



Native Plant Rain Garden Recipes

Thank you for considering native plantings for your next garden project. Adding native plants in our gardens, balconies, yards, and parks – even small patches – helps to build a more resilient, sustainable, and healthy Hamilton. Adding native plants helps pollinators thrive, supports biodiversity to expand, and helps make our city greener. These garden recipes will provide you with tips, plant lists and designs for a number of different garden types including:

- [Sun](#)
- [Partial Sun](#)
- [Shade](#)
- [Oak Savannah](#)
- [Around existing trees and shrubs](#)

These recipes will work for naturalising your landscape, but are perfect for rain gardens! Follow along to learn more about rain gardens and how-to start naturally adapting to urban runoff.

These recipes were curated and designed by our Garden Manager, Jessica Gale as part of our NATURhoods program. To learn more about our NATURhoods program please visit greenventure.ca/NATURhoods.

If you have any questions regarding plant selection - please do not hesitate to contact a team member at Green Venture! Easiest way to connect is water@greenventure.ca.



Green Venture • 22 Veevers Drive, Hamilton, Ontario, L8K 5P5
• 905-540-8787 • water@greenventure.ca

Background:

Rain Gardens:

Adding native plants has many benefits to our environment but you can take it a step further with a rain garden! These gardens may appear like any other garden, but there's lots going on under the surface to help soak up water. Some key features of a rain garden include a water source (downspout or rain barrel), are filled with native plants with deep roots to facilitate infiltration in a bowl-shaped planting area and have an outflow to allow clean water to exit the system. Check out all the benefits of a rain garden:

Reducing water pollution

- By reducing runoff, pollutants found on the surface of traditional asphalt and concrete are not swept into the storm drain and into local water courses.

Keeping rain water on our property

- The amount of water entering our water courses during storm events is reduced because the water is being kept where it lands, rather than running off into storm drains causing high water levels, an overload of the stormwater overflow tanks and stream bank erosion.

Reducing property erosion

- Because rain gardens can catch and store water, it prevents rain from washing away valuable topsoil and nutrients.

References + Important Links:

- [How-to Build a Rain Garden \(Landscape Ontario\)](#)
- [Healthy Yards DIY: How to Build a Rain Garden \(Reep Green Solutions\)](#)
- [Rain Garden Guide \(TRCA\)](#)
- [Complete Guide to Building and Maintaining a Rain Garden \(TRCA\)](#)
- [Steven's Rain Garden](#)



Assessing Your Site + Selecting a Recipe:

Sun Patterns:

Check on your future garden location multiple times in a day to note sun patterns.

- Full sun: 6-8 hours of direct sunlight.
- Partial sun: 4-6 hours of sunlight. Could include areas that are bright, but aren't receiving direct sunlight.
- Shade: anything under 4 hours.

Note: if your shady patch receives any direct, especially strong sun for a short period of time, you may want to select the partial shade recipes, which have plants that can take occasional, strong sun.

Soil Type:

Check on your soil. Is it heavy clay that drains slowly? Dry and sandy? Hard, urban soil? Rich and dark? Check garden recipe notes for any specific plant characteristics in regards to soil that may make a plant incompatible with your soil. Unlike planting a veggie garden, for a native garden, it is better to pick a plant that fits the environmental conditions than to try and amend the soil. Soils can be gradually improved with organic matter, like mulch, but this can take many years. Native plants do not need compost and often prefer a "leaner" soil. Rich soil can make plants overly leggy.

Changes to the Recipes:

The following recipes are based on the sun, partial sun, shade and savannah gardens at 10' x 10' size. If you would like to make any modifications or substitutions we suggest you consider the following:

- Measure your garden site and compare it to recipe size (10' x 10'). Note how much larger or smaller your site is compared to the drawing and estimate how many plants more or less will be needed.
- Purchase perennial plants in odd numbers whenever possible.
- Clump like with like when laying out. In spaces large and small, it helps the garden "read" better and be more cohesive.
- If you want to mix plants together, choose 2-3 types to mix in bigger clumps. Avoid a scattered look.
- Budget and maintenance wise, it is better to do a smaller, more densely planted garden than to try and cover more space and leave bigger gaps of soil or mulch. Not only does this create a space for weeds to invade, it takes that many more years for the garden to look "finished" and grown in. Consider breaking your garden plans into a multi-year

project, completing a section at a time that is manageable from a labour and budget perspective. Great gardens take years.

- If using the recipes for building a rain garden, take note of the plant list description of “does well in basin area” and “better for garden edges.” Plants that work in basins can also take dry periods between rain events. Plants that do better in edges are plants that prefer not to be fully inundated and are better for the up slope, berms or basin edges.
- An additional design of an “oak savannah” is included in the recipes. Oak savannah was a unique natural ecosystem found in Hamilton and the GTHA. While an oak tree may be a long term investment and requires adequate planting space, there is not a better tree to support insect diversity. If utilising this design without a rain garden, substitute in either a black, red or white oak. Pin oaks prefer moist soil.

Let's Grow - Prepping + Planting:

Site Prep Tips:

- Ideally your new garden will be installed in spring or early summer (May-end of June) or fall (September). Avoid installations in the height of summer, which causes heat stress to plants or too late into fall, which doesn't leave a lot of time for plants to be established. An exception is that shrubs and trees can be planted as late as October or November (and sometimes prefer a fall planting).
- Mark out your site with flags or chalk spray paint.
- Create tidy edges - cohesive, cleaner lines, an aesthetic that people are used to.
- Have your mulch ordered and ready. It is better to mulch right away.
- If you have turf which needs to be removed, you have 3 options.
 - First and easiest, is to do sheet mulching. By laying cardboard, soil, and mulch, you kill turf passively underneath. This method requires 2-3 months of breaking down before planting. However, it is the most environmentally friendly and least labour intensive method. You can sheet mulch at any time of the year but the ideal would be to sheet mulch in the previous fall for a spring planting, or in the spring for a fall planting.
 - Second, you can remove the turf by hand or machine. By hand is only feasible on very small garden spaces. Machinery can be rented (sod kickers), but is not for everyone.
 - Third, you can till. This is the least recommended method and not as labour saving as one would think. By inverting soil, the machine exposes weed seeds for germination and destroys soil structure. Machines are also heavy, difficult to manoeuvre and generally not easy to operate unless you have sandier soil and not thick turf. With this method, you still may have to lay a tarp to weaken the turf to make tilling easier.

Shopping Tips:

- Have your list ready with A and B options in case your first choice is not in stock.
- Look for native, straight species versus cultivars. Native plants have more genetic diversity, are more resilient to changing climatic conditions, and more likely to be suitable for the needs of our native pollinators and other insects. These are easy to locate as they have the scientific name followed by a branded cultivar epithet in quotations (e.g. *Echinacea purpurea* 'White Swan')
- Pick the healthiest plants: new growth and buds, undamaged stems, not a lot of die back and no sign of pests or disease. Check the roots.
- When you bring plants home from the nursery, keep them well watered and protected from too much sun or wind, and animals.

Planting Tips:

- Lay out plants with correct spacing and staggered from one another (avoid lines, too much symmetry if going for a “natural” look). You do not need to follow the recipe exactly, just note the general order of groups of plants usually corresponds to height.
- Plant perennials deep enough to lightly cover the root ball. If the plant appears root bound, gently tease out roots.
- With shrubs and trees, the woody stems should be directly at grade (the level of the soil) or planted 1-2 centimetres higher to ensure they are not planted too deep as soil settles. Ensure all roots are covered and they are snug in the soil. Do not cover the trunk flare on a tree with soil or mulch.
- Water all your plants when you are finished, even if the soil is damp. This helps settle soil in and around the roots and makes sure the shocked plants have a good drink.

Care + Maintenance Tips:

- Newly planted gardens need water daily for up to two weeks, if there is no rainfall. After that time period, it is important to keep track of the weather and water as needed.
- Mulch as soon as possible. In the future, you may choose not to mulch your gardens, but initially it helps to preserve water and improve soil conditions. Remember not to bury plants, but also apply enough so soil is thoroughly covered.
- New plantings do not need any pruning. If you want to shape plants, wait until the second or third year.
- Consider letting your perennial plants fully go to seed and remain standing through the winter. Seeds provide food to birds and small mammals. Stalks provide habitat for overwintering insects.
- Resist raking leaves in the fall. This is habitat for overwintering insects and small mammals. Leaf litter is also free mulch: insulating plants from freezing temperatures and drying winter winds along with improving soil conditions over time.

Additional Resources:

Rain Gardens:

- [“Routine Maintenance Activities for Rain Gardens”](#) by Blue Water Baltimore
- [“The Modern Rain Garden: Scrape, Shape, and Plant”](#) by Michael Albanese (available at EcoHouse!)

Native Plants:

- [“Grow Me Instead \(Southern Ontario\)”](#) by the The Ontario Invasive Plant Council
- [Halton Master Gardeners](#) webpage
- [“In the Zone Gardens”](#) by Carolinian Canada
- [“Plant Selection Guidelines”](#) by Credit Valley Conservation Authority
- [“Plants for Specific Conditions/Purposes”](#) by Grand Moraine Growers
- [North America Native Plant Society](#) webpage
- [CanPlant](#) webpage

Local Native Plant Nurseries:

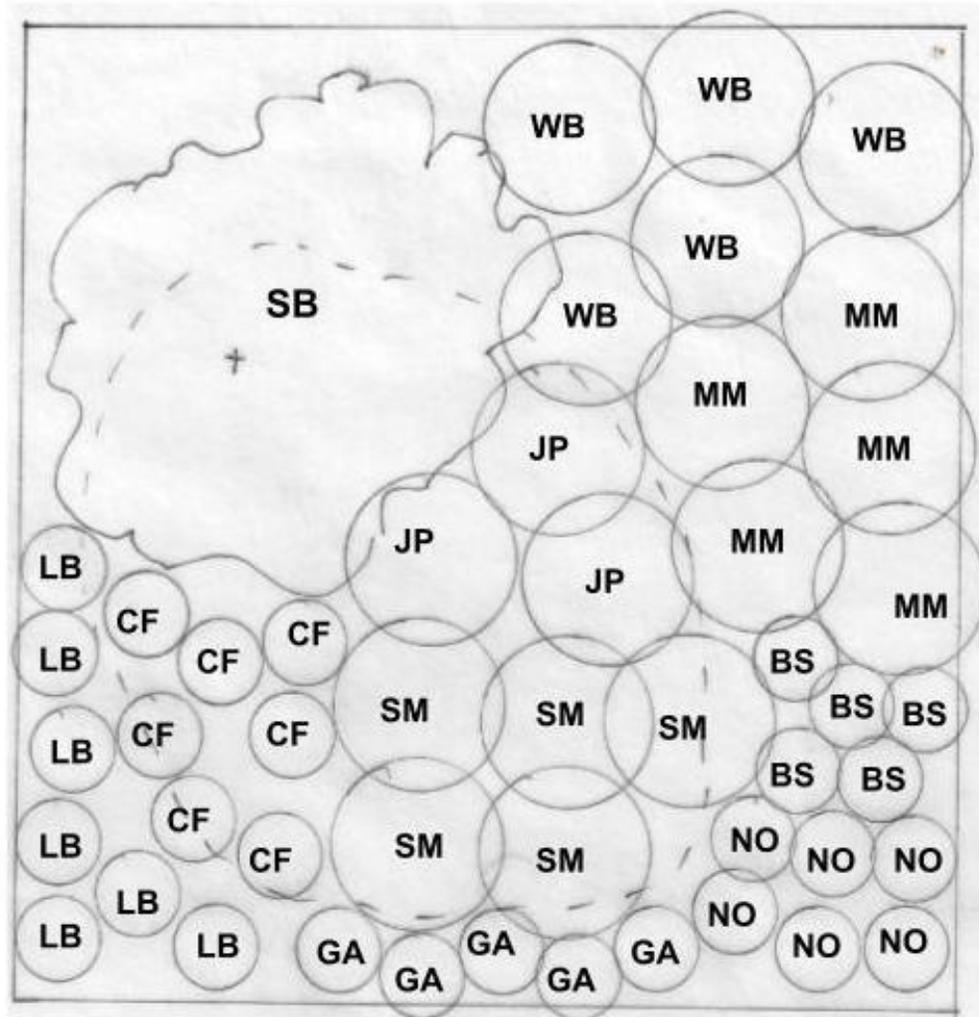
- Check the [MGHalton directory](#) to find a nursery close to you
- [Ontario Native Plants](#)
- [Kayanase](#)
- [Ontario Flora](#)
- [Origin Native Plants](#)
- [Native Plants in Claremont](#)
- [Connors](#)
- [BeeSweet](#)
- [Hortico](#)



Green Venture Team will continue to update our [Frequently Asked Questions webpage](#) for additional resources

Native Plant Rain Garden Recipe For Sun - Diagram

Full Sun, 10' x 10'



KEY:

- SB: Spice bush (1)
- WB: Wild bergamot (5)
- MM: Mountain mint (5)
- JP: Joe pye weed (3)
- CF: Cardinal flower (7)
- SM: Swamp milkweed (5)
- LB: Little blue stem (7)
- NO: Nodding Onion (6)
- GA: Golden alexander (5)
- BS: Blazing star (5)
- Basin boundary



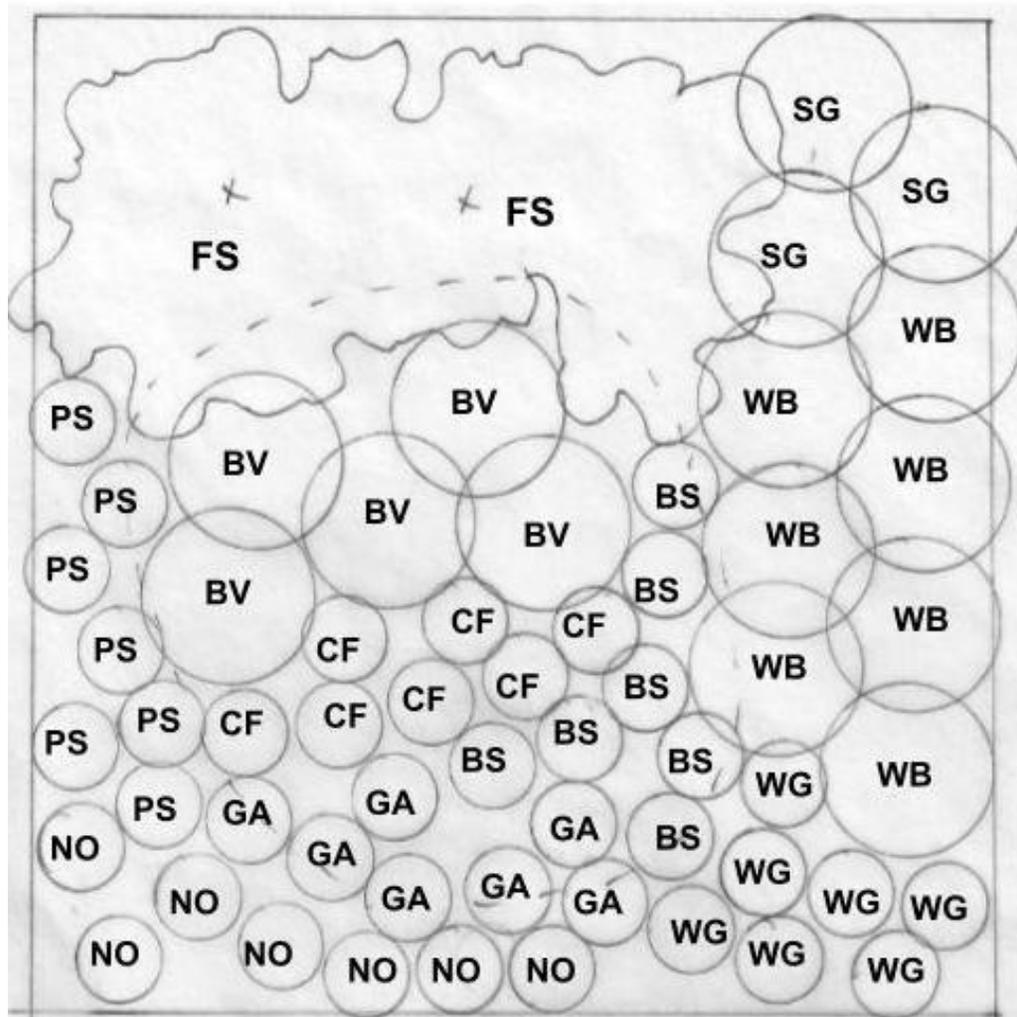
Native Plant Rain Garden Recipe For Sun - Plant List

Full Sun, 10' x 10'

Scientific name	Common Name	Size Maximum (W x H)	Notes	Rain Garden Notes
<i>Plants</i>				
Monarda fistulosa	Wild bergamot	2' x 4'	Lavender flowers have nice scent and attract pollinators	
Pycnanthemum virginianum	Virginia mountain mint	2' x 3'	Minty foliage and dainty flower that are very attractive to pollinators	Better for garden edges
Liatris spicata	Blazing star	1' x 3'	Bold, fuschia spire flowers	
Asclepias incarnata	Swamp milkweed	2' x 4'	Bright pink flowers; food for monarch caterpillars	Does well in basin area
Zizia aurea	Golden alexanders	1' x 2'	Bright yellow umbel flowers	
Eutrochium purpureum	Joe pye weed	3' x 6'	Fluffy purple flowers, large stature	Does well in basin area
Allium cernuum	Nodding onion	1' x 1'	Nodding, purple flowers	
Schizachyrium scoparium	Little bluestem	1' x 3'	Nice fall colour and small seed heads	Better for garden edges
Lobelia cardinalis	Cardinal flower	1' x 4'	Bright red flowers, attractive to hummingbirds	Does well in basin area
<i>Shrubs / Trees</i>				
Lindera benzoin	Spicebush	6' x 10'	Bright yellow flowers in spring	Does well in basin area



Native Plant Rain Garden Recipe For Partial Sun - Diagram Partial Sun, 10' x 10'



- KEY:
- FS: Fragrant sumac (2)
 - WB: Wild bergamot (7)
 - SG: Switchgrass (3)
 - BV: Blue vervain (5)
 - WG: Wild geranium (7)
 - BS: Black-eyed susan (7)
 - CF: Cardinal flower (7)
 - NO: Nodding Onion (7)
 - GA: Golden alexander (7)
 - PS: Pennsylvania sedge (7)
 - Basin boundary



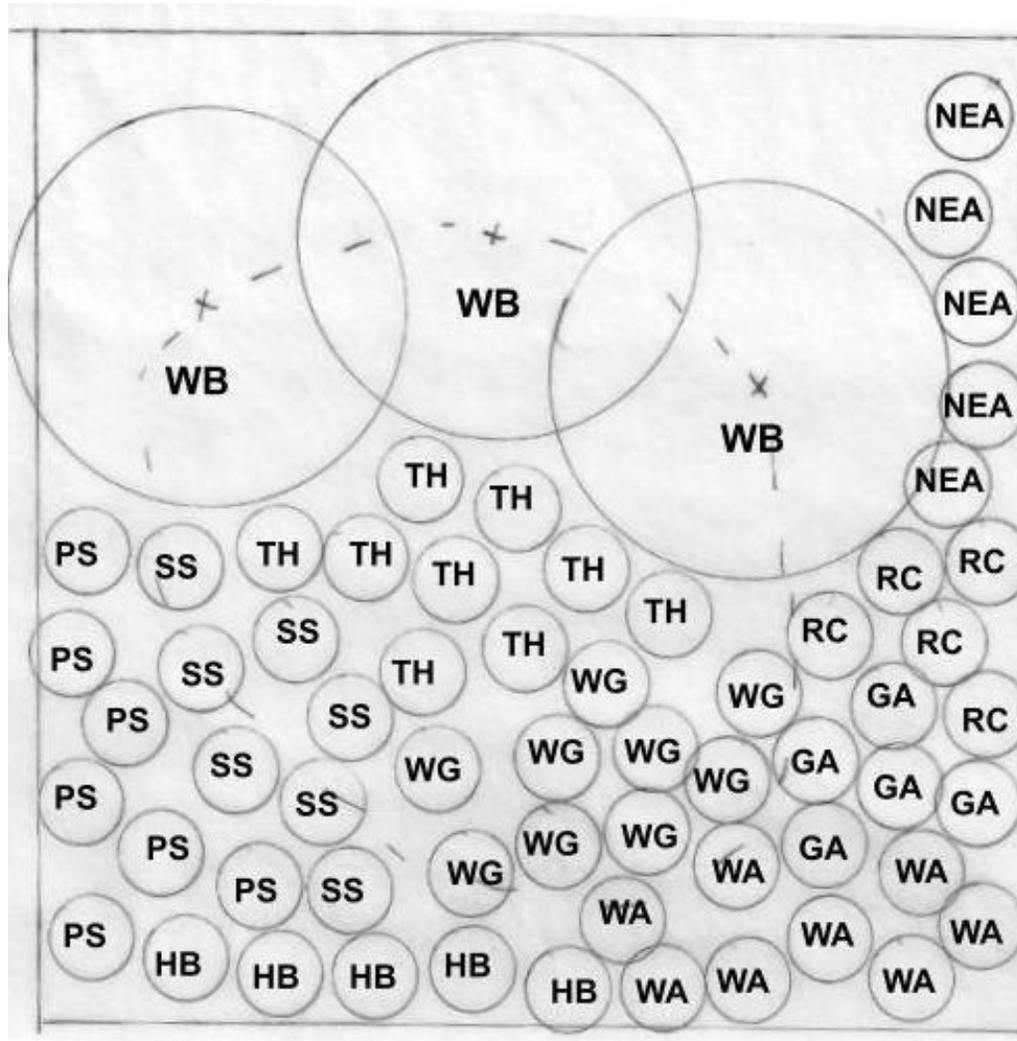
Native Plant Rain Garden Recipe For Partial Sun - Plant List

Partial Sun, 10' x 10'

Scientific name	Common Name	Size Maximum (W x H)	Notes	Rain Garden Notes
<i>Plants</i>				
Monarda fistulosa	Wild bergamot	2' x 4'	Lavender flowers have nice scent and attract pollinators	
Zizia aurea	Golden alexanders	1' x 2'	Bright yellow umbel flowers	
Allium cernuum	Nodding onion	1' x 1'	Nodding, purple flowers	
Rudbeckia hirta	Black-eyed susan	1' x 3'	Bright yellow flowers. Seed heads attractive to birds	
Carex pensylvanica	Pennsylvania sedge	1' x 1'	Spreads over time, good ground cover	
Geranium maculatum	Wild geranium	1' x 1'	Spreads by seed over time	
Panicum virgatum	Switchgrass	2' x 5'	Tall, dense, non-spreading grass	Better for garden edges
Verbena hastata	Blue vervain	2' x 3'	Purple flower spikes	
Lobelia cardinalis	Cardinal flower	1' x 4'	Bright red flowers, attractive to hummingbirds	Does well in basin area
<i>Shrubs / Trees</i>				
Rhus aromatica	Fragrant sumac	4' x 6'	Attractive fall foliage	



Native Plant Rain Garden Recipe For Shade - Diagram Shade, 10' x 10'



KEY:

- WB: Winter berry (3)
- NEA: New England aster (5)
- RC: Eastern red columbine (5)
- SS: Solomon's seal (7)
- WG: Wild geranium (9)
- WA: Woodland anemone (7)
- TH: Turtlehead (9)
- HB: Hairy beardtongue (5)
- GA: Golden alexander (5)
- PS: Pennsylvania sedge (7)
- Basin boundary



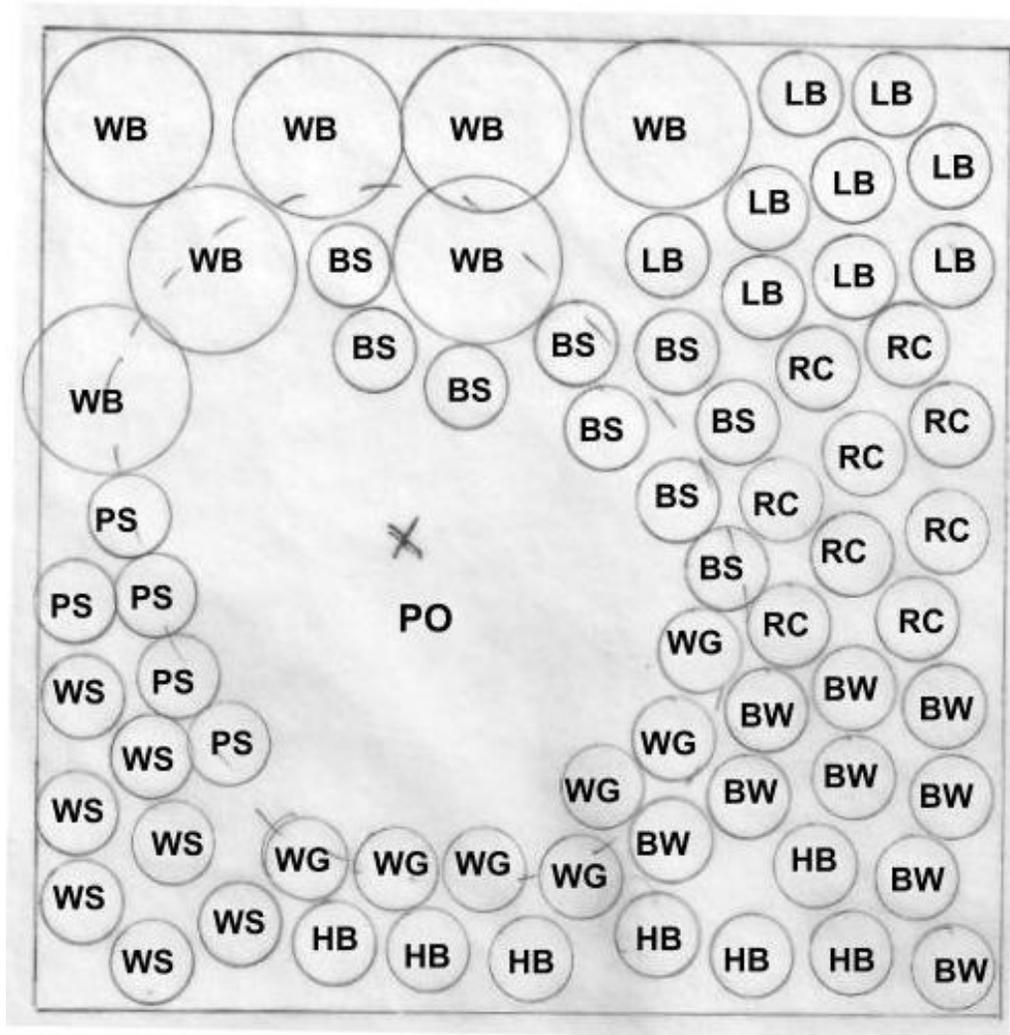
Native Plant Rain Garden Recipe For Shade - Plant List
Shade, 10' x 10'

Scientific name	Common Name	Size Maximum (W x H)	Notes	Rain Garden Notes
<i>Plants</i>				
Carex pensylvanica	Pennsylvania sedge	1' x 1'	Spreads over time, good ground cover	
Geranium maculatum	Wild geranium	1' x 1'	Spreads by seed over time	
Aster novae-angliae	New England aster	1' x 2'		
Chelone glabra	Turtlehead	1' x 2'	White, unusual flowers	Does well in basin area
Penstemon hirsutus	Hairy beardtongue	1' x 1'	Small, lavender flowers	Better for garden edges
Aquilegia canadensis	Eastern red columbine	1' x 1'	Red bell-like flowers	Better for garden edges
Anemone sylvestris	Woodland anemone	1' x 1'	Spreads through rhizomes over time	
Polygonatum biflorum	Solomon's seal	1' x 2'	Arching greenery with white bell-like flowers	Does well in basin area
Solidago flexicaulis	Zig zag goldenrod	1' x 1'	Dainty golden rod with twisting stem	
<i>Shrubs / Trees</i>				
Ilex verticillata	Winter berry	3' x 7'	Bright red berries in winter, attractive to birds	Does well in basin area



Native Plant Rain Garden Recipe For Oak Savannah - Diagram

Around Pin Oak Tree, 10' x 10'



KEY:

- PO: Pin oak (1)
- WB: Wild bergamot (7)
- LB: Little bluestem (9)
- RC: Eastern red columbine (9)
- WG: Wild geranium (7)
- WS: Wild strawberry (7)
- BS: Black-eyed susan (9)
- HB: Hairy beardtongue (7)
- BW: Butterfly weed (9)
- PS: Pennsylvania sedge (5)
- Basin boundary



Native Plant Rain Garden Recipe For Oak Savannah - Plant List

Around Pin Oak Tree, 10' x 10'

Scientific name	Common Name	Size Maximum (W x H)	Notes	Rain Garden Notes
<i>Plants</i>				
<i>Asclepias tuberosa</i>	Butterfly weed	1' x 2'	Bright orange flowers; food for monarch caterpillars	Better for garden edges
<i>Monarda fistulosa</i>	Wild bergamot	2' x 4'	Lavender flowers have nice scent and attract pollinators	
<i>Schizachyrium scoparium</i>	Little blue stem	1' x 3'	Nice fall colour and small seed heads	Better for garden edges
<i>Rudbeckia hirta</i>	Black-eyed susan	1' x 3'	Bright yellow flowers. Seed heads attractive to birds	
<i>Carex pensylvanica</i>	Pennsylvania sedge	1' x 1'	Spreads over time, good ground cover	
<i>Geranium maculatum</i>	Wild geranium	1' x 1'	Spreads by seed over time	
<i>Fragaria virginiana</i>	Wild strawberry	1' x 1'	Spread through rhizomes, good ground cover	Better for garden edges
<i>Penstemon hirsutus</i>	Hairy beardtongue	1' x 1'	Small, lavender flowers	Better for garden edges
<i>Aquilegia canadensis</i>	Eastern red columbine	1' x 1'	Red, bell-like flowers	
<i>Shrubs / Trees</i>				
<i>Quercus palustris</i>	Pin oak	70'		Does well in basin area



Native Plant Rain Garden Recipe For Around Existing Plants and Shrubs - Plant List

Scientific name	Common Name	Size Maximum (W x H)	Notes	Rain Garden Notes
Carex pensylvanica	Pennsylvania sedge	1' x 1'	Spreads over time, good ground cover	
Geranium maculatum	Wild geranium	1' x 1'	Spreads by seed over time	
Aster novae-angliae	New England aster	1' x 2'	Beautiful purple fall flower	
Anemone sylvestris	Woodland anemone	1' x 1'	Spreads through rhizomes over time	
Solidago flexicaulis	Zig zag goldenrod	1' x 1'	Dainty golden rod with twisting stem	
Fragaria virginiana	Wild strawberry	1' x 1'	Spread through rhizomes, good ground cover	Better for garden edges
Penstemon hirsutus	Hairy beardtongue	1' x 1'	Small, lavender flowers	Better for garden edges
Rudbeckia hirta	Black-eyed susan	1' x 3'	Bright yellow flowers. Seed heads attractive to birds	
Verbena hasta	Blue vervain	2' x 3'	Purple flower spikes	

