LANDSCAPING: WATER-WISE WYOMING GARDENS

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Watering restrictions in Wyoming are becoming more the norm than the exception. Many areas in the state are high-elevation deserts, and some areas receive less than 10 inches of precipitation each year. This makes landscape water issues necessities rather than options.

In the landscape there are all sorts of wonderful plant types from annuals to evergreens that do not require much water. For plants that require a bit more irrigation, there are watering systems and mulches available to keep water in the soil where plants need it.

Years ago, Denver Water coined the term “xeriscape” to denote landscaping with low-water-using plant material. (No, it is not pronounced “zeroscape.”) Unfortunately, many people think this means using gravel and cactus, but nothing could be farther from the truth. Others have used the term “water wise.” Either way, there is a definite process involved in landscaping to cut down on irrigation needs.

There are seven steps involved in setting up a water-wise landscape or xeriscape. These steps are, briefly: 1) developing a landscape plan, 2) reducing turf areas, 3) improving the soil, 4) selecting appropriate plants, 5) mulching the soil, 6) irrigating efficiently, and 7) maintaining properly. Always keep in mind that any new perennial plantings will require consistent moisture until they are established (usually two to three years, depending on the plant), especially during the winter.

**STEP 1 — DEVELOPING A LANDSCAPE PLAN.**

Spend some time planning and designing on paper. Analyze the site, taking into account existing structures, other plants, shade, sun, wind exposure, and neighbors. Then decide what areas are needed - turf area for kids, a vegetable garden, a center for entertaining, or a dog zone.
STEP 2 — LIMITING TURF AREAS.

Note that this does not say eliminate turf areas. For areas with little or no foot traffic, consider groundcovers such as carpet bugle (see sidebar). For heavily used areas, consider mixtures of turfgrasses. For areas that may be tough to maintain and mow, consider perennial ornamental grasses. Some alternative turfgrasses are possibilities, depending on the altitude. Perennial flower beds or tree and shrub additions are also appropriate. Even hardscapes such as patios, walks, and decks should be considered.

Keep in mind that turf areas help to cool down the environment, soften the landscape, and provide essential oxygen. Using rock or gravel mulch near a home may result in heating the area. Any savings in water might be offset by air conditioning costs inside.

STEP 3 — SELECTING AND ZONING PLANTS APPROPRIATELY.

Put the right plants in the right places. Group plants with similar water requirements together to make irrigation simpler and more efficient. Look for microclimates around structures. Every yard or landscape will have shady areas that stay moister than south or west-facing zones. In Wyoming there is the potential for windy spots, too. Group low-water-use plants together, those that require moderate watering together in another area, and those plants that require consistent watering and are high water users in yet another spot. Then irrigate each area accordingly.

STEP 4 — IMPROVING THE SOIL.

This is probably the most important step in any landscaping, xeriscaped or otherwise. Before most plants are put in the ground, good-quality organic matter should usually be added. (Exceptions may exist for plants that are native to Wyoming; most of these require little soil improvement if any.) Put a layer about two inches thick on the area to be planted and then till or spade it in to a depth of about six inches. Also, core aerate lawn areas at least once a year. Avoid aerating in
hot, summer months, though, in order to reduce evaporation from newly exposed soil. Core aeration allows better water and air penetration to the grass root systems. Leave the cores on the turf since they will add nutrients and organic matter back to the area as they break down.

**STEP 5 – USING MULCHES.**

This is arguably the second most important step in landscaping. Good-quality organic mulches (bark, straw, etc.) keep moisture in the soil, minimize evaporation, moderate soil temperatures, mitigate freeze/thaw damage, and add organic matter back into the soil as they decompose. They also help prevent weed seeds from germinating. One problem with organic mulches, however, is that they are prone to blowing away in windy areas. Inorganic mulches (gravel, rock, etc.) can also be used but tend to get hot and warm up the surrounding area. The type that should be used (inorganic or organic) depends on the landscape design and the long-term goals for the area.

**STEP 6 – IRRIGATING EFFICIENTLY.**

Note that this does not say “stop watering.” Water according to area and plant type as well as weather patterns. Use drip irrigation or soaker hoses where possible for annuals, perennials, and vegetables. Other types of watering systems should be used for large trees and shrubs as well as turf areas. These can include overhead sprinklers and automatic systems. If the sprinklers are on an automatic-timer system, remember to change the clock according to the weather and season. “Set and forget” is too common and is not appropriate. Whatever system is used, make sure it is functioning properly and is not clogged or split or leaking. Another important point is to irrigate at night or early in the morning to minimize evaporation.

**STEP 7 – MAINTAINING PROPERLY.**

A *no*-maintenance landscape is almost nonexistent, but *low* maintenance is possible, depending on the plant material. Some xeriscape or water-wise gardens may need as much maintenance as a more traditional garden. Such routine tasks as weeding, deadheading, fertilizing, and occasional mowing may still need to be done.
Here are some suggestions for water-wise plant materials from trees to annuals and even a few shade plants.

### Trees

- **Acer ginnala**  
  amur maple  
  deciduous
- **Crataegus crus-galli**  
  cockspur hawthorn  
  deciduous
- **Gymnocladus dioicus**  
  Kentucky coffeetree  
  deciduous
- **Juniperus scopulorum**  
  Rocky Mountain juniper  
  evergreen
- **Pinus aristata**  
  bristlecone pine  
  evergreen
- **Pinus ponderosa**  
  ponderosa pine  
  evergreen
- **Pinus cembroides edulis**  
  pinyon pine  
  evergreen
- **Prunus virginiana**  
  chokecherry  
  deciduous
- **Quercus macrocarpa**  
  bur oak  
  deciduous

### Shrubs

- **Atriplex canescens**  
  four-wing saltbush  
  semi-evergreen
- **Caragana arborescens**  
  peashrub  
  deciduous
- **Caryopteris x clandonensis**  
  blue mist spirea  
  deciduous
- **Ceratoides lanata**  
  winterfat  
  deciduous
  
  *Krascheninnikovia lanata*
  
  *Erotia lanata*
- **Cercocarpus ledifolius**  
  mountain mahogany  
  deciduous
- **Cotoneaster apiculatus**  
  cranberry cotoneaster  
  evergreen
- **Holodiscus dumosus**  
  rock spiraea  
  deciduous
- **Juniperus chinensis**  
  Chinese juniper  
  evergreen
- **Juniperus communis**  
  common juniper  
  evergreen
- **Juniperus horizontalis**  
  spreading juniper  
  evergreen
- **Juniperus sabina**  
  savin juniper  
  evergreen
- **Potentilla fruticosa**  
  cinquefoil  
  deciduous
  
  *Pentaphylloides floribunda*
- **Rhamnus cathartica**  
  common buckthorn  
  deciduous
- **Rosa rugosa**  
  rugosa rose, ramanas rose  
  deciduous
- **Symphoricarpos alba**  
  snowberry  
  deciduous
Perennials

Achillea sp.  
yarrow  
Achillea sp.  

Asclepias tuberosa  
butterfly weed  
Asclepias tuberosa  

Callirhoe involucrata  
wine cup  
Callirhoe involucrata  

Centranthus ruber  
valerian  
Centranthus ruber  

Eriogonum umbellatum  
sulfur flower  
Eriogonum umbellatum  

Gaillardia x grandiflora  
blanket flower  
Gaillardia x grandiflora  

Hemerocallis sp.  
daylily  
Hemerocallis sp.  

Nepeta x faassenii  
catmint  
Nepeta x faassenii  

Oenothera missouriensis  
evening primrose  
Oenothera missouriensis  

Perovskia atriplicifolia  
Russian sage  
Perovskia atriplicifolia  

Penstemon (some species)  
beardtongue  
Penstemon (some species)  

Salvia (many species)  
sage  
Salvia (many species)  

Sedum sp.  
stonecrop  
Sedum sp.  

Tanacetum densum  
partridge feather  
Tanacetum densum  

Vines

Lonicera (some species)  
honeysuckle vine  
Lonicera (some species)  

Parthenocissus quinquefolia  
Virginia creeper  
Parthenocissus quinquefolia  

Polygonum aubertii  
silver lace vine  
Polygonum aubertii  

Groundcovers

Antennaria dioica  
pussytoes  
Antennaria dioica  

Cerastium tomentosum  
snow-in-summer  
Cerastium tomentosum  

Polygonum affine  
fleece flower  
Polygonum affine  

Sedum (many species)  
stonecrop  
Sedum (many species)  

Sempervivum sp.  
hens and chicks  
Sempervivum sp.  

Thymus pseudolanuginosus  
woolly thyme  
Thymus pseudolanuginosus  

Veronica pectinata  
woolly speedwell  
Veronica pectinata  

### Grasses

<table>
<thead>
<tr>
<th>Species</th>
<th>Type</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Agropyron cristatum</em></td>
<td>crested wheatgrass</td>
<td>bunch turf grass</td>
</tr>
<tr>
<td><em>Bouteloua gracilis</em></td>
<td>blue grama grass</td>
<td>clump ornamental, turf</td>
</tr>
<tr>
<td><em>Buchloe dactyloides</em></td>
<td>buffalograss</td>
<td>turf, below 6,500 feet</td>
</tr>
<tr>
<td><em>Calamagrostis acutiflora</em></td>
<td>feather reed grass</td>
<td>ornamental</td>
</tr>
<tr>
<td><em>Festuca arundinacea</em></td>
<td>tall fescue</td>
<td>turf grass</td>
</tr>
<tr>
<td><em>Festuca ovina glauca</em></td>
<td>blue fescue</td>
<td>ornamental</td>
</tr>
<tr>
<td><em>Helictotrichon sempervirens</em></td>
<td>blue oat grass</td>
<td>ornamental</td>
</tr>
<tr>
<td><em>Lolium perenne</em></td>
<td>perennial ryegrass</td>
<td>turf grass</td>
</tr>
<tr>
<td><em>Oryzopsis hymenoides</em></td>
<td>Indian rice grass</td>
<td>ornamental</td>
</tr>
</tbody>
</table>

### Annuals

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</thead>
<tbody>
<tr>
<td><em>Coreopsis tinctoria</em></td>
<td>tickseed</td>
</tr>
<tr>
<td><em>Eschscholzia californica</em></td>
<td>California poppy</td>
</tr>
<tr>
<td><em>Gaillardia pulchella</em></td>
<td>blanket flower</td>
</tr>
<tr>
<td><em>Gazania (several species)</em></td>
<td>gazania</td>
</tr>
<tr>
<td><em>Gomphrena globosa</em></td>
<td>globe amaranth</td>
</tr>
<tr>
<td><em>Lavatera trimestris</em></td>
<td>annual mallow</td>
</tr>
<tr>
<td><em>Pennisetum setaceum rubrum</em></td>
<td>purple fountain grass</td>
</tr>
<tr>
<td><em>Portulaca grandiflora</em></td>
<td>moss rose</td>
</tr>
<tr>
<td><em>Portulaca oleracea</em></td>
<td>purslane</td>
</tr>
<tr>
<td><em>Sanvitalia procumbens</em></td>
<td>creeping zinnia</td>
</tr>
<tr>
<td><em>Zinnia angustifolia</em></td>
<td>narrowleaf zinnia</td>
</tr>
</tbody>
</table>

### Shade plants

<table>
<thead>
<tr>
<th>Species</th>
<th>Type</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Aconitum</em></td>
<td>monkshood</td>
<td>perennial</td>
</tr>
<tr>
<td><em>Arctostaphylos uva-ursi</em></td>
<td>kinnikinnick, bearberry</td>
<td>evergreen shrub</td>
</tr>
<tr>
<td><em>Heuchera sanguinea</em></td>
<td>coral bells</td>
<td>perennial</td>
</tr>
<tr>
<td><em>Mahonia repens</em></td>
<td>creeping grape holly</td>
<td>evergreen</td>
</tr>
<tr>
<td><em>Symphoricarpos x chenaultii</em></td>
<td>chenault coral berry</td>
<td>deciduous</td>
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These other University of Wyoming resources are available on the World Wide Web at www.uwyo.edu/ces/ceshome/:


