, preferred soil type, vegetation characteristics, and maintenance requirements.

The following native and alternative grasses create appealing mowed-turfgrass areas or naturalized, un-mowed prairie.

	Potential Savings Range	Assumed* Annual Savings (%)	Annual	Potable Incentive Amount per Area Converted (\$/sqft)	Soil Amendment Required
Warm Season Lawn or Prairie	50-80%	60%	1.40	\$0.18**	No
Low Maintenance Prairie	40-80%	60%	1.40	\$0.18**	No
Cool Season Prairie or Lawn	25-50%	30%	0.70	\$0.09**	No
Shady Water-wise Lawn	10-40%	30%	0.70	\$0.09**	Yes

\*Assumes water savings compared to a high-water using grass like Kentucky bluegrass.

\*\*Maximum total rebate amount per customer is \$20,000 per year.

### **Irrigation Requirements**

Due to the semi-arid nature of our climate and the inconsistency of natural rainfall, all converted areas must have an automated in-ground irrigation system. Watering guidelines for establishment and maintenance are provided in this document.

Commonly used "grow low" seed mixes do not qualify for this program as they contain high water use turfgrass species and do not reduce water requirements.

## **Plant Details**

#### Warm Season Lawn or Prairie

A low water and low maintenance lawn or prairie option for full sun sites with low to moderate use.

<u>Description</u>: These native grasses develop a fine textured light green drought tolerant turf that can save up to 80% of the water applied. When combined, they create a dense very well adapted lawn that can be left unmowed for a more natural look or mowed monthly for a more traditional look. These warm season grasses green up around mid-May and start to go dormant in late-September. They can tolerate low to moderate foot traffic; however excessive winter use may create thinning or increase weed invasion.

#### Recommended for:

- Sunny tree lawns or parking strips (areas between sidewalk and curb)
- Low use turf areas with minimal irrigation
- Borders along natural or peripheral areas



For a traditional lawn look, try Sundancer buffalograss. This grass stays short and is only mowed once per month.

Multiple examples of these grasses can	h be found at the Water-wise Demonstration G	iarden at 2855 Mesa Road.
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Warm Season Native Turf or Prairie Approved Grass Species				
Common Name	Species	Elevation	Height	Soil
Buffalograss	Buchloe dactyloides	<6,500'	4-6"	Clay loam to clay
Blue grama grass	Chondrosum gracile syn. Bouteloua gracilis	<7,500'	6-18"	Sand to clay

<u>Conditions:</u> Both species are adaptable to different soils, but buffalograss is best adapted to medium to heavy clay soils, while blue grama grass is more adaptable overall, including sandy soils. Both species grow best in full sun locations and should not be used in full shade locations. Soil does not have to be improved before seeding.

Seeding: For best results, these grasses must be seeded in summer between mid-May and early August.

<u>Maintenance Watering</u>: Once established, these will grow well with once-a-week watering. Applying one-half inch each watering day will keep these tough, deep rooting grasses green all summer.



Unmowed blue grama grass in a large peripheral area.

<u>Mowing</u>: Mow this grass once a month for a more uniform lawn or once a year (in March) for a natural prairie appearance.

<u>Fertilizer</u>: Fertilize every few years and use a slow-release product, such as Biosol<sup>®</sup> or equivalent. Fast-release chemical fertilizers should be avoided as they can thin or weaken the turf and may promote weed invasion.

<u>Weed Control:</u> Early spring weed control of broadleaf species or residual cool season grasses is essential. Careful application of broadleaf or broad-spectrum herbicides may be safe during the late dormancy period in March. However, once the grass has started to turn green, stay away from any "Weed and Feed" or any broad-spectrum herbicide since it may damage these grass species. Always follow herbicide label directions.

## Low Maintenance Prairie

A very low water and extremely low maintenance option for large spaces that brings back the beauty of nature.

<u>Description</u>: These native grasses recreate the light green drought tolerant prairies found naturally in El Paso County. By combining native cool and warm season grasses, this mix is bound to perform no matter what the weather brings. These species generally tolerate little foot traffic and perform best with annual mowing. Use this mix in areas where a more natural look is desired. These grasses save up to 80% of the water used in the landscape.

#### Recommended for:

- Moderate slopes
- North and east-facing exposures
- Passive use park and campus areas
- Native streetscapes
- Open space areas
- Areas with very low irrigation requirements



Low Maintenance Prairie Approved Grass Species				
Common Name	Species	Elevation	Height	Soil
Buffalograss	Buchloe dactyloides	<6,500'	4-6"	Clay loam to clay
Blue grama grass	Chondrosum gracile syn. Bouteloua gracilis	<7,500'	6-18"	Sand to clay
Sideoats grama	Bouteloua curtipendual	<7,000'	15-30"	Sand to clay
Western wheatgrass	Pascopyrum smithii	<9,000'	12-36"	Clay loam to clay
Sand dropseed	Sporobolus cryptandrus	<8,000'	6-18"	Sand
Green needlegrass	Nasella viridula	<9,000'	18-36"	Sand to clay
Little bluestem	Schizachyrium scoparium	<8,200'	18-36"	Sand to clay
Big bluestem	Andropogon gerardii	<8,500'	18-60"	Sand to clay
Switchgrass	Panicum virgatum	<8,000'	30-40"	Sand to clay

Other approved species may be included in a low maintenance prairie mix but must be approved prior to installation. Two qualifying commercially available mixes are: <u>El Paso County Shotgun Mix</u> and <u>PBSI Native Prairie</u>.

<u>Conditions</u>: All species are somewhat adaptable to different soils and grow best in full sun locations. Soil does not have to be improved before seeding.

Seeding: For best results, seed between mid-May and early August.

<u>Watering</u>: Once established, these will grow well with once-a-week watering or less. Apply one-half to one inch of water each watering day to keep these tough, deep rooting grasses green all summer.

<u>Mowing:</u> These species are best mowed only once or twice per year. At a minimum, these species should be mowed once in the spring. Regular mowing is not recommended with these species as it tends to decrease plant vigor and increase weed density. Increased mowing may require increasing watering frequency to recover from mowing injury.

<u>Fertilizer</u>: Fertilize every few years and use a slow-release product, such as Biosol<sup>®</sup> or equivalent. Chemical fertilizers should be avoided as they can thin or weaken the turf and lead to weed invasion.

<u>Weed Control</u>: Early spring weed control for broadleaf species or residual cool season grasses is essential. Careful use of broadleaf herbicides can be very effective at controlling weeds. Always follow herbicide label directions.

## Cool Season Prairie or Lawn

An option with some water and maintenance savings that works well is common spaces where a more traditional lawn look is desired.

<u>Description</u>: These native grasses develop a coarse textured light to dark green, moderately drought tolerant turf. They are reasonably well adapted, resemble Kentucky bluegrass at a distance and create a dense sod when combined. On average they save about 30% of the water when compared to Kentucky bluegrass.

Recommended for:

- Tree lawns or parking strips (grass between sidewalk and curb)
- Areas with moderate irrigation requirements
- High visibility, low use areas



These grasses will green up around late March and start to go dormant in early November. These species generally tolerate moderate foot traffic and should NOT be left unmowed and only allowed to reach a height of 6 to 8 inches. These are best used in a mix which includes most or all of these. **Other approved species can be included in a cool season native turf/prairie mix but must be approved prior to installation.** 

Cool Season Prairie or Lawn Approved Grass Species				
Common Name	Species	Elevation	Height	Soil
Pubescent wheatgrass	Thinopyrum intermedium spp barbulatum	<9,000'	20-48"	Loam to Clay Loam
Western wheatgrass	Pascopyrum smithii	<9,000'	12-36"	Loam to Clay Loam
Streambank wheatgrass	Elymus lanceolatus	<10,000'	12-36"	Loam to Clay Loam
Slender wheatgrass	Elymus trachycaulus	<12,000	24-30"	Loam to Clay Loam
Rocky Mountain fescue	Festuca saximontana		6-24"	Sandy loam to Clay Loam
Sheep fescue	Festuca ovina	<13,000	4-12"	Sandy loam to clay loam

<u>Conditions:</u> All species are somewhat adaptable to different soils, but some may perform poorly in sandy areas. Soil does not have to be improved before seeding. This combination grows best in full sun locations however, south facing slopes and extended hot weather patterns may cause foliage to temporary turn brown. For shady locations, increase the percentage of fescue in the mix.

<u>Seeding:</u> These grasses may be seeded anytime during the growing season up to early September assuming adequate establishment watering is provided.

<u>Watering</u>: Once established, these will grow well with watering one to two days per week. Apply one-half inch of water each watering day to keep these grasses green all summer.

<u>Mowing:</u> Regular mowing is required for these species though less often than Kentucky bluegrass. These species are best mowed weekly in the spring and once or twice per month thereafter. Mower blades must be sharp to avoid shredding the edges of the leaf blades. These grasses should not be allowed to go to seed.

Fertilizer: Apply up to two applications of fertilizer per year, at about half the rate used for Kentucky bluegrass.

Weed Control: Early spring weed control for broadleaf species is essential. Always follow herbicide label directions.

## Shady Water-wise Lawn

A water-wise traditional lawn option for shady areas.

<u>Description</u>: These are native and introduced grasses which develop a fine textured blue to dark green, that will green up in late March and start to go dormant in early November. They tolerate moderate to high foot traffic and can be left unmowed for a meadow appearance, reaching a height of 6-15 inches. They are reasonably well adapted, resemble Kentucky bluegrass at a distance and create a dense sod when combined.

Shady Lower-Water Lawn Approved Grass Species				
Common Name	Species	Elevation	Height	Soil
Hard fescue	Festuca trachyphylla	<12,000	6-24"	Sandy loam to clay loam
Sheep fescue	Festuca ovina	<13,000	4-12"	Sandy loam to clay loam
Chewing's fescue	Festuca rubra	<13,000	12-24"	Sandy loam to clay loam
Creeping red fescue	Festuca rubra	<12,000	6-24"	Sandy loam to clay loam

#### Other pre-approved species of fine fescue can be included in a fine fescue turf mix.

<u>Conditions:</u> All species are somewhat adaptable to different soils, but may perform poorly in clay or unimproved sand and are most drought tolerant where they can develop a deep root system. These grow best part to full shade areas. Full sun applications will not be approved. Soil must be improved at a minimum rate of 4 cubic feet of organic matter per 1,000 square feet before seeding.

<u>Seeding:</u> These grasses may be seeded anytime during the growing season up to early September assuming adequate establishment watering is provided.

<u>Watering</u>: Once established, these will grow well with 10 to 40 percent less irrigation than conventionally maintained turf. These will require more water if mowed regularly. Overwatering and underwatering may result in damage requiring overseeding to repair.

<u>Mowing:</u> Regular mowing is not be necessary for these species. Depending on preferences, these may be short enough to be mowed only once or twice per year. Mowing every one or two weeks will create a more formal turf appearance, but will increase frequency of watering and shorten rooting depth. Mower blades must be sharp to avoid shredding the edges of the leaf blades.

Fertilizer: Apply two or three fertilizer applications per year, at about half the rate for Kentucky bluegrass.

<u>Weed Control:</u> Early spring weed control for broadleaf species is essential. Always follow herbicide label directions.

Recommended for:

- Shady lawn areas
- Shady un-mowed grasslands in naturalized areas



## Watering Details

## Warm Season Lawn or Prairie and Low Maintenance Prairie Establishment Watering

FREQUENCY	TARGETED SOIL MOISTURE DEPTH	
3 times per day for 3 to 4 weeks (or until substantial establishment)	Maintain moisture at surface and in upper inch of soil; check moisture depth daily, do not saturate or puddle	
2 to 3 nights per week for 2 weeks	Maintain moisture to 2 inches; check moisture depth twice weekly	
1 to 2 nights per week for 4 weeks	Maintain moisture to 3 inches; check moisture depth twice weekly	
1 night per week for up to 6 weeks	Maintain moisture to 6 inches; check moisture depth twice weekly	
Withhold irrigation when nighttime temperatures are consistently below 40 degrees		

## Cool Season Prairie or Lawn and Shady Water-wise Lawn Establishment Watering

FREQUENCY	TARGETED SOIL MOISTURE DEPTH
3 times per day for 2 to 3 weeks (or until substantial establishment)	Maintain moisture at surface and in upper inch of soil; check moisture depth daily, do not saturate or puddle
Nightly for 2 weeks	Maintain moisture to 2 inches; check moisture depth twice weekly
Alternate nights for 2 weeks	Maintain moisture to 3 inches; check moisture depth twice weekly; surface soils can dry somewhat between waterings
3 nights per week	Moisture to 6 inches; check moisture depth weekly, surface soils can dry between waterings