



The Best Plants For 30 Tough Sites

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Minnesota's Master Gardeners share their 30 years of experience in teaching in Minnesota

Best Plants for 30 Tough Sites

Introduction

This bulletin is written in celebration of 30 years of Master Gardener teaching in Minnesota. Here are the BEST plants for 30 tough garden sites: dry shade, slopes, lakeshores, all locations that call for tough, durable plants. Also included are hard-to-find plant lists of special traits and useful characteristics: self-seeding, fragrance, long-blooming, minimal litter trees. And who better to recommend these plants than the University of Minnesota Extension Service Master Gardeners? Drawing on their 30 years of teaching and experience, Master Gardeners list here their selections for these tough sites.

Inside you will find answers to these tough questions:

- What can I plant under a black walnut?
- What will grow in alkaline soil?
- What is a good small tree for a boulevard?
- What tree is good for my compacted soil?
- What will grow in dry shade, under trees?



About the University of Minnesota Master Gardeners

The University of Minnesota Extension Service Master Gardeners are volunteers who teach horticulture throughout the state. More than 5,000 Master Gardeners have taken the training, started in 1977 by Mike Zins, now retired U of M Extension Horticulturist. About 2,500 are currently active volunteers teaching in schools, nursing homes, community education programs, community gardens, farmers' markets, at county fairs and the state fair and answering phone and email questions. Most counties in Minnesota have active Master Gardeners that extend the research-based gardening information from the University of Minnesota to the public. To contact a Master Gardener near you or to learn more about the program and how you can become a Master Gardener, see www.mg.umn.edu. For more gardening information see: www.extension.umn.edu.

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top: Home vegetable gardens need full sun and well-drained soil. Specific vegetable plants and herbs for alkaline soils and near black walnut trees are listed in this publication.



middle: Crimson Pigmy barberry, background, tolerates alkaline soil, is deer resistant and can be pruned for knot gardens. Blue oatgrass (middle) and hardy chrysanthemums (foreground) are additional choices for boulevard gardens and sunny dry sites.



bottom: The Rain Garden at the Minnesota Landscape Arboretum handles water runoff from several large parking lots.

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Alkaline Soil

Botanical Name	Common Name	Height	Comments
Trees & Shrubs			
<i>Acer saccharinum</i>	silver maple	45-75'	Fast growing, brittle wood; yellow fall color; most conditions.
<i>Aesculus glabra</i>	buckeye	20-40'	Attractive palmately compound leaves; yellow/orange/red fall color.
<i>Berberis thunbergii</i>	barberry	2-5'	Spreads 2-5 ft.; colorful foliage in summer and fall.
<i>Celtis occidentalis</i>	hackberry	40-60'	Large shade tree for tough sites.
<i>Cotinus coggygria</i>	smokebush	6-15'	Produces showy smoky-silver to pink panicles July - Sept.
<i>Cotoneaster lucidus</i>	cotoneaster	8-10'	Small pink flowers; black fruit; excellent for hedge and xeriscape.
<i>Fraxinus pennsylvanica</i>	green ash	40-60'	Vigorous growth habit.
<i>Gleditsia triacanthos inermis</i>	honeylocust	30-60'	Thornless varieties are best; rapid grower; provides filtered shade.
<i>Hydrangea arborescens</i>	hills of snow hydrangea	3-5'	Spreads 3-5 ft.; mop-head blooms of pink in alkaline soil.
<i>Hydrangea paniculata</i>	panicle hydrangea	6-8'	Showy white to pinkish blooms in summer.
<i>Juniperus horizontalis</i>	creeping juniper	1-2'	Excellent groundcover; tough and dependable on poor soils.
<i>Juniperus chinensis</i>	Chinese juniper	2-6'	Gold to green foliage depending on variety; best in full sun.
<i>Ostrya virginiana</i>	ironwood	25-40'	Interesting hoplike fruits in fall and brown leaves add winter interest.
<i>Pinus nigra</i>	Austrian pine	50'	Spreads to 20 ft.; vigorous, dense grower; dark green.
<i>Potentilla fruticosa</i>	bush cinquefoil	2-3'	Long bloom season; flowers white, pink, gold or yellow.
<i>Prunus virginiana</i>	chokecherry	20-40'	Native tough smaller tree; white flowers in early spring.
<i>Quercus macrocarpa</i>	bur oak	40-60'	Easy to grow; drought tolerant; long-lived.
<i>Syringa vulgaris</i>	lilac	8-15'	Reliable, fragrant spring flowers.
<i>Viburnum</i> spp.	viburnum	4-18'	Many excellent varieties; white flowers; colorful fall berries.
Perennials & Vines			
<i>Achillea</i> spp.	yarrow	18"-3'	Drought tolerant; attractive fern-like foliage and flat topped bloom.
<i>Astilbe xarendsii</i> or <i>A. chinensis</i>	astilbe	15-36"	Long bloom season; spikes of white, pink, lavender or red; moist soil.
<i>Clematis</i> spp.	clematis	5-15'	Excellent blooming vine; many colors and bloom times; shade roots.
<i>Dianthus barbatus</i>	sweet William	8"	Biennial; white and pink fragrant flowers; self-seeds like perennial.
<i>Echinacea purpurea</i>	coneflower	2-3'	Great native perennial; prefers well-drained soil and full sun.
<i>Hemerocallis</i> spp.	daylily	1-3'	Tough; long season of daily bloom; many flower colors.
<i>Heuchera sanguinea</i>	coral bells	12-24"	Blooms early to mid-summer on spikes of brightly colored flowers.
<i>Hosta</i> spp.	hosta	4"-4'	Hundreds of varieties of this hardy shade plant.
<i>Lonicera</i> spp.	honeysuckle	10-20'	Colorful tubular flowers from June to Sept; attracts hummingbirds.
<i>Phlox subulata</i>	creeping phlox	4-8"	Low growing spring bloomer; foliage makes good edging plant.
<i>Phlox paniculata</i>	garden phlox	3-4'	Dependable showy flowers; wide range of colors; midsummer to fall.
<i>Salvia nemorosa</i>	salvia	8-24"	Flower spikes in early summer; rebloom if deadheaded.

In general, ornamental grasses are tolerant of alkaline pH; there are many to choose from including native grasses. Herbs such as wormwood, *Artemisia absinthium*; borage, *Borago officinalis*; chamomile, *Chamaemelum nobile*; parsley, *Petroselinum crispum*; and thyme, *Thymus* spp., grow well in alkaline conditions. Legumes such as beans and peas, peppers, and spinach are good vegetables to grow in high pH soils.



'Emerald Triumph' viburnum is a U of M introduction that grows quickly to 6-10'.

Compiled by Esther Filson, Washington County Master Gardener. Alkaline soil is common in Minnesota. Many Master Gardeners, including Esther, a Master Gardener for 25 years, have had plenty of experience with alkaline soils. This list includes some of the best plants for soils with a pH of 7.0-8.0.

Annuals 3 Feet or More

Botanical Name	Common Name	Height	Soil Type	Exposure*	Comments
<i>Abutilon xhybridum</i>	flowering maple	3-6'	all	PS	Attractive flowers; frost tender shrub; some varieties have variegated leaves.
<i>Amaranthus caudatus</i>	love-lies-bleeding	2-4'	all	S	Colorful foliage; trailing rope or chenille-like flowers.
<i>Antirrhinum majus</i>	snapdragon	2-4'	all	S	'Rocket', 'Bright Butterflies' and 'Supreme Double' are tall; frost tolerant.
<i>Borago officinalis</i>	borage	2-4'	rich, moist soil	S	Hairy foliage; nodding blue flowers.
<i>Cleome hasslerana</i>	cleome, spider flower	4-6'	all, dry	S, PS	Large 6-7" rounded flower clusters; reseeds freely.
<i>Cosmos bipinnatus</i>	cosmos	4-6'	all, dry	S, PS	Lacy fine foliage; good cut flower.
<i>Datura metel</i>	horn-of-plenty; angel's trumpet	2-3'	all, dry	S, PS	Large, trumpet flowers; all plant parts are poisonous.
<i>Consolida</i> spp.	larkspur	1-4'	moist	S	Tall spikes of flowers often need staking; good cut flower.
<i>Helianthus annuus</i>	sunflower	2-10'	well-drained	S	Showy flowers; birds love seeds; many cultivars.
<i>Hibiscus acetosella</i>	red-leaf hibiscus	4-6'	all, dry	S	Rich burgundy-black maple-like foliage.
<i>Lavatera trimestris</i>	annual mallow	2-6'	all	S	Showy flowers bloom all summer.
<i>Nicotiana sylvestris</i>	flowering tobacco	4-6'	all, dry	S, PS	Large fragrant flowers attract hummingbirds; showy coarse foliage; self-seeds.
<i>Pennisetum setaceum</i>	fountaingrass	3-4'	all, dry	S	Pink fuzzy flower spikes; 'Rubrum' has dark purple flowers and foliage.
<i>Persicaria orientale</i>	kiss-me-over-the-garden-gate	6-9'	all	S	Pendulous pink flowers; self-seeds.
<i>Ricinus communis</i>	castor bean	3-8'	moist	S	Huge leaves; all parts poisonous, especially seeds.
<i>Salvia guaranitica</i>	blue sage; black & blue salvia	3-4'	all	S	Attracts bees, butterflies; 'Indigo Spires' is a sterile hybrid.
<i>Solenostemon scutellarioides</i>	coleus	1-4'	moist	S, PS	Newer cultivars are sun tolerant; needs water and fertilizer.
<i>Strobilanthes dyerianus</i>	Persian shield	3-4'	all	S, PS	Heat tolerant; dramatic; foliage is iridescent green, purple and silver.
<i>Tagetes erecta</i>	African marigold	2-3'	all	S	Tall African mixed is one of the taller cultivars.
<i>Tithonia rotundifolia</i>	Mexican sunflower	4-6'	all, dry	S, PS	Daisy-like flowers attract butterflies.
<i>Verbena bonariensis</i>	verbena	3-4'	all, dry	S, PS	Tender perennial that freely self-seeds; butterfly favorite.
<i>Zinnia elegans</i>	zinnia	3-4'	all, dry	S	Colorful; long-lasting; excellent cut flower; many cultivars.

New selections and cultivars of annuals today are often shorter and smaller. This list includes several old-fashioned plants that have been grown for many years. Also listed are taller cultivars of new and old favorites. These taller annuals will make a colorful addition to your garden and many can also be used for cut flowers.

Compiled by Paula Parker, Wright County Master Gardener. Paula has been a Master Gardener for four years, answering questions about annuals and other gardening issues along with the Wright County Master Gardeners who work on community gardens, teaching in schools, and at the county fair.



New cultivars of sunflowers have a variety of colors and forms, often with branched, multiple flowers.



'Indigo Spires' is a tall salvia that blooms all summer.

Annual Vines That Grow Quickly

Botanical Name	Common Name	Height	Comments
Fast-Growing Annual Vines			
<i>Asarina scandens</i>	climbing snapdragon	6-9'	One inch trumpet-like flowers throughout summer; twining.
<i>Humulus scandens</i>	Japanese hops	5-15'	Green flowers in summer; fast growing; twining.
<i>Ipomoea purpurea</i>	common morning glory	to 10'	Funnel shaped flowers from midsummer to fall; 'Heavenly Blue' recommended.
<i>Ipomoea quamoclit</i>	cypress vine	8-10'	Fine lacy leaves; star-shaped tubular red, pink and white flowers.
<i>Ipomoea xmultifida</i>	cardinal climber	6 to 20'	Ferny foliage; twining; trumpet-shaped flowers.
<i>Lathyrus odoratus</i>	annual sweet pea	2-6'	Pea-type flowers; honey-orange blossom scent; grows best in cool weather.
<i>Phaseolus coccineus</i>	scarlet runner bean	10-15'	Scarlet pea-type flowers; purple pods; twining; edible beans.
<i>Tropaeolum majus</i>	climbing nasturtium	4-6'	Twining; fragrant, edible flowers in red, brown, yellow and bicolor.
Tropical/Tender Perennial* Vines			
<i>Cardiospermum halicacabum</i>	love-in-a-puff, balloon vine	8-10'	Tendrils; tiny white flowers; balloon type seed pods.
<i>Cobaea scandens</i>	cup and saucer vine, cathedral bells	10-20'	2" reddish purple flower cups in green saucers; tendrils.
<i>Eccremocarpus scaber</i>	Chilean glory vine	10-15'	Orange, red, pink, or yellow clusters of flowers from summer to fall.
<i>Ipomoea alba</i>	moonflower	10-20'	Fragrant white flowers from midsummer to frost, heart-shaped leaves.
<i>Ipomoea batatas</i>	sweet potato vine	6-10'	Several cultivars; 'Tricolor' is pink, cream.
<i>Lablab purpureus</i>	purple hyacinth bean	6-20'	Purple fragrant, pea-type flowers; purple beanlike pods.
<i>Mina lobata</i>	Spanish flag, firecracker vine	10-20'	Red flowers fading to yellow and cream.
<i>Passiflora incarnata</i>	passion flower	15-20'	Tendrils; very exotic looking purple and white flowers
<i>Rhodochiton atrosanguineum</i>	purple bell vine	to 10'	Tendrils; tubular, deep purple flowers; heart-shaped leaves.
<i>Thunbergia alata</i>	black-eyed Susan vine	3-7'	Twining; orange, yellow, pink and white flowers with black eye.
<i>Thunbergia grandiflora</i>	skyflower	6-9'	Weaving and twining with sky-blue flowers.
<i>Tropaeolum peregrinum</i>	canary creeper	7-10'	Twining; bright yellow flowers; fringed petals and a green spur.

*Tender perennial vines are not hardy in Minnesota, however in milder climates they are perennials. All vines on this list grow as annuals in Minnesota.



Annual vines require support and can be planted along narrow spaces to cover a wall, shade a patio, or screen a poor view. Many of these attract birds and make a quick display in weeks. Like all annuals, in order to grow to their maximize size, they need regular water and fertilizer throughout the summer.

Compiled by Esther Peters, Stevens County Master Gardener, who loves educating others about nature and plants.

l: Cardinal climber is a fine lacy vine that grows quickly in full sun.
r: Morning glory makes a quick cover at the Minnesota Landscape Arboretum.

Boulevard Gardens: Perennials

Botanical Name	Common Name	Height	Comments
<i>Achillea</i> spp.	yarrow	18"-3'	Full sun; drought tolerant; rapid grower; butterfly plant.
<i>Asclepias</i> spp.	milkweed	18"-6'	Full sun; drought tolerant; butterfly plant.
<i>Aster</i> spp.	aster	12"-5'	Full sun; fall blooms and color; many cultivars.
<i>Echinacea purpurea</i>	purple coneflower	2'-4'	Full sun; drought tolerant; butterfly plant.
<i>Hemerocallis</i> spp.	daylily	1'-3'	Full sun; tough, long lived; butterfly plant.
<i>Hosta</i> spp.	hosta	4"-4'	Light shade to full sun; many are fragrant; <i>H. lancifolia</i> is salt tolerant.
<i>Iris germanica</i>	bearded iris	4"-4'	Full sun; drought and salt tolerant; many are fragrant.
<i>Liatriis</i> spp.	blazing star	2'-5'	Full sun; drought tolerant; butterfly plant.
<i>Lilium</i> spp.	Asiatic and oriental lily	18"-5'	Full sun; good cut flowers; can increase in good conditions.
<i>Monarda didyma</i>	bee balm, bergamot	12"- 4'	Full sun to part shade; butterfly plant.
<i>Narcissus</i> spp.	daffodil, jonquil	6"-2'	Welcomes spring; long lived; deer and squirrels do not eat.
<i>Nepeta</i> spp.	catmint, catnip	6-30"	Full sun; drought tolerant; large groundcover; very tough and vigorous.
<i>Paeonia lactiflora</i>	peony	2-3'	Full sun; long lived; cut flowers; cut back in late fall to minimize botrytis blight.
<i>Perovskia atriplicifolia</i>	Russian sage	3-4'	Full sun; drought tolerant; fragrant; sub-shrub; cut back in spring after new growth has started.
<i>Phalaris arundinacae</i> 'Feesey's Form'	ribbon grass	30"	Full sun; drought and salt tolerant; rhizomes are confined by pavement; remove any all-green plants that develop.
<i>Phlox paniculata</i>	garden phlox	3-4'	Full sun; butterfly plant; hundreds of cultivars; tough.
<i>Rudbeckia fulgida</i>	gloriosa daisy	12"-10'	Full sun; drought tolerant; 'Goldstrum' is about 30"; old fashioned 'Golden Glow' is 5-6' and makes a tall screen.
<i>Sedum</i> spp.	stonecrop, sedum	6"-2'	Easy; full sun; groundcover and upright forms; fall color and winter interest; attracts many insects.
<i>Stachys byzantina</i>	lamb's ear	6-15"	Full sun; drought tolerant; large, soft silver foliage looks good with pastels and burgundy perennials.
<i>Veronica</i> spp.	speedwell	12"-3'	Full sun; drought tolerant; blue, white, or pink flowers.
<i>Yucca filimentosa</i>	yucca	30"	Full sun; drought and salt tolerant; flowers up to 5' tall.

Boulevards are tough sites known for dry, poor soil and salt from the winter. These plants have been selected based on their ability to live and flourish in these difficult urban sites.

Compiled by Rose Bush, Ramsey County Master Gardener. Rose became a Master Grdener in 2001 and has a 4-year-old boulevard garden that includes most of these plants. A handful of these tried and true, easy, versatile perennials were used in a Habitat for Humanity landscaping project led by Master Gardeners.



A boulevard garden can be in the front yard, as shown here on this St. Paul street.



Iris and salvia are tough perennials for a boulevard garden.

Boulevard Gardens: Small Trees

Botanical Name	Common Name	Height	Comments
<i>Acer tataricum</i> ssp. <i>ginnala</i>	amur maple	20-30'	Lightly scented May flowers are followed by double serrated dark colored leaves with lighter undersides; excellent fall color; hardy, adaptable; grown as a free-form clump, standard, or a well-groomed hedge; self-seeds.
<i>Amelanchier laevis</i>	Alleghany serviceberry	15-25'	Minnesota native; large flowers; excellent red fall color; delicious edible purple fruits attract birds in summer.
<i>Maackia amurensis</i>	amur maackia	12-20'	Good drought tolerance; adaptable small tree with a rounded crown; shiny patched bark sheds; lovely flowers; post-flowering pods; foliage emerges with a silvery cast; very slow early growth.
<i>Carpinus caroliniana</i>	bluebeech, ironwood or musclewood	20-30'	Highly tolerant of and adaptable to difficult city conditions, even a bit of shade; Minnesota native; interesting steely blue-tinged bark; lovely red fall foliage.
<i>Chionanthus virginicus</i>	white fringe tree	12-20'	Adaptable to salt and difficult conditions once established, worth the extra care needed initially; "hairy" young branches; fragrant white flowers; shiny deep-green foliage and winter buds provide winter interest.
<i>Corylus americana</i>	filbert or hazelnut	8-15'	Large shrub or small tree; unique early spring catkins; nuts attract wildlife; nice foliage.
<i>Cotinus obovatus</i>	American smoketree	20-30'	Underused and under-appreciated, this small tree bears round leaves that turn brilliant scarlet or purple in fall; tolerant of a variety of soil types.
<i>Hamamelis virginiana</i>	common witch hazel	10-20'	Under-appreciated Minnesota native bears unusual bright yellow flowers in late fall on very dark brown branches; bright green foliage is slightly hairy and fragrant when crushed.
<i>Malus</i> hybrids	crabapple	15-25'	Tough and hardy in Minnesota; scab can be a conspicuous foliar disease, look for resistant varieties; many flower colors provide vivid displays; various shades of green foliage and winter interest with yellow or red fruit.
<i>Phellodendron amurense</i>	amur cork tree	20-35'	Excellent salt, compaction and dry soil tolerance; rounded canopy; irregular growth form; deeply furrowed gray-black bark and deep green shiny foliage; use male selections; can naturalize in wooded areas.
<i>Syringa reticulata</i>	Japanese tree lilac	15-25'	Long-lived and cold tolerant; scented ivory flowers are an early summer hallmark; interesting winter seed pods.
<i>Viburnum lentago</i>	nannyberry	12-18'	Native to Minnesota; multi-stemmed, can be grown as a standard; tolerant of most soil types once established; showy white flowers and multicolored fruit.

Small trees can fit into many sites and do not need pruning when used near power lines and other utilities. These are some of the best small trees to use for Minnesota cities and landscapes.

Compiled by Carol Krajewski, Wright Co. Master Gardener. Carol has been a Master Gardener for five years and has made small tree recommendations not only for Wright County locations, but also to gardeners statewide through "Ask A Master Gardener" on the U of M Extension website. Public plantings, whether small trees, annual flower beds or community gardens, are areas where Master Gardeners specialize in teaching research-based recommendations.



Crabapples are tough and easy to grow on a boulevard.



Amur maackia has attractive foliage and makes a good choice for boulevards.

Broadleaf Evergreens for USDA Zone 4

Botanical Name	Common Name	Height	Comments
<i>Arctostaphylos uva-ursi</i>	common bearberry	6-12"	Prostrate native shrub with small, thick persistent leaves; small red berries; may be hard to find at garden centers.
<i>Bergenia cordifolia</i>	pig squeak, bergenia	12-18"	Bronze/red winter foliage; often tattered and brown by spring; early spring pink flowers.
<i>Buxus microphylla koreana</i>	Korean boxwood	2-4'	Hardy; good for low hedges and knot gardens; deep-green fine-textured foliage persists throughout winter; prefers well-drained soil; protect from winter sun and wind; 'Green Velvet' and 'Wintergreen' are good dwarf cultivars.
<i>Daphne xburkwoodii</i>	'Carol Mackie' daphne	2-3'	Officially rated as USDA Zone 5; beautiful specimen plant; provide winter protection; often shortlived but well worth it.
<i>Euonymus fortunei vegeta</i>	bigleaf wintercreeper	under 1'	Can be grown as a groundcover, small shrub, or trained to a wall; flowers insignificant; needs protection from winter sun; do not plant where it can escape into a native area.
<i>Kalmia latifolia</i>	mountain laurel	3-5'	Marginally hardy in zone 4; attractive, leathery dark green leaves are maroon when emerging from the snow in spring; needs moist acidic site; 'Sarah' has large pinkish-red flowers.
<i>Microbiota decussata</i>	Russian cyprus	1' x 6'	Low radiating arborvitae-like evergreen shrub; fan-like foliage changes from light green in spring to deep green in summer and bronze-brown in winter.
<i>Pachysandra terminalis</i>	Japanese spurge	6-12"	Attractive whorls of evergreen foliage; good for under maple and other trees; 'Green Carpet' and 'Variegata' are common varieties; needs winter cover from sun and wind.
<i>Rhododendron</i> 'P.J.M.'	PJM rhododendron	3-5'	Prefer acidic soil; tolerates light shade; lavender pink flowers in early spring; hardy to -35°F.
<i>Yucca filamentosa</i>	yucca	30"	Bold focal point; leaves are pointed and very sharp; drought and salt tolerant; flowers up to 5' tall.
<i>Vinca minor</i>	myrtle, periwinkle	6-12"	Attractive thick foliage; showy blue flowers in spring; creeping stolons.



Selected cultivars of boxwood make good evergreens for Zone 4 in protected areas.



Rhododendron leaves react to cold climates by drooping and curling inward to minimize water loss.

Broadleaf evergreens are a welcome but rare sight in USDA Zone 4. Green foliage in the dead of winter, even curled and transformed by cold, still provides interest in the garden. These plants are the best bets for surviving the zone's climate, but all prefer protection from drying winds and bright winter sun; therefore protected areas on the north and eastern side of a building are good locations.

Compiled by Deb Reiersen, Hennepin County Master Gardener. Deb enjoys volunteering in the Master Gardener program by answering calls on the Yard and Garden Line and working on home landscape projects with Habitat for Humanity. She grows several of these evergreen plants in her garden.

Clay Soil

Clay soils are common throughout Minnesota. Master Gardeners are often asked what plants will grow best in these heavy soils.

Compiled by Roberta Smith, Carver/Scott County Master Gardener. Roberta says, "After reviewing many publications on gardening in clay soil, this is a list that I have come up with. I have successfully used all of these plants in my Carver County clay soil for a number of years."



Carver Co. Master Gardener Roberta Smith's front yard garden shows many perennials that grow well in clay soil.



Purple coneflower and perovskia (background) are tough perennials for clay soil.

Botanical Name	Common Name	Height	Comments, Hardiness Zone
Perennials			
<i>Aquelegia canadensis</i>	columbine	1-3'	Native; self seeds; attracts hummingbirds; Z2*.
<i>Aster novae-angliae</i>	New England aster	1-5'	Native; nectar source for butterflies; blooms late; Z4.
<i>Baptisia australis</i>	blue false indigo	3-5'	Shrub-like when mature; attractive seed pods; Z3.
<i>Belamcanda chinensis</i>	blackberry lily	2-4'	Reseeds; dried seedheads great in fall arrangements; Z5.
<i>Calamagrostis xacutiflora</i> 'Karl Foerster'	feather reedgrass	3-4'	Ornamental grass adds all-season interest; Z4.
<i>Echinacea purpurea</i>	purple coneflower	2-4'	Native; long bloom season; nectar source for butterflies; Z3.
<i>Eryngium yuccifolium</i>	rattlesnake master	3-4'	Native; unusual, spiky white golf ball flowers; Z4.
<i>Geranium maculatum</i>	wild cranesbill	1-2'	Native; blooms May/June, orange/red fall foliage; Z3.
<i>Heliopsis helianthoides</i>	oxeye	3-5'	Native; long-lasting blooms; reseeds; good in arrangements; Z4.
<i>Hemerocallis</i> spp.	daylily	1-3'	Stabilizes slopes; gorgeous in mass plantings; edible petals; Z3.
<i>Liatis</i> spp.	blazing star, gayfeather	2-5'	Native; stiff spikes of feathery flowers; attracts butterflies; Z3.
<i>Linum perenne</i>	perennial flax	1-2'	Self-seeds; shear back after flowering to promote regrowth; Z5.
<i>Monarda fistulosa</i>	bergamot, bee balm	2-4'	Native; spreads; attracts bees, butterflies, hummingbirds; Z4.
<i>Parthenium integrifolium</i>	wild quinine	4-5'	Native; white flowers with long bloom period; Z4.
<i>Perovskia atriplicifolia</i>	Russian sage	3-4'	Low maintenance shrub; drought tolerant; fragrant; Z4.
<i>Ratibida pinnata</i>	gray headed coneflower	3-5'	Native; reseeds; attracts butterflies; drought tolerant; Z4.
<i>Rudbeckia hirta</i>	black-eyed Susan	3-4'	Native; reseeds; attracts butterflies; winter interest; Z4.
<i>Schizachyrium scoparium</i>	little bluestem	2-4'	Native; great fall color; adds texture to winter garden; Z4.
<i>Sedum</i> spp.	stonecrop	1-3'	Many varieties available; drought tolerant; good fall color; Z3.
<i>Silphium perfoliatum</i>	cupplant	5-7'	Native; provides food, water, and cover for birds; Z4.
<i>Zizia aurea</i>	golden alexander	1-3'	Native; yellow spring flowers; larval food for butterflies; Z4.
Shrubs			
<i>Aronia melanocarpa</i>	black chokeberry	5-8'	Native shrub; white flowers in spring; berries in fall; Z3.
<i>Cornus sericea</i>	red osier dogwood	5-12'	Native; spreads; drought tolerant; deep red stem/twigs; Z3.
<i>Diervilla lonicera</i>	dwarf bush honeysuckle	2-3'	Native; spreads; good bank cover; low maintenance; fall color; Z3.
<i>Syringa vulgaris</i>	lilac	8-15'	Spring is here when the fragrant lilac blooms; Z2.

*refers to hardiness zone; southern Minnesota is Zone 4, central and northern Minnesota are Zone 3; far north and Canada are Zone 2

Cold Tolerant Annuals

Botanical Name	Common Name	Height	Comments
Cold Tolerant Seeds: Sow directly in the garden in early spring, seedlings also cold tolerant			
<i>Calendula officinalis</i>	pot marigold	12-24"	Daisy-like flowers are cream to orange; very cold tolerant.
<i>Centaurea cyanus</i>	bachelor's button	1-3'	Blue, pink, white flowers; drought tolerant; self-seeds.
<i>Consolida</i> spp.	larkspur	1-4'	Blue, pink and white flowers; looks like delphinium.
<i>Eschscholzia californica</i>	California poppy	6-8"	Gold and yellow flrs; blooms all summer.
<i>Helianthus annuus</i>	sunflower	2-10'	Giant flowers; blooms all summer.
<i>Lathyrus odoratus</i>	sweet pea	2-6'	Climbing vine or trailing groundcover; dwarf and bush forms; may self-seed.
<i>Lavatera trimestris</i>	rose mallow/tree mallow	2-6'	Bushy plants with cup-shaped pink flowers resembling hollyhocks; summer to fall.
<i>Lobularia maritima</i>	sweet alyssum	4-12"	Quintessential edging plant; several colors; blooms from spring to heavy frost.
<i>Moluccella laevis</i>	bells of Ireland	2-3'	Green bell-like calyxes surround tiny fragrant white flowers; blooms all summer.
<i>Myosotis sylvatica</i>	forget-me-not	6-10"	Dainty blue, white, or pink flowers.
<i>Reseda odorata</i>	mignonette	6-18"	Very fragrant small white flowers are great for cutting from summer to mid-fall.
<i>Rudbeckia hirta</i>	black-eyed Susan	8-36"	Daisy flowers bloom in yellows, oranges, reds, browns; mid-summer to early fall.
Cold Tolerant Seedlings: May be planted in garden before frost-free date			
<i>Antirrhinum majus</i>	snapdragon	6"-4'	Tall, short, dwarf, and trailing forms; range of colors.
<i>Brassica oleracea</i>	ornamental kale/cabbage	8-24"	White, lavender, and green foliage; tolerates 20°F.
<i>Centaurea cineraria</i>	dusty miller	8-14"	Grown for its silvery foliage; also looks beautiful in the winter when frozen.
<i>Cordyline</i> spp.	dracaena/spike	1-2'	Indispensable for container gardens; spiky foliage is also effective in beds.
<i>Dianthus chinensis</i>	pinks	12-18"	White, pink, red, and bi-color flowers bloom atop grassy foliage; summer to early fall.
<i>Matthiola incana</i>	stock	12-30"	Spicy fragrant, grey foliage; many flower colors.
<i>Nierembergia hippomanica</i>	cupflower	6-8"	Bushy mounds covered with tiny white or pale blue flowers; summer to early fall.
<i>Osteospermum</i> spp.	cape daisy	12-18"	Bright daisy flowers w. dark centers; best in cool weather.
<i>Phlox drummondii</i>	phlox	6-18"	Many colors; excellent cut flower; may overwinter.
<i>Viola</i> spp.	pansy/violet/viola/Johnny jump-up	3-12"	Very hardy; can be planted in fall with a mulch and may survive the winter.

“Cold tolerance” here is defined as seeds that can be planted in the garden and will grow in cold soil and survive early spring frost, and/or young bedding plants that can survive frost in the spring and early autumn. Minnesota growing conditions call for cool temperatures at almost any time of the year. These annuals will tolerate cool temperatures and even grow well after a light frost. Most are hardy to the mid-20s F.



Showy pansies flower in early spring and, when mulched, can even be planted the previous fall.



Sweet peas are cold tolerant, actually preferring cool conditions, fragrant, a good cut flower and can self-sow.

Compiled by Sue Schiess, Hennepin County Master Gardener. Sue answers questions on the Yard and Garden Line at the Arboretum and at Ask a Master Gardener booths at local garden centers.

Compacted Sites: Trees

Botanical Name	Common Name	Height	Comments
<i>Abies balsamea</i>	balsam fir	40-60'	Flat, fragrant needles, upright cones.
<i>Acer rubrum</i>	red maple	50-70'	Round crown, transplants readily, 'Northwood' and 'Red Sunset' have nice fall foliage.
<i>Acer saccharinum</i>	silver maple	45-75'	Oval crown with pendulous branches, transplants well, fast growth
<i>Betula nigra</i>	river birch	40-70'	Peeling cinnamon-brown bark, often multi-stemmed
<i>Celtis occidentalis</i>	hackberry	40-60'	Vase-like habit, easily transplanted, very adaptable. Slow to establish.
<i>Fraxinus nigra</i>	black ash	40-70'	Large black buds, 'Fallgold' recommended for fall color.
<i>Fraxinus pennsylvanica</i>	green ash	40-60'	Fast growth, deep shade, broad rounded form, seedless varieties.
<i>Larix laricina</i>	larch, tamarack	40-70'	Native, deciduous conifer, yellow fall color, few pests
<i>Malus hybrids</i>	crabapple	15-25'	Excellent variety in flower, fruit and foliage, and habit.
<i>Picea mariana</i>	black spruce	30-70'	Spire-like conical habit with flaky brown cones.
<i>Populus deltoides</i>	eastern cottonwood	80-100'	Open, irregular mature habit, fast growth, seedless 'Siouxland' recommended.
<i>Quercus bicolor</i>	bicolor oak	60-70'	Resistant to oak wilt, yellow fall color, prefers acidic soil.
<i>Salix amygdaloides</i>	peachleaf willow	30-40'	Long, fragrant leaves.
<i>Salix nigra</i>	black willow	30-60'	Small- to medium-sized tree with orange twigs.
<i>Thuja occidentalis</i>	northern white cedar, arborvitae	40-50'	Scale-like leaves, broad pyramidal form; 'Techny' recommended



Larch are native to Minnesota and are one of the few deciduous conifer trees. Shown here in November with lingering fall color, larch are well suited for wet or compacted soils.



'Northwood' red maple has bright orange fall color and grows to 50 feet. It is a U of M introduction developed by the Minnesota Agricultural Experiment Station, released in 1980.

Compacted sites are common in urban and suburban areas where construction equipment is used to build homes and alter the landscape. Trees on this list will tolerate compacted soils, but remember no trees respond well to a major grade change or construction damage.

Compiled by Kim Sullivan, Anoka County Master Gardener. Anoka County is north of the metropolitan Twin Cities of Minneapolis and St. Paul and has numerous new communities where compacted soil is an issue with growing plants.

Crevice Plants

Botanical Name	Common Name	Height	Comments
<i>Achillea tomentosa</i>	wolly yarrow	6-14"	Yellow blossoms all summer.
<i>Adonis vernalis</i>	pheasant eye, spring adonis	6-15"	Full sun to part shade, well-drained soil; clump forming with bright yellow flowers.
<i>Ajuga reptans</i>	bugleweed	6-12"	Moist soil, part shade to part sun; creeping evergreen with dark blue flowers; short-lived.
<i>Alchemilla alpina</i>	mountain lady's mantle	6-8"	Full sun or partial shade, deeply cut leaves with silvery margins.
<i>Antennaria dioica</i>	pussy toes	2-10"	Full sun, poor dry soil, basal silver leaves, <i>rosea</i> has rose-red 8-10" flowers.
<i>Aquilegia jonesii</i>	columbine	4"	Full sun or part shade; blue-gray leaves with blue-violet flowers.
<i>Arabis caucasica</i>	wall rock cress	6-12"	Full sun, needs dry or well-drained sites; white May flowers; good cascade
<i>Arenaria balearica</i>	sandwort	4-8"	Full sun to part shade, moist soil; deer resistant; drought tolerant.
<i>Artemisia pedemontana</i>	artemesia	3-8"	Evergreen, fern-like leaves; yellow flowers in June; perfect for vertical crevice.
<i>Aurinia saxatilis</i>	basket of gold	4-8"	Full sun; well-drained soil; bright yellow flowers.
<i>Callirhoe involucrata</i>	poppy mallow, wine cups	6-12"	Native; full sun or light shade; needs well-drained sites; magenta flowers.
<i>Campanula porscharskyana</i>	bellflower, campanula	6-12"	Moist, well-drained soil; full sun to part shade; vigorous; lavender-blue flowers.
<i>Cerastium tomentosum</i>	snow in summer	2-3"	Full sun; silver-grey foliage; white flowers.
<i>Dianthus</i> spp.	dianthus	2-4"	Full sun/afternoon shade; well-drained soil; tiny, fragrant pink flowers.
<i>Gypsophila repens</i>	creeping baby's breath	6-8"	Full sun; well-drained soil; mat forming; semi-evergreen.
<i>Iberis sempervirens</i>	candytuft	6-18"	Full sun to part shade; tolerates poor soil; spreading; white flowers.
<i>Lysimachia nummularia</i> 'Aurea'	moneywort	4-5"	Sun or partial shade; yellow leaves on this cultivar; green form is more vigorous.
<i>Nepeta</i> spp.	catmint	6-24"	Sun or partial shade; grey-green foliage; blue flowers; can be aggressive.
<i>Phlox subulata</i>	creeping phlox	4-8"	Full sun to part shade; well-drained soil.
<i>Sedum acre</i>	sedum	2-3"	Full sun; well-drained soil; spring golden flowers; filler for stepping stones.
<i>Sedum kamtschaticum</i>	sedum	4-9"	Full sun; well-drained soil; summer yellow-orange flowers in flat clusters.
<i>Sedum spurium</i>	dragon's blood	3-4"	Purple foliage; dark red summer flowers; full sun; well-drained soil.
<i>Sempervivum</i> spp.	hen and chicks	3-12"	Full sun; tolerates poor soil conditions; low growing; succulent; perennial.
<i>Thymus serpyllum</i>	thyme	1-3"	Full sun; mat forming; well-drained soil; 'Coccinea' has summer red flowers.

All of these plants are useful for stepping stones, or wall and rock garden areas. Cindy and Shirley's method for planting seeds in walls: 1) Fold an index card in half lengthwise and sprinkle seeds into card. 2) Position card in crack to be planted, then blow the seeds into a fine, rich soil mix in crevice. 3) Mist with a spray bottle of water, apply a piece of facial tissue to the dampened crevice to act as biodegradable mulch, and mist regularly until established.

Compiled by Cindy Welke and Shirley Oberton, Winona County Master Gardeners. Cindy and Shirley both have limestone walls in their gardens along the Mississippi River bluffs in southeastern Minnesota.



Catnip (foreground atop wall) is a vigorous perennial that has self-seeded into crevices.



Campanula, lavender, sedum, scilla, and yucca easily grow in this sunny wall.

Deer Resistant Plants

Botanical Name	Common Name	Height	Comments
Annuals & Perennials			
<i>Achillea</i> spp.	yarrow	18"-3'	Drought tolerant; prefers full sun.
<i>Ageratum houstonianum</i>	ageratum	6-24"	Beautiful blue, pink or white flowers; easy to grow.
<i>Allium</i> spp.	ornamental onion	1-4'	Many forms and species; tough and may self-seed.
<i>Aquilegia canadensis</i>	columbine	1-3'	Short-lived, but self-seeds; showy flowers.
<i>Begonia semperflorens</i> & hybrids	wax begonia	8-2'	Dependable flowers; shade and drought tolerant.
<i>Echinacea purpurea</i>	coneflower	2-3'	Native; attracts birds and butterflies; well-drained soil.
<i>Heliotropium arborescens</i>	heliotrope	18-24"	Cherry-pie fragrance; tough, long lasting flowers.
<i>Lobularia maritima</i>	sweet alyssum	4-12"	Edging and container plant; self-seeds.
<i>Narcissus</i> spp.	daffodil	6-24"	Poisonous to squirrels and deer; can be planted under trees.
<i>Paeonia lactiflora</i>	peony	2-3'	Long lasting perennial; may need staking; prefers full sun.
<i>Papaver</i> spp.	poppy	1-3'	Showy flowers; can self-seed; many species and cultivars.
<i>Pelargonium xhortorum</i>	geranium	12-18"	Cemetery plant; tough and drought resistant.
<i>Perovskia atriplicifolia</i>	Russian sage	3-4'	Drought tolerant; prefers full sun.
<i>Salvia farinacea</i>	blue salvia	24-30"	Attracts butterflies and hummingbirds.
<i>Senecio cineraria</i>	dusty miller	6-15"	Silver-grey or white foliage; drought and cold tolerant.
<i>Stachys byzantina</i>	lamb's ear	6-15"	Silver foliage good for edging and front of border; drought tolerant.
<i>Tagetes</i> spp.	marigold	6"-3'	Long-lasting yellow, gold and bicolor flowers; easy to grow from seed.
Trees, Shrubs, & Vines			
<i>Barberis thunbergii</i>	Japanese barberry	2-5'	Thorny; many cultivars; red berries and red fall color; may be invasive.
<i>Celastrus scandens</i>	bittersweet	to 60'	Woody native vine with attractive berries.
<i>Cornus sericea</i>	red osier dogwood	6-12'	Attractive red stems; cultivars vary in height and form.
<i>Forsythia</i> 'Northern Sun'	forsythia	8-10'	Fast growing, very hardy flower buds, tolerates a wide variety of soils.
<i>Juniperus chinensis</i>	Chinese juniper	2-6'	Many cultivars and forms; good for full sun and well-drained soil.
<i>Pinus mugo</i>	mugo pine	12-20'	Tolerant of alkaline, compacted or salty soils.
<i>Pinus sylvestris</i>	Scots pine	25-50'	Evergreen with attractive bark.
<i>Rhododendron</i> spp.	rhododendron & azalea	3-6'	Evergreen and deciduous species; showy flowers; 'Northern Lights' series are the hardiest.
<i>Syringa vulgaris</i>	lilac	8-15'	Showy fragrant flowers in spring; tolerant of many sites.
<i>Viburnum lentago</i>	nannyberry	12-18'	Native shrub; fruits turn from red to blue; shade tolerant.

Deer damage to ornamental plants is very frustrating. You can minimize the damage they can do by avoiding plants they prefer and instead use these plants that deer avoid due to toxicity, fragrance or texture.

Compiled by Gilda Banfield, Olmsted County Master Gardener. Gilda has been gardening with deer for 30 years and has learned that the plants listed here are usually avoided by deer. She likes to remember that the deer were here first.



Peonies are long lived, cold tolerant perennials that deer rarely eat.



'Northern Sun' is a UM cold hardy introduction of forsythia, a shrub rarely eaten by deer.

Dry Soil: Annual Foliage Plants

Botanical Name	Common Name	Height	Comments
<i>Amaranthus caudatus</i>	love-lies-bleeding	2-4'	Colorful foliage, trailing rope or chenille-like flowers; <i>A. tricolor</i> has brightly colored foliage.
<i>Dichondra argentea</i> 'Silver Falls' 'Emerald Falls'	dicondra	1-4'	Trailing with small round grey leaves; tolerates part sun.
<i>Duranta erecta</i> 'Golden Edge'	variegated pigeonberry	24"	Crisp variegated green and cream foliage; tolerates part sun and dry sites.
<i>Euphorbia marginata</i> 'Kilimanjaro'	snow in summer, variegated annual spurge	2-4'	Green leaves, edged with cream; native to poor soil, do not fertilize, needs good drainage, self-seeds.
<i>Felicia amelloides</i> 'Variegata'	variegated or blue Marguerite	12-18"	Small blue daisy-like flowers, variegated foliage, bushy shape.
<i>Lantana camara</i> 'Samantha'	variegated lantana 'Samantha'	12-18"	Clusters of golden yellow flowers, chartreuse and yellow foliage; extremely drought tolerant.
<i>Pelargonium</i> 'Crystal Palace Gem' 'Blazonry' 'Golden Ears'	fancy-leaved geraniums	12-18"	Showy, colored leaves; prefer lean, dry soils, and can tolerate part-shade; grow from cuttings.
<i>Pennisetum setaceum</i> 'Rubrum'	purple fountaingrass	2-4'	Excellent in containers; purple foliage and seed heads; good for xeriscaping; sets no seed; dies with frost.
<i>Senecio</i> 'Silver Dust'	dusty miller	8-10"	Lacy silver colored mounding cultivar with a spread of 12" or more; prefers full sun.
<i>Setcreasea purpurea</i> or <i>Tradescantia pallida</i>	purple heart	8-12"	A rugged plant that has no serious pest or disease issues; full sun.
<i>Tropaeolum majus variegata</i> 'Alaska' 'Jewel of Africa'	variegated nasturtium	12"	Grown cascading in containers, up a trellis, or as a groundcover; prefers dry, less fertile sites.

Foliage plants are invaluable for obtaining an attractive colorful look for plantings whether in containers or in ground. In a container, foliage can reinforce a color theme or blend the disparate elements of various bloomers. In the ground, annual foliage can carry a summer display through the quiet times between perennial flowering periods. These recommendations can be used in the tough situations that would be a challenge for the more typical plant list. Plants listed may be perennial in other zones, but are used as annuals in our northern gardens.

A word about establishment: Initial care must be taken to establish the plantings for the first two weeks, whether from seed or bedding plants. They require only light watering however; DO NOT overwater or plants will be floppy and disease-prone. Unless indicated these prefer full sun and average soil conditions of fertility, drainage, and pH.

Compiled by Terry Engels and Mary Zeug, Stearns County Master Gardeners, who have answered hundreds of public questions on foliage plants, and have years of experience seeing plants in their own gardens and at Munsinger Clemens Gardens in St. Cloud, MN.



Purple fountaingrass loves heat and full sun. It has no cold tolerance and dies with the first frost.



Lantana tolerates hot dry sites such as this container planting at the Minnesota Landscape Arboretum.

Dry Soil: Shade or Under Trees

Dry shade locations are some of the most difficult sites to grow plants. Under trees, competition is keen for water, light and nutrients. This list represents tough plants that can survive under trees or in dry low light conditions. All are winter hardy in Zones 3 and 4, with the exception of *Epimedium*, which is not hardy in Zone 3. Spring flowering bulbs are often overlooked for the dry shade garden; they work well in deciduous shade areas.

Compiled by Theresa Rooney, Hennepin County Master Gardener. Theresa gardens under a 100-year-old elm tree and very sandy soil (with 2 large dogs).



Plan a path to enjoy wild geranium, hosta, wild ginger, and sweet woodruff.



Daffodils are a good choice under trees; they like dry summer conditions.

Botanical Name	Common Name	Height	Comments
<i>Ajuga reptans</i>	ajuga, bugleweed	6"-12"	Groundcover with purple flowers; various leaf colors; can be short-lived.
<i>Alchemilla mollis</i>	lady's mantle	1'	Pretty light green leaves; yellow/green flowers; good cut flower.
<i>Anthyrium angustum</i>	lady fern	2'	Graceful green fronds; wonderful with hosta, coral bells, or bergenia.
<i>Aquilegia canadensis</i>	columbine	1-3'	Short-lived but self-seeds; yellow/red flowers on native form; nice bluegreen foliage.
<i>Aruncus dioicus</i>	goatsbeard	4-6'	Foliage similar to astilbe; white flower adds light and coolness to the shade garden.
<i>Asarum canadense</i>	wild ginger	12"	Matte round leaves will hide tiny flowers; great groundcover.
<i>Bergenia cordifolia</i>	bergenia	12-18"	Thick glossy leaves similar to cabbage; pink flowers in spring; red/burgundy fall color.
<i>Brunnera macrophylla</i>	Siberian bugloss	1-2'	Light blue to pale purple flowers bloom in spring.
<i>Catharanthus rosea</i>	periwinkle, vinca	6-12"	Showy flowers and leathery leaves.
<i>Chionodoxa luciliae</i>	glory-of-the-snow	6"	Small early flowers with open petals and yellow centers; easy to grow.
<i>Clematis virginiana</i>	virgin's bower	5-10'	Tiny white flowers mid- to late summer; great native vine.
<i>Convallaria majalis</i>	lily-of-the-valley	12"	Spreading groundcover; fragrant white bell flowers in early summer.
<i>Dicentra eximia</i>	fringed bleeding heart	12-18"	Bluegreen foliage; white or pink flowers; flowers most of summer.
<i>Digitalis purpurea</i>	foxglove	2-4'	Allow self-seeding for a perennial bed; poisonous.
<i>Epimedium</i> spp.	barrenwort	1'	Beautiful heart shaped leaves; tiny orchid-like flowers in spring.
<i>Galanthus nivalis</i>	snowdrops	4-8"	Small, nodding, white bell-shaped flowers often bloom while snow is on the ground.
<i>Galium odoratum</i>	sweet woodruff	4-12"	Pretty groundcover with white fragrant flowers.
<i>Geranium</i> spp.	geranium, cranesbill	12-18"	Many flower colors and leaf shapes; <i>Geranium maculatum</i> is native.
<i>Lamium</i> spp.	dead nettle	8-12"	White or pink flowers; leaves are streaked with white/silver; good groundcover.
<i>Leucojum aestivum</i>	summer snowflake	1-2'	Nodding white flowers similar to <i>Galanthus</i> , but much larger and later blooming.
<i>Narcissus</i> spp.	daffodil	6-24"	Wide variety of colors and bloom time; wildlife will not eat daffodils.
<i>Polygonatum biflorum</i>	giant Solomon's seal	1-3'	Arching branches; small white flowers in spring; blue berries in summer.
<i>Puschkinia scilloides</i>	striped squill	2-6"	Pale flowers with a wonderful fragrance, if you can get that close to the ground.
<i>Scilla sibirica</i>	Siberian squill	6"	Blue flowers that naturalize wonderfully, especially in wooded areas.
<i>Vinca minor</i>	periwinkle, myrtle	6-12"	Blue flowers in spring; evergreen; may need winter protection; groundcover.

Dry Soil: Trees

Botanical Name	Common Name	Height	Comments
<i>Abies balsamea</i> , <i>Abies concolor</i>	balsam fir; concolor fir	40-60'	Popular as Christmas tree for shape and scent; adelgid can be a pest problem.
<i>Acer rubrum</i>	red maple	50-70'	Round crown; transplants readily; 'Northwood' and 'Red Sunset' recommended.
<i>Betula nigra</i>	river birch	40-70'	Peeling cinnamon-brown bark; often multi-stemmed; can become chlorotic (yellow).
<i>Celtis occidentalis</i>	hackberry	40-60'	Vase-like habit; easily transplanted; very nice; slow to establish.
<i>Crataegus crusgalli</i>	cockspur hawthorne	20-30'	Var. <i>inermis</i> recommended; effective in groups; wide-spreading low-branches.
<i>Fraxinus nigra</i>	black ash	40-70'	Large black buds; 'Fallgold' recommended for fall color.
<i>Fraxinus pennsylvanica</i>	green ash	40-60'	Fast growth; deep shade; broad rounded form; seedless varieties.
<i>Gleditsia triacanthos inermis</i>	honeylocust	30-60'	Delicate silhouette; readily transplanted; 'Skyline' recommended.
<i>Malus</i> hybrids	crabapple	15-25'	Excellent variety in flower, fruit, foliage, and habit.
<i>Picea glauca</i>	white spruce	40-60'	Dense pyramidal to conical; transplants easily.
<i>Picea mariana</i>	black spruce	30-70'	Spire-like conical habit with flaky brown scales.
<i>Populus deltoides</i>	eastern cottonwood	80-100'	Open, irregular mature habit; fast growth; seedless 'Siouxland' recommended.
<i>Quercus bicolor</i>	bicolor oak	60-70'	Resistant to oak wilt; yellow fall color; requires acidic soil.
<i>Quercus macrocarpa</i>	bur oak	40-60'	Long-lived; pest resistant native tree.
<i>Syringa reticulata</i>	Japanese tree lilac	15-25'	Excellent specimen tree; good in groups; 'Ivory Silk' recommended.
<i>Tilia americana</i>	American linden	60-80'	Fragrant flowers mid-June; transplants readily; large silver-grey leaf.



r: River birch has attractive bark year-round; it is much more tolerant of dry soils than white paper birch.

l: Honeylocust provides light lacy shade and tolerates dry soil conditions. Select improved forms with no thorns and seedpods; this tree also has nice yellow fall color.

The Anoka Sand Plain is a wide area of light, sandy soil in central Minnesota that is a challenge for growing plants. This list identifies trees that can grow in dry or sandy conditions. These are trees that, after establishment, can be grown with minimal water or supplemental irrigation.

Compiled by Kim Sullivan, Anoka County Master Gardener. Anoka County Master Gardeners are experienced gardening in dry conditions.

Fragrant Annuals and Perennials

Botanical Name	Common Name	Height	Flower Color	Exposure*	Comments
Annuals					
<i>Brugmansia</i> spp.	angel's trumpet	3-6'	yellow, gold, cream	S	Good container fragrance plant; poisonous.
<i>Centaurea moschata</i> var. <i>suaveolens</i>	sweet sultan	18-24"	yellow	S	Unusual chocolate fragrance.
<i>Cosmos atrosanguineus</i>	chocolate cosmos	2-3'	deep maroon	S	Faint chocolate scent.
<i>Datura</i> spp.	horn-of-plenty	2-6'	yellow, lavender, white	S, PS	Fragrant at night.
<i>Dianthus caryophyllus</i>	annual carnation	18-24"	white, yellow, pink	S	'Can Can Scarlet' was AAS 2003.
<i>Heliotropium</i> spp.	heliotrope	18-24"	purple, lavender, white	S	Strong vanilla fragrance.
<i>Lobularia maritima</i>	sweet alyssum	4-12"	pink, mauve, white	S, PS	Spicy fragrance; drought tolerant.
<i>Matthiola incana</i>	common/garden stocks	12-30"	white, pink, rose, red	S	Spicy fragrance; early blooming.
<i>Nicotiana sylvestris</i> , <i>N. alata</i>	flowering tobacco	4-6'	white	S, PS	Fragrant at night.
<i>Pelargonium</i> spp.	scented geranium	1-3'	pink, white	S	Grown for the very fragrant foliage.
<i>Petunia</i> spp.	petunia	12"	purple, white, pink	S, PS	Older purple and white varieties are most fragrant.
<i>Tagetes tenuifolia</i>	signet marigold	6-12"	yellow, orange, red	S	Nice citrusy scent.
Perennials					
<i>Actaea racemosa</i> (<i>Cimicifuga</i>)	black snakeroot	4-6'	white, pink	PS, Sh	Very pest-resistant shade plant.
<i>Dianthus gratianopolitanus</i>	cheddar pinks	1-2'	pink, rose	S	'Firewitch' was 2005 Perennial of the Year.
<i>Dictamnus albus</i>	gas plant	3-4'	pink, white	S, PS	Can cause severe dermatitis.
<i>Filipendula rubra</i>	queen-of-the-prairie	3-6'	pink, white	S, PS	Tolerant of boggy conditions.
<i>Hemerocallis</i> 'Hyperion'	Hyperion daylily	36-40"	lemon yellow	S, PS	One of few fragrant daylilies, sweet.
<i>Monarda</i> spp.	bee balm	18-48"	red, purple, white	S, PS	A favorite of hummingbirds.
<i>Nepeta</i> spp.	catmint	6-30"	purple, lavender	S, PS	Long blooming perennial.
<i>Paeonia lactiflora</i>	garden peony	2-3'	pink, red, white	S	Useful in deer-resistant plantings.
<i>Perovskia atriplicifolia</i>	Russian sage	3-4'	Lavender	S	Very fragrant foliage.
<i>Phlox paniculata</i>	garden phlox	3-4'	lavender, pink, red	S, PS	Fragrance varies by cultivar.
<i>Saponaria officinalis</i>	bouncing bet	9-12"	pink, white	S, PS	Can become invasive.
<i>Sporobolus heterolepis</i>	prairie dropseed	2-3'	pink	S	Flowers smell like coriander.
<i>Valeriana officinalis</i>	garden valerian	2-3'	white	S, PS	One plant perfumes a yard.

* S = Full Sun, PS = Part Shade, Sh = Shade

An added plus of these flowers is their distinctive and memorable fragrance. Use these flowers in garden beds or containers near your door or outdoor patio where you can enjoy their lovely scent.

Compiled by Terry Yockey, Goodhue County Master Gardener. Terry has designated a large area in her garden just for fragrant shrubs and flowers. In 1996, Terry created one of the first gardening websites for cold climates:

www.northerngardening.com.



Flowering tobacco, a showy annual with a sweet fragrance, dwarfs 'Profusion Orange' zinnia. Both prefer full sun.



Garden phlox is a dependable perennial with a lovely scent.

Fragrant Shrubs

Botanical Name	Common Name	Flower Color	Height	Exposure**	Comments
<i>Buddleia alternifolia</i> *	butterfly bush	lavender, purple	8-15'	S, PS	Reliably hardy to Zone 5; annual in Zone 4.
<i>Calycanthus floridus</i>	carolina allspice	brown	6-10'	S, PS	Fragrance of pineapple, strawberry/banana.
<i>Caryopteris clandonensis</i> *	bluebeard	blue	2-4'	S	Reliably hardy to Zone 5. Foliage and flowers are fragrant.
<i>Comptonia peregrina</i>	sweet fern	N/A	2- 4'	S, PS	This small shrub has very fragrant foliage.
<i>Clethra alnifolia</i>	summersweet, sweet pepperbush	white, pink, rose	2-6'	S, PS, Sh	Does well in a shady situation.
<i>Daphne xburkwoodii</i>	daphne	pink	3-5'	PS	'Carol Mackie' is most widely grown.
<i>Hamamelis virginiana</i>	witch hazel	yellow with red	10-20'	S, PS	Hardy native plant flowering in fall.
<i>Magnolia kobus</i> var. <i>stellata</i>	star magnolia	white	10-12'	S, PS	One of the hardiest magnolias.
<i>Magnolia</i> hybrid	'Merrill'	white	15-20'	S, PS	A good alternative to crabapple.
<i>Magnolia</i> hybrid	'Leonard Messel'	pink	15'	S, PS	Lovely flowers.
<i>Philadelphus coronarius</i>	mock orange	white	6-12'	S	'Minnesota Snowflake' has fragrant, double flowers.
<i>Rhododendron</i> spp.	azalea	pink, rose, white	5-8'	S, PS	'Northern Lights' are hardy azaleas that are fragrant.
<i>Rhus aromatica</i>	fragrant sumac	yellow	2-6'	S, PS, Sh	Crushed leaves are very aromatic.
<i>Ribes odoratum</i>	clove currant	yellow	3-8'	S, PS	Clove-scented flowers; host to white pine blister rust.
<i>Rosa</i> spp.	shrub roses	white, pink, rose, lavender, yellow	2-12'	S	'Jens Munk,' 'Cuthbert Grant,' 'Therese Bugnet,' and 'Frau Dagmar Hastrup' are very fragrant.
<i>Syringa</i> spp.	lilac	purple, white, lavender, pink	4-15'	S	Dependable fragrance.
<i>Viburnum carlesii</i> *	Korean spice	white, pink	4-6'	S, PS	Reliably hardy to Zone 5.
<i>Viburnum xjuddii</i>	Judd viburnum	white, pink	6-8'	S, PS	Very fragrant, white semi-snowball blossoms.

* Not fully hardy in Zones 4 or 3 and should be grown as annuals. ** S = Full Sun, PS = Part Shade, Sh = Shade

Plant one of these fragrant shrubs near an outdoor patio, front walk, or entry door where the aroma will be welcomed and enjoyed.

Compiled by Terry Yockey, Goodhue County Master Gardener. Goodhue County Master Gardeners have created a pocket park out of a parking lot in downtown Red Wing, MN. This high-visibility public park allows the public to enjoy fragrant and beautiful flowers.



Northern Lights azaleas, U of M introductions for Zone 4, have a spicy fragrance that is delightful.



Star Magnolia welcomes spring with its fragrant flowers.

Indoor Low Light

Botanical Name	Common Name	Height	Comments
<i>Aglonema</i> spp.	Chinese evergreen	1-2'	Several species and many cultivars with green/silver variegated leaf patterns.
<i>Aspidistra elatior</i>	cast iron plant	1-2'	Tough in every way; also variegated.
<i>Beaucarnea recurvata</i>	ponytail palm	1-6'	Will grow in all light conditions, but grows very slowly.
<i>Chamaedorea elegans</i> 'Bella'	parlor palm	1'-2'	Can grow to 5 or 6'; best low light palm; prone to spider mites.
<i>Dracaena deremensis</i> 'Janet Craig'	Janet Craig dracaena	2-6'	Similar to cornstalk, but solid green foliage; 'Warneckii' is also popular.
<i>Dracaena fragrans</i> 'Massengeana'	cornstalk plant	2-6' or more	Intolerant of cold; yellow stripe on foliage.
<i>Epipremnum aureum</i>	pothos	1-4' or more	Vining plant that can trail or grow up supports.
<i>Philodendron scandens oxycardium</i>	heart-leafed philodendron	1-3' or more	Vining plant that can trail or grow up supports.
<i>Philodendron selloum</i>	selloum philodendron	1-4'	Also called lacy tree philodendron.
<i>Sansevieria</i> spp.	snake plant	6"-4'	Succulent, leathery leaves.
<i>Spathyphyllum</i> spp.	peace lily	1-3'	Also called spathe flower; blooms best in east light.
<i>Syngonium</i> spp.	arrowhead vine	1-3'	Grows best on support, or cut back often to prevent rank growth.
<i>Zamioculcas zamiifolia</i>	zz plant	1-3'	Succulent leaves; rots easily when overwatered; prefers east-facing window.

Low light is not the same as *no* light. You should be able to read a book by the natural light or see a shadow if your hand passes over the area. Artificial light is ok if your desire is for plant maintenance, not growth.

Compiled by Jean Back, Douglas County Master Gardener. Jean has been a MG since 2005, and along with other Master Gardeners, teaches and works at a variety of Douglas County community projects, including Let's Get Growing, Community Ed Classes, and Terrace Learning Garden.



Chinese evergreens can grow indoors with no direct light, as shown on this inside wall at the Minnesota Landscape Arboretum.



Peace lily tolerates low light but likes moist soil, it wilts quickly when water is needed.

Knot Gardens

Botanical Name	Common Name	Height	Comments
<i>Allium senescens</i> 'Glaucum'	ornamental onion	4-12"	Grey-green twisted foliage; pink flowers Aug-Sept; tolerates partial shade.
<i>Armeria maritima</i>	sea thrift	6-12"	Short; pink flowers April-May; requires well-drained soil.
<i>Berberis thunbergii</i> 'Crimson Pygmy'	crimson pygmy barberry	2'	Attractive purple-red foliage, turns greener in shade; tough.
<i>Buxus</i> 'Green Velvet'	'Green Velvet' boxwood	2-4'	Broadleaf evergreen; protect from winter sun and drying winds.
<i>Buxus</i> 'Wintergreen'	Korean boxwood	2-4'	Hardy; fine-textured foliage; may turn bronze or brown in winter.
<i>Euonymus alatus</i> 'Compactus'	dwarf burning bush	4-10'	Brilliant red fall foliage; can be trimmed to a hedge; easy to grow.
<i>Hyssop officinalis</i>	hyssop	1-2'	Perennial in Zone 4; aromatic foliage; small blue flowers.
<i>Lavandula angustifolia</i>	lavender	8"-2'	Winter kills in Zone 4; 'Hidcote' may be hardier; grey, scented foliage.
<i>Nepeta</i> 'Walker's Low'	catnip	10-24"	Grey-green, fragrant foliage; small blue flowers; sprawling form.
<i>Pinus mugo</i>	dwarf mugo pine	1-4'	'Mugo,' 'Teeny,' 'Mops,' or 'Valley Cushion' grow very slowly.
<i>Rosmarinus officinalis</i>	rosemary	2-4'	Annual in Zone 4; dark green, fragrant foliage.
<i>Santolina chamaecyparissus</i>	lavender cotton	1-2'	Annual in Zone 4; attractive grey-white foliage.
<i>Taxus cuspidata</i> 'Nana'	Japanese yew	3-6'	Slow-growing evergreen; hedge plant; requires well-drained soil.
<i>Taxus xmedia</i> 'Hicksii'	Hicks yew	2-8'	Evergreen hedging plant; requires well-drained soil.
<i>Teucrium chamaedrys</i>	germander	6-12"	Small attractive foliage; grow as an annual in Zone 4.

Knot Gardens require high maintenance, but are a beautiful sight in many English and European gardens. Regular pruning into small compact forms can be stressful for many plants, so dwarf, naturally small plants work best. Select different foliage colors for an effective knot year-round. Annual herbs and rapidly growing leafy vegetables, such as lettuce and chard can make showy annual knot gardens.

Compiled by Mary Laine, Ramsey County Master Gardener, who developed this list on Zone 4 knot gardens before her trip to England to tour them.



Boxwood, 'Crimson Pigmy' barberry, and ornamental onion have contrasting foliage that makes a colorful knot garden.



Lavender is the grey foliage in this Minnesota Landscape Arboretum knot garden, which requires winter protection in Zone 4. Purple barberry and green boxwood are also pictured.

Lakeshore Native Plants

Botanical Name	Common Name	Height	Site*	Exposure**	Flower Color	Season of Interest
<i>Agastache foeniculum</i>	blue giant hyssop	2-4'	um/ud	S, PS	lavender-blue	July-August
<i>Allium stellatum</i>	prairie wild onion	1-2'	um/ud	S, PS	pink	July-August
<i>Andropogon gerardii</i>	big bluestem	2-5'	um/ud	S, PS	purple	August-November
<i>Anemone canadensis</i>	Canada anemone	1-2'	w/um	S, PS	white	May-July
<i>Aquilegia canadensis</i>	columbine	1-3'	um/ud	S, PS, Sh	red/yellow	May-July
<i>Aralia nudicaulis</i>	wild sarsaparilla	1-2'	um/ud	PS, Sh	greenish-white	May-June
<i>Asclepias incarnata</i>	marsh milkweed	3-4'	w/um	S	pink	June-August
<i>Campanula rotundifolia</i>	harebell	0.5-1.5'	um/ud	S, PS	blue	June-September
<i>Cornus sericea</i>	red-osier dogwood	6-12'	w/um/ud	S, PS, Sh	white	May-June; red twigs in winter
<i>Epilobium angustifolium</i>	fireweed	2-6'	w/um	S, PS	magenta	June-August
<i>Eupatorium maculatum</i>	Joe-Pye weed	3-6'	w/um	S, PS	pink	July-September
<i>Fragaria virginiana</i>	wild strawberry	6-12"	um/ud	S, PS	white	April-June
<i>Galium boreale</i>	northern bedstraw	1-2.5'	um/ud	S, PS	white	June-July
<i>Heuchera richardsonii</i>	alumroot	1-3'	um/ud	S, PS, Sh	green	June
<i>Iris versicolor</i>	blue flag iris	2-3'	w/um	S, PS	blue-violet	June-July
<i>Monarda fistulosa</i>	wild bergamot	2-4'	um/ud	S, PS	lilac	July-August
<i>Prunus virginiana</i>	chokecherry	30'	um/ud	S, PS, Sh	white	May; red fall color
<i>Rudbeckia hirta</i>	black-eyed Susan	3-4'	um/ud	S, PS	golden	July-August
<i>Rudbeckia laciniata</i>	greenheaded coneflower	4-9'	w/um	S, PS	yellow	July-August
<i>Sanguinaria canadensis</i>	bloodroot	8-10"	um	PS, Sh	white	April-May
<i>Smilacina racemosa</i>	false Solomon's seal	1-3'	um	PS, Sh	cream	May-June
<i>Solidago rigida</i>	stiff goldenrod	1-5'	um/ud	S, PS	yellow	August-October
<i>Sorghastrum nutans</i>	Indian grass	2-6'	w/um	S, PS	copper/yellow	August-November
<i>Spartina pectinata</i>	prairie cordgrass	3-6'	w/um/ud	S	gold fall color	September-November
<i>Stachys palustris</i>	hedge nettle	1-3'	w/um	S, PS	purple	June-August
<i>Thalictrum dasycarpum</i>	tall meadow rue	3-6'	w	S, PS	cream	June
<i>Uvularia grandiflora</i>	large-flowered bellwort	1-1.5'	um	Sh	yellow	May
<i>Uvularia sessilifolia</i>	wild oats	0.5-1'	um/ud	Sh	pale yellow	May
<i>Verbena hastata</i>	blue vervain	2-5'	w/um	S	blue	July-September
<i>Veronicastrum virginicum</i>	Culver's root	3-5'	w/um	S, PS	white	July-August
<i>Viola canadensis</i>	Canada violet	0.5-1'	um	PS, Sh	white	May-June
<i>Zizia aurea</i>	golden Alexander	1-3'	w/um	S, PS	yellow	May-June

* w = wet; um = upland moist (neither wet nor dry); ud = upland dry

** S = Full Sun, PS = Part Shade, Sh = Shade



l to r: This lakeshore features oxeye, fireweed, and Joe-Pye weed. Eupatorium (Joe-Pye weed) is a tall, tough native for wet sites. The edge of a pond planted with blue vervain and Joe-Pye weed. Red osier dogwood 'Cardinal' and 'Isanti' are U of M introductions that tolerate wet sites.

Plants on this list will re-establish native plant buffers where the native shoreland vegetation has been altered. Suitable for any zone in Minnesota, these were selected based on their ability to establish readily from seed, spread from rhizomes, tolerate seasonal flooding, fruit in fall, self-sow, stabilize bank and soil, attract bees/butterflies/ hummingbirds/moths, as well as provide beautiful foliage and color throughout the seasons. Most importantly, this natural buffer will help to maintain the quality of the lake.

Compiled by Diane Plath, Beltrami County Master Gardener, who has a lakeshore home and whose passion is 'lakescaping' or lakeshore restoration. Her shoreline is natural, yet she continues to enhance the area with these plants. She encourages all lakeshore owners to do the same in order to protect the water quality, to stabilize shorelines, and to increase wildlife habitat. As Diane says, "If we don't take care of our lakes, who will?"

Master Gardeners tour a lakeshore restoration planting in central Minnesota. Patience is required in establishment of native plants, since the first few years are needed to establish a strong root system.



For More Information on Lakeshore Native Plants

Lakeshore planting and restoration is an important environmental issue in Minnesota and across the US. There are several print references available from University of Minnesota Extension at www.extension.umn.edu, including:

- 📖 Native Plants for Sustainable Landscapes: Establishment and Management of Lakeshores and Gardens (07447)
- 📖 Shoreland Design (Sustainable Urban Landscape Information Series)
- 📖 Shoreland Plant Identification and Selection (Sustainable Urban Landscape Information Series)

The *Minnesota Shoreland Management Resource Guide*, workshops, demonstration sites, local programs and *Protecting Our Waters, Shoreland Best Management Practices* are featured at the Shoreland Education site: wrc.umn.edu/outreach/shore/.

Long-Blooming Perennials

Botanical Name	Common Name	Height	Soil	Exposure*	Bloom Time	Comments
<i>Achillea filipendula</i>	yarrow	18-36"	light, sandy, dry	S, PS	June-Oct	Attracts butterflies; cut; dried.
<i>Anthemis</i> 'Susanna Mitchell'	anthemis	20-24"	well-drained	S	June-Sep	Cut back lightly after first bloom.
<i>Coreopsis</i> 'Moonbeam' 'Zagreb'	threadleaf coreopsis	18-20"	well-drained	S	June-Oct	Deer resistant; attracts butterflies.
<i>Corydalis lutea</i> 'Oranges & Lemons'	fumewort	10-16"	well-drained	PS	May-Sep	Deer resistant; drought tolerant.
<i>Dianthus</i> 'Firewitch' 'Bath's Pink'	cheddar pinks	4-8"	well-drained	S, PS	Apr-Sep	Deadhead.
<i>Dicentra eximia</i> 'King of Hearts'	fringed bleeding heart	9-18"	rich, moist, well-drained	Sh	Apr-Sep	Attracts bees, hummingbirds, butterflies.
<i>Echinacea purpurea</i>	purple coneflower	2-4'	normal, sandy, clay	S, PS	Jul-Oct	'Razzmatazz' is a double flowered form.
<i>Gaillardia</i> spp.	blanket flower	18"	prefers poor soil	S	June-Sep	Heat & drought tolerant.
<i>Geranium sanguineum</i>	cranesbill	12-18"	normal, loamy	S, PS	May-Sep	'Jolly Bee,' 'Rozanne' are good; tough.
<i>Helenium autumnale</i>	Helen's flower	4-5'	well-drained, light	S, PS	Jul-Sep	Tolerates dry soils
<i>Heliopsis helianthoides</i> 'Summer Sun'	false sunflower; oxeye	3-5'	dry-med wet well-drained	S	June-Oct	Attracts butterflies; drought tolerant.
<i>Helleborus niger</i>	Christmas rose	10-12"	well-drained, humus rich	PS, Sh	Mar-May	Deer resistant; slow to grow in MN.
<i>Hemerocallis</i> 'Happy Returns' 'Stella de Oro'	daylily	2-3'	slightly acidic, moist	S, PS	June-Sep	Fragrant
<i>Leucanthemum</i> 'Becky'	shasta daisy	40"	well-drained	S	June-Sep	Attracts butterflies; good cut flower.
<i>Liatris spicata</i>	gayfeather	2-4'	well-drained	S	June-Oct	Attracts butterflies.
<i>Linum perenne</i>	blue flax	18-24"	light, sandy	S	June-Sep	Self-seeds freely.
<i>Macleaya cordata</i>	plume poppy	6-8'	well-drained, moist	S, PS	Jul-Sep	Coarse foliage.
<i>Nepeta</i> 'Walker's Low' 'Six Hills Giant'	catmint	2-3'	sandy to clay loam	S	May-Sep	Attracts bees, hummingbirds, & butterflies.
<i>Perovskia atriplicifolia</i>	Russian sage	3-4'	well-drained	S	Jul-Oct	Tolerates dry soil.
<i>Phlox paniculata</i>	phlox	3-4'	moist, organic, well-drained	S, PS	Jul-Sep	Powdery mildew resistant.
<i>Platycodon grandiflorus</i>	balloon flower	2-3'	normal, loamy	S	Jun-Aug	Deadhead; good cut flower.
<i>Rudbeckia</i> 'Goldsturm'	gloriosa daisy	18-30"	well-drained, moist	S	Jul-Oct	Attracts butterflies & birds.
<i>Salvia nemorosa</i> 'May Night'	salvia	18"	moist, well-drained	S	June-Oct	Attracts butterflies, bees, & hummingbirds.
<i>Sedum</i> 'Autumn Joy'	stonecrop	1-2'	well-drained	S, PS	Aug-Nov	One of many good cultivars; easy.
<i>Veronica spicata</i> 'Sunny Border Blue' 'Goodness Grows'	speedwell	1-2'	well-drained	S, PS	June-Sep	Good cut flower; deer resistant.

* S = full sun; PS = partial sun or light shade; Sh = shade

Long-blooming perennials are prized plants and can serve as the backbone of your garden. This list includes plants that are low maintenance and will bloom 8 weeks or longer. Specific cultivars listed are examples of many good selections.

Compiled by Verna Jackson, Hubbard County Master Gardener. Verna has been gardening for seven years in the Bemidji, Minnesota area, in hardiness Zone 3 and has grown many of these plants in her own garden.

Rudbeckia, phlox, zebra grass, and perovskia provide several weeks of showy flowers.



Plume poppy and sedum are tough, long-blooming perennials.



Rain Garden Plants

Rain gardens are gardens that are planted where rainwater is purposely channeled into the site. Depending on the slope and amount of rain that can move into the garden, there may be standing water at all times or only after a significant rainfall. This list includes plants for the lowest part of the rain garden in shallow water or wet soils, to the upland or dry portion of the rain garden.

Compiled by Sally Hausken, Becker Co. Master Gardener, and Gregg Thompson, Metro Soil & Water District. Sally answers questions at Plant Clinics in Becker County and has been a community leader in opening Sucker Creek Preserve in Detroit Lakes, MN. Master Gardeners often work with local watershed districts to plan and plant gardens where rainwater runoff is an issue.

Botanical Name	Common Name	Height	Moisture*	Exposure**	Native Habitat	Fl Color	Bloom Time
Aquatic Plants: grown in less than 12" of water, soil is always saturated							
<i>Carex comosa</i>	bottlebrush sedge	24-42"	s,w,um	S	marsh, peatland, lake edge	green	May-June
<i>Carex crinita</i>	fringed sedge	30-42"	s,w,um	S	marsh, swamp, lake edge	green	May-June
<i>Carex lacustris</i>	lake sedge	24-36"	s,w,um	S	marsh, swamp, lake edge	green	May-June
<i>Carex stricta</i>	tussock sedge	24-36"	s,w,um	S	swamp, marsh, peatland	green	May-June
<i>Eleocharis palustris</i>	spike rush	6-24"	s,w,um	S	wetland, wet prairie	brown	August
<i>Iris versicolor</i>	blue flag iris	24-36"	s,w	S, PS	marsh, peatland, lake edge	blue	June-July
<i>Juncus effusus</i>	soft rush	24-48"	s,w,um	S	swamp, marsh, lake edge	brown	July-Aug
<i>Sagittaria latifolia</i>	common arrowhead	24-42"	s,w	S, PS	lake edge, marsh	white	July-Aug
<i>Scirpus acutus</i>	hardstem bulrush	36-108"	s,w	S	lake edge, marsh	green	June-July
<i>Scirpus validus</i>	softstem bulrush	36-108"	s,w	S	marsh, swamp, lake edge	brown	July-Aug
Non-Aquatic Plants: Wildflowers or Forbs							
<i>Agastache foeniculum</i>	fragrant hyssop	24-40"	um,ud	PS	prairie, savanna	blue	June-Oct
<i>Allium stellatum</i>	prairie wild onion	12-24"	um,ud	S, PS	prairie, savanna	pink	July-Aug
<i>Anaphalis margaritacea</i>	pearly everlasting	6-18"	um,ud	S, PS	prairie, savanna, woodland	white	July-Sept
<i>Anemone canadensis</i>	Canada anemone	12-24"	w,um	PS, Sh	prairie, marsh, swamp	white	May-July
<i>Arisaema triphyllum</i>	jack-in-the-pulpit	8-24"	w,um	PS, Sh	woodland, forest	green	April-June
<i>Asclepias incarnata</i>	swamp milkweed	36-48"	w,um	S	prairie, marsh, lake edge	lavender	June-Aug
<i>Asclepias tuberosa</i>	butterfly flower	12-24"	ud	S, PS	prairie, savanna	orange	June-Sept
<i>Aster novae-angliae</i>	New England aster	24-48"	w,um	S, PS	prairie, marsh, swamp	blue	Aug-Oct
<i>Boltonia asteroides</i>	boltonia	48-96"	w,um	S, PS	prairie, marsh, swamp	white	Aug-Sept
<i>Dalea purpurea</i>	purple prairie clover	12-24"	ud	S	dry prairie, savanna	purple	June-July
<i>Echinacea angustifolia</i>	purple coneflower	24-36"	um,ud	S, PS	prairie, savanna	purple	July-Aug
<i>Eupatorium maculatum</i>	Joe-Pye weed	24-48"	w,um	S, PS	wet prairie, marsh, swamp	purple	July-Sept
<i>Gentiana andrewsii</i>	bottle gentian	18-30"	w,um	S, PS	prairie, marsh, lake edge	blue	Aug-Oct
<i>Geum triflorum</i>	prairie smoke	6-12"	um,ud	S	dry prairie, woodland	purple	April-June

Rain Garden Plants

This newly installed rain garden is a joint effort of Carpenter Nature Center, Washington Co. Master Gardeners, Washington Conservation District, Dakota Co. Board of Commissioners, and volunteers who did the planting. The garden is adjacent to the new visitor center at Carpenter Nature Center.



Runoff from the parking lots at the Minnesota Landscape Arboretum is channeled into these rain garden planting beds and supports a wide variety of plants.

Botanical Name	Common Name	Height	Moisture*	Exposure**	Native Habitat	Fl Color	Bloom Time
<i>Helianthus maximiliani</i>	Maximilian sunflower	24-108"	w,um	S	swamp, prairie, lake edge	yellow	Aug-Oct
<i>Liatriis pycnostachya</i>	prairie blazing star	24-36"	w,um	S	prairie, marsh, lake edge	purple	July-Sept
<i>Lobelia cardinalis</i>	cardinal flower	24-48"	w,um	S, PS	prairie, marsh, lake edge	red	July-Oct
<i>Lobelia siphilitica</i>	great blue lobelia	20-30"	w,um	S	prairie, marsh, lake edge	blue	July-Oct
<i>Monarda fistulosa</i>	wild bergamot	24-48"	um,ud	S, PS	prairie, savanna, woodland	lavender	July-Aug
<i>Rudbeckia hirta</i>	black-eyed Susan	3-4'	um,ud	S, PS	prairie, savanna	yellow	June-Oct
<i>Rudbeckia laciniata</i>	wild goldenglow	36-108"	w,um	S, PS	prairie, swamp, lake edge	yellow	July-Aug
<i>Thalictrum dasycarpum</i>	tall meadow rue	36-72"	w	S, PS	prairie, swamp, lake edge	cream	June
<i>Uvularia grandiflora</i>	large-flowered bellwort	12"	um	PS	deciduous forest	yellow	May
<i>Verbena hastata</i>	blue vervain	24-60"	w,um	S, PS	prairie, marsh, swamp	blue	June-Sept
<i>Zizia aurea</i>	golden Alexander	12-36"	w,um	S, PS	prairie, savanna, woodland	yellow	May-July
Graminoides (grasses and grass-like plants)							
<i>Acorus calamus</i>	sweet flag	36"	s,w	S, PS	marsh, peatland, lake edge	yellow	July-Aug
<i>Andropogon gerardii</i>	big bluestem	36-72"	um,ud	S, PS	prairie, savanna, woodland	purple	July-Sept
<i>Bouteloua curtipendula</i>	side oats grama	1-2'	um,ud	S	prairie, savanna, woodland	red	July-Sept
<i>Bouteloua gracilis</i>	blue grama	6-18"	um,ud	S	prairie, savanna	purple	July-Sept
<i>Bromus kalmii</i>	Kalm's brome	24-36"	w,um,ud	PS, Sh	prairie, savanna, woodland	green	June-July
<i>Calamagrostis canadensis</i>	bluejoint grass	36-72"	w,um	S, PS, Sh	prairie, marsh, swamp	green	July-Sept
<i>Carex bebbii</i>	Bebb's sedge	24-36"	w,um	S	marsh, swamp, lake edge	green	May-June
<i>Carex comosa</i>	bottlebrush sedge	24-42"	s,w,um	S	marsh, peatland, lake edge	green	May-June
<i>Carex lacustris</i>	lake sedge	24-36"	s,w,um	S	marsh, swamp, lake edge	green	May-June
<i>Carex pensylvanica</i>	Pennsylvania sedge	6-8"	um,ud	S, Sh	dry to mesic forest	brown	May
<i>Carex scoparia</i>	pointed broom sedge	6-30"	w	S	marsh, wetland, lake edge	tan	May-June

Rain Garden Plants

Botanical Name	Common Name	Height	Moisture*	Exposure**	Native Habitat	Fl Color	Bloom Time
Graminoides (grasses and grass-like plants), continued							
<i>Carex sprengelii</i>	Sprengel's sedge	12-24"	um,ud	S	woodland, forest	green	June-July
<i>Carex stricta</i>	tussock sedge	24-36"	s,w,um	S	swamp, marsh, peatland	green	May-June
<i>Carex vulpinoidea</i>	fox sedge	12-36"	w,um	S	swamp, marsh, lake edge	green	May-June
<i>Eleocharis palustris</i>	spike rush	6-24"	s,w,um	S	wetland, wet prairie	brown	Aug
<i>Elymus hystrix</i>	bottlebrush grass	24-48"	w,um,ud	PS, Sh	forest, woodland, lake edge	green	June-July
<i>Glyceria canadensis</i>	rattlesnake manna grass	24-36"	w	S	marsh, peatland, lake edge	green	July-Aug
<i>Glyceria grandis</i>	tall manna grass	36-60"	w	S	swamp, peatland, lake edge	green	July-Aug
<i>Hierochloa odorata</i>	sweet grass	12-24"	w,um	S	lake edge, marsh, prairie	green	May-June
<i>Juncus effusus</i>	soft rush	24-48"	s,w,um	S	swamp, marsh, lake edge	brown	July-Aug
<i>Juncus tenuis</i>	path rush	6-12"	w,um	S, PS, Sh	swamp, marsh, lake edge	brown	July-Aug
<i>Koeleria macrantha</i>	June grass	12-24"	um,ud	S	prairie, savanna, woodland	green	June-July
<i>Panicum virgatum</i>	switchgrass	36-72"	w,um,ud	S	prairie, swamp, lake edge	purple	June-Oct
<i>Schizachyrium scoparium</i>	little bluestem	24-48"	um,ud	S	prairie, savanna, woodland	amber	July-Sept
<i>Scirpus atrovirens</i>	green bulrush	36-48"	w	S	marsh, swamp, lake edge	brown	June-July
<i>Scirpus cyperinus</i>	wool grass	36-48"	s,w,um	S	marsh, swamp, lake edge	brown	June-July
<i>Scirpus validus</i>	softstem bulrush	36-96"	s	S	lake edge, marsh	brown	June-Aug
<i>Sorghastrum nutans</i>	Indian grass	24-72"	w,um	S, PS	prairie, savanna, woodland	amber	July-Sept
<i>Spartina pectinata</i>	cord grass	36-72"	w,um	S	prairie, marsh, lake edge	yellow	Aug-Oct
Shrubs and Small Trees							
<i>Amelanchier laevis</i>	serviceberry	15-25'	um,ud	PS	forests, fields, clearcuts	white	April-May
<i>Aronia melanocarpa</i>	black chokeberry	3-6'	w,um,ud	S, PS	lake edge, forest, swamp	white	May-June
<i>Cornus alternifolia</i>	pagoda dogwood	15-25'	um,ud	PS	forest, swamp	white	May-July
<i>Cornus racemosa</i>	gray dogwood	5-15'	um,ud	PS, Sh	forest, fields, lake edge	white	May-July
<i>Cornus sericea (stolonifera)</i>	red-osier dogwood	6-12'	w,um,ud	S, PS, Sh	forest, wetland, lake edge	white	May-July
<i>Corylus americana</i>	American hazel	8-15'	um,ud	S	forest, wetland, lake edge	purple	March-April
<i>Diervilla lonicera</i>	bush honeysuckle	2-4'	um,ud	PS, Sh	woodland, forest, clearcuts	yellow	June-July
<i>Prunus virginiana</i>	chokecherry	20-30'	um,ud	S, PS	forest, woodland	white	May
<i>Sambucus pubens</i>	red berried elderberry	4-8'	um,ud	PS, S,Sh	dry to moist forest	white	May
<i>Symphoricarpos albus</i>	snowberry	4-6'	ud	S	forest, woodland	whitish	May-July
<i>Viburnum atropurpurea</i>	downy arrowwood	6'	ud	S, PS	woodland, forest, clearcuts	white	May-June
<i>Viburnum lentago</i>	nannyberry	12-18'	um,ud	PS	forest, swamp, lake edge	white	May-June
<i>Viburnum trilobum</i>	highbush cranberry	5-15'	w,um	S, PS	forest, swamp, lake edge	white	June

* **Moisture Zone Key:** ud = upland-dry (dry, well-drained soils); um = upland-mesic (soil is moist, but not wet); w = soil is wet, occasionally standing water; s = shallow water most of the time

** **Exposure Key:** S = full sun, PS = partial sun, Sh = shade

River Banks and Canoe Public Access Areas

Botanical Name	Common Name	Height	Season of Interest	Comments
<i>Andropogon gerardii</i>	big bluestem	2-6'	Aug-Sept	Warm season grass; sod forming, very aggressive.
<i>Aquilegia canadensis</i>	wild columbine	1-3'	June-July	Red-yellow flowers; self-seeds readily.
<i>Aster cordifolius</i>	heart-leaved or blue wood aster	1-2'	Aug-Sept	Pale blue fragrant flowers; heart-shaped leaves; wet/shade tolerant.
<i>Aster ericoides</i>	heath aster	1-3'	Aug-Sept	Showy white flowers; spreads by rhizomes; aggressive.
<i>Aster novae-angliae</i>	New England aster	1-5'	Sept-Oct	Purple flowers; self-seeds; wet/shade tolerant.
<i>Bouteloua curtipendula</i>	sideoats grama	1-2'	July-Sept	Bunch grass; self-seeds readily; good for erosion control.
<i>Chelone glabra</i>	white turtlehead	2-3'	Aug	White flower heads resemble "turtle heads."
<i>Cornus sericea</i>	red osier dogwood	6-12'	year round	Bright red twigs; prefers wet/moist soil; tolerates most soils.
<i>Eupatorium maculatum</i>	Joe-Pye weed	3-5'	July-Aug	Pink flowers; aggressive and can compete with weedy species.
<i>Eupatorium perfoliatum</i>	boneset	3-5'	July-Aug	Competes with weedy species; wet/shade tolerant.
<i>Geranium maculatum</i>	wild geranium	1'	May-June	Spreads by rhizomes; grows well under trees.
<i>Iris cristata</i>	dwarf crested iris	6"	May	Lavender or white flowers; short-lived; rhizomatous.
<i>Liatris punctata</i>	dotted blazing star	1-2'	Sept-Oct	Purple flowers; prefers dry sites.
<i>Lobelia cardinalis</i>	cardinal flower	2-4'	Aug-Sept	Brilliant red flowers attract hummingbirds; short-lived.
<i>Lobelia siphilitica</i>	great blue lobelia	1-3'	Aug-Sept	Dark blue flowers; sensitive to competition; wet/shade tolerant.
<i>Mimulus moschatatus</i>	monkey flower	8-24"	July	Yellow flowers; spreads; wet/shade tolerant.
<i>Phlox divaricata</i>	woodland phlox	1'	May-June	Pale blue flowers; does best in moist shade.
<i>Rudbeckia laciniata</i>	greenheaded coneflower	5-8'	Aug-Sept	Very robust; moist, brushy areas.
<i>Schizachyrium scoparium</i>	little bluestem	2-4'	Aug-Sept	Orange fall foliage; erosion control on slopes; self-seeds; tough.
<i>Vernonia fasciculata</i>	ironweed	2-5'	July-Aug	Red-purple flowers; coarse texture; aggressive; wet/shade tolerant, taller in wet sites.
<i>Viola canadensis</i>	Canada violet	6-12"	June-Aug	White fragrant flowers; wet/shade tolerant.

These plants were selected from a list of 55 species recently planted at Canoe Park on the Snake River in Mora, Minnesota. This list represents the Kanabec County Master Gardeners' top priority plants for this site based on their durability, adaptability, and beauty. The planting site is a public park and canoe access point characterized by poor soil, high shade from deciduous trees, and seasonal flooding. In addition to the native plantings along the upper one-fourth of the river bank slope and the upland park area, the renovation also included placement of rip-rap along the river bank to prevent further erosion and undercutting of the bank. The renovation of Canoe Park was a cooperative project of the Snake River Watershed Management Board, the City of Mora, Kanabec County Soil and Water Conservation District, and Kanabec County Master Gardeners.

Compiled by Diana Rankin and Kanabec County Master Gardeners.



Kanabec Master Gardeners restoration project along the Snake River.

Self-Seeding Perennials

Botanical Name	Common Name	Height	Comments, Hardiness Zone
<i>Aquilegia</i> spp.*	columbine	1-4'	Moist, well-drained soils; light shade; attracts hummingbirds; Zone 3-10.
<i>Acanthus mollis</i>	bear's-breech	2-4'	Well-drained soil; sun to light shade; Zone 4-10.
<i>Aconitum napellus</i>	monkshood	2-8'	Moist, light woodland; showy tall flower spikes; Zone 3-8.
<i>Allium schoenoprasum</i>	chives	12-24"	Sun, light shade; tolerates most soils; Zone 3-8.
<i>Allium tuberosum</i>	garlic chives	18-24"	Sun; well-drained soil; tough and easy to grow; Zone 4-8.
<i>Asclepias incarnata</i> *	swamp milkweed	3-4'	Wet and moist soil preferred; showy flowers; attractive seed pods; Zone 3-8.
<i>Asclepias tuberosa</i> *	butterfly weed	1-2"	Well-drained sandy soil; drought resistant; sun; common wildflower; Zone 4-10
<i>Baptisia australis</i> *	blue false indigo	3-5"	Most any soil; sun or light shade; long taproots; dislikes transplanting; Zone 3-10
<i>Brunnera macrophylla</i>	Siberian forget-me-not	12-24"	Sun or medium shade; dependable; Zone 3-8.
<i>Callirhoe involucrata</i>	purple poppy mallow	6-12"	Likes crevices, rocks, dry banks, well-drained soil; sun; Zone 4-10.
<i>Campanula</i> spp.	bellflower	2-4'	Sun or partial shade; some are invasive; Zone 4-10.
<i>Centaurea montana</i>	perennial bachelor's button	18-30"	Sun; good drainage; silver-grey foliage; large flowers; Zone 3-8.
<i>Chasmanthium latifolium</i> *	northern sea oats	2-5'	Sun or light shade; attractive flowers; Zone 4-9.
<i>Dianthus barbatus</i>	sweet William	6"-2'	Sun or light shade; biennial that re-seeds to be like a perennial; Zone 3-7.
<i>Echinacea purpurea</i> *	purple coneflower	2-4'	Sun or light shade; non-soggy soil; drought resistant; attracts birds, butterflies; Zone 3-10.
<i>Heliopsis helianthoides</i> *	oxeye	3-5'	Sun or light shade; all soils; easy and tough; attracts aphids; Zone 2-8.
<i>Liatris</i> spp.*	gayfeather, blazing star	2-5'	Sun; good drainage; butterfly favorite; Zone 3-9.
<i>Scilla siberica</i>	Siberian squill	6"	Sun or light shade; blue carpet in spring; Zone 3-7.
<i>Silphium perfoliatum</i> *	cupplant	4-8'	Sun; tolerates most soils; Zone 2-7.
<i>Verbena bonariensis</i>	verbena	2-4'	Sun; well-drained soil; self-seeds to be like a perennial in MN; can be a nuisance; Zone 6-9.
<i>Viola</i> spp.*	violet	3-8"	Sun or light shade; easy; long flowering; Zone 3-8.

*Native to MN or U.S.

Self-seeding can be a desirable way to increase garden perennials, or it can be a nuisance and a means of spreading invasive plants. Many seedlings revert to less desirable forms. Pay attention to avoid exotic plants self-seeding into native areas.



Sweet William is a fragrant old-fashioned biennial that produces abundant seed, left undisturbed it can grow like a perennial.



Northern sea oats or river oats are native to moist shady sites in the U.S. and will usually self-sow.

Compiled by Norrie MacIraith, Olmsted County Master Gardener. Norrie has been a Master Gardener for 23 years. Olmsted County Master Gardeners work on community projects including Community Ed, Olmsted County History Center, buckthorn removal, historic garden restoration, and school programs.

Septic Mound Plants

Botanical Name	Common Name	Height	Comments
<i>Asclepias tuberosa</i>	butterfly weed	2-3'	Native; showy orange flowers; butterfly favorite; prefers well-drained soil.
<i>Bouteloua curtipendula</i>	sideoats grama	1-2'	Tough grass for well-drained sites; native to central US.
<i>Bouteloua grama</i>	blue grama	6-18"	Tough grass for well-drained sites; native to central US.
<i>Echinacea purpurea</i>	purple coneflower	2-4'	Popular wildflowers with medicinal properties; large showy flowers in late summer.
<i>Festuca</i> spp.	fescue	3"-2'	Wiry; tough grass; 'Elijah Blue' is silvery blue.
<i>Geum triflorum</i>	prairie smoke	6-12'	Showy pink flowers; attractive foliage.
<i>Heliopsis helianthoides</i>	oxeye, false sunflower	3-5'	Bright yellow flowers in summer; easy to grow; attracts aphids.
<i>Hemerocallis</i> spp.	daylily	1-3'	Plant several varieties for continuous bloom; require minimal care; tough plant.
<i>Liatris</i> spp.	blazing star, gayfeather	2-5'	Butterfly favorite; may need rabbit protection.
<i>Monarda fistulosa</i>	bergamot, bee balm	2-4'	Lovely pink to lavender flowers; subject to powdery mildew; mint family; can make tea from the leaves.
<i>Penstemon</i> spp.	penstemon, beardtongue	2-3'	Native wildflowers; a favorites of bees and hummingbirds.
<i>Schizachyrium scoparium</i>	little bluestem	2-4'	Clump forming grass; bronze and orange fall color.
<i>Sedum</i> spp.	sedum	6"-2'	Tough plant for dry sites; many forms and species.
<i>Sporobolus heterolepis</i>	prairie dropseed	2-3'	Native grass found on upland sites or sandy soils; cloud-like fragrant flowers; yellow-orange fall color.



Dry garden plants are perfect for a septic mound; dwarf blue fescue is shown here with sedum on either side and yucca in the background.

Septic mounds are difficult sites requiring minimal disturbance to keep the drainfield intact. Frequent working of the soil is not a good idea. Plants listed above have low maintenance and reduced water requirements. Their fibrous root system helps to hold the soil and prevent erosion off the mound. All are winter hardy in Zones 3 and 4.

Compiled by Tim Wedekind, Dakota County Master Gardener. Tim researched septic mound plantings for his weekly gardening columns for the Hastings Star Gazette. He recently "retired" from that Master Gardener volunteer role after writing 412 (8 years) of gardening columns.



Prairie dropseed, left unmowed, forms attractive mounds between a mowed walkway.

Shade: Shrubs

Shade limits plant growth. The heights listed here are for less than ideal conditions. Many plants will grow larger when grown in full sun with adequate moisture.



Bush honeysuckle forms a dense cover on the edge of this parking lot. It's a good choice for a tough, low growing shrub in the shade.



Viburnum opulus 'Compactum' is also a good choice for shady conditions. Spring flowers, summer fruit, and fall color provide interest throughout the year.

Compiled by Pam Hartley, Cathy LeVahn and Sheryl Engstrom, Anoka County Master Gardeners, who have answered many questions about growing shrubs. Anoka County Master Gardeners teach classes in the community, including a series called *Lasting Landscapes* and other Community Education classes.

Botanical Name	Common Name	Height/ Width	Soil Type	Zone	Exposure
Evergreen					
<i>Buxus</i> 'Green Velvet'	Green Velvet boxwood	2'3'	loose, well-drained	4-8	light shade
<i>Taxus cuspidata</i> 'Dwarf Bright Gold'	Dwarf Bright Gold yew	4'6'	moist, well-drained	2-7	full sun to heavy shade
<i>Taxus xmedia</i> 'Tauntonii'	Taunton yew	3'6'	moist, well-drained	4-7	medium to heavy shade
<i>Thuja occidentalis</i> 'Holmstrup'	Holmstrup arborvitae	8'3'	moist, well-drained	2-9	light shade
<i>Tsuga canadensis</i> 'Aurea Compacta'	aurea compacta hemlock	6'6'	moist, well-drained	3-8	full sun to heavy shade
Deciduous					
<i>Andromeda polifolia</i> 'Blue Ice'	bog or marsh rosemary	2'3'	acidic, moist, well-drained	2-6	light shade
<i>Aronia melanocarpa</i> 'Autumn Magic'	Autumn Magic chokeberry	5'4'	avg., well-drained	3-8	light to heavy shade
<i>Berberis thunbergii</i>	Japanese barberry	4'4'	avg., well-drained	4-8	full sun to heavy shade
<i>Clethra alnifolia</i> 'Hummingbird'	summersweet	3'3'	moist	3-8	medium to heavy shade
<i>Cornus alternifolia</i>	pagoda dogwood	15-25'	average	2-8	full sun, light to medium shade
<i>Cornus hessei</i> 'Garden Glow'	Garden Glow dogwood	5-6'	average, moist	4-6	medium to heavy shade
<i>Cornus racemosa</i>	gray dogwood	8'6'	moist, well-drained	2-9	light shade
<i>Cornus sericea</i> 'Cardinal'	ted-twig dogwood	10'10'	moist, well-drained	2-9	full sun to heavy shade
<i>Diervilla sessifolia</i> 'Butterfly'	bush honeysuckle	3'5'	avg./moist	4-8	light shade
<i>Fothergilla gardenii</i> xmajor 'Mount Airy'	witch alder	6'4'	acidic, moist, well-drained	4-9	light to medium shade
<i>Hydrangea arborescens</i> 'Annabelle'	Annabelle hydrangea	5'5'	moist, well-drained	3-9	light shade
<i>Hydrangea paniculata</i>	panicle hydrangea	9'8'	moist, well-drained	3-9	light to medium shade
<i>Rhododendron</i> Northern Lights Series	Northern Lights azaleas	5'3'	well-drained, pH 4.5-5.5	3-7	light to medium shade
<i>Rhus typhina</i> 'Bailtiger'	Tiger Eye sumac	6'6'	sandy, well-drained	4-8	light to medium shade
<i>Stephanandra incisa</i> 'Crispa'	lace shrub	1'3'	avg.	4-7	light to medium shade
<i>Symphoricarpos albus</i>	snowberry	4'4'	avg./moist	4-7	light to medium shade
<i>Viburnum lentago</i>	nannyberry	15'6'	avg./moist	4-7	light to medium shade
<i>Viburnum trilobum</i>	highbush cranberry	10'5'	avg.	2-7	light to medium shade
<i>Viburnum opulus</i> 'Nanum'	dwarf European viburnum	2'3'	moist, well-drained	3-8	light to medium shade

Shade: Small Trees

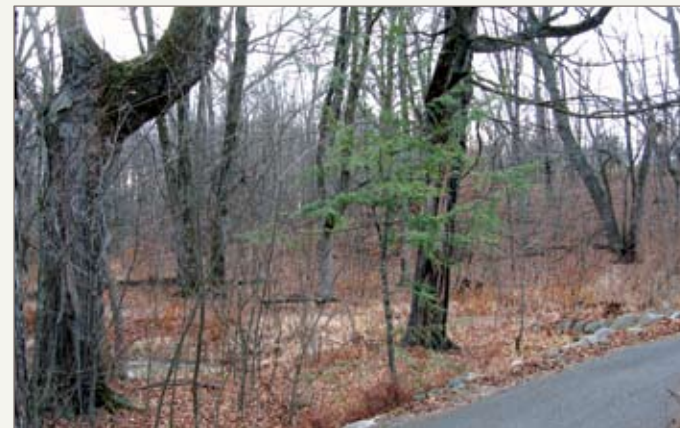
Scientific Name	Common Name	Height	Comments
<i>Alnus rugosa</i>	speckled alder	15-25'	Prefers wet soil high in organic matter; native.
<i>Amelanchier arborea</i>	Juneberry	15-25'	Fall color is yellow to dull red; fruit berry-like, reddish purple; tolerates partial shade; native.
<i>Amelanchier laevis</i>	Allegheny serviceberry	15-25'	Fall color is orange red; fruit purple black, sweet and edible; native.
<i>Carpinus caroliniana</i>	blue beech	20-30'	Fall color is orange-scarlet; bark is fluted giving a muscle appearance; native; tolerates heavy shade.
<i>Cercis canadensis</i>	Eastern redbud	20-30'	Tolerates partial shade; plants should be from Univ. of MN seed source to be reliably hardy in MN.
<i>Cornus alternifolia</i>	pagoda dogwood	15-25'	Fall color reddish purple; native; horizontal branches.
<i>Hamamelis vernalis</i>	vernal witchhazel	6-10'	Yellow flowers in March; fruit a capsule; handles filtered shade.
<i>Hamamelis virginiana</i>	common witchhazel	10-20'	Yellow flowers bloom in October/ November; fruit a capsule; handles filtered shade.
<i>Nyssa sylvatica</i>	sour gum	30-50'	Fall color bright scarlet; moist, well-drained acid soil; plant only trees from northern sources.
<i>Ostrya virginiana</i>	ironwood	25-40'	Fall color yellow; understory tree, does well in heavy shade; native.
<i>Prunus virginiana</i>	chokecherry	20-30'	Fruits globose dark purple, edible; understory tree in the woods; native.
<i>Ptelea trifoliata</i>	hoptree, wafer-ash	15-20'	Fall color yellow-green; native; understory tree in moist woodlands.
<i>Staphylea trifoliata</i>	American bladdernut	5-15'	Bladder-like fruit; tolerates very heavy shade; native.
<i>Taxus cuspidata</i>	Japanese yew	5-15'	Dark green foliage; upright and spreading forms; deer favorite; toxic to cows and horses.
<i>Tsuga canadensis</i>	Eastern hemlock	40-70'	Leaves are soft, short needles; no fall color; evergreen; grows slowly; likes cool, moist conditions; native.
<i>Viburnum lentago</i>	nannyberry	12-18'	Fall color purplish red; fruits bluish-black; filtered shade; native.

Whether in the city, suburbs, or rural areas, small trees are often needed for shady locations. Some of these trees may grow larger in full sun; the height listed is for full sun conditions.

Compiled by Shirley Mah Kooyman, Hennepin County Master Gardener. Shirley has been teaching as a Master Gardener for 22 years. She also coordinates Adult Education classes at the Minnesota Landscape Arboretum and is a botanist. She compiled this list based on her personal knowledge and teaching experience.



Redbud is an early spring flowering native tree that tolerates shade.



Eastern hemlock is a native evergreen that will grow in shady conditions. It is much fuller and dense when grown in full sun.

Shade: Tall* Perennials

Botanical Name	Common Name	Height	Zone	Soil Type	Exposure**	Comments
<i>Actea racemosa</i> (<i>Cimicifuga racemosa</i>)	black snakeroot	4-6'	3-9	moist, well-drained	S, PS	Tall blossoms; 'Atropurpurea' has purple foliage.
<i>Actea simplex</i> 'White Pearl' (<i>Cimicifuga simplex</i>)	white pearl, snakeroot	4'	3-8	tolerant of boggy conditions	S, PS	Spikes of flowers
<i>Aconitum</i> spp.	monkshood	4-5'	3-8	moist, well-drained	PS	Poisonous.
<i>Aconitum henryi</i>	autumn monkshood	3-6'	4	average, dislikes wet	PS	Showy flowers, poisonous.
<i>Aruncus dioicus</i>	goat's beard	4-6'	4-9	moist	PS, Sh	Attractive foliage; spectacular plumes.
<i>Astilbe biternata</i>	false spirea	2-6'	4	moist, acidic woodlands	PS, Sh	Clusters of flowers.
<i>Campanula lactiflora</i> 'Prichard's Variety'	milky bellflower	3'	4-8	moist	Sh	Self-seeds.
<i>Chelone glabra</i>	turtlehead	24-36"	3-8	rich, moist	PS	
<i>Dicentra spectabilis</i>	bleeding heart	36"	4	tolerant of boggy conditions	S, PS	Exquisite arching sprays of flowers.
<i>Digitalis purpurea</i>	foxglove	2-4'	4-10	moist, well-drained	S, PS	Tall elegant flower spikes; self-seeding biennial.
<i>Eupatorium maculatum</i>	Joe-Pye weed	3-6'	3-9	average	S, PS	Useful in wet areas.
<i>Filipendula rubra</i>	queen-of-the-prairie	3-6'	3-8	moist	PS	Flower clusters; 'Venusta' has dark pink flowers.
<i>Filipendula ulmaria</i>	queen-of-the-meadow	48"	3-9	moist, well-drained	Sh	
<i>Gillenia trifoliata</i>	bowman's root	2-3'	4-8	moist	PS	
<i>Ligularia dentata</i>	big leaf ligularia	4'	3-7	alkaline	PS	'Desdemona' 'Britt-Marie Crawford' are good.
<i>Ligularia przewalskii</i>	leopard plant	4-6'	3-8	moist	PS, Sh	Requires moist soil.
<i>Lilium martagon</i>	martagon lily	3-4'	4	humus rich	PS, Sh	Small, turk's cap flowers.
<i>Matteuccia struthiopteris</i>	ostrich fern	3-4'	4-8	moist	PS	Tolerates moisture; ostrich plume leaves.
<i>Osmunda cinnamomea</i>	cinnamon fern	2-4'	3-8	rich, well-drained	S, PS	Cinnamon brown spore bearing stalks.
<i>Osmunda regalis</i>	royal fern	3-5'	3-8	moist, wet	S, PS, Sh	Can be grown in swampy conditions.
<i>Rodgersia</i> spp.	rodgersia	3-6'	4-7	moist	PS	Huge foliage; accent plant.
<i>Thalictrum dasycarpum</i>	tall meadow rue	3-6'	4-9	rich, well-drained	S, PS	Blue-green foliage.
<i>Veronicastrum virginicum</i>	Culver's root	3-5'	4-9	rich, moist	S, PS, Sh	Candles of white flowers; native to moist sites.

* 3' or more

** S = full sun, PS = partial sun, Sh = shade

Tall plants for shade are harder to find. These drier sites usually mean shorter plants, but this list features a variety of native and non-native taller perennials.

Compiled by Pam Hartley, Cathy LeVahn and Sheryl Engstrom, Anoka County Master Gardeners. Anoka County Master Gardeners are active in teaching classes and other horticulture related projects.

r: 'Lavender Mist' meadow rue and Culver's root are two tall perennials for shade.

l: Bugbane, or black snakeroot, is native to woodland edges in Minnesota. Its stately tall white flowers last for several weeks in the summer.



Steep Slopes

Steep slopes are tough sites. Plants are needed to prevent soil erosion and yet the site is usually difficult to work on for mowing or maintenance. Plants listed here are minimal maintenance choices that are attractive and hardy in Minnesota.

Compiled by Connie C. Collison, Cass County Master Gardener. This list has been compiled through personal experience of steep slopes and lakeshore restoration in the Cass and Crow Wing County area.



Daylilies and hosta provide color and cover on this steep residential slope.



Fragrant sumac 'Gro-low', a shorter, 2' cultivar, edges the roadway along a slope at the Minnesota Landscape Arboretum.

Botanical Name	Common Name	Height	Comments
Native Grasses			
<i>Bouteloua curtipendula</i>	sideoats grama	1-2'	Common on dry prairies; can form sod and does well on steep slopes; at least partial sun.
<i>Elymus canadensis</i>	Canada wildrye	2-4'	Covers an area rapidly; self-seeds.
<i>Festuca ovina</i>	sheeps fescue	6-24"	Common on sandy soils; quite drought and shade tolerant; bunch grass.
<i>Festuca rubra</i>	red fescue	6-24"	Common lawn grass is quite shade and drought tolerant.
<i>Sporobolus cryptandrus</i>	sand dropseed	12-30"	Dry prairie grass; grows in sand or on heavier soils; drought tolerant.
<i>Schizachyrium scoparium</i>	little bluestem	2-4'	Blue summer foliage; clump forming with arching habit; bronze and orange fall color.
<i>Panicum virgatum</i>	switchgrass	3-6'	Native self-seeding grass with winter interest; good for wildlife.
Herbaceous Plants			
<i>Heemerocallis</i> spp.	daylily	1-3'	Low maintenance; many flr colors; long bloom time.
<i>Hosta</i> spp.	hosta	4"-4'	Excellent choice for partially to fully shaded slopes.
<i>Lamium</i> spp.	dead nettle	8-12"	White or pink flowers; leaves streaked white/silver.
<i>Rosmarinus officinalis</i>	rosemary	2-4'	Tough annual; can grow in dry, poor soils; aromatic.
<i>Viola</i> spp.	violet	6"	Beautiful flowers in spring; spreads rapidly.
Shrubs			
<i>Aronia melanocarpa</i>	black chokeberry	3-6'	Tolerates most soils; attractive foliage, fruit and flowers.
<i>Diervilla lonicera</i>	bush honeysuckle	2-4'	Sun or partial shade, a native tough low growing shrub.
<i>Euonymus alatus</i>	burning bush	4-8'	A favorite for highway or commercial landscapes; beautiful foliage, bark; great fall color.
<i>Juniperus horizontalis</i>	creeping juniper	1-2'	Creeps to 8-10'; a great shrub for most areas; will tolerate poor soil.
<i>Juniperus sabina</i>	savin juniper	3'	Many cultivars; spreads to 10'; delicate color; tolerates most soils; sun.
<i>Rhus aromatica</i>	fragrant sumac	2-6'	Attractive foliage; great fall color; <i>Rhus trilobata</i> , <i>R. glabra</i> , and <i>R. typhina</i> are good also.
<i>Symphoricarpos albus</i>	snowberry	4-6'	Beautiful flowers in spring; interesting fall leaf color; winter berries.
<i>Taxus cuspidata</i>	Japanese yew	5-6'	Great hardy plant that spreads.
<i>Taxus xmedia</i> 'Tauntonii'	Taunton yew	3-5'	Tolerates full sun to full shade.

Trees That Produce Minimal Litter

What is a messy tree? Trees that drop large or thick leaves, twigs, flowers, fruit, seeds and nuts might be considered ‘messy.’ However, each of these ‘messes’ performs a function contributing to survival or reproduction. Many people value these features and enjoy them as part of the beauty of the tree. Wildlife often live from these features! Many plants today are bred to be sterile, with no fruit or pollen and thus have minimal tree ‘litter.’ Female trees can produce large fleshy fruits that some people consider ‘messy.’ As a homeowner you may be concerned with tree litter clogging gutters, falling on cars, drive-ways, walkways, patios or decks. The list below is not all inclusive, but meant to be a starting point on identifying trees with minimal litter potential.



Spruce have cones that can become litter, but usually these are a minor nuisance.



Pine trees have minimal litter and make a good permanent addition to the landscape.

Compiled by Barb Kirkpatrick, Ramsey County Master Gardener. Barb has served for 10 years as a Master Gardener and Tree Care Advisor in Ramsey County and has a special interest in trees. In both of these roles, Barb has helped many people with their tree questions, and believes that each tree has its merits.

Botanical Name	Common Name	Height	Comments
<i>Abies</i> spp.	fir	40-60'	Korean, Canaan, balsam, Fraser, white.
<i>Acer negundo</i>	boxelder	40-60'	'Baron' is recommended.; use only male forms.
<i>Carpinus caroliniana</i>	blue beech	20-30'	Good native small tree.
<i>Fraxinus americana</i>	white ash	50+'	'Northern Blaze' is recommended; use only male forms.
<i>Fraxinus pennsylvanica</i>	green ash	40-60'	Select seedless forms: 'Marshall Seedless', 'Bergeson', Kindred', 'Wahpeton.'
<i>Gleditsia triacanthos inermis</i>	honeylocust	30-60'	Minimal raking; select a thornless/fruitless form.
<i>Larix laricina</i>	tamarack	40-70'	Deciduous conifer; yellow fall color.
<i>Malus</i> hybrids	crabapple	15-25'	Select persistent fruit or fruitless (e.g., 'Spring Snow') forms.
<i>Ostrya virginiana</i>	ironwood	25-40'	Good native small tree.
<i>Picea</i> spp.	spruce	25-50+'	Black, white, Norway, Serbian.
<i>Pinus</i> spp.	pine	25-50+'	White (mature trees do have large cones), Austrian, Scots, Norway, Swiss stone, mugo.
<i>Populus deltoides</i> 'Siouxland'	cottonless cottonwood	80-100'	South Dakota selection; adapted to poor soil, grows quickly.
<i>Populus</i> hybrids	seedless poplar	40-60'	Good selections are: 'Prairie Sky,' 'Robusta,' 'Tower,' 'Highland'
<i>Populus x acuminata</i>	lanceleaf cottonwood	40-60'	Hardy; upright seedless pyramidal tree.
<i>Prunus</i> hybrids	cherry	15-25'	Select fruitless varieties.
<i>Prunus x nigrella</i> 'Muckle'	muckle plum	10-15'	Sterile hybrid, thus no fruit; red buds and showy pink flowers; red fall color.
<i>Syringa reticulata</i>	Japanese tree lilac	15-25'	Nice bark, flowers and form.
<i>Thuja occidentalis</i> & cultivars	arborvitae	25-50'	Wide variety of forms and height from cultivars.
<i>Tilia cordata</i>	littleleaf linden	25-50'	Conical form, fragrant flowers, <i>T. americana</i> has larger leaves and multiple stems

Under a Black Walnut Tree

Botanical Name	Common Name	Height	Comments
<i>Alcea rosea</i>	hollyhock	4-8'	Full sun with rich soil; half-hardy biennial, reseeds like a perennial.
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit	8-24"	Flower or "pulpit" is 3-4" green leaf-like hood; red berries in fall.
<i>Astilbe xarendsii</i>	astilbe	1-2'	Fernlike foliage; clusters of tiny flowers; heavy feeders; may need irrigation.
<i>Begonia sempervirens</i> & hybrids	wax begonia	8"-2'	Attractive foliage; white, pink, rose or red flowers.
<i>Calendula officinalis</i>	pot marigold	12 - 24"	Gold, red or yellow flowers all summer; all soils.
<i>Campanula latifolia</i>	bellflower	2-4'	Bell-like, purplish blue flowers; spreads freely by rhizomes and seeds.
<i>Chionodoxa luciliae</i>	glory-of-the-snow	6"	Early flowering bulb; violet-blue, six petal, star-like flowers.
<i>Claytonia virginica</i>	spring beauty	3-6"	Flowers are white with fine pink stripes; wide variety of soils.
<i>Crocus vernus</i>	crocus, giant crocus	4-6"	Very early spring flowering bulb; prefers sandy, well-drained soil.
<i>Dicentra cucullaria</i>	dutchman's breeches	6-12"	White upside down "breeches" for flowers; prefers fertile moist soil.
<i>Galanthus nivalis</i>	snowdrop	3-10"	One of the earliest flowers; dainty white flowers with green markings.
<i>Galium odoratum</i>	sweet woodruff	4-12"	Dainty-looking groundcover with late spring white flowers.
<i>Geranium sanguineum</i>	cranesbill	12-18"	Attractive foliage; tough; many cultivars.
<i>Heuchera</i> spp.	coral bells	12-20"	Small red, pink, or white tiny bell-shaped flowers; good drainage is essential.
<i>Hyacinthoides hispanica</i>	Spanish bluebell	12-15"	Woodland garden; grows into robust clumps; average to rich well-drained soil.
<i>Ipomoea</i> 'Heavenly Blue'	morning glory	10'	Blooms early summer to fall; blue trumpet-shaped flowers; vine.
<i>Monarda didyma</i>	bee balm	2-4'	Requires good air circulation to prevent powdery mildew; moist soil is best.
<i>Oenothera fruticosa</i>	sundrops	15"	Reliable; yellow flowers; well-drained soil; sun.
<i>Osmunda cinnamomea</i>	cinnamon fern	2-4'	Large, yellowish-green fronds; prefers moist, humus-rich soil.
<i>Phlox paniculata</i>	garden phlox	3-4'	Common perennial; rich, well-drained soil.
<i>Poa pratensis</i>	Kentucky bluegrass	2-28"	Sod-forming lawn grass; tolerates cold, heat, rain, but not shade or wet.
<i>Pulmonaria species</i>	lungwort	8-18"	Pink, violet, and blue flowers; prefers evenly moist, humus-rich soil.
<i>Sanguinaria canadensis</i>	bloodroot	8-10"	White flowers in April; moist, humus-rich soil.
<i>Scilla siberica</i>	Siberian squill	6"	Early spring; blue flowers; moist soil; naturalizes by seed and off sets.
<i>Stachys byzantina</i>	lamb's ear	6-15"	Large silvery very soft leaves; prefers well-drained, sandy loamy soil.
<i>Tradescantia virginiana</i>	spiderwort	18-24"	Long blooming flowers; grass-like foliage; well-drained soil.
<i>Zinnia</i> spp.	zinnia	1-3'	Easy to start from seed; many colors and flower forms.

Under a Black Walnut Tree

Native throughout Minnesota and much of the U.S., black walnut trees pose difficult gardening conditions due to the toxic juglone naturally produced by the plants. In addition to the list above, pansies, violets, daylilies, hosta, sedum, squash, melons, beans, carrots, corn, and black raspberries can grow under black walnuts.

Compiled by Kathleen Fesenmaier and several other Renville County Master Gardeners. In Renville County, friends and family have been growing walnut trees in their yards for 50 or more years. The Master Gardeners compiled this list because as black walnuts grow, the juglone slowly kills off some plants that had appeared to thrive. Master Gardeners were often asked why a plant did not grow, only to solve the mystery by finding out a neighbor or they themselves owned a beautiful black walnut tree.



Hosta grow well under many trees, maples as shown here at the Minnesota Landscape Arboretum, as well as black walnut trees.



The trees are each side of the bench are black walnuts. There are many juglone tolerant plants; however, many plants will not tolerate this tough site.

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top: Japanese tree lilac is a good small tree for boulevards and dry soils.
middle: Colorful annuals for full sun include dusty miller, a decorative foliage plant that makes a nice border even in dry sites, algerian thyme, ageratum and begonia.
bottom: Master Gardeners volunteer over 90,000 hours annually for University of Minnesota Extension teaching horticulture in their communities.



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top: Garlic chives make a nice border plant at the Minnesota Landscape Arboretum.

middle: The Terrace Learning Center in Alexandria, MN is an award-winning Douglas County Master Gardener demonstration and teaching project.

bottom: Junipers are tough plants for compacted soil and steep slopes and are deer resistant.

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