



Description:

Front-range Colorado gardening is unique thanks to a cold and dry climate, and we have always had to do things differently: planting, sourcing, and care, so the design offers guidance to landscape professionals and DIY homeowners. Thus the design is heavy with the *how-to* in addition to the *what* of a native garden design.

This design features a broad variety of food sources, nesting materials, and hideaways for Colorado insects and wildlife. It promotes a zero-waste design system, in which no (carbon-rich) organic material is hauled away, but instead used to resist weeds while improving soil, plant, and critter health.

The front yard proves that a landscape can be unirrigated, enjoying fewer weeds and pruning as a result. The design also includes cost-saving options of using free or recycled mulch materials as well as seed instead of plants. These plants are at home in virtually any soil type in the 4500-7000' altitude range, and most will stretch beyond that; any exceptions are given USDA hardiness zones.

Plants:

Plants were selected for a list of features: ruggedness, nativity, service to wildlife, reasonability to maintain, non-aggression in a garden, seasonality, and multi-use. We have intentionally promoted a few excellent but lesser-available species (but provided alternates) in the spirit of supporting growers who take the risk producing them and to gently encourage those who don't.

Specified plants are Colorado-state native, but alternates include regional/US natives that are easily sourced so as to not exclude Colorado gardeners for whom plant availability is truly dismal.



Amsonia jonesii, *Nolina microcarpa*, and *Zinnia grandiflora*

The Layout:

The different spaces honor the varied natural Colorado Landscapes and use plants that fit microclimates that form around homes in urban settings and soil conditions that will develop with the specified mulch and planting.

The front yard is designed to be unwatered or irrigated optionally, employing passive, rainwater-trapping and featuring plants and the atmosphere of Colorado's arid and rocky places. Colorful, re-blooming species add curb appeal, and the plants are given space that is in line with native vegetation coverage based on rain, and uses plants appropriate for a hotter street-side microclimate. Non-flammable foundation plants are a nod to Coloradans who live in danger of increasingly prevalent wildfires.

The denser, cooler, back yard is watered infrequently and deeply. It calls to mind our state's forests, thickets, meadows, and shortgrass prairie with a native buffalo-grass lawn. The back yard is a buffet of pollinator and larvae-host plants as well as a refuge, restaurant, and water-stop for birds. Optionally, yet more flowers can grow in the least-trafficked parts of the lawn.

Flexibly, the design provides a seed alternative to sourcing plants. Mail-ordered seed and mixes can be used for the front and back areas. These create dynamic, wilder, and more adaptable garden situations that are actually much more drought resilient. The second optional feature is a crevice garden. It both provides excellent surface drainage for plants from yet drier places (the desert) while trapping water below for deep roots to find.



Crevice gardens evoke Colorado's rugged places and create an under-provided urban habitat for snakes, lizards, and even butterflies to warm themselves on the rocks. Many burrowing bees, ants, and beneficial wasps relish the warm, dry soil between and under the stones.

Plant Lists: ("Alt"= alternative/substitution species)

Front Yard + Sides:

Tree:

1. Scrub Oak, *Quercus gambelii* x1 (Alts: *Sapindus drumondii*, *Celtis reticulata*, *Cercis canadensis*, *Cupressus arizonica*)

Shrubs:

2. Mormon Tea, *Ephedra viridis* x1
3. Beargrass, *Nolina greenii* x1 (z5b) (alt *Nolina microcarpa*, or small *Yucca* sp)
4. Baby Rabbitbrush, *Ericameria nauseosa* ssp *nauseosa* x8
5. Apache Plume, *Fallugia paradoxa* x1
6. Fernbush, *Chamaebataria millifolium* x1
7. Soapweed, *Yucca glauca* x1 (alt *Y. baccata*, *Y. harrimaniae*, *elata*, *angustissima*, *neomexicana* but not *flaccida* nor *filamentosa*.)
43. Threeleaf Sumac, *Rhus trilobata* x1

Grasses:

8. Alkali dropseed, *Sporobolus airoides* (alt: *Bouteloua curtipendula*)x21
9. Blue Grama, *Bouteloua gracilis* x15

Perennials:

10. Desert Bluestar, *Amsonia jonesii* x1
11. Heath Aster, *Symphyotrichum* (Aster) *falcatus* (alt *A. ericoides*) x3
12. Prairie Zinnia, *Zinnia grandiflora* x4
13. Blanketflower, *Gaillardia aristata* x3
14. Desert Four-o'clock, *Mirabilis multiflora* x1
15. Sunshine Daisy, *Tetrameuris* (*Hymenoxys*) *scaposa* x3
16. Beardtongues, *Penstemon secundiflorus*, *versicolor* (alt *P. strictus*) x4
17. Chocolate Daisy, *Berlandiera lyrata* x5
18. Prairie Coneflower, *Ratibida columnifera* (alt *R. pulchra*) x3
19. Spotted Gayfeather, *Liatris punctata* (alt *ligulistylis*) x6
20. Purple Prairie Clover, *Dalea purpurea* x2
21. Firecracker Penstemon, *Penstemon eatonii* x7 (alt. *P. barbatus*)
22. Prickly Pear Cactus, *Opuntia phaeacantha* x1 (alt *O. erinacea*, *aurea*, etc)

'46. Crevice Garden

Back Yard:

Tree:

23. Nettleleaf Hackberry, *Celtis reticulata* x1 (alt: *Cercocarpus ledifolius*, *Cercis canadensis*, *Chilopsis linearis*)

Shrubs:

24. Golden Clove Currant, *Ribes aureum* x1

25. Rocky Mtn. Juniper, *Juniperus scopulinus* x1 (alt *Cupressus arizonica*, smaller *J. monosperma*)

26. Leadplant, *Amorpha canescens* x1

27. Manzanita, *Arctostaphylos x coloradoensis* x1

28. Utah Serviceberry, *Amelanchier utahensis* x1 (alt: larger *A. alnifolia*,

Grasses:

29. Switchgrass, *Panicum virgatum* x14

30. Little Bluestem, *Schizachyrium scoparium* x10

Perennials:

31. Missouri Evening Primrose *Oenothera macrocarpa (missouriensis)* 1

32. Wright's Buckwheat, *Eriogonum wrightii* (alt *E. jamesii*) x4

33. Butterflyweed, *Asclepias tuberosa* x4

34. Blue Flax, *Linum lewisii* x5

13. Blanketflower, *Gaillardia aristata* x8

36. Anise Hyssop, *Agastache foeniculum* x3

37. Smooth Aster, *Symphyotrichum (Aster), porteri*, (alt *S. leavis*) x5

38. Prairie Ironweed, *Vernonia fasciculata* x3

39. Winecups, *Callirhoe involucrata* x2

40. Purple Coneflower, *Echinacea angustifolia* (alt: *E. pallida*) x11

41. Stiff Goldenrod, *Solidago rigida* x2

42. Wild Bergamot, *Monarda fistulosa* x5 (alt: *M. punctata*)

45. Pasqueflower, *Pulsatilla patens* x5

46. Prairie Junegrass, *Koeleria macrantha* x10

44. Bird Bath

Optional Seed mix lists:**Good species for a the dry front:**

Indian Ricegrass, *Acnatherum hymenoides*
 Firecracker Penstemon, *Penstemon eatonii*
 Blanketflower, *Gaillardia aristata*
 Blue Flax, *Linum lewisii*
 Chocolate Daisy, *Berlandiera lyrata*
 Paintbrush, *Castilleja integra*
 Dotted Gayfeather, *Liatris punctata*
 Purple Prairie Clover, *Dalea purpurea*
 Desert Marigold, *Baileya multiradiata*
 Rocky Mtn. Beeplant, *Cleome lutea*
 Prairie Coneflower, *Ratibida columnifera*
 Monroe's Globemallow, *Sphaeralcea munroana*

Good species for a Back yard pollinator seed mix:

Hoary Vervian, *Verbena stricta*
Englemannia peristenia
 Blue Flax, *Linum lewisii*
 Butterflyweed, *Asclepias tuberosa*
 Gayfeathers, *Liatris punctata ligulistylis*
 Blanketflower, *Gaillardia aristata*
 Purple Coneflower, *Echinacea angustifolia or pallida*
 Purple Prairie Clover, *Dalea purpurea*
 Rocky Mt Penstemon, *Penstemon strictus*
 Prairie Coneflower, *Ratibida columnifera*
 Anise Hyssop, *Agastache foeniculum*
 Winecups, *Callirhoe involucrata*

Plants for the Crevice Garden:

Claret Cup Cactus, *Echinocereus coccineus*, x3 alt: *triglochidiatus/*
mojavensis (Colorado's state cactus)
 Sunshine daisy *Hymenoxys caespitosa* or other sp. x4
 Dwarf Snowball Cacti, *Escobaria sneedii* x1-5
 Ovalleaf Buckwheat, *Eriogonum ovalifolium* x1
 Hooker's Sandwort, *Arenaria hookeri* x3
 Hooker's Townsend Daisy, *Townsendia hookeri* x2
 Desert Evening Primrose, *Oenothera caespitosa* x1

Optional seeds/plants to mix/plant into buffalograss:

Fringed Sage, *Artemisia frigida*
 Prairie Junegrass, *Koeleria macrantha*
 Prairie Zinnia, *Zinnia grandiflora*
 Spotted Gayfeather, *Liatris punctata*
 Purple Prairie Clover, *Dalea purpurea*
 Blue Grama, *Bouteloua gracilis*
 Paintbrush, *Castilleja integra*
 Scarlet Globemallow, *Sphaeralcea coccinea*

Phases/Stages of Installation:

Installation can be broken into manageable pieces- front and back, one at a time, and each of those can be split further if needed by dividing them by mulch zone to develop first. Generally, demolition/removal is first, mulch, then plant, then seed. The gravel garden area in front can serve as a placeholder before a crevice garden is built, or if one is not built at all.

Demolition, Soil:

New homes typically have poor, compacted soil and will benefit from including a thin (1/4-1/2") layer of compost or generous sprinkle of alfalfa meal on the soil, then worked in. Rototilling should be avoided in favor of loosening by hand with a turning fork, broad fork, or by "ripping" the soil 4-10" deep with a "scarifier" on a skid-steer, or larger/smaller machine. Soils around older homes will usually have sufficient nutrition and not need additional compost.

Excessive soil grades should be carved out along sidewalks, drives, and paths to make room for those future several inches of mulch so that your mulch does not migrate or spill onto them. If replacing a healthy lawn, usually no soil amendment is necessary. The following links outline preparing sites for native planting and removing lawns:

- <https://frontrangewildones.org/lawn-removal/>

- <https://www.xerces.org/sites/default/files/>

[2018-05/16-027_02_XercesSoc_Organic-Site-Preparation-for-Wildflower-Establishment_web.pdf](#)

The difference between annual or perennial weeds is useful to know. Annual weeds are not too serious- they are easily removed and future mulch and plants will prevent them from returning. Perennial and deep-

rooted weeds (such as thistle, bindweed, wheatgrass, white top etc) are the ones to be diligent in removing as much as possible before planting. Roto-tilling and excessive organic material often promotes terrible weeds like bindweed.

At a stage when there is bare soil, it's a good time to consider earth works to passively trap rainwater to supplement the unirrigated front yard, as well as help trap pollutants before they enter streams and rivers.

[-https://www.harvestingrainwater.com/](https://www.harvestingrainwater.com/)

Mulches:

A top-dressing material reduces weeds, conserves water, and improves the soil. Here, there are two types appropriate to their different plant communities, maintenance, and microclimate.

Wood-chips (brown/tan) are laid 2-4" deep. These may be sourced for free from municipalities and tree-trimming companies. Especially if you may have perennial weeds, start by covering the ground with tape-free and uncoated cardboard to block them, overlapping edges 1', then cover with a full 4" of wood-chip. This temporary weed barrier blocks weeds and holds moisture until get established, and then breaks down in about a year after its has served its purpose.

Gravel (gray in drawing) is 1-4" thick and uses 1/2" size, crushed (sharp) gravel. Avoid rounded pea-gravels or contain them so they don't roll on sidewalks dangerously. A bucket or two of coarser 1" screen gravel scattered on top can help pin down the finer gravel where it is near sidewalks or on slopes, or contain it with edging. Scattering larger gravels also helps you create a more random, naturalistic surface that looks less like a parking lot! The base layer of 1/2" size can be dug, hoed, and weeded easily. If you want a thin gravel mulch to encourage your future flowers but not weed seeds in the ground, use newspaper in two layers and overlapping under gravel as an organic temporary weed barrier. One cubic yard of gravel will cover about 300 sf, one-inch thick, as a rule of thumb. Thinner depths of gravel (1-2") encourage seedlings of both your plants and weeds. 4" can entirely exclude seedlings, 3" is sane. If you can, leave occasional areas of naked, unirrigated soil, perhaps hidden behind taller plants or on the back of the crevice garden. this will welcome solitary, usually ephemeral and shy, ground-nesting bees.

Planting:

Spring and autumn are the best times to plant. Summer is possible, but tricky. The practice of bare-root planting leads to faster establishment, healthier, more resilient and more long-lived plants, and is especially effective in arid climates like ours. New plants are bare-rooted by dunking them in a bucket of water and



gently teasing the roots until at least 2/3 of the spongy nursery mix is off of them, which would otherwise encumber the roots from growing into your soil where they need to be. One should dig a hole as deep as the roots and spread them out, for example into a fan, and backfill the hole halfway to support the plant, keeping it at the same depth/level it was in the pot. The half-open hole and plant are then watered, creating mud that will flow into its roots. The hole can then be completely filled and a temporary dirt basin is made- like a donut or life-saver- to trap water near the young plant. Gravel can return to the spot at its thickness, but with wood-mulch, it's depth should taper down toward the plant so that it is not touching the base of the plant to rot it.

New plants need a weekly soaking until they are visibly larger, after which frequency can be reduced by half. If planting in summer and the temperature is over 75 F, plants need some kind of shade for two weeks. and must be religiously watered at least 2 times a week. As rules of thumb for water duration: individual plants need 5-10 seconds with an open hose-end, a whole landscape 60 minutes with an impact sprinkler, or 15 min with popup sprayers. The best way to get a sense if the duration was right is to check the soil moisture before and after you've watered: it should be soaked at least 4" deep immediately after watering- it continues to move deeper afterwards.

[-https://www.youtube.com/watch?v=_rXCEpBUoTQ](https://www.youtube.com/watch?v=_rXCEpBUoTQ)

Optional Seeding:

If one is sowing seeds, they will need naked soil or no more than 1" of gravel on top of them. Generally, perennial wildflower seed is sown in fall (Oct to Jan 1), as most need to experience winter to germinate in spring. New seed may be eaten by eager birds like Juncos, so to compensate,

seed can be sown 50% heavier and/or protected it by tamping, watering it in, or mulching with a 1/4"-1/2" of straw (not hay), which makes a good temporary mulch, too. The seedbed should be kept moist until plants are 4-6" tall, after which, they can be weaned from water. Weeds among them will have to be identified and cut out. With perennials, there will be few flowers the first year, and a real show the second year. Seed-grown plants are always more resilient, better performing, and longer lived than a container-grown and planted counterpart. A wildflower mix from seed will be dynamic; it should be expected it to change over time as species come and go, and the best plants stay.

Buffalograss:

Seed is preferable to plugs for buffalo grass for diverse genetics and both female and male flowering grass plants- these are useful to humble pollinators. Buffalograss seed is sown onto naked, raked soil June-September, tamped and covered with a thin mulch of straw. Buffalograss is a great long-term turf resilient to foot traffic and wear.

[-https://extension.colostate.edu/topic-areas/yard-garden/buffalograss-lawns-7-224/](https://extension.colostate.edu/topic-areas/yard-garden/buffalograss-lawns-7-224/)

Crevice Garden:

This bold style of rock garden approximates rocky places by being purpose-built to create narrow gaps between stones where special plants thrive, creating a dry surface and trapping moisture deeper below, and forcing roots deeper.



It can be made of stone, recycled concrete, or other recycled materials. It can use big lumpy rocks or slab-like thinner stones- any kind, truly. Rocks are buried at least 1/2 and "pave" over half of the soil surface. Crevices are covered with 1" deep gravel like the surrounding area. Built too tall and it will become too dry for most plants, so a humble rise of 1/3 or 1/4 the width is good in dry climates- it can also be made jagged to catch the rain rather than built smoothly to shed it. Crevice gardens are a personal art form- a person should play with stone non-committally for a while first to get a feel for they want to make.

Maintenance:

Weeding:

Weeds will decrease over time as soil becomes less disturbed and flowers mature. A buffalo lawn without a cool-season grass or plants or bulbs within it will need defense from winter-growing weeds like dandelions- corn gluten is used as an organic pre-emergent. Annual weeds are weak and unthreatening contenders against any sharp tool, but perennial weeds are persistent adversaries if they are not smitten early and before the garden is planted. A hoop hoe is ideal for unwanted weed or flower seedlings in your gravel, no more difficult than pushing a vacuum. White vinegar with a partial drop of soap or surfactant is a strong “defoliant” type organic herbicide for weeds in concrete cracks especially- It shouldn’t be overused or allowed to hit flowers with friendly fire.

Mowing

Buffalo grass can be kept as a weekly-mown turf, it will need more regular water and be much less resistant to weeds. It is better habitat and less work if mown just once a year for cleanliness: in late spring just as it begins to green up. Many people use an alternative tool like a trimmer so as to avoid owning a mower for this once-yearly task!

Watering

Existing lawn sprinklers are a great way to establish a new garden. Without, new plantings can be hand-watered or irrigated with a cheap, temporary hardware-store drip system (or one with impact sprinklers on stakes) controlled by a battery-operated timer. Morning is the most ideal time to water but this is not critical.

The unirrigated front yard can be enjoyed as such, but a homeowner should be ready to water in an extreme drought year just once or twice to keep plants healthy. New plants deserve a soaking every 1-2 weeks their first year in the ground. In case of uncertainty about soil moisture, one should just find out by digging a tiny bit. The bird bath water can be freshened up when the hose is nearby!

The back yard is best overhead irrigated using impact sprinkler or pop-up rotors in the lawn. Avoid basic spray nozzles that make a mist that will blow away on the wind or evaporate. Aim to deeply water once every 2 weeks, but most irrigation control boxes are limited to weekly watering. This

landscape does not need or want more than a weekly watering- excessive watering will rot plants or increase weeds and overabundant growth!

The back yard can be watered between once every two weeks to a deep soaking each month from May to September. More than once a week is never, ever necessary. The first control over weeds is controlling water. Native trees won't need winter watering, especially when well mulched.

Cleanup & Trimming

Flowers should not be deadheaded; seed-heads to become silhouettes against snow and provide winter bird forage: those Juncos get a reward for their patience. Perennials which die to the ground should be left standing until spring when they just begin to grow back from the ground. The wood-chipped areas in the design can be used as the receptacle for all yard waste, to "chop and drop" materials where plants stand so as to replenish the mulch naturally, and forever.

Stems are cut into small sections: 2"-8" long pieces will lay flatly and cleanly. New gardens will be slower to break this material down in the beginning, but second and third year landscapes will start to see a healthy soil flora develop that will remarkably and consistently consume all yard waste. Some homeowners will enjoy using power mulchers (now available as quieter electrics) to break down tree leaves or this "chop and drop" material into a neater, uniform consistency that is sent right back into the beds where it becomes quickly hidden by established plants. One can even mulch weeds if they haven't gone to seed.

What seems like more work actually prevents a chain-reaction of onerous tasks like trash bagging, fossil-fueled trash transport and disposal; finally avoiding any green "waste" being lost to the landfill. Especially the dry grass in mulch will be prized by birds building nests, and towhees are born to scrounge for dinner in the leaf-litter.

Contrastingly, gravel areas should be swept, raked or blown clean to preserve a leaner soil for plants that prefer it- those wastes can simply be swept and mulched into the nearby wood chip areas.

The difference between "yard work" and "gardening" is attitude; and gardening is a joy amidst a labor-saving, wildlife-serving, dynamic living community of plants.

Where to Buy Native Plants

Retail

- Harlequin Gardens (Boulder)
- Fort Collins Nursery
- Phalen Gardens (Colorado Springs)
- Plants of the Southwest (Santa Fe)
- Aguafrica Nursery (Santa Fe)
- Chelsea Nursery (Grand Junction)
- Gulley's (Fort Collins)

Seasonal Plant Sales

- Denver Botanic Gardens
- High Plains Environmental Center (Loveland)
- Colorado Native Plant Society

Online/Mail-Order

- WaterwiseGardening.com
- ColdHardyCactus.com
- HighCountryGardens.com
- Sunsclapes.net
- PrairieMoon.com
- PrairieNursery.com
- WesternNativeSeed.com
- SouthwestSeed.com
- GraniteSeed.com