

Plant Perennial Ground Cover



Turf Alternatives Series

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Turf grass has its place. It is a hardy surface to play or lounge on and its dense network of shallow roots controls erosion. **But it also has its drawbacks.** Healthy turf grass requires **frequent mowing, chemicals** that don't stay where they're put, and substantial **irrigation** to stay green through the summer. It also does a poor job of infiltrating water into the ground to be cleaned and cooled naturally—**contributing to runoff that pollutes our lakes and rivers.** Lastly, **it offers nothing to the beneficial insects** we rely on to pollinate our landscapes and control pests. **With so much of our urban and suburban environment covered by impermeable surfaces** (roofs, streets, parking lots, etc.), what we choose to plant in the remaining patches of soil **has drastic consequences for water and habitat quality.**

About Perennial Ground Cover

Though many things can technically be considered perennial ground cover, when we use the term we mean a matrix of tightly knit grasses and forbs that take the place of traditional turf grass. If you have low-use areas and welcome a non-traditional look, a biodiverse perennial ground cover offers maximum ecological impact—though it generally requires more investment of planning and money and has higher maintenance needs while establishing than other turf alternative options. The back of this sheet offers a starter list of options that have been recommended for their hardiness, ecological benefits, and relative low-growing nature and ease of maintenance. Of course, if ordinances allow, you could go further and convert your yard into a native meadow or prairie.

Visit bluethumb.org/turfalternatives for more information, or bluethumb.org/plants for more plant options.

Planting and Establishing Perennial Ground Cover

Planting plugs is the fastest way to establish perennial groundcover, but can be expensive over a large area. Other options are to work in phases, or to choose a combination of plugs and seeding. While plants spread, keep an eye out for weeds. It may require a trained eye or some research to spot the difference between a beneficial plant and an unwanted one. Once established, the ground cover should be thick enough to inhibit weed germination and hardy enough to compete with most intruding weeds.

	Common Name	Scientific Name	Bloom	Height	Sun/Shade	Soil	Native
Flowers	Calico Aster	<i>Symphyotrichum lateriflorum</i>	white	24"	both	mesic	Yes
	Common Blue Violet	<i>Viola sororia</i>	purple	4"	both	mesic	Yes
	Creeping Thyme	<i>Thymus serpyllum</i>	purple	2-4"	sun	dry	Yes
	Ground Plum	<i>Astragalus crassicaarpus</i>	purple	12"	sun	dry to mesic	Yes
	Lanceleaf Coreopsis	<i>Coreopsis lanceolata</i>	yellow	12-24"	sun	dry	Yes
	Prairie Groundsel	<i>Packera plattensis</i>	yellow	12-16"	sun	dry	Yes
	Prairie Smoke	<i>Geum triflorum</i>	pink	8"	sun	dry to mesic	Yes
	Pussytoes	<i>Antennaria plantaginifolia</i>	white	12"	sun	dry	Yes
	Self-heal	<i>Prunella vulgaris ssp. lanceolata</i>	purple	2-12"	both	mesic	Yes
	Sweet White Violet	<i>Viola blanda</i>	white	6"	shade	mesic	Yes
	White Clover	<i>Trifolium repens</i>	white	6-12"	both	dry	No
Woodland Strawberry	<i>Fragaria vesca</i>	white	6-10"	shade	mesic	Yes	
Grasses/Sedges	Blue Grama	<i>Bouteloua gracilis</i>	n/a	12"	sun	dry	Yes
	Fine Fescues	<i>Festuca sp.</i>	n/a	1-8"	both	dry	Some
	Ivory Sedge	<i>Carex eburnea</i>	n/a	6"	shade	dry to mesic	Yes
	Path Rush	<i>Juncus tenuis</i>	n/a	6-12"	sun	dry to mesic	Yes
	Pennsylvania Sedge	<i>Carex pensylvanica</i>	n/a	8"	both	dry to mesic	Yes
	Prairie Junegrass	<i>Koeleria macrantha</i>	n/a	24"	sun	dry	Yes

Plant a Low Maintenance Lawn



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What is a Low Maintenance Lawn?

A low maintenance lawn functions as a typical lawn but is made up of species that require less water and fewer inputs such as fertilizers, pesticides, and mowing than Kentucky bluegrass. Most low maintenance lawns are a mix of fine and/or tall fescues, both hardy cool season grasses. The benefits of fescues include:

- **Drought tolerant.** They need less water to stay healthy and green.
- **Less fertilizer.** They prefer 0.5lb /1000 ft², (instead of 3 lb/1000 ft² for Kentucky bluegrass).
- **Slow growing; less mowing.** Mowing is typically done once in mid-summer to remove seed heads and once in late fall for a healthy spring lawn (shorter grass overwinters better). Metro Blooms recommends following the rule of 1/3 when it comes to mowing, where no more than 1/3 of the plant material is removed during a mowing event (i.e 6" - 4" or 4.5" - 3").
- **Adaptable.** Many species, such as creeping red fescue, do well both in shade and full sun.
- **Weed-suppressing.** Some fescues are bunch forming while others are creeping. Either way, they interlock to form a dense sod and prevent weeds from establishing, so pesticides aren't needed. Tall fescue and some species of fine fescue are even allelopathic, meaning they produce natural herbicides to suppress the growth of other plants. Built in weed control!

Where to use Low Maintenance Turf?

Areas with moderate foot traffic. Home lawns (especially hard-to-mow areas), golf course roughs, street boulevards, and city parks.

Where to NOT use Low Maintenance Turf?

Areas with high foot traffic, such as athletic fields, and areas with deep shade. Creeping red fescue has the best shade tolerance, or try sedges or path rush.

What species to look for

Often the fescues used in low maintenance lawns are referred to as "low mow" or "no mow" grasses. Proprietary seed mixes usually include fine fescues like hard fescue, sheep fescue, chewings fescue, and creeping red fescue.

How do I create a Low Maintenance Lawn?

Overseed a traditional lawn with low maintenance species.

STEP 1: Mow your lawn very short—1" or less. Rake or remove grass clippings to expose as much soil as possible.

STEP 2: Aerating the lawn is recommended, but not required. It can be done with a hand aerator or machine to create good conditions for seed germination and healthy growth.

STEP 3: Spread fescue seed at a rate of 3 lbs / 1000 ft². For best results, apply a very thin layer of compost (40 lbs / 200 ft²) along with or over seed to improve seed to soil contact, and/or a thin layer of straw to limit erosion.

STEP 4: Keep well-watered for 2 weeks until seeds sprout and begin to establish. Then, refrain from watering except in lengthy periods of hot and dry weather, and do not fertilize. The fine fescues will over time out-compete the existing turf.



Build from the bottom up

STEP 1: To start from a blank slate you must remove existing grass. A large area of bare soil is easily eroded by runoff, and provides fertile ground for weeds to easily grow. Herbicides are not recommended because of impacts to water quality. All methods have pros and cons. Below are alternatives to chemical removal:

- Sheet mulching uses cardboard or newspaper to smother grass. A quick google search can tell you all you need to know.
- Sod cutter use is hard work, but non-chemical. You can lose a lot of organic matter though.
- Solarization is a method that covers the area with plastic and using the sun and lack of water to kill grass. This uses a lot of plastic, takes time, plastic degrades and may release toxins and is not practical on a large scale.
- 20% acetic acid or Phydura is an ecologically responsible alternative to glyphosate. It kills all vegetation but leaves roots for stabilization and reseeds easily.

STEP 2: Optional. Aerate the area with a hand aerator or machine. This helps air, water and nutrients get to where they're needed most.

STEP 3: Reseed with mix of fine fescue at a rate of 6lbs / 1000 ft².

STEP 4: Water daily for 10-15 minutes to maintain moisture for a week, then every other day for a week to promote healthy germination and establishment. Water deeply weekly, as roots establish, then ensure your yard receives at least 1" water a month from rain or irrigation to maintain green.

STEP 5: Pull any weeds as they become apparent. Watch out for broadleaf weeds as well as crab grass.

Maintaining a Low Maintenance Lawn

If you mow, leave the lawn at least 3" tall. Taller lawns shade the ground, prevent too much moisture from evaporating and discourage weeds. When seeding from scratch, there will be weeds, so you will need to weed and re-seed bare spots during establishment. To maintain green through growing season, the lawn should receive 1" of water per month (compared to 1" water per week for Kentucky bluegrass).

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Turf Alternatives

Restoring Ecological Function

Turf grass has its place. It is a hardy surface to play or lounge on and its dense network of shallow roots controls erosion. **But it also has its drawbacks.** Healthy turf grass requires **frequent mowing, chemicals** that don't stay where they're put, and **substantial irrigation** to stay green through the summer. It also does a poor job of

infiltrating water into the ground where it can be cleaned and cooled naturally—**contributing to runoff that pollutes our lakes and rivers.** Lastly, **it offers nothing to the beneficial insects** we rely on to pollinate our gardens and control pests. **With so much of our urban and suburban environment covered by impermeable surfaces** (roofs, streets, parking lots, etc.), what we choose to plant in the remaining patches of soil **has drastic consequences for water and habitat quality.**

Types of Turf Alternatives

1.

Low Maintenance Turf

functions as a typical lawn but is composed of species that require less water and fewer inputs. This may be appealing if you want to keep the appearance of a traditional lawn and have heavily used areas.

2.

Pollinator Friendly Lawn

introduces low-growing flowers into a lawn as forage for pollinators and deeper roots that need less watering. If you are not concerned with having a pure green carpet of lawn, this may be the best option to help restore the ecological function of your yard.

3.

Perennial Ground Cover

is a matrix of tightly knit grasses and forbs. If you have low use areas and welcome a non-traditional look, this option offers the maximum ecological impact, though it requires investment of planning and money and has higher maintenance needs while establishing.

	Common Name	Scientific Name	Bloom	Height	Sun/ Shade	Soil	Native?
1	No Mow mixture	n/a	n/a	1-8"	both	dry	some
1, 2	Fine Fescues	<i>Festuca sp.</i>	n/a	1-8"	both	dry	some
2, 3	Self-heal	<i>Prunella vulgaris</i>	purple	2-12"	both	mesic	yes
2, 3	Creeping Thyme	<i>Thymus serpyllum</i>	purple	2-4"	sun	dry	no
2, 3	White Clover	<i>Trifolium repens</i>	white	6-12"	both	dry	no
2, 3	Sweet White Violet	<i>Viola blanda</i>	white	6"	shade	mesic	yes
2, 3	Common Blue Violet	<i>Viola sororia</i>	purple	4"	both	mesic	yes
2, 3	Ground Plum	<i>Astragalus crassicaarpus</i>	purple	12"	sun	dry to mesic	yes
3	Sideoats Grama	<i>Bouteloua curtipendula</i>	n/a	24"	sun	dry to mesic	yes
3	Blue Grama	<i>Bouteloua gracilis</i>	n/a	12"	sun	dry	yes
3	Ivory Sedge	<i>Carex eburnea</i>	n/a	6"	shade	dry to mesic	yes
3	Pennsylvania Sedge	<i>Carex pennsylvanica</i>	n/a	8"	both	dry to mesic	yes
3	Path Rush	<i>Juncus tenuis</i>	n/a	6-12"	sun	dry to mesic	yes
3	Prairie Junegrass	<i>Koeleria macrantha</i>	n/a	24"	sun	dry	yes
3	Calico Aster	<i>Symphotrichum lateriflorum</i>	white	24"	both	mesic	yes
3	Lanceleaf Coreopsis	<i>Coreopsis lanceolata</i>	yellow	12-24"	sun	dry	yes
3	Prairie Groundsel	<i>Packera plattensis</i>	yellow	12-16"	sun	dry	yes
3	Pussytoes	<i>Antennaria plantaginifolia</i>	white	12"	sun	dry	yes
3	Prairie Smoke	<i>Geum triflorum</i>	pink	8"	sun	dry to mesic	yes
3	Woodland Strawberry	<i>Fragaria vesca</i>	white	6-10"	shade	mesic	yes

Planting

- **It is possible to overseed a healthy Kentucky bluegrass or fine fescue lawn with Pollinator Friendly seeds:**
 1. Mow your lawn to a height of 1" or less. Rake or collect the clippings in order to expose as much soil as possible.
 2. If not too difficult, aerate lawn. These steps will improve the flow of nutrients within the soil to create favorable conditions for germination and healthy growth.
 3. Spread seed at recommended rates of lb/acre, according to seed source.
 4. Keep area moist as seeds sprout and take root.

If your lawn has much creeping charlie, tall fescue or perennial ryegrass present, this option will be less effective.

- **To establish Low Maintenance Turf or Perennial Ground Cover or a Pollinator Friendly Lawn where overseeding isn't desired or recommended:**
 1. Remove existing turf. This can be done with a sod kicker or sod cutter, by solarization, sheet mulching, or safe herbicides (20% acetic acid or Phydura is an ecologically responsible alternative to glyphosate).
 2. Amend soil with compost or compost tea. This introduces nutrients and organisms to help foster healthy growth.
 3. Smooth and level the planting area. If possible, shape it so that runoff is directed away from impermeable surfaces towards places where it can infiltrate.
 4. For Low Maintenance Turf: Seed at recommended rates of lb/acre, or some nurseries may offer or be willing to grow No Mow or fine fescue sod.
For Pollinator Friendly Lawn: Spread mixture of flower and fine fescue or Kentucky bluegrass seeds at recommended rates.
For Perennial Ground Cover: Seed at recommended rate, or plant plugs at recommended spacing. Planting of plugs is the fastest way to establish a perennial groundcover yard, but can be expensive when doing a large area. Options are to work in phases, or to choose a combination of plugs and seeding.
 5. If possible, cover seeded area with germination blanket to help keep moist.

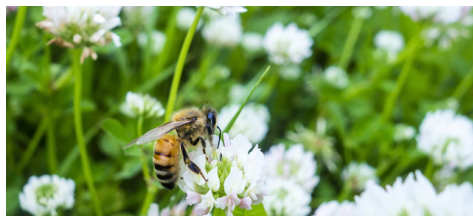
Establishment & Maintenance



Low Maintenance Turf

once established can be treated like turf that requires less mowing, watering, and fertilizer application.

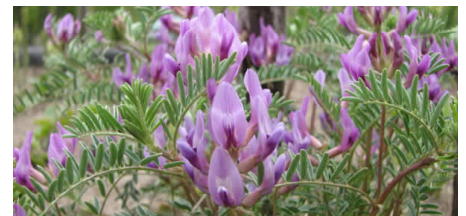
Sometimes heavy thatching can occur in No Mow lawns, often as a result of too much nitrogen. Once lawn turns green in Spring, use a de-thatching machine to remove dead leaves without disturbing soil. Sow No Mow seeds into gaps.



Pollinator Friendly Lawn

can be treated like turf. If you do mow, keep it at least 3" tall. You can choose to refrain from mowing while flowers are blooming to increase the amount of forage available for pollinators.

If you've planted white clover, know that its roots host bacteria that convert atmospheric nitrogen into a form usable by plants—as a result, you are able to cut back on fertilizing your lawn.



Perennial Ground Cover

While plants spread, you will need to keep an eye out for weeds. This will take time. It may require a trained eye to spot the difference between a beneficial plant and a weed.

Once established, the ground cover should be thick enough to inhibit weed germination and hearty enough to compete with most intruding weeds.