

Transforming Your Lawn into a Drought Tolerant Yard

September 22, 2022



GARFIELD COUNTY
MASTER GARDENER
COLORADO STATE UNIVERSITY
EXTENSION



Overview

- What is Meant by Drought Tolerant
- Considerations, Planning & Preparation
- Planting and Caring
- Benefits of Selecting Native Plants
- Questions
- Plant options – native and non-native
- Resources

Photo Source: Houzz.com



What is NOT meant by Drought Tolerant?

- Elimination of all turfgrass and shrubbery.
- A dry, barren landscape, with only cactus.
- A "no maintenance" landscape.



What IS meant by Drought Tolerant?



- Water conservation
- Well adapted plants
- Mulches
- Efficient irrigation
- Low maintenance
- Different styles & aesthetics



Why Convert to Drought Tolerant?

To save water.

As much as **50%** of household water is used for the yard and garden.



Photo source: engagement.source.colostate.edu

What about plants I just like but have higher water needs?

- We all have plants we just love & don't care if they need a little extra water.
- You could grow these "thirstier" plants in containers. By growing them in containers or designated areas, you can still reduce water use.



Photo Source: Southernliving.com



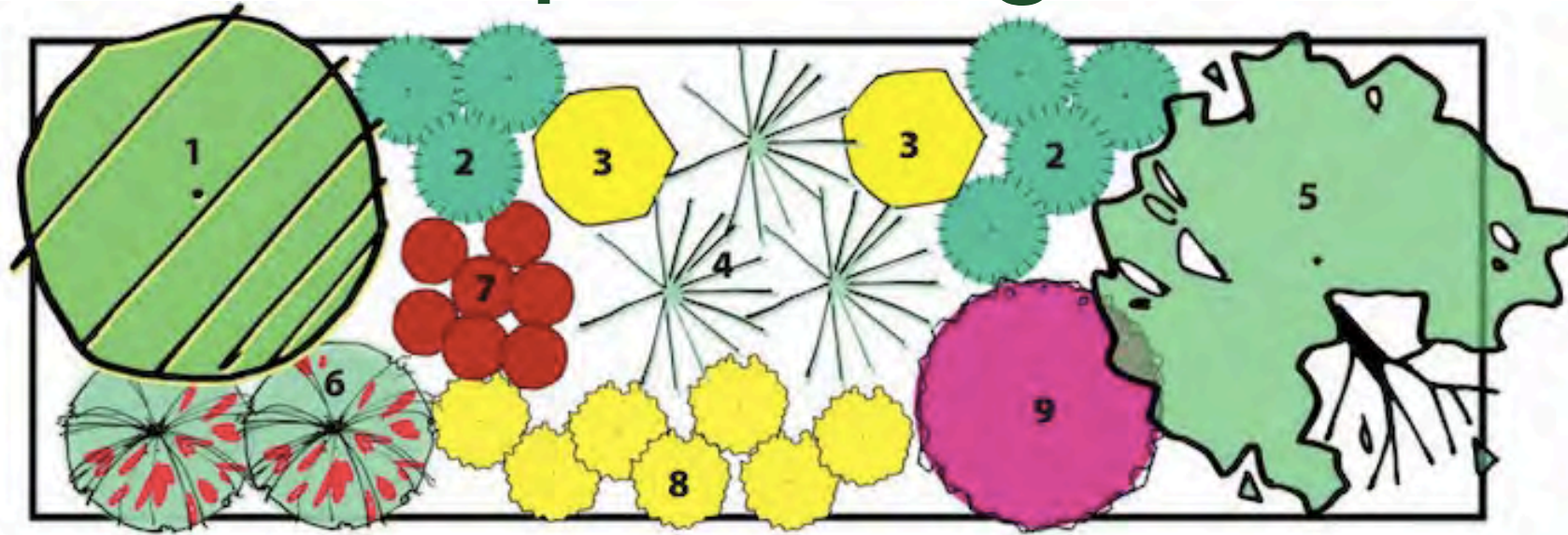


Why It Is Good to Have a Plan?

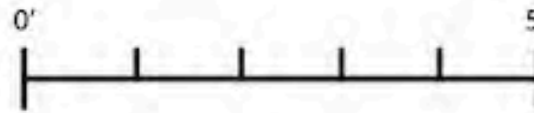
- Careful **plant selection** is needed to succeed in creating a sustainable, waterwise yard. **RIGHT PLANT FOR THE RIGHT PLACE.**
- Consider implementing your new landscape in **phases**; most likely a multi-year process.
- **Enlist help** from a professional landscaper or experienced gardeners



Landscape Design #1



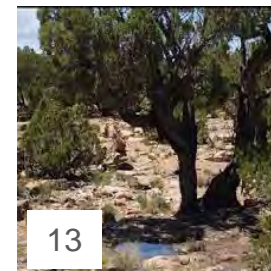
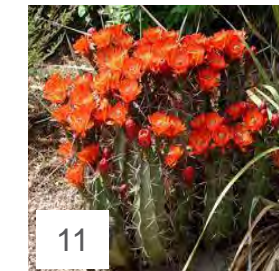
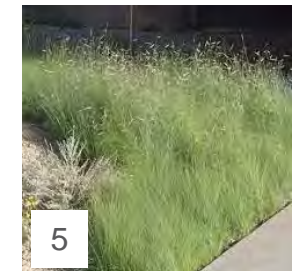
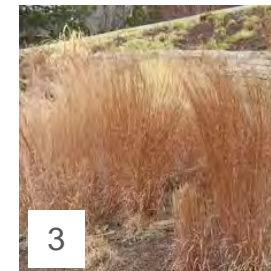
1. Mormon Tea *Ephedra viridis*
2. Little Bluestem *Schizachyrium scoparium*
3. Desert Prince's Plume *Stanleya pinnata*
4. Narrowleaf Yucca *Yucca harrimaniae*
5. Panchito Manzanita *Arctostaphylos x coloradoensis*
6. Claret Cup Cactus *Echinocereus triglochidi*
7. Blanketflower *Gaillardia aristata*
8. Lavender Leaf Sundrop *Calylophus lavandulifolius*
9. CO Four O'Clock *Mirabilis multiflora*



Garden design by Nick Daniel

<https://extension.colostate.edu/docs/pubs/native/WestSlopeSm.pdf>

Landscape Design #2



1. Bluetooth Maple *Acer grandidentatum*
2. Rabbitbrush *Ericameria nauseosa*
3. Little Bluestem *Schizachyrium scoparium*
4. Single Leaf Ash *Fraxinus anomala*
5. Blue Grama *Bouteloua gracilis*
6. Jones' Bluestar *Amsonia jonesii*
7. Butterfly Milkweed *Asclepias tuberosa*
8. CO Four O'Clock *Mirabilis multiflora*
9. Mat Penstemon *Penstemon caespitosus*
10. Apache Plume *Fallugia paradoxa*
11. Claret Cup Cactus *Echinocereus triglochidiatus*
12. Desert Prickly Pear *Opuntia phaeacantha*
13. Utah Juniper *Juniperus osteosperma*
14. Sulfur Buckwheat *Eriogonum umbellatum*

Garden design by Nick Daniel

<https://extension.colostate.edu/docs/pubs/native/WestSlopeSm.pdf>

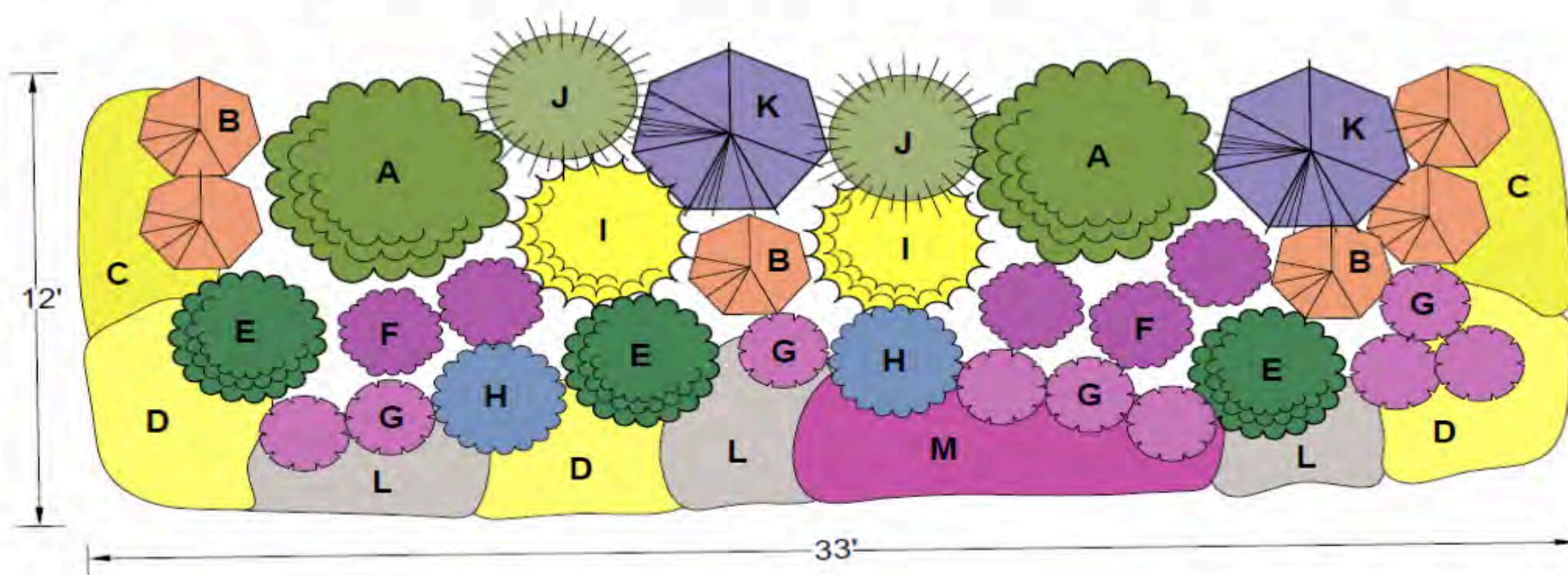
XERISCAPE DESIGN SOLUTIONS

Lauren Springer Ogden Collection:

PRACTICAL AND INSPIRING DESIGNS WITH REGIONAL RESONANCE USING PLANT SELECT® PLANTS, BY ONE OF AMERICA'S BEST-KNOWN HORTICULTURISTS AND GARDEN DESIGNERS.

CHAPARRAL/XERIC MIXED BORDER

This shrubby garden has a natural feel to it, blending native and adapted plants in a casual but full manner. Foliages are attractive and mostly fine-textured, with several evergreen plants to add winter interest. Long-bloomers add color from late spring to fall. Many of the flowers attract butterflies, hummingbirds, and bees. For added late winter and early spring color, consider adding the bulbs listed below amid the lower-growing plants in the foreground of the planting. To add interest the first couple of years in the area where the shrubs are filling in, consider planting the short-lived plants listed for that purpose. This design can be used as a perimeter planting: just repeat to the length needed. It can also be widened into a broader bed with the larger plants in the center or spine by planting its mirror image on the other side. This garden needs full sun and dry conditions, and will thrive in a lean, unamended soil.



PLANT LIST:

Plant Select® plants are in bold

- A. Apache Plume -or- Fernbush (2)
- B. Sunset Hyssop -or- Sonoran Sunset® Hyssop (6)
- C. Kannah Creek® Buckwheat -or- Snow Mesa Buckwheat (12)
- D. 'Shimmer' Evening Primrose (12) -or- Silver Blade® Evening Primrose (9)
- E. Panchito Manzanita -or- Pawnee Buttes Sand Cherry (3)
- F. Mojave Sage -or- Blue Flame Hyssop (5)
- G. Red Rocks® Penstemon -or- Greek Valerian (9)
- H. Big Catmint (2)
- I. Spanish Gold® Broom -or- Lydian Broom (2)
- J. Giant Sacaton -or- Heavy Metal Switchgrass (2)
- K. Russian Sage -or- Blue Mist Spirea (2)
- L. Sea Foam Artemisia (6) -or- Partridge Feather (16)
- M. Winecups (3) -or- Table Mountain® Ice Plant (15)

Additional Plants:

- Corsican Violet (12) randomly in front 2' of bed to self-sow year after year

If desired, fill in around shrubs with the following short-lived plants while the shrubs grow to size:

- Red Feathers (9)
- Prairie Jewel® penstemon (9)
- Grand Mesa penstemon (9)
- Moon Carrot (9)

Waterwise Landscape Transformation

(Glenwood Springs)



BEFORE



AFTER





Waterwise Landscape Transformation

Some questions you should ask yourself:

1. What is important to me in my landscape?
2. What is the purpose of my landscape and how will it be used?

Photo Source: Highcountrygardens.com



Planning: Where to keep turf grass?

There is a place for grass in the waterwise landscape.

Play areas for children and pets are often best left in turf.

Change turf areas on steep slopes, hard-to water places and narrow mowing strips to low-water ground covers.

Learn how to properly water your lawn. Most lawns are over-watered!



Kentucky Blue Grass

Can remain green and healthy with far less water than most people ever thought possible. Well-placed & well-maintained turf has a place in the drought tolerant landscape. Makes play area for kids & pets.

Survives well for extended periods of time without any irrigation due to its excellent dormancy mechanism.

Twice weekly watering produces healthy bluegrass lawns. Even once weekly watering can be adequate for all but the warmest summer periods.

Bluegrass is still the best grass species for many places!



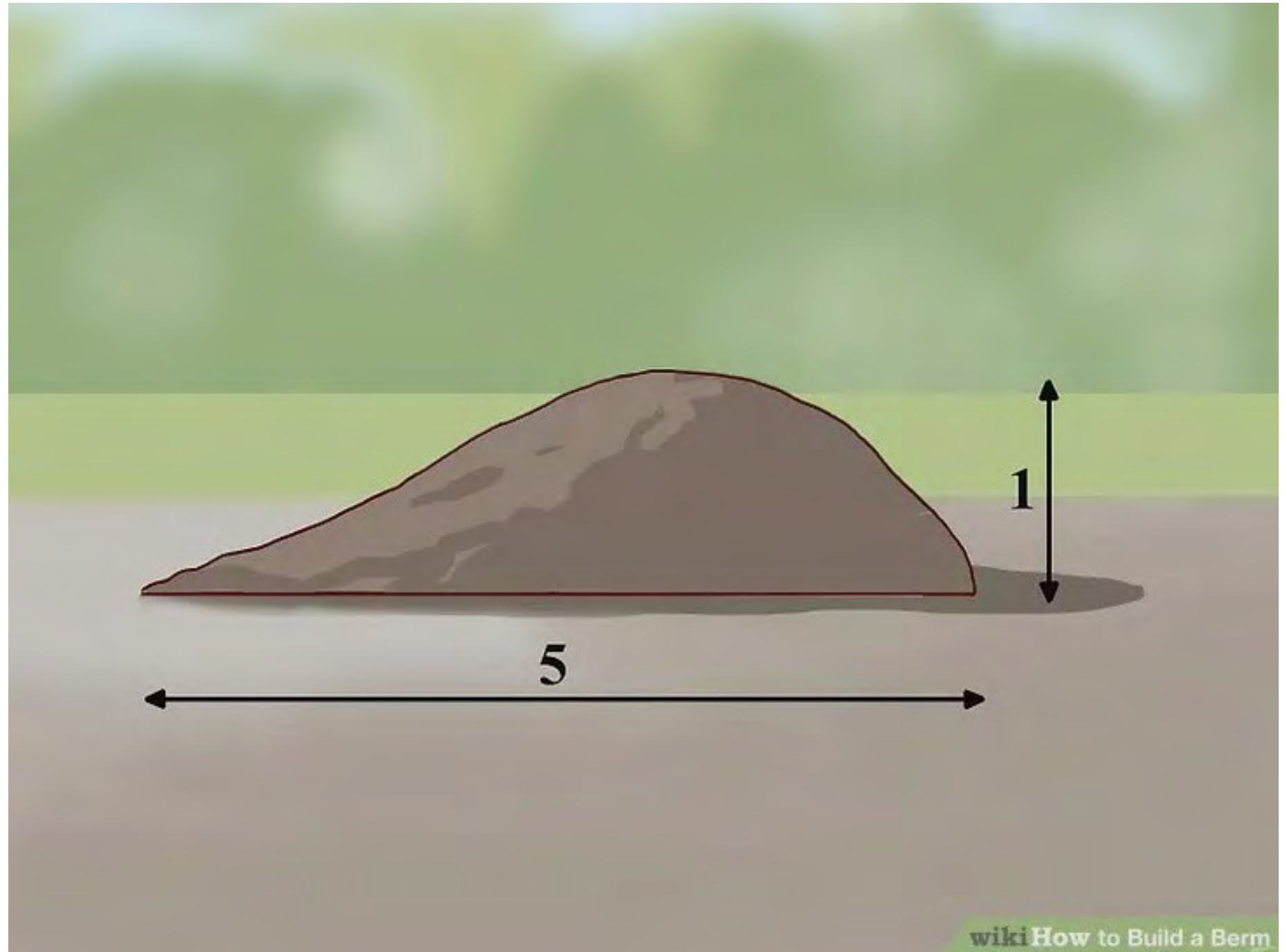
Preparing to plant - Soil



- The benefits of a **soil test**
- Most xeric plants require **very well-draining soil**.
- **Beware of compaction!**



Mounding & Amending the Soil



Preparing to Plant – Lighting & Location

When choosing plants, consider sun requirements:

- **Full-sun** = 6 or more hours of direct sun
- **Partial sun** = 4-6 hours of direct sun
- **Full Shade** = less than 4 hours of direct sun





Planting – Starter Plants vs. Seeds



Benefits of Mulch in the Waterwise Landscape



Watering

- Regular watering to establish
- Gradually wean from supplemental water.
- Group appropriately
- Trees & shrubs will need more water



Fertilizing

- Most drought-tolerant plants will not require soil amendments and perform better in the long term in leaner soils that more closely resemble the region's natural conditions.
- Know the requirements for each specific plant to determine the need for fertilizer. If in question, call the Garfield County extension office for assistance or look at packaging/labels.



Why Plant Natives?

- Naturally adapted to Colorado's climate
- 4X more attractive to pollinators.
- Require less water and fertilizer
- More resistant to pests and disease
- Helps maintain biodiversity
- Special sense of place



Questions?



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Native Trees

Gambel Oak *Quercus gambelii*

- Native large shrub or small tree with irregular spreading branches dark green leaves and tan acorns.
- Commonly found throughout western Colorado between 6,000 and 9,000 feet in elevation.





Native Trees

Pinyon Pine (*Pinus edulis*)

- Hardy, drought-tolerant trees well-suited to many Colorado landscapes, including Garfield County.
- Their dense growth habit provides good visual screening and wind protection, and they offer shelter and food for birds and other wildlife.
- Site selection and proper maintenance are important for tree health.



Native Trees

Bristlecone pine

Pinus aristata

- Slow growing, but long-lived. 20 ft. tall x 25 ft. spread when mature.
- Needs full sunlight.
- Prefers dry to average moisture levels with very well-drained soil.
- Not particular as to soil type or pH.
- Apply a thick mulch around the root zone in winter to protect it in exposed locations or colder microclimates.





Native Trees

Rocky Mountain juniper *Juniperus scopulorum*

- Grows naturally throughout the Rocky Mountains, including the foothills.
- Extremely drought-tolerant & low-maintenance, evergreen.
- Many cultivars have been developed & may be better suited to landscapes. Check with your local nursery.



Native Shrubs

Fernbush

Chamaebatiaria millefolium

- One of the southwest's greatest plant treasures.
- Native to the Colorado plateau, it has intensely aromatic foliage & is extremely useful as a low maintenance shrub for drier garden areas.
- Needs no supplemental irrigation once established!
- Deer resistant.





Native Shrubs

Panchito Manzanita *Arctostaphylos coloradoensis*

Native to the Uncompaghre Plateau in western Colorado, requires very little water once established.

Excellent for slopes, evergreen, hardy & deer generally will not eat it. Great alternative to juniper.

Adds texture & structure.



Native Shrubs

Mountain Mahogany

Cercocarpus intricatus

- An unsung hero, native to Western Colorado.
- Densely branched, slow-growing shrub is pest-free, seldom browsed by deer, and requires almost no care once established.
- Once in the landscape, these plants flourish and grow in even in the harshest conditions.
- Narrow leaves hang on year-round.





Native Shrubs

Mountain Big Sage Brush *Artemisia tridentata*

- It doesn't get more drought tolerant than this! This is the plant that literally covers the vast interior of the west with its beautiful blue aromatic foliage.
- Twisted gnarly branches add interest to any landscape.
- Look for it in the native section of the nursery. Grows faster than you may think.



Native Flowering Plants

Arrowleaf Balsamroot *Balsamorhiza sagittata*

- You will see this growing in mass in meadows throughout Garfield County in spring & early summer.
- Member of the Sunflower Family





Native Flowering Plants

Common Yarrow *Achillea millefolium*

- Does well in hot, dry and sunny locations.
- Easy to find when shopping at nurseries.
- **Many varieties & colors.** Try Moonshine Yarrow for yellow.



Native Flowering Plants

Rocky Mountain Penstemon *Penstemon strictus*

- A native of the foothills and mountains of the southern Rockies
- Spikes of bright blue flowers and evergreen foliage.
- One of the easiest-to-grow Penstemon.
- Long-lived, this beauty thrives in most any well-drained soil with full sun exposure.
- Drought tolerant





Native Flowering Plants

Sulphur Buckwheat *Eriogonum umbellatum*

- Notice these next time you go on a hike in the valley or up high – they're everywhere!
- Masses of yellow flowers turn orange as they age. Prefers gravel & well-draining soil.
- Vigorous and adaptable western native.
- When sited properly, requires very little water or attention.



Native Flowering Plants

Scarlet Globe Mallow *Sphaeralcea coccinea*

- Native wildflower. Plants spread from roots & make extensive colonies.
- Grows well in clay.
- Extremely drought tolerant, but blooms best with a little extra water.
- Likely only available as seeds.



Native Flowering Plants

Colorado Four O'Clock *Mirabilis multiflora*

- Magnificent native wildflower that blooms all summer with magenta-pink flowers that open in the afternoon.
- A perennial with an enormous taproot, which allows it to grow in unwatered areas once it is established.





Native Flowering Plants

Hairy Golden Aster *Heterotheca villosa*

- A tough sun lover, blooms 3-4 months from late spring to fall. Emits a pleasant spicy sharp sage aroma.
- Attracts butterflies, but are ignored by deer.
- Requires very little water to perform. Perfect for dry sunny garden and thrives in poor soils, as long as they drain well.



Native Cactus

Claret Cup

Echinocereus triglochidiatus

- Also known as hedgehog cactus
- Official state cactus of Colorado
- Notice it when hiking Mushroom Rock/Red Hill area in the spring





Native Cactus

Prickly Pear Cactus

Opuntia

- Well adapted to desert ecosystems, and prefer sandy, well drained soil.
- Flowers appear in the summer and can be yellow, pink, violet, bronze, or yellow-green.
- Beetles are one of the main pollinators.



Native Grass

Indian Rice Grass *Oryzopsis Hymenoides*

- This is a bunch grass with delicate lacy leaves.
- In early summer this grass will be covered in airy clusters of nut-like seeds. The nutlets were a food staple for native people.
- Prefers full sun, dry conditions



Use of Non-Natives

- Many non-native plants are adapted to Colorado's climate and can be used in a native landscape, as long as moisture, light and soil requirements are similar.
- Requires thoughtful plant selection – look for plants that say low-water, xeric, or waterwise.
- Kentucky Bluegrass is non-native, but one of the best options for turf in Colorado.





Non-Native Trees

Hot Wings Tatarian Maple *Acer tataricum*

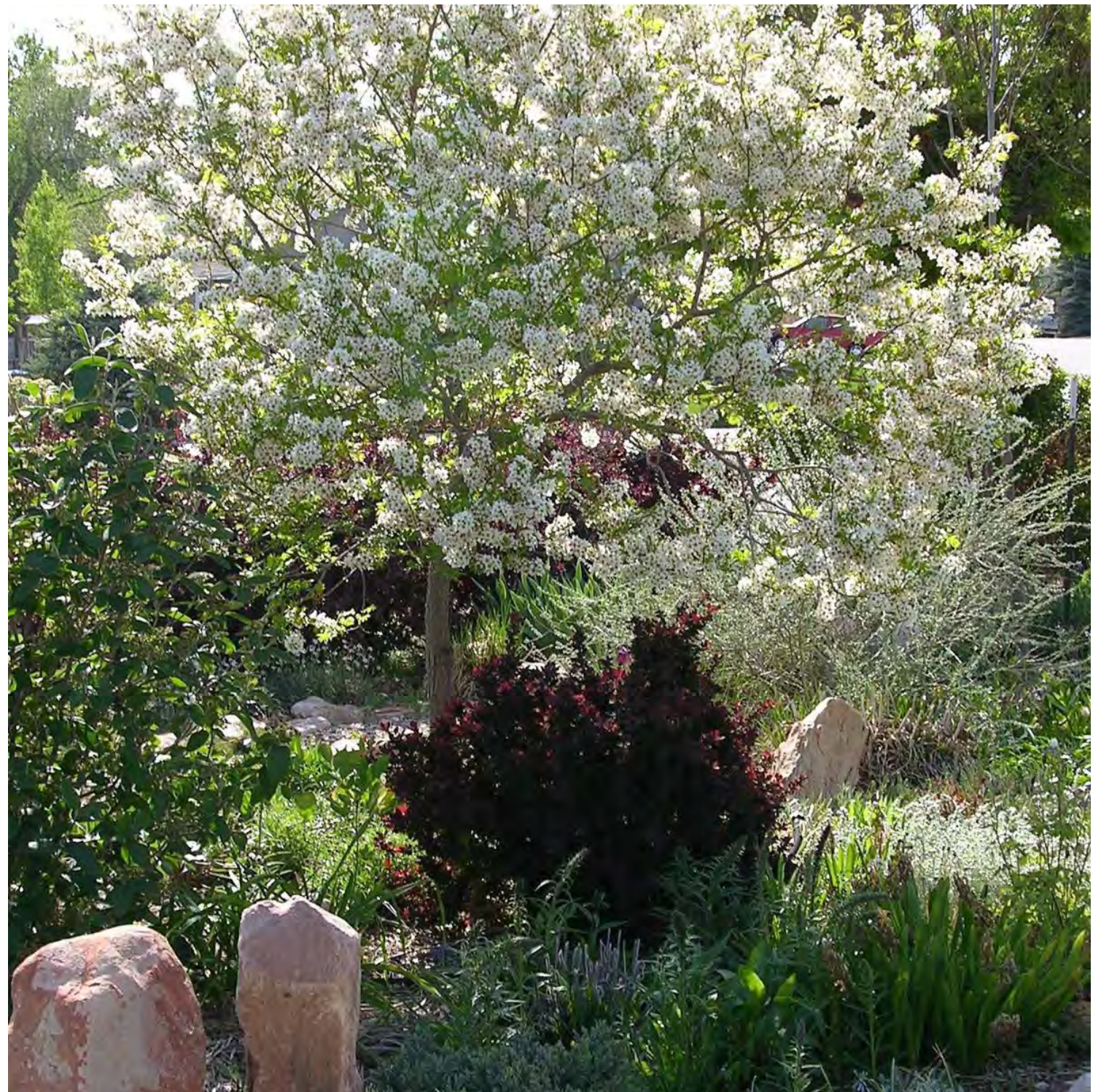
- Attractive sturdy tree with showy fall color.
- Brilliant red samaras look like flaming flowers in mid-summer.
- Ideal for home landscapes where a smaller tree is desired.
- Deciduous



Non-Native Trees

Clear Creek Golden Yellowhorn *Xanthoceras sorbifolium* 'Psgan'

- Masses of white flowers in spring with yellow eyes turning maroon. Unique leathery seedpods form in summer and persist into winter.
- Vase-shaped habit with attractive, ferny leaves. Especially hardy strain. Large shrub or small tree.
- Attracts Bees, Attracts Butterflies, Drought Tolerant, Edible Fruit, Winter Interest





Non-Native Shrubs

Red Yucca *Hesperaloe parviflora*

- Graceful native of **Texas and Mexico**.
- Instant magnet for hummingbirds from early summer to autumn.
- Perfectly xeric once established.
- Not well suited to areas that are frequently irrigated, in poorly drained soils, and in soils highly amended with organic materials.



Non-Native Shrubs

Spanish Gold Broom

Cytisus purgans

- Bright green stems with outstanding golden, pea blossoms.
- Subalpine shrub from the mountains of **Spain**, hardy.
- Evergreen, winter interest.
- Extremely tolerant of drought and alkaline soils but it does need to be well-drained.





Non- Native Flowering Plants

Sunset Hyssop *Agastache rupestris*

- Bold brushes of sunset-orange flowers from August to frost.
- Exudes a rich, root beer aroma.
- Loves a hot, sunny position in well-drained soil.
- Attracts hummingbirds!
- Native to **high deserts of Arizona, New Mexico**



Non-Native Flowering Plants

Catmint

(This variety: Walker's Low Catmint)

- A robust variety with dark lavender-blue flowers in late spring and aromatic gray-green foliage.
- Thrives in harsh conditions. Ideal for xeriscapes.
- Rabbit and deer resistant perennial
- Very bee-friendly & long-blooming





Non-Native Ground Cover

Ice Plant

Delosperma ssp (many varieties)

- A fast spreading groundcover from **South Africa** that blooms for most of the growing season.
- Many different hardy options in any color to fit your taste.
- Prefers pea gravel mulch, not bark.
- Needs full sun



Non-Native Flowering Plants

Lavender

Lavandula (many varieties)

- Very xeric and will tolerate the heat of summer.
- Flowers & foliage perfume the garden with a crisp, clean scent that calms and relaxes.
- Best planted in sunny sites at the edge of borders or tucked in a rock garden.



Non-Native Flowering Plants

Hybrid Tea Rose and Other Roses



CSU Extension Resources

- Colorado Yard and Garden Website (CSU Extension)
<http://extension.colostate.edu/topic-areas/yard-garden/>
- CO-Horts: Horticulture Agents and Specialists Blog
<http://csuhort.blogspot.com/>
- Plant Select <https://plantselect.org/>
- Colorado Master Gardener <https://cmg.extension.colostate.edu/>
- Garfield County Extension Office: 970-625-3969
- Plant*talk* Colorado™
<http://planttalk.colostate.edu/>
- Ask an Expert <https://ask.extension.org/groups/1955/ask>
- Colorado Plant Database
<https://coloradoplants.jeffco.us/>



Thank you



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