OCTOBER 2022

RESIDENTIAL RAINGARDEN PILOT PROJECT

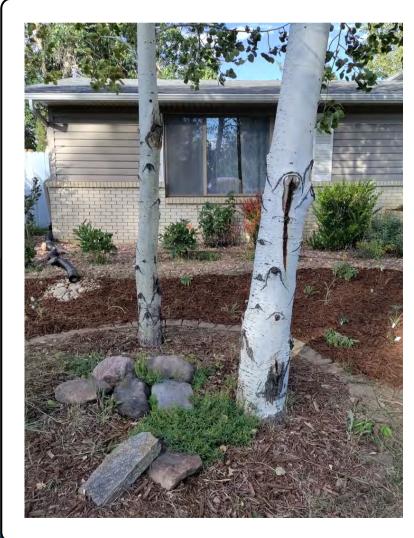
FULL SHADE PLANTING LAYOUT: 1B



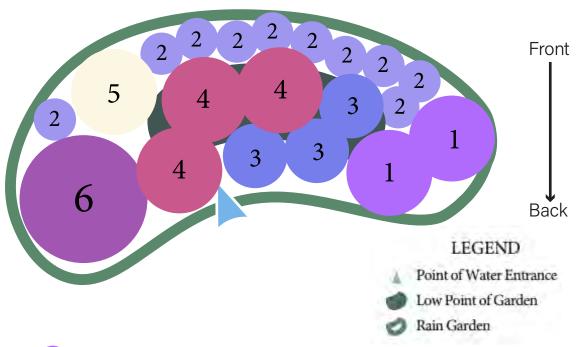
PRODUCED BY



COLORADO STATE UNIVERSITY



Rain Garden Layout - **Shade Design 1B - 50ft**²



- Beebalm *Monarda fistulosa*
- 2 Harebells Campanula rotundifolia
- 3 Rocky Mountain Columbine Aquilegia caerulea
- 4 Swamp Milkweed Asclepias incarnata
- 5 White Yarrow Achillea lanulosa
- 6 Winecups/Poppy Mallow Callirhoe involucrata

FULL SHADE 1B SUBSTITUTION LIST

All Plants on list are Native to the Rocky Mountain/Front Range Region unless marked*

Layout Number	Original Plant	Subsitution	Tier	Dimensions	Color
1	Beebalm	Creeping Phlox* (Phlox stolonifera)	top	8" tall, 2ft spread	purple flowers, groundcover native to North America
		Rocky Mountain Columbine (Aquilegia caerulea)	mid	1.5ft tall, 1ft spread	Light blue and white flowers
2	Harebells	Sierra Wild Ginger* (Asarum hartwegii)	mid	6" tall, 1ft spread	foliage appeal, heart-shaped leaves, native to North America
		White Yarrow (Achillea millefolium)	top	1-2ft tall, 1.5ft spread	white flowers, finely textured foliage
3	Rocky Mountain Columbine	Yellow Trout Lily* (Erythronium americanum)	mid	6" tall, 8" spread	yellow nodding lily, speckled foliage, native to North America
		Celadine Poppy* (Stylophorum diphyllum)	mid	1.5ft tall, 1ft spread	yellow mini poppy flowers, native to North America
4	Swamp Milkweed	Umbrella Plant* (Darmera peltata)	low	3.5ft tall, 4ft spread	pink/white blooms, large serrated leaves, native to North America
		Wherry's Foam Flower* (Tiaella wherryi)	low	1ft tall, 1.5ft spread	white/pink flowers, foliage has purple veins and turns bronze in fall, native to North America
5	White Yarrow	Prairie Trillium* (<i>Trillium</i> recurvatum)	mid	1.5ft tall, 1.5ft spread	deep red flowers blooming early, dormant in summer, native to North America
		White Wood Aster* (Eurybia divaricata)	top	2ft tall, 3ft spread	daisy-like white flowers, bushy, native to North America
6	Winecups	Jack in the Pulpit* (Arisaema triphyllum)	mid	1.5ft tall, 2ft spread	pitcher-plant like flowers, native to North America
		Crevice Alumroot* (Heuchera micrantha)	top/mid	2ft tall, 2ft spread	purple foliage, native to North America

Tiers:

Top: lowest water requirements, planted along the garden berm

Mid: average water requirement, planted on the sloping sides of the garden

Low: higher water requirements, planted in the basin, roots must withstand wet conditions up to 12 hours

Shade Plant Guide Layout 1B



1. Beebalm (Monarda fistulosa)

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Mature Height	2-4ft tall and 2-3ft spread
Care & Water	Once established, water once per week. Deadhead to promote blooming.
Flowering Time	May-September
Hardiness	Zones 3-9, plant 18" apart
Special Features and Notes	Attracts bees, butterflies, hummingbirds, and other pollinators. Deer and rabbit resistant. Prone to powdery mildew when overwatered.



2. Harebells/Bluebells (<u>Campanula rotundifolia</u>)

Mature Height	1ft tall and 1ft spread, stems are weak and the plant often bends over.
Care & Water	Once established, water once per week.
Flowering Time	June-September, periwinkle color flowers.
Hardiness	Zones 2-7, plant 10" apart
Special Features and Notes	Attracts hummingbirds. When grown from seed, the plants start blooming the second year.



3. Rocky Mountain Columbine (Aquilegia caerulea)

Mature Height	1-2ft tall with 1ft spread
Care & Water Once established, water once per week. Deadhead to promote bloomir	
Flowering Time	May-July
Hardiness	Zones 3-8, plant 15" apart

Shade Plant Guide Layout 1B

Special Features and Notes Attracts butterflies and hummingbirds. Deer and rapleasing scent. Will self seed to form a colony.	bbit resistant with a
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4. Swamp Milkweed (Asclepias incarnata)

Mature Height	4-5ft tall with 2-3ft spread
Care & Water	Once established, water once per week.
Flowering Time	June-September
Hardiness	Zones 3-11, plant 30" apart
Special Features and Notes	Toxic to dogs, cats, and horses if consumed. Attracts butterflies (especially Monarchs) and hummingbirds. Deer resistant.



5. White Yarrow (Achillea lanulosa)

Mature Height	2-3ft tall with 2ft spread
Care & Water	Once established, water once per week.
Flowering Time	June-mid September
Hardiness	Zones 2-9, plant 18" apart
Special Features and Notes	Flowers and leaves (when crushed) have a pleasant aroma. White yarrow is the original native variety but other varieties bloom yellow, pink, or red.



6. Winecups/Poppy Mallow (<u>Callirhoe involucrata</u>)

Mature Height	6in-1ft tall with 3ft spread
Care & Water	Once established, water once per week.
Flowering Time	March-June

Shade Plant Guide Layout 1B

Hardine	SS	Zones 4-8, plant 3ft apart
Special Fea and Not		Ornate foliage that is attractive when not in bloom. Attracts butterflies and hummingbirds.