
Introduction

This document is written for people who want to add mulch to their landscape, but need some background information to get started on the right foot. Maybe you are removing a section of grass and installing lower water-use plants in its place, or maybe you are rejuvenating a neglected landscape to create a nicer setting for your home. Perhaps you are seeking ways to reduce the maintenance in your yard.

Whatever the application, the purpose of this document is to help you 1) choose appropriate mulch products for your landscape, 2) install them in an effective manner, and 3) maintain them so they provide lasting benefits. With a quality mulch job completed, your landscape will add significant value to your home, require less maintenance, and be much more enjoyable.



Quality landscaping adds significant value to a home.

Why did I write a whole document on mulching? Isn't it really simple? Yes, mulching is very simple if you know what you're doing. The truth is it's not that hard to learn if you get good information up front. I truly believe that mulching *is* a task that most homeowners can complete with excellence—given a reasonable amount of knowledge, time, investment, and effort. As someone said a long time ago, knowledge is power.

However, if you go into a landscape project without solid advice, there are some places where things can go

seriously wrong. Most people can look at a mulched area with weeds, dead plants, and ripped landscape fabric flapping in the wind, and recognize that whatever method the landscaper used simply did not work. But, they aren't quite sure how to install mulch so the job lasts.

After you finish reading this document, you'll have the information you need to mulch sections of your yard in a way that makes the best use of your time, effort, and money. Landscaping is expensive and can be hard work. Make sure you do it right the first time.

If done well, mulch will ensure your plants are healthier, your landscape is easier to maintain, and your yard looks more refined. It will enhance the value of your home and make your landscape more pleasing and usable. Let's get started!

The Science Behind the Magic

What is mulch?

The term “mulch” refers to any material placed on the soil surface to protect the soil. Think of it as a blanket for your landscape plants. The purpose of mulch is to enhance plant growth and reduce landscape maintenance. You can use the term “mulch” to refer to any material applied to the soil surface (not mixed into the soil).

There are lots of products used as mulches in the Mountain States, but the most common materials either belong to the wood/bark products family or the gravel/rock family. Throughout this document, I’ll make many generalizations about wood/bark vs. gravel/rock. The specific mulch products that belong in each family often share similar characteristics.

Why use it?

Mulch is one of the best ways to enhance plant growth in your landscape. It’s a simple technique that creates a lot of benefits. But before you jump into action, it’s important to understand why successful landscapers use mulch. This understanding will help you choose the materials best suited to the characteristics of your property.

Preserves moisture in the soil. Mulch prevents water from evaporating from the soil surface. By using mulch, you’ll help the soil stay more moist. In the dry climates of the Mountain States, this is very important for your landscape plants. By using mulch, you can water your landscape less often. Watering less often will help you save money on your water bill in the long term.

Controls weeds. Mulch keeps new weeds from germinating. Most weed seeds need to be exposed to light in order to grow. Mulch keeps the soil surface dark, which prevents new weeds from growing. It also prevents weed seeds from ever reaching the soil surface, which keeps them from finding a hospitable place to germinate.

Stabilizes soil temperature. Mulch keeps soil temperature more stable compared to bare soil. The benefit is that plant roots don’t get as hot or as cold. There can be wild temperature swings in the Intermountain West, which can be tough on plants. Mulch helps plants deal with these swings by moderating the extremes for roots.

Improves soil. Wood/bark mulch breaks down over time. As it decomposes, the residual materials wash down into the soil. This material helps the soil retain more water and drain better, plus it slowly feeds your plants. As these qualities develop in the soil, the soil becomes more favorable for healthy plant roots, so the whole plant grows better. It’s common to discover that areas that have been mulched for 10-20 years have excellent soil underneath the mulch. Excellent soil grows beautiful plants. However, rock mulch doesn’t provide this benefit since it doesn’t break down over time.

Reduces soil erosion. The western United States is windy. It also experiences periodic downpours. Thus, soil erosion is a major problem. Mulch protects the soil surface from wind erosion. It also deflects the force of raindrops. This helps the soil stay in place rather than blowing or washing away to Kansas. We need our soil here. Kansas already has plenty.

Enhances the soil’s ability to absorb water. If the soil can’t absorb water droplets from rain or sprinklers, you lose it to runoff. Mulch intercepts powerful water droplets, then drips the water slowly to the soil surface. The result is that more water soaks into the soil rather than running down the gutter. Plants can then use it.

Protects tree trunks. When grass grows right up the base of a tree, it’s tempting to cut it with a lawn mower or string trimmer. Often, the bark ends up injured, which can damage or even kill the tree. By keeping a grass-free mulched area at the base of a tree, it keeps machinery away from bark. It’s a simple and effective way to

protect both newly planted and mature trees, which are the most valuable assets in most landscapes.

Where should mulch be used?

It's wise to use mulch in any area of the landscape where there is space between individual plants. Where there is space between plants, there is the potential for bare soil. Bare soil should be covered with mulch.

Common places to use mulch include underneath trees, around the base of shrubs, in flower beds, vegetable gardens, and mixed borders. A mixed border is a garden bed that consists of a mixture of trees, shrubs, ornamental grasses, flowers, and groundcovers.

In some areas of the landscape, you may want the plants to grow so they almost touch each other. Eventually, they should create a solid cover of vegetation. In these areas, it's not necessary to use mulch because the leaves of the plants will cover the soil. Mulch just gets in the way. Common examples include lawn areas, naturalized native grass areas, and areas of solid groundcover.



Use mulch in the flower bed where there is space between plants, but not in the lawn where there is a solid cover of grass blades.

Commonly Used Mulches in the semi-arid Western United States

Wood/Bark Mulches

- ▶ wood chips
- ▶ bark nuggets
- ▶ shredded bark
- ▶ shredded wood
- ▶ shredded bark & wood (“gorilla hair”)
- ▶ mini-bark nuggets
- ▶ redwood mulch
- ▶ recycled wood
- ▶ dyed wood
- ▶ hardwood
- ▶ pine bark
- ▶ playground wood chips
- ▶ cedar mulch

Rock/Gravel Mulches

- ▶ decorative rock
- ▶ decorative gravel
- ▶ pea gravel
- ▶ crushed rock
- ▶ lava rock
- ▶ pebbles
- ▶ cobble
- ▶ granite gravel
- ▶ river rock
- ▶ quartz gravel

Specialty Mulches

- ▶ rubber mulch*
- ▶ recycled rubber mulch*
- ▶ cocoa bean hulls
- ▶ pine straw
- ▶ pine needles

Vegetable Garden Mulches

- ▶ grass clippings from a pesticide-free lawn
- ▶ weed-free straw
- ▶ leaves

* Not recommended, see Frequently Asked Questions

Mulch in the Vegetable Garden

Mulching your vegetables is a unique case worthy of some reflection. Most vegetable gardeners use either weed-free straw or untreated grass clippings from their lawn as mulch.

Both of these mulches are excellent options when used wisely. If you're growing vegetables from seed, wait until the seedlings are several inches high before mulching. If you're using transplants, you can mulch immediately after planting.

Be aware that mulch keeps the soil cooler than bare soil. Use this fact to your advantage to get the biggest harvest possible. Mulch cool season vegetables throughout the growing season. Since they grow best in cool soil, you'll get better quality produce when they are mulched from early growth all the way to harvest.

With warm season vegetables, leave the soil bare, then mulch when they start to set fruit. You know they have set fruit when you see the little immature vegetables starting to form. Keep in mind these plants grow more quickly when the soil is warm. If you mulch too early, and thereby keep the soil cool, their growth will be delayed. You might not get any produce before the first fall frost if their growth is set back.

Now that we've covered the definition of mulch, its benefits, and where to use it, let's move on to design.

Cool Season Vegetables

beets
bok choy
broccoli
peas
Brussels sprouts
cabbage
carrots
collards
kohlrabi
lettuce
parsnips
radish
spinach
Swiss chard
turnips

Warm Season Vegetables

cantaloupe
corn
cucumber
eggplant
green beans
melons
peppers
pumpkin
summer squash
tomatillos
tomatoes
winter squash
zucchini

Design Considerations

Before you invest time, energy, and money mulching your yard, it's important to think through a couple of things. First, you'll want to make sure the mulch you choose blends well with your landscape design. Second, you'll want to use mulch to define different areas of your yard. Third, you'll want to make sure you're using the right mulch in the right place to achieve long-lasting results and minimize your long-term maintenance.

Mulch should not be a focal point

A pleasing landscape design uses plants, garden art, and construction features as the focal points. Focal points are the items that draw your attention when you first glance at someone's yard. Try looking at one of your neighbor's yards that you like. What's the first thing you notice? I'll bet it's not the mulch.

It can be great fun to look at yards in your neighborhood and figure out good and not-so-good focal points. If this concept doesn't seem obvious to you at first, try squinting your eyes a little. By blurring your vision, the focal point will become more clear.

Pleasing landscape designs do not use mulch as a focal point. In other words, ultimately, you shouldn't notice the mulch very much. It's hard to think of mulch this way when you spend your hard-earned money on it. But trust me on this one; it should serve as a background to the rest of your well-planned landscape elements. Think of mulch as a supporting cast member, who plays a critical role in making other landscape elements look good.



With so few plants, you notice the mulch.

For some people who are not familiar with the fundamentals of landscape design, mulch can become the dominant feature of the landscape. I'm sure you've seen a landscape without any plants, completely covered by patterns of different colored rock. Although curious, not many people describe "mulch-scapes" as attractive, valuable, or welcoming. It can be hard to let go of this landscaping approach, but trust me, there's a much better way to create a low-maintenance landscape.

Quality landscapes include plants

In order for a landscape to be valuable and functional, it needs to include plants. This may seem obvious, but judging by the number of plant-free landscapes, it's not. Strive to cover at least half of your yard with healthy, cared-for plants. Three-fourths coverage is better. If you can achieve this, your yard will be usable, pleasing and add value to your home. This is what yards are for.



Mulch plays a supporting role in this landscape, supporting healthy plants by enhancing their growth.

Please don't think that you have to create a botanic garden in your yard. In fact, it's better if you limit your plant choices somewhat. If you have too many different kinds of plants, the landscape can appear cluttered and disorganized. Consult with local experts and nursery professionals to help you make smart selections. There

are many low-maintenance, regionally-adapted plants that can be incredible assets to your home's exterior.

Some people don't want to hassle with plants no matter what. As a horticulturist, I am biased towards including at least some plants. It's my opinion that homeowners who don't want to care for any plants should consider either hiring someone to care for their landscape or moving to a home with little or no yard. There are several new developments in the western United States that feature very nice homes with a landscape that consists of only a 3 foot planted border around the home. They usually have well-maintained parks and open spaces in the communities for everyone to use. Patio homes are also a good option.

The bottom line is to think about mulching as creating an essential background for your plants. Rather than choosing the flashiest mulch, choose a mulch that you ultimately won't notice much. You'll be much happier in the long run.

Break up the space

Another important aspect of landscape design is to break up the space. Drive around your area until you find a landscape that you like. Take a picture or sit in your car and study the landscape for a few minutes. (Not too long, or people will wonder what you're doing.) One thing you may notice is the landscape might be divided into different areas. There may be lawn areas, flower beds, pathways, walls, boulders, or seating areas.

We break up the space inside our homes all the time. Most homes are built with interior walls. We divide the space based on its function. We have bedrooms for sleeping and storage, a kitchen for cooking, and a living room for relaxing. Use this same mind-set outside your home.

Use different mulches in different areas. Since it's important to break up the space, don't cover your entire yard with a continuous swath of one type of mulch. That makes the landscape too boring. Sometimes I talk with homeowners who want to remove all of their lawn and



This simple yard was effectively divided into smaller spaces by the pathway, berm and retaining wall. Note the use of rock and wood mulch repeated in different areas of the yard.

install a sea of wood chips or rock over their entire yard. Bad idea. If you take this approach, your yard will seem like it only supports one function, like a house with only one giant room inside of it. It will lack any organization and will feel confusing and bizarre.

Dividing the space into areas with different functions makes the landscape seem more accessible and interesting. Think about how you might divide your yard into areas with distinct uses. A typical front yard might support four functions: arriving at the front door, passage to the back yard, curb appeal, and serving as an attractive setting for the home. A backyard might support four or five functions: play area, outdoor dining area, relaxation, storage, and vegetable gardening.

What does all this have to do with mulch? By figuring out which areas of your landscape are serving which function, it will help you determine what types of plantings and surfaces to use. By having this clearly defined in your mind, you'll be able to make a wise choice on mulch types for each area. It will also give you a reason to use a few different mulches, thereby breaking up the space and creating a pleasing landscape design.

As you begin to define different areas in your landscape, be sure not to use too many different kinds of mulch. Limit yourself to two, or if you have a large yard, maybe three mulch types in a front or back yard. If you use too many different products, the landscape will look too hectic and jumbled. Be sure to repeat the use of each mulch in different areas of your yard to give your landscape a sense of unity.

A few words on rock mulch

Rock mulch can be difficult to undo once it's installed. Because of this fact, it's important to develop a thorough plan. If you're thinking of using rock mulch, consider these guidelines during the planning stage.

Make sure you include plants in rock mulch.

Nothing is more unusable than unplanted rock mulch. It's extremely hot in summer due to the heat it reradiates after baking in the sun all day. It's also a terrible surface for walking. Anyone who has tripped in rock mulch will testify to this truth.



An entire landscape of unplanted rock mulch becomes unusable space.

One of my friends rocked nearly her entire back yard before she and her husband had kids. It had very few plants in it. Once her kids grew to be preschoolers, she wanted to let them play in the yard. She realized that the rock mulch areas were totally unusable. The estimate she received to remove the rock was about \$1 per square foot. The expense was too much for them to afford, so they had to live with it. Let's face it. No one wants to have a barbecue in rock mulch.

By saying all of this, I don't mean that you should never use rock mulch in your landscape. Rock mulch can be a wise addition to a landscape in the right situation. Just don't cover your landscape in unplanted rock mulch. Don't think, "I'll take out my grass and rock my yard, so I'll never have to water or do any yard work." It simply doesn't work out like that. You have to be more creative.

If you choose rock mulch for some areas of your yard, keep in mind there are plenty of plants that can successfully grow in rock mulch in the Intermountain West. Look for plants that are adapted to hot, dry climates. Desert Southwest native plants are a great place to start. Some of them are incredibly beautiful. Plants native to the Rocky Mountain foothills, the Colorado Basin, and low-water, xeric plants from other parts of the world with similar climates are also great options.

If you're going to use rock mulch, keep in mind the following principle. Don't use just one size of rock. Instead, use a variety of sizes to make it look more natural. Next time you're out in nature, notice how the ground is covered by a variety of rock sizes virtually anywhere you look. We can't totally imitate this look in the built landscape, but by using more than one size rock, we can make our landscapes less artificial looking.



A variety of rock sizes makes rock mulch look more natural than using just one size of rock.

Here's another consideration. In the Rocky Mountain West, our views often include natural areas. By incorporating mulches that blend with the natural surroundings, our landscape will fit with the environment better. We'll intuitively know that we're in the West rather than a random suburban development in Florida.

To create more natural rock areas, use larger boulders as focal points, smaller rock for most of the mulch, and sprinkle in different sizes of medium size rock. This combination of sizes will create a natural look.

The Garden at Kendrick Lake in Lakewood, Colorado, is a gorgeous public garden where they've done this very successfully. They've used a variety of rock and rock mulch products to create a fitting background for the landscape plants. If you're considering making a big investment of rock in your landscape, I would highly recommend a visit to get ideas.

Last words on design

Here are just a few last ideas on design considerations that affect your mulch choices.

Use rock in any area of your landscape where you expect rapidly moving water. Wood chips will end up in the street or storm drain. Remember back to the last downpour at your house. Do you remember how the water drained off your property? Think about creating a drainage swale or dry streambed in the low points of drainage pathways. A drainage swale is simply a shallow-sided channel that conveys water to the street. They are often lined with medium to large cobble. For most homes constructed in the past 20-30 years, the drainage area is usually along the side property lines. That's why you see so many rock swales between homes in newer neighborhoods.

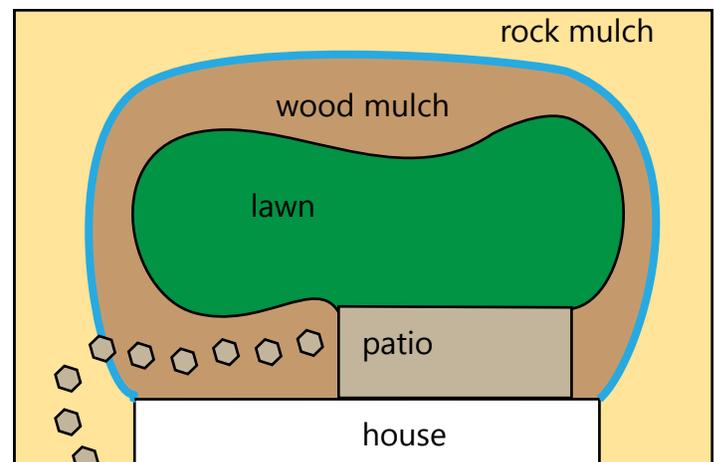
If you live in a neighborhood along the wildland-urban interface, you have to **think about fire risk when making mulch decisions.** Most fire departments recommend that you use rock mulch (not wood/bark mulch, rubber mulch, or pine needles) within 5 feet of

your home's foundation. Even though wood mulch and pine needles are combustible, you may use them under trees and shrubs farther away from your home. Just use it in "islands" separated by at least 10 feet of rock or mowed grass. Be sure to check your city ordinances, homeowners' association guidelines, and fire department recommendations before making any final decisions.

Make sure you plan to use barriers to keep mulch in bounds. This is important because mulch inevitably moves around, especially at the edges.

In most cases, the barrier will be an edging of some sort. There are many edging materials, which I'll discuss more in the Installation section of this guide. You don't need to use edging along sidewalks and driveways. The concrete serves as the edging or barrier.

If you're going to use two different mulches in your front or back yard, you will need to be proactive about minimizing the mixing between the two. Anywhere two materials meet, they will mix. This is a natural occurrence, and one you can deal with, provided you can undo the mixing relatively easily. The best way to prevent mixing is to reduce the length where the two mulches meet.



A long border between two mulches (represented by the blue line) requires significant maintenance.

The picture above illustrates what not to do. Don't put a ring of wood/bark mulch around a lawn area, surrounded by a ring of rock. Besides looking like a target, this