

Xeriscape and Beyond

Tanya Fisher

Colorado Vista Landscape Design, Inc.

(970) 231-3088

coloradovista@comcast.net

www.coloradovista.com



About Me

Landscape Designer

Custom, sustainable and high quality landscape design plans & horticulture consulting

- residential
- community
- commercial landscapes

Northern Colorado region since 2003



Volunteer Work

- ❖ Garden of Hope for the Food Bank for Larimer County
- ❖ Youth Foundation Safe House
- ❖ Care House
- ❖ Workshops and Seminars
 - ❖ Colleges, Garden Clubs, Community Programs
- ❖ City of Fort Collins Water Conservation Programs



Hobbies

Gardening...Really?

- Experimenting with new plants
- Hydroponics
- LED Lighting
- Donate plants to local food banks



Xeriscape: Definition

Xeriscape landscaping, by definition, is landscaping designed specifically for:

- areas that are susceptible to drought.
- properties where water conservation is practiced.

Derived from the Greek word, xeros, meaning "dry," the term, xeriscape means literally "dry landscape."



Seven Principles of Xeriscape

1. Planning and Design

- Direction and guidance for water-saving techniques
 - Pathways, patios and decks
 - Sun/Shade
 - Water availability (slopes, open dry areas)

2. Soil Improvement (Amendment)

- Plants will grow better and use less water
- Compost or manure
 - Open air space in clay soils
 - Add water holding ability in sandy and rocky soils
- Native plants (loosen soil)

Note: Work 1 to 3 inches of organic material 6 inches deep into the top layer



Seven Principles of Xeriscape

3. Efficient Irrigation

- Zone turf areas separately from other plantings
- Drip, spray or bubbler emitters for watering trees, shrubs, flowers and groundcovers.

4. Appropriate Plants (Plant Zones)

- Group together plants with similar light and water requirements



Seven Principles of Xeriscape

5. Mulches

- keeps plant roots cool, prevents soil from crusting, minimizes evaporation and reduces weed growth.
- Organic
 - bark chips, pole peelings or wood grindings,
- Non-organic
 - rocks and gravel



Seven Principles of Xeriscape

6. Turf Alternatives

- Reduce the amount of turf in your landscape
- Native or low-water-use plants
- Patios, decks or mulches can beautify your landscape while saving water.
- Buffalo grass, blue grama grass, turf-type tall fescue and fine fescues



Seven Principles of Xeriscape

7. Maintenance

- Xeriscape will need to be watered, pruned and fertilized, and control.
- similar to a traditional landscape, but it will decrease over time.



I Don't Use Xeric Plants

Because I want or need:

- ❖ lot of flowers and color, not cactus or plants that look like weeds.
- ❖ garden interest in the winter months.
- ❖ aromatic plants.
- ❖ attract birds and butterflies.
- ❖ hedges for screening.
- ❖ to plant annuals.



Irony?

I Cannot Use Xeriscape in My Yard

Because:

- ❖ I need lawn for my children to play.
- ❖ I have to use rock and I hate rock!
- ❖ My yard is already landscaped.



False Expectations of Xeriscape?

- ❖ I don't have to water.
- ❖ I don't have to amend the soil or fertilize.
- ❖ I don't have to prune because I use native plants and they take care of themselves.
- ❖ My xeric and native plants won't die.



False Expectations of Xeriscape?

- ❖ It will only take a year and my plants will be mature.
- ❖ The yard takes care of itself!
- ❖ I will only have to water my lawn once a year.
- ❖ I bought all my plants at the local nursery, so they must be xeric.



Busting the Myths of Xeriscape



Plants for Xeriscape

Appropriate Plant Selection

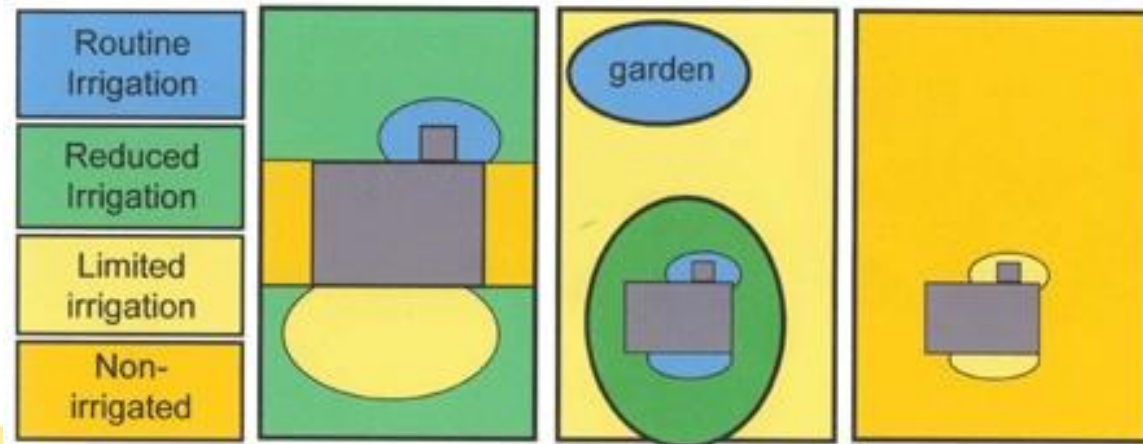
- Xeric plants require less water
- Group plants with similar soil, light and watering requirements.
 - Expands the varieties and types of plants



Hydrozoning

Groups plants with similar water needs.

1. (High) Areas of routine irrigation – watered every 2-4 days.
2. (Medium) Areas of reduced irrigation – watered every 5-14 days.
3. (Low) Areas of limited irrigation – watered during dry spells once plants are established.
4. Non-irrigated areas



Note: Interchanging drippers or emitters on a drip irrigation line to adjust for varying water needs of plants on the same line is not water-wise.



Xeric Plants for Functional and Aesthetic Use

Xeric Plant: Definition

Plants that use very little water

- indigenous or native
- introduced from a similar climatic zone
- advantage of using little nutrients



Using Xeric Plants for Color in the Landscape

Xeric Flowering Perennials

- Pinks, Whites, Lavender, Pastels



CORAL CANYON® Twinspur
Diascia integerrima



CRYSTAL RIVER® Veronica
Veronica 'Reavis'



LAVENDER MIST®
Sun Daisy
Osteospermum sp.

Xeric Flowering Perennials

Red, Yellow, Oranges, Deep Blues

Daylily, Rocket City
Hemerocallis 'Rocket City'



RED MOUNTAIN® Ice Plant
Delosperma dyeri 'Psdold'



Chocolate Flower
Berlandiera lyrata



Grand Mesa
Beardtongue
Penstemon mensarum

Xeric Flowering Deciduous Shrubs



Silver Fountain Butterfly Bush
Buddleia alternifolia 'Argentea'



SPANISH GOLD® Broom
Cytisus purgans

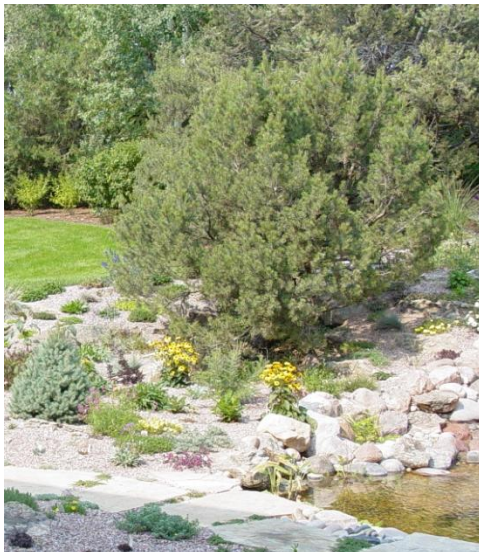


Potentilla fruticosa
'Red Ace'

Xeric Evergreen Trees for Winter Interest



Japanese Garden
Ponderosa Pine
Pinus ponderosa



Pinon Pine
Pinus edulis



Bristlecone pine
Pinus aristata



Rocky Mountain Juniper (*Juniperus scopulorum*).

Rocky Mountain Juniper
Juniperus scopulorum



One-seed juniper
Juniperus monosperma

Xeric Evergreen and Broadleaf Evergreen Shrubs



Desert Holly, *Mahonia fremontii* (sun)
Creeping Grape Holly, *Mahonia Repens*, not shown (shade)



Spanish Gold® Hardy Broom
Cytisus purgans



Mugo Pine
Pinus mugo



Panchito Manzanita (sun)
Arctostaphylos x coloradoensis



Kinnikinnick, Bearberry (shade)
Arctostaphylos uva-ursi

Ornamental Grasses

- Sound and Movement
- Taller the grass, the more water it needs



Blue Avena Grass, Blue Oat Grass
Helictotrichon sempervirens



Blue Fescue, *Festuca ovina glauca*



Gracillimus
Miscanthus sinensis
'Gracillimus'



Korean Feather Reed Grass
Calamagrostis brachytricha



Fountain Grass
Pennisetum alopecuroides

Aromatic Xeric Plants



Woolly thyme, *Thymus pseudolanuginosus*
(ornamental not culinary)



Double Bubble Mint, Wild Hyssop
Agastache canna (smells of aniseed)



Lavender Cotton
Santolina chamecyparissus
(musty, garlic)



Attracting Wildlife

Hummingbirds and butterflies



Russian Hawthorn
Crataegus ambigua



Silver Fountain Butterfly Bush
Buddleia alternifolia 'Argentea'



Double Bubble Mint, Wild Hyssop
Agastache canna (smells of aniseed)



Red Birds in a Tree
Scrophularia macrantha

Repelling Wildlife

Deer to Chipmunks

- No guarantees
- Milky sap, prickles and spines, tough, leathery leaves, toxic



Kinnikinnick, Bearberry (shade)
Arctostaphylos uva-ursi



Russian Hawthorn
Crataegus ambigua
(attracts birds and butterflies)



Avalanche white sun daisy
Osteospermum 'Avalanche'

Xeriscaping and Shade

Fine fescues do well in shade (used in "Shady Blend" grass seed mixes) as well as in poor soil conditions.



Kinnikinnick, Bearberry, *Arctostaphylos uva-ursi*, Can be planted under pine trees.



Purpleleaf Winter Creeper
Euonymus fortunei



Creeping Oregon Grape
Mahonia repens

Coralbells, Alum Root
Heuchera sanguinea



Hedges and Screening



Cheyenne Privet
Ligustrum vulgare (10' x 6')
Deciduous



Wichita Blue Juniper
Juniperus scopulorum 'Wichita Blue'
(10'-15' x 4' - 6')
Evergreen



Xeric Annuals



Tickseed, Calliopsis
Coreopsis tinctoria



Cosmos, Mexican Aster
Cosmos bipinnatus



California Poppy
Eschscholzia californica



Globe Amaranth
Gomphrena Globosa



Annual Mallow
Lavatera trimestris



Moss Rose, Rose Moss, Portulaca
Portulaca grandiflora

Lawn

Uses and Expectations

Practical Uses

- Safe surface for children to play
- Anchor soil against wind and water erosion
- Aesthetic value; bring landscape elements together



Non-Practical Uses

- Slopes and narrow strips
- Shady areas
- Heavy foot traffic

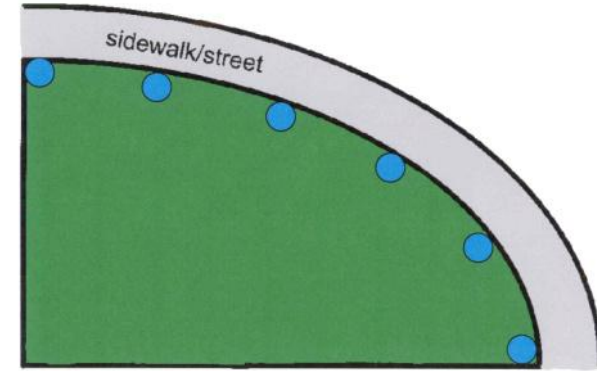
Turf Grass

- Kentucky Blue Grass
 - Tolerates High Traffic
 - Goes dormant
- Blue Grama Grass
 - Short growing season
 - Intolerant of high traffic
- Buffalograss
 - Thins out with excessive foot traffic

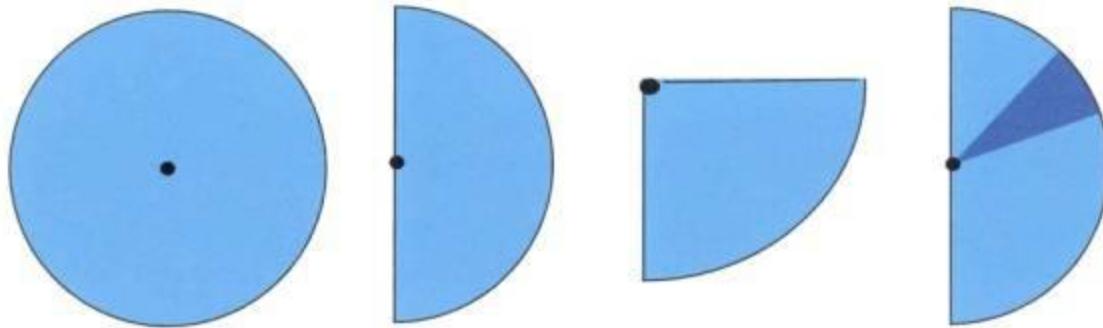
Lawn Design and Irrigation

Avoiding 90 degree angles (sharp corners)

- Prevents watering sidewalks, garden beds, & patios
- Eases mowing and reduces trimming and edging
- Water from the outside in, not the inside out



Sprinkler heads come in full circle, half circle, quarter circles and adjustable arc.



Mulch in the Xeriscape

- Reduce surface evaporation.
- Improve water penetration and air movement.
- Control soil temperature fluctuations.
- Protect shallow-rooted plants from freeze damage.
- Improve soil structure and nutrient availability.
- Reduce weeds



Organic Mulch

Gradually break down and add nutrients to the soil.

- Wood chips
- Chunk bark
- Pole Peelings
- Pine Needles
- Straw

Renew periodically.

Decomposition wood mulches can create nitrogen deficiencies.

- supplement the area with a fertilizer.



Tip: Mulchgard, liquid-bonding agent. www.Mulchgard.com

Inorganic Mulch

Stone-based

- rock
 - cobblestone
 - pea gravel
 - lava rock and
 - crushed rock
- Last longer than organic mulches
 - Formal look
 - Store and radiate heat
 - avoid putting large areas of unshaded rock next to a house.



Tip: Use an air- and water- permeable landscape fabric under the mulch if an additional weed barrier is needed.

Watering Needs of Plants in a Xeriscape

I don't have to water. True or False? **False**

Xeric flowers are rated by their water needs,

- "L" for low or "M" for moderate water requirements.

Garden Centers of Colorado developed "X-rated gardening"

- One "X" is thrifty, requiring about 1" of water per week
- "XXX" has the lowest water needs (1/2" of water every two weeks)



Handouts Available this Evening

Water Needs for Establishing and Maintaining Xeric Plants

Xeric plants

- Not drought tolerant until established
- Water regularly for the first couple of seasons
- Supplemental watering during extreme hot temperatures and drought.
- Xeric plants will die by overwatering.



Tip: Remember Your Hydrozones



Soil Amendment

I don't have to amend the soil or fertilize. True or False? **False**

- 80% of all plant problems begin with soil conditions reducing the plant's vigor
- Compacted soils
- Natives may not need soil amending



Soil Amendment for Existing Landscapes

In existing landscapes, amending the soil may not be practical, consider:

- Selecting plants more tolerant of the soil conditions.
- Space plants further apart to reduce competition for limited soil resources.
- Raised-bed gardening and container gardening.



Soil Test

Analyzing a sample of soil

Test results indicate the

- amount of available soil nutrients
 - Nitrate, nitrogen, phosphorus, potassium, zinc, iron, copper and manganese.

Lack of one of these nutrients could cause stunted growth or yellowing leaves in plants.

Private companies and Colorado State University soil testing laboratory can test soil samples.



Pruning

I don't have to prune because I use native plants and they take care of themselves. True or False? **False**

- Unpruned flowering shrubs become woody with little new growth to support flower bud development.
- Proper pruning and shaping.
- Replace overgrown shrubs with an appropriate smaller plant.



- Helps with some insect or disease problems.
- Increase air circulation reduces the amount of diseases.
- Prune at the appropriate time of the season.

Plant Life Expectancy

My xeric and native shrubs won't die? True or False?
False.

- Not enough water.
- Too much water.
- Plant is naturally short-lived.
- Planted in the wrong micro-climate.
- Stress of disease and pests.



Growth Rate

My xeric plants will be mature the first year. True or False? ***False.***

Some plants such as the Bristlecone Pine are slow-growing. Research the mature growth rate expectancy or ask your local nursery.

Hedging/Screening/Privacy

Overplanting

- High maintenance
- Resale value of your home.
- Overgrown landscaping is an eyesore.



Watering Turf

I only have to water my lawn once. True or False? ***False.***

- A healthy bluegrass or ryegrass lawn 2.25 inches of water per week under dry conditions
- Tall fescue may require as much water as bluegrass to look good.
- Buffalograss and blue grama lawns can remain green for weeks without watering, even during the hottest summer weather.

Note: Shady lawns require less water, you may have to water more in mature landscapes where the roots of many plants compete for water.



Purchasing Xeric Plants

I bought all my plants at a local nursery so they must be xeric. True or False? **False.**

Local nurseries carry xeric, native and non-native plants.

Ask your local nursery staff to show you their xeric plants

Remember...

Group plants into zones of similar water needs



Education and Resources

Websites, Books, Local Workshops and Seminars

www.denverwater.org

www.fcgov.com/utilities/residential/conserve/water-efficiency/xeriscape/plant-selection

www.Coloradowaterwise.org

www.greenco.org

www.allianceforwaterefficiency.org

www.cuwcc.org

www.ext.colostate.edu (fact sheets)

www.plantselect.org

www.planttalk.org

Face-to-Face

Local Nurseries

Local Landscape Designers



Summary

Xeriscape is a water conscious, creative landscape

- new landscape or retrofitting an existing landscape
 - Functionality
 - Aesthetics (Japanese, English, Formal, Informal)

Planting Demonstration Gardens

- Fort Collins
- Trinidad
- Sterling
- Grand Junction



Denver's water conservation hotline at (303) 628-6343 for referrals to Gardens and available brochures.



Thank You!

Questions and Answers

Tanya Fisher, President
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