

# WESTERN BEST PRACTICES

The Front Range along the Colorado Rockies, as well as the Intermountain Western United States, has a unique climate. Successful landscape design in our region demands specific horticultural best practices that are unique to geographic and climate conditions. Using this guide can help reduce costs by conserving water and providing higher rates of planting success.

Sustainable landscape design provides a sense of place by using the design principle right plant, right place. Sustainable design does not mean "zero-scape" or desert-like plantings. Waterwise plantings can be lush, colorful and full of texture.

<b>IRRIGATION RECOMMENDATIONS</b> Irrigation recommendations serve as a guide. Temperature, soil conditions, precipitation, cloud coverage, humidity, plant health and establishment are all variables that must be considered. When in doubt, feel the soil as deep as 1-2" below the surface. If the soil is completely dry, water.		
<b>WATERING GUIDE</b>		
<b>Water Designation</b>	<b>Establishment Period</b>	<b>Post Establishment</b>
Moderate	2" per month	Natural precipitation + irrigation necessary to equal total of 1-2"/month
Dry	1" per month	Natural precipitation + irrigation necessary to equal total of 1"/month
Xeric	1" per month	Irrigation during drought

**\*Trees require regular long-term irrigation.**

<b>RECOMMENDED PLANT SIZES AT INSTALLATION</b> It is important to reduce stress to plants. Less stress leads to higher success rates in establishment. While we cannot control environmental stressors like aridity, temperature and UV, we can control plant installation size.	
Perennials	1 quart
Shrubs	1 gallon
Trees	1.5" caliper

1. Small plants allow roots to establish quickly and therein can significantly improve plant survival. Plants that establish strong root systems will promptly establish new growth in the form of shoots, spread and coverage.
2. Large plants will stress more, i.e. lose water due to our arid climate and the sun's UV intensity. The shoots and leaves wilt and suffer because the roots are not able to quickly establish to support existing photosynthesizing materials.
3. When ball and burlapped plants are harvested, a portion of the roots are left behind. Smaller caliper trees lose less roots during harvesting which can result in better survival rates. Remove as much burlap as possible and cut away the wire basket.



## SOILS AND MULCH: HOW TO PREPARE LOW WATER PLANTING AREA

### Horticulture Best Practices for the Western U.S.: Provide well-drained soil

Many plants that thrive in our climate prefer lean soil and good drainage as opposed to rich, organic soils. Inorganic soil amendments are ideal for many xeric, native and other plants that thrive on the Front Range.

- Remove existing turf/vegetation and mulch from planting area.
- Apply 3" of inorganic soil amendment (sized ¼" and smaller, for example "squeegee" rock or crushed granite).
- As you install the plants, amend the backfill with 50% inorganic soil amendment (squeegee).
- Compost can be used for non-xeric plants along with inorganic soil amendment.
- After planting, add up to 1-2" squeegee mulch as needed.

## SOILS AND MULCH: PLANTING UNDER ESTABLISHED TREES

Do not disturb existing tree roots. Amend soil for individual plants as you plant. Amend the backfill with 50% inorganic soil amendment (squeegee). Place plants so as not to disturb existing root system. Apply very **fine wood mulch (1" sized organic particles and smaller)**.

## SEEDING: KEYS FACTORS FOR SUCCESSFUL SEEDING ALONG THE FRONT RANGE

### Timing

#### Warm Season Grasses: Seed in Mid-Summer to Early Fall

The warm earth (temperature above 70 F) will stimulate germination in warm season grasses.

### Germination & Establishment

Seeds require consistent moisture, but not overly wet soils to germinate. Exchange of gases is also essential for rapid and uniform germination. Soils over saturated with water may prevent oxygen exchange, which in turn will limit or prevent germination.

1. **Remove existing plant material or turf.** This can be done mechanically. If using herbicide, wait a minimum of 2 weeks after application before seeding.
2. **Inorganic soil amendment is NOT required.** If the soil has a high clay content or is poor condition top dress ½ to 1" of garden topsoil or compost.
3. **Seed area (by hand, spreader or hydroseed). Ensure seed has good contact with soil. Rake or harrow the area so that seed has contact with the soil.** Covering seeded area with too much soil, mulch and straw will often inhibit germination. You can apply an inert spreading agent for even application, such as sawdust, rice hulls or sand.
4. **Water daily for 2 weeks or until seedlings emerge. Seeds require consistent moisture during the first 2 weeks of germination** but should not be left in wet soil. This may require watering 2 times a day in short intervals (10-20 minutes). Avoid watering during the heat of the day. Weather conditions will dictate frequency.
5. **After seedlings emerge, continue to water one to two times a week during first growing season.** Weather conditions will dictate frequency. When in doubt, feel the soil to determine if it is dry or moist. Use your hands to feel at least 1" deep into the soil. If it is moist, do not water. Often, overwatering is the cause of plant failure.
6. **After establishment (the next growing season), reduce watering** to once a week or less depending on weather conditions and plant palette.
7. **Weed control: Mechanical weeding or spot spraying is recommended.** No herbicides should be applied during germination and establishment. Wait until the seedlings are fairly well established before mechanically removing weeds.

### Fall Seeding

Seeds can require specific criteria and conditions to break dormancy. Factors include light/exposure, temperature (soil and stratification) and physical intervention (scarification). The winter months allow for cold stratification to occur, the opportunity for seed scarification via birds and animals and the early spring provides moisture (in the form of snow and early spring melt). Once the risk of freezing temperatures is past the following spring, follow germination and establishment practices listed above.

