

1<sup>ST</sup> EDITION

# D.I.Y. LAWN CONVERSION GUIDE

A STEP-BY-STEP GUIDE FOR REMOVING YOUR  
LAWN AND REPLACING IT WITH A BEAUTIFUL  
WATER-EFFICIENT LANDSCAPE



colorado  
waterwise



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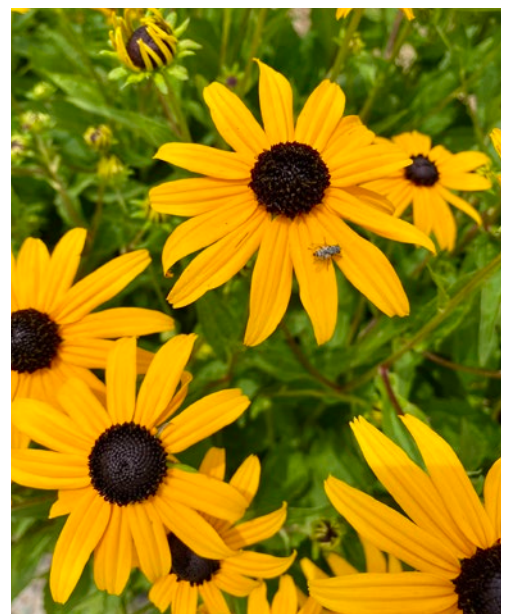
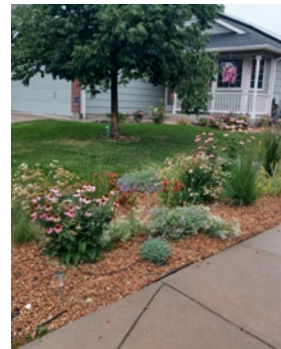
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# INTRODUCTION

**Whether you call it native, water-wise, Xeriscape, Coloroscape or Colorado-friendly, we are all talking about “water-wise landscaping” and its ample benefits for Colorado landscapes. Plants that require less water and are well-suited to Colorado’s semi-arid climate are a beautiful replacement for thirsty, non-native lawns. Water-wise landscapes offer tremendous environmental benefits while looking stunning and thriving long-term.**

Rather than pushing a lawn mower, your gardening time will be spent pruning and using hand tools as you admire the flourishing flowers and vibrant greenery of your water-wise landscape. These amazing low-water use plants are not only resilient to harsh climates like our Colorado winters; they create vital habitats for wildlife of all shapes and sizes.

Your yard will come to life year-round with the various types of flowers blooming throughout the seasons. It is truly a sight to behold as butterflies and hummingbirds float through your yard. Water-wise landscapes can also help homeowners save on monthly utility bills once the plants are well-established.

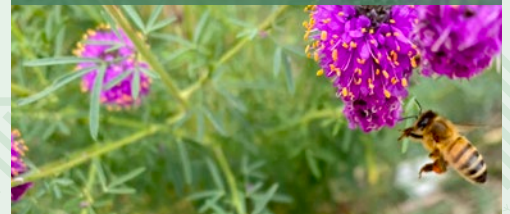
This D.I.Y. Lawn Conversion Guide is designed to walk you through the process of removing your lawn and installing water-efficient landscaping. You’ll also find pro tips from water-wise landscaping experts, links to gardening resources, customizable landscape design templates and financial incentives to help you complete your project.

## TOP 3 BENEFITS OF WATER-WISE PLANTS:

### BEAUTIFY YOUR HOME LANDSCAPE



### PROTECT THE ENVIRONMENT



### SAVE WATER & MONEY THROUGH LESS WATERING



### PRO TIP:

Check your local water provider’s website for water wise landscaping and irrigation rebates/incentives.





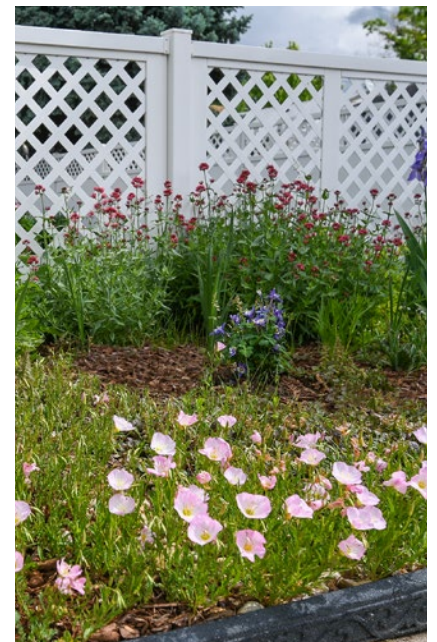
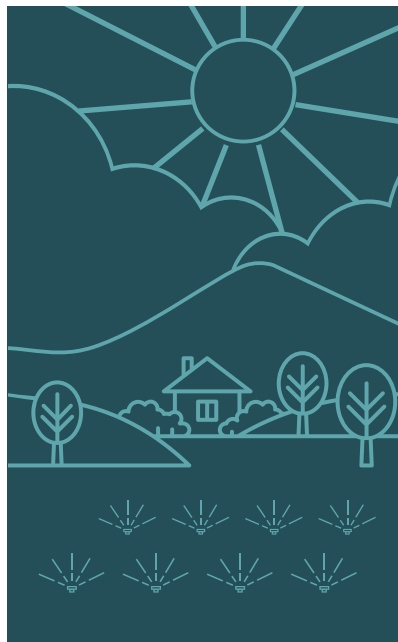
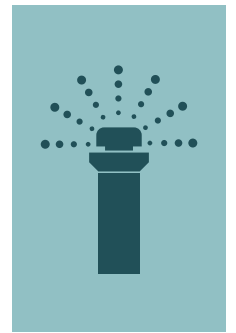
# WATER SAVINGS

## HOW MUCH WATER WILL I SAVE?

**Water savings is one of the most important reasons to convert your lawn to a water-wise landscape.**

Estimates suggest that the water savings generated from a water-wise landscape conversion project is 12 gallons per square foot. For a 500 square foot area, that's 6,000 gallons of water per year.

Looking at it another way, replacing your lawn with a water-wise landscape can reduce your outdoor water use by up to 60% when properly designed and maintained (Resource Central, 2023). This water savings can help homeowners reduce their water bills while simultaneously reducing polluted water runoff, conserving precious natural resources and improving drought resilience.





# D.I.Y. VS HIRE A PRO

One of the first questions you'll want to ask yourself is whether you're planning to tackle this project on your own or hire a professional.

There are pros and cons to both approaches, and your decision may come down to important factors like your time/availability, budget and willingness to take on the job. This guide will help you understand the process and determine which aspects you are able to take on.



## PRO TIPS:

CHECK THE ASSOCIATED  
LANDSCAPE CONTRACTORS  
OF COLORADO (ALCC)



ALCC.COM

"FIND A LANDSCAPE  
PROFESSIONAL" TAB



FOR CERTIFIED  
LANDSCAPE  
CONTRACTORS IN  
YOUR AREA.

ASK YOUR LOCAL  
WATER PROVIDER  
IF THEY HAVE A  
LIST OF APPROVED  
LANDSCAPE  
CONTRACTORS.



ASK FRIENDS AND NEIGHBORS FOR REFERENCES.



# HIRING A PRO

If you decide to hire a professional landscaper, we recommend following these steps:



## GET MULTIPLE BIDS (AT LEAST THREE)

### RATE THEM ON THESE KEY FACTORS:

- **Experience:** Have they done a job like this before? Are they familiar with turf removal procedures per your city's rules?
- **Process:** What is their process and timeline for completing this work?
- **Price:** How much will it cost? Make sure they itemize your invoice with the prices of each material used, any demolition of existing landscape, as well as labor.

## ASK ALL CONTRACTORS THE SAME QUESTIONS SO YOU CAN COMPARE THEM EQUALLY.



- Find out if they will handle the design work or just install.
- Get their suggestions on water-wise plants given the site conditions.
- Ask if they will provide all services or subcontract some of the work.
- Find out if they have received professional training on water efficient irrigation system installation and/or water-wise landscaping.



## ASK FOR REFERENCES AND PHOTOS OF PROJECTS WITH A SIMILAR SIZE AND SCOPE OF WORK.

- When possible, speak with the references directly.
- Ask if you can come by to view their landscape.



## DISCUSS YOUR BUDGET UPFRONT

IF YOU ARE UNSURE WHAT TO BUDGET, ANTICIPATE  
ABOUT 5-10% OF YOUR HOME VALUE.





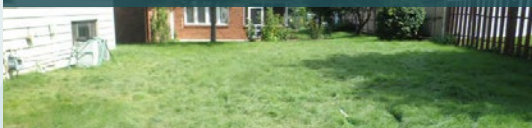
# PROJECT COSTS

**You may be wondering how much your new water-wise landscape is going to cost.**

Different landscaping and irrigation materials (and related installation costs) can vary significantly. Choose a combination of materials and methods that best fit your project budget.

**IN GENERAL, YOU CAN EXPECT TO PAY THE FOLLOWING PRICES:**

**NATIVE GRASSES:  
\$0.50 - 0.75/SQ FT**



**DIY WATER-WISE PLANTS:  
\$2.00 - 6.00/SQ FT**



**PROFESSIONALLY INSTALLED  
\$5.00 - 12.00/SQ FT**



## Cost-Saving Opportunities

**These are some great ways to save money on your new water-wise landscape:**

### 1. Choose your plants wisely:

- Start seeds indoors ahead of time.
- Buy smaller plants.
- Divide and trade plants with your friends and neighbors.
- Stick with perennials, which can rely on natural precipitation once established.

### 2. Be a savvy shopper:

- Look for coupons for plants and landscape products at local garden centers.
- Search Facebook Marketplace, Nextdoor or Craigslist for recycled or repurposed hardscape products and plant giveaways.
- Buy landscape materials (e.g., rock or mulch) in bulk at a landscape yard.
- Do your planting in the fall when perennials, trees and shrubs are on sale.

### 3. Minimize labor costs:

- Do some or all of the work yourself.
- Hire local teenagers to help with more strenuous tasks.
- Install less rock and hardscape.
- Skip the unnecessary expense of landscape fabric or underlayment.
- Consider costs in your up-front design, making design modifications as necessary.

### 4. Take advantage of available resources:

- Access local turf removal incentives and tree planting programs.
- Utilize Resource Central's "Garden in a Box" pre-planned garden kits.





# LANDSCAPE PLANNING CONSIDERATIONS

There are many important factors to consider before you begin designing your new water-wise landscape. Careful consideration will help you determine the most appropriate landscaping materials, design features and other critical aspects of your project.

## SUN

- **Follow the sun.** Note your yard's sun exposure (full sun, partial sun, partial shade or full shade) and select plants that thrive in those conditions.
- **Cluster plants.** Group plants with similar water and sun requirements to ensure they receive the right combination to thrive.
- **Avoid overexposure.** Avoid putting plants in areas that will expose them to more wind, moisture or sun than they can tolerate.

## EXISTING LANDSCAPE

- **Work with what you already have.** Design your new landscape around large trees or interesting features that you already have and want to keep.
- **Assess drainage.** Consider any drainage issues on your property and be sure to factor them into your plans.

## HARDSCAPE ELEMENTS

- **Say yes to no-water hardscapes.** Hardscapes are the nonliving elements within a landscape. This includes patios, decks, fences, boulders, pathways and lighting. Hardscapes save a lot of water, have multiple uses and look fantastic. They're also great for high-traffic areas. Consider if there are existing hardscapes you want to keep or new ones you wish to incorporate. Select permeable hardscape materials to take advantage of natural precipitation.



### SUN EXPOSURE GUIDE:



#### FULL SUN

6+ hrs/day



#### PARTIAL SUN

4-6 hrs/day



#### PARTIAL SHADE

2-4 hrs/day



#### FULL SHADE

<2 hrs/day



### PRO TIP:

Know what's below! Call 811 to locate/mark utility features in your yard before designing your new landscape.



## SOIL TYPE

- **Determine your soil type.** It's important to know what type of soil is in your yard. Different types of soil have vastly different water and nutrient holding capacities. The soil impacts which types of plants are best suited to your local landscape and guides your plant selections.
  - » **Clay soil tips.** Clay soil holds water and is naturally fertile but tends to compact, which can hinder plant growth. Add organic materials to loosen tightly packed clay particles and make space for air. This allows plant roots to grow deeper into the soil, giving plants access to more water and nutrients.
  - » **Sandy soil tips.** Sandy soil drains freely, eliminating plant growth problems caused by too much water, but it can prevent plants from getting enough water. Add organic amendments to sandy or rocky soil and till it in to help it retain enough water for plants to grow. Organic materials will also add nutrients, which are lacking in sandy soils.
  - » **Silt soil tips.** Silt has a smooth or floury texture. It settles out in slow-moving water and is commonly found at the bottom of irrigation ditches and lakeshores. Silt adds little to the characteristics of a soil and has a water holding capacity similar to clay.
  - » **Rocky soil tips.** Rocky soils in some parts of Colorado are dominated by gravel and rock, making them difficult for gardening. Gravel and rock do not provide nutrients and have low nutrient holding capacity. They often drain quickly, preventing rocky soil from holding much water.



### PRO TIP:

Ask yourself what's working well in your current landscape and what can be improved. This will provide helpful insight and direction on your project.

## Soil Identification Tests:

### 1. Estimate your soil texture by testing it at home.

These tests are quick and easy to do at home, but can be less accurate

### 2. Send your soil sample to a lab.

A soil lab can perform a more accurate analysis of your soil type

### 3. Review soil type maps.

The USDA Natural Resources Conservation Service offers a web soil survey map that can help you identify your local soil

Colorado State University Extension's Master Gardener website offers helpful resources for soil identification tests at: [cmg.extension.colostate.edu](http://cmg.extension.colostate.edu)



## Landscape Use/Function:

### Make it yours.

Think about what's important to you and what you like to do in your yard, then design a landscape that's a perfect fit.

### Be realistic.

Some landscapes require lots of maintenance and some only take a little. If you don't have much time to spend on your yard, look for lower-maintenance options – there are plenty to choose from. The Maintenance section of this D.I.Y. Lawn Conversion Guide provides a helpful overview.





# DESIGNING YOUR NEW LANDSCAPE

If you are designing your new water-wise landscape without the help of a landscape professional, these step-by-step instructions will walk you through the process. It's important to finalize your new landscape design prior to purchasing plants.

Homeowners often get so excited about the plants that they rush out to buy them before knowing precisely what will fit their new landscape design. Careful planning and consideration will ensure you select the right plants for your new water-wise landscape.

## CREATE A MAP OF YOUR PROPERTY

1. Use Google Earth or any online map app to get a birds-eye view of your property. Print it out and place tracing paper over the image.
2. Be sure to create your drawing to scale: 1"= 10' or 1"= 20". Use a tape measure or wheel to verify your landscape measurements.
3. Use a pencil to trace a map of your property, including large structures and any existing plants, trees, shrubs and features you'd like to keep. Mark a North arrow and any utilities.
4. Mark changes in grade (e.g. hills or slopes) and draw contour lines on the land areas to plan proper drainage.
5. Be sure to mark your irrigation layout. The Irrigation section of this guide provides a handy overview of irrigation equipment and applications.





## SELECT AN AREA OF YOUR LAWN TO CONVERT

1. **Your new water-wise landscape area will need to be on a different irrigation zone than the rest of the lawn due to lower water requirements. Choose a section of your lawn that:**

- Can easily be converted to a drip system using a drip conversion kit.
- Is rarely used by kids and/or pets, or is tough to keep green.
- Could be a nice spot to enjoy in a new way (e.g., a garden or entertainment space).

2. **Plan your lawn removal.**

- Before you get started, contain any lawn areas you intend to remove. You can do this with wooden stakes and string, spray paint or even a garden hose to outline an area.
- Select a method to remove lawn areas. The Removing Your Lawn & Existing Vegetation section of this guide outlines different options and the advantages/disadvantages of each.



## DESIGN YOUR WATER-WISE LANDSCAPE

1. **Consider all the elements.** As you're designing your new landscape, give some thought to factors like intended use of the space, sun exposure, irrigation, soil or water challenges, budget and maintenance.
2. **Begin with a sample plan.** Review design plans on PlantSelect.org, or customize the sample designs on the City of Thornton's H2Overhaul website for everything from small to large lots: [thorntonwater.com/h2overhaul](http://thorntonwater.com/h2overhaul). CSU Extension has multiple landscape design topics: [cmg.extension.colostate.edu/gardening-resources](http://cmg.extension.colostate.edu/gardening-resources). Colorado WaterWise's Best Practices Guidebook lists additional design templates available for free online.




3. **Keep your options open.** Use your tracing paper to draw a few alternate designs. Don't be afraid to change it or make mistakes – it's all part of the creative process.
4. **Plant outside the lines.** Create visual interest by adding curves and nonlinear elements to your design.
5. **Start big.** Add your largest features first: draw in trees, shrubs and hardscapes. Then fill in open areas with smaller plants, native grasses and accents like boulders or benches.

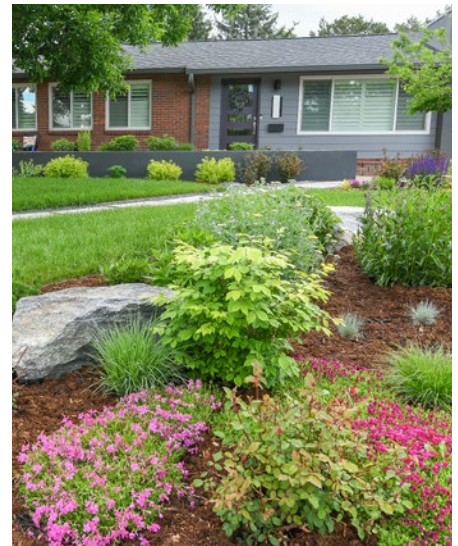


## INSTALL WATER-EFFICIENT IRRIGATION

1. **It's important to use the right kind of irrigation in each area of your water-wise landscape.** You can maximize your efficiency and wave goodbye to water waste by matching your irrigation system to your soil, slope, microclimates and available water pressure. Understanding how to best water your landscape will benefit the plants and your wallet.
2. **Select the most appropriate type of irrigation equipment for each part of your new landscape.** The Irrigation section of this guide reviews the different types of irrigation and best uses for each.

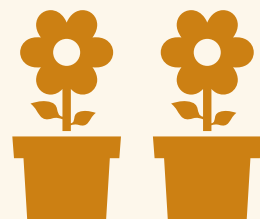
# SELECT YOUR WATER-WISE PLANTS

- 1. You don't have to sacrifice beauty to save water.** Water-wise plants come in a variety of colors, shapes and sizes that add beauty and visual interest to your yard. Native plants will also have the added benefit of attracting pollinators like butterflies and hummingbirds.
- 2. Use these tips to select the perfect plants for your new landscape.**
  - Choose plants that work for you. Look for low-water native grasses, trees, shrubs, plants and groundcovers that fit your local landscape. Consider microclimate, location, sun exposure, maintenance level, use and your budget.
  - Mix it up. Select plants with varying colors, heights and blooming seasons to create visual interest and add pops of color throughout the year.
  - Allow room for growth. Before you plant, find out how tall and wide each plant will get to allow the space they need as they mature.
  - Create a color scheme. Select plants with complementary colors and use both warm and cool tones to create depth. Repeat the scheme throughout your landscape for a balanced color flow.
  - Peruse plant guides. Visit Plant Select ([PlantSelect.org](http://PlantSelect.org)), Colorado Native Plant Society ([conps.org](http://conps.org)) and CSU Extension ([range.colostate.edu/plantfind.shtml](http://range.colostate.edu/plantfind.shtml)) to find plants adapted to Colorado's climate.
    - » These free resources offer plant suggestions, landscaping designs and other helpful gardening information.
    - » Download free landscaping and garden designs: [plantselect.org/design/downloadable-designs](http://plantselect.org/design/downloadable-designs)
    - » Discover the best plants for your landscape: [plantselect.org](http://plantselect.org)  Plant Select® or [conps.org/waterwise-native-plants-by-region/](http://conps.org/waterwise-native-plants-by-region/)
    - » Find local retailers and garden centers near you: [plantselect.org/where-to-buy/retailers](http://plantselect.org/where-to-buy/retailers). Call ahead to ask if they have the plants you want.



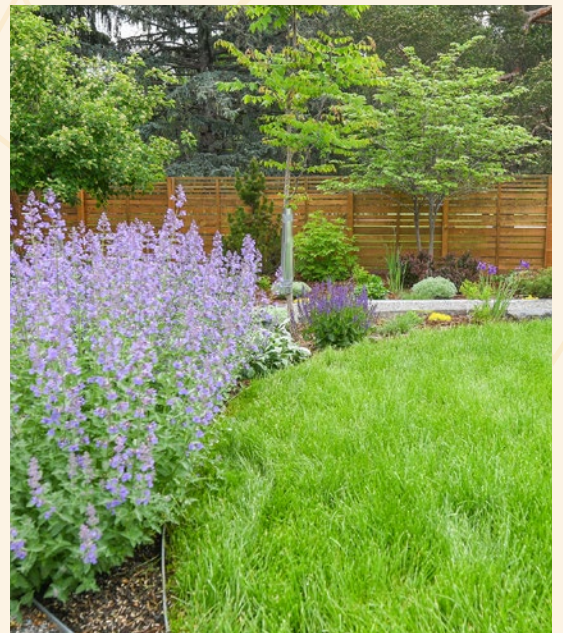
## PRO TIP:

Resource Central offers professionally designed gardens with a curated selection of beautiful water-wise perennials. These plants make a fantastic substitute for turf as they have much lower water needs and are better suited to our local climate.



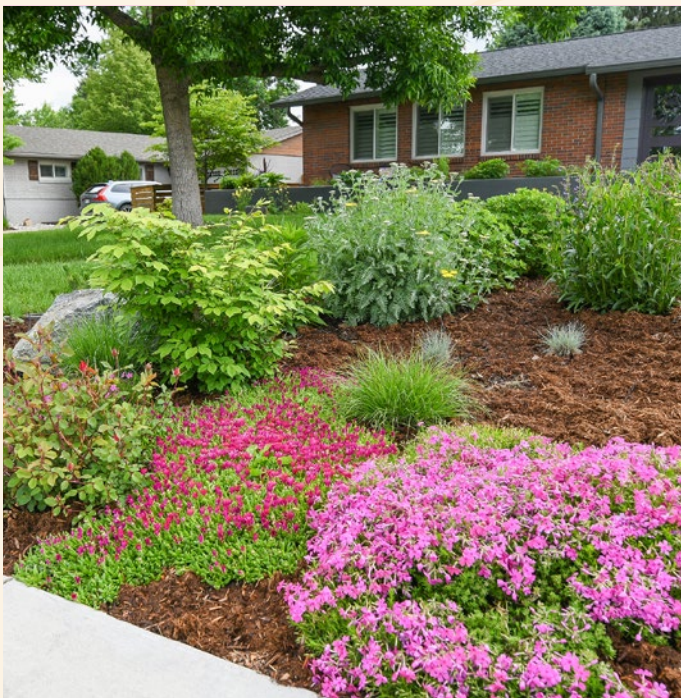
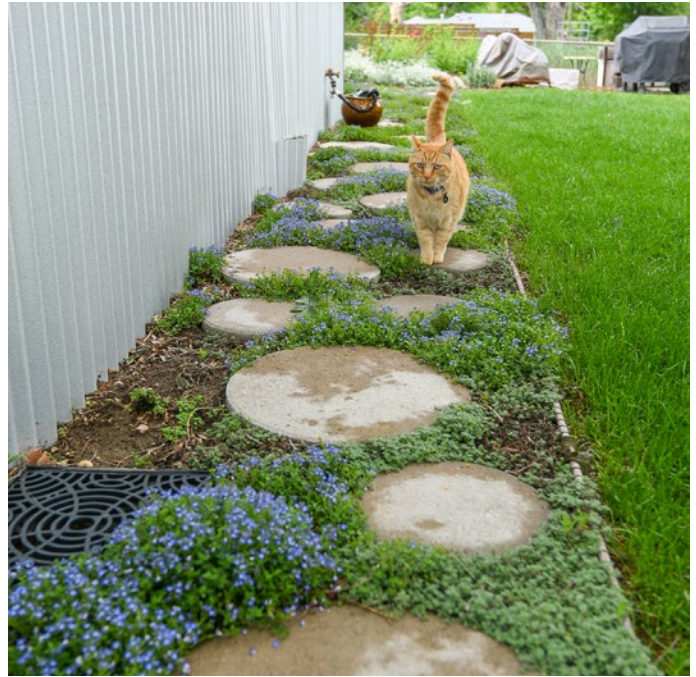
# CHOOSE WATER-WISE LAWN ALTERNATIVES

- 1. Traditional lawns require a tremendous amount of water (and work).** Consider grass alternatives that can give you that lush lawn look without the hefty water use. The Water-Wise Grass Alternatives section of this guide provides a helpful overview of recommended grass alternatives.
- 2. Explore a variety of water-wise grasses, ground covers and hardscapes that can enhance your space.** Visit [ColoradoNativeGrass.org](https://coloradonativegrass.org) for inspiration and ideas.
  - Low traffic, hard to maintain areas: Groundcovers, drought-resistant flower gardens, ornamental shrubs and shade trees are perfect for difficult locations (near foundations, along medians or on steep slopes).
  - High traffic, easily maintained areas: Low-water turf is ideal for areas designed to accommodate children's play, sports activities, entertaining and pets.



## GIVE GROUND COVERS A GO

1. Low-growing ground covers can be used as an alternative to turf in areas with low foot traffic. Usually chosen for texture, density and how well they spread and choke out weeds, ground covers enhance the soil by acting as mulch.
  - During the first year, any new ground cover will require weeding and mulching, but once established, little care is needed.
  - Check out Plant Select's diverse list of gorgeous ground cover options by visiting [plantsselect.org](http://plantsselect.org) and selecting Groundcovers.
  - Visit High Country Gardens at [highcountrygardens.com](http://highcountrygardens.com) for pre-planned groundcover garden designs



## GROUP PLANTS BY HYDROZONE

1. Group plants together that have similar needs for water and sun. This prevents overwatering/underwatering and helps plants thrive.
  - Put high-water plants in easily accessible areas or in low-lying drainage areas, near downspouts, or in the shade of other plants.
  - In areas that are harder to reach, plant low-water plants that require less frequent watering.





# PREPARING YOUR SOIL

Good soil is the basis of any successful water-wise landscape. In Colorado, most soil is sandy or full of clay, which can make it difficult for plants to thrive. You can whip your subpar soil into shape with a little hard work and TLC.

## 1. Loosen soil before planting.

- Native plants usually only need the soil to be loosened up before planting. Non-native plants will likely require additional soil amendments.

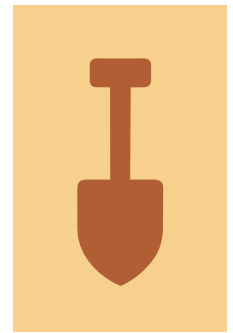
## 2. Add organic amendments.

- Mixing organic amendments into your soil can help build better soil structure, increase water holding capacity and promote deep roots for water-wise landscaping success.
- Amendment materials like grass clippings, leaves and manure decompose rapidly and yield quick results. Wood chips decompose slowly and provide longer-lasting outcomes. Use a combination of both materials to help your landscape thrive.



### PRO TIP:

Make sure to use weed-free, chemical-free and disease-free organic matter to keep your soil its healthiest.



### 3. Know when to amend.

- Perennial gardens and surrounding soil should only be amended once, prior to planting.
- Annual vegetable and flower gardens should be amended every year with organic materials to improve the water and nutrient holding capacity.

### 4. Go easy on the compost.

- Use a mixture of 50 percent compost and 50 percent topsoil for plant gardens. Over-composting can lead to high concentrations of nitrogen, too much water retention and over-salinization.
- Look for well-aged compost with non-feedlot manure (i.e., sheep or chicken manure).



### 5. Rototill sparingly.

- Only use a rototiller 1-2 times throughout the entire lifetime of your garden to avoid damaging your soil's natural structure.

### 6. Dig in!

- Grab your tools, roll up your sleeves and get to work:
  - » Add a 2-inch layer of organic material to the surface of your soil (about 4 cubic yards of organic material per 1,000 square feet).
  - » Use a spade, pitchfork or rototiller and thoroughly mix in the material until it is at least 6 inches deep.

## SOIL AMENDMENTS TABLE

Amendment Type	Requirements	Practical Use
<b>MANURE &amp; MANURE-BASED COMPOST</b> 	The bagged manure at your local garden store is usually mixed with other composted matter and aged for at least six months to lower ammonia/nitrogen levels. Readily available due to Colorado's livestock industry, it can be high in salts and cause burning.	Use manure with caution. Watch out for "hot compost" or unaged/immature animal-based compost that has not had time to mature. This can be dangerous for plants.
<b>PLANT-BASED COMPOSTS</b> 	This compost is made of decomposed organic material like leaves, shredded twigs and kitchen scraps. A wide variety of compost products are available in bagged and bulk products. These may be a combination of plant-based compost, manure-based compost and other agricultural by-products.	Apply at higher application rates to improve the soil. Note: Colorado Mountain Peat is not recommended.

# SOIL AMENDMENTS TABLE

Amendment Type	Requirements	Practical Use
<b>BIO-COMP</b> 	Bio-Comp is a wood-based compost that's already broken down. It has more plant-based organic material than mulch, so it adds more nutrients to soil.	This amendment can be used as a top dressing or soil amendment any time of the year in any type of soil—especially clay soils. Bio-Comp is one of the few composts that can be safely used as mulch to protect flower beds.
<b>EXPANDED SHALE</b> 	Mined in Golden, CO, this inorganic fertilizer can be used to improve your clay-based soil. Expanded shale is baked to dry out water. It is lighter than sand and adds aeration/space for roots and microorganisms. It also acts as a rodent deterrent and attracts beneficial organisms like earthworms.	Start by adding 3 inches of expanded shale (3/8 inches diameter particle size) into the top 6 inches of your soil. Then add 3 inches of compost and work it in with your soil and expanded shale mix.
<b>WORM CASTINGS</b> 	Worm castings can be costly but can be extremely effective when added to a garden in small amounts.	Castings can be used as a top dressing or tilled into a garden at 1 gallon per 13 square feet – or 7.5 gallons (1 cubic foot) per 100 square feet. To increase earthworm activity in your garden, transplant dirt from an area that's already full of worms.
<b>COMPOST TEA</b> 	Biologically active compost tea can be bought at garden stores or created by steeping your compost in water for several weeks. Use compost tea to increase the nutritional quality and improve the flavor of vegetables.	Spray it on plant leaves to suppress diseases. Compost tea increases the amount of nutrients available to plants and speeds up the breakdown of toxins in the soil.



# FIRE-RESISTANT LANDSCAPING

Wildfires are a reality of life in Colorado. Fortunately, there are many things you can do to protect your property from fire damage.

## Top 5 fire-resistant landscaping principles:

1. Employ the 4-zone defensible space principle.
2. Install fuel breaks with hardscape material such as retaining walls, walkways, driveways, boulders and gravel mulch.
3. Use fire-resistant plants and maintain them regularly. Prune dead and dying branches from trees and shrubs.
4. Keep plants watered appropriately. Deep water trees throughout summer/fall and during dry winters. Healthy plants are less flammable.
5. Maintain irrigation systems and access to emergency water supplies. Make sure to have a 50-foot hose available with access to hose bibs for use in putting out wildlands grass or surface fires.



## Fire-Resistant Mulch

If you live in a fire-prone area, choosing a fire-resistant mulch is an important part of creating a defensible space.

- Mineral mulch (gravel) is the best option for making landscapes more fire-resistant.
- Organic mulch materials have a broad spectrum of flammability, particularly if ignition is from point sources like cigarette butts or spent fireworks.
  - In low-wind conditions, moistened wood mulch resists ignition from such sources. Dry wood chips, bark, pine needles and other small-particle organic mulches are more ignitable.
  - Larger and denser mulch pieces make for the most fire-resistant wood mulch.
- Rubber mulch will always burn and should be avoided.



### PRO TIP:

Northern Water offers free fire-resistant landscape design templates:

[northernwater.org](http://northernwater.org)



# FIRE-RESISTANT LANDSCAPE MATERIALS

Fire-resistant landscaping can enhance your home's defense against wildfires. Opt for fire-resistant plants that retain moisture, such as deciduous trees and certain shrubs, which are less likely to ignite. Proper installation and spacing of plants is vital to prevent the rapid spread of fire.

Maintain a defensible space by keeping plants low to the ground and placing them at least 3 feet away from structures. Ensure that tree branches do not extend within 10 feet of roofs, and prune lower branches to prevent fire from climbing.

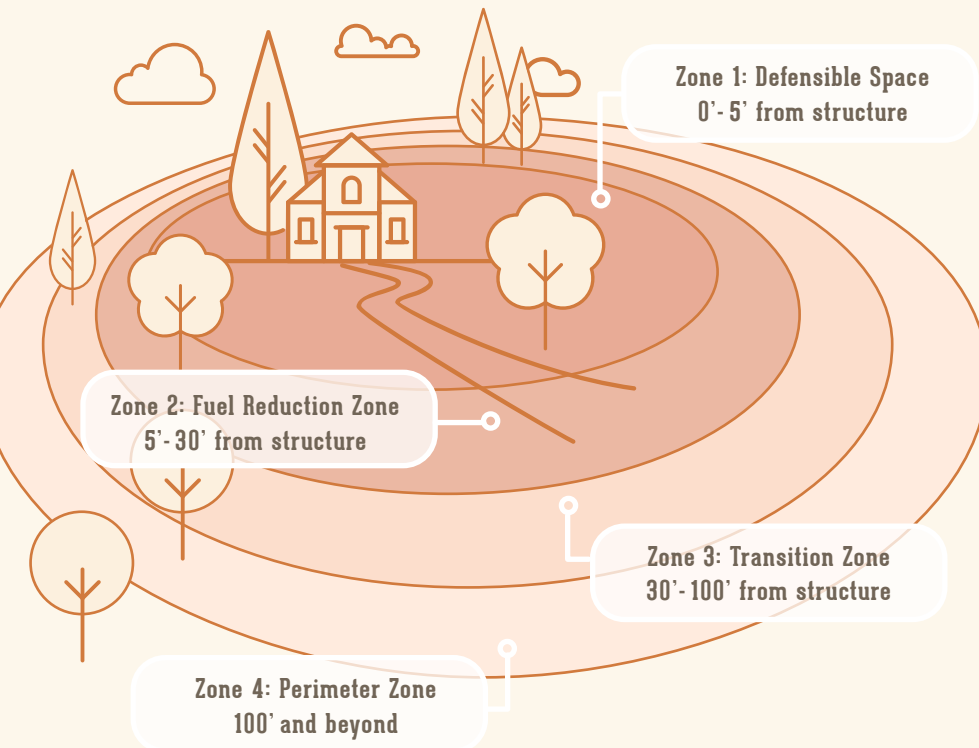
Regular maintenance is essential: remove dead vegetation, keep plants well-watered and routinely

clear debris from gutters and around the property. By following these guidelines, you can create a landscape that not only enhances your property's aesthetics but also serves as a robust barrier against wildfires.



## DEFENSIBLE SPACE

Firefighters recommend following this 4-zone defensible space plan to give your home the best chance of surviving wildfire.



### Zone 1: Defensible Space

Nothing flammable should be planted or placed against your home or other structures.

### Zone 2: Fuel Reduction Area

Thin and maintain vegetation, mow regularly, and irrigate wisely in this area.

### Zone 3: Transition Zone

Driveways within zone 3 can provide a fire break. As in zone 2, area should be maintained and irrigated wisely.

### Zone 4: Perimeter Zone

This area can extend up to 200 feet from the house or structure - including adjacent property.





# LAWS & PERMITTING

**IN RECENT YEARS, LEGISLATION WAS PASSED TO PROMOTE WATER-WISE LANDSCAPING.**

Legislation	Requirements
Senate Bill (SB) 13-183	Prohibits HOAs from restrictive covenants that forbid Xeriscape/drought-tolerant vegetation or require ground covering consisting of any amount of lawn. HOAs cannot levy fines or violations for failure to water lawns when drought restrictions are in place. Landscape plans must still be approved by the HOA.
Senate Bill (SB) 23-178	Removes barriers to water-wise landscaping in common interest communities. HOAs cannot prohibit the use of artificial turf in an owner’s backyard and must allow owners to use at least 80% drought tolerant plants.
Senate Bill (SB) 24-005	Prohibits local governments from allowing the installation, planting or placement of nonfunctional lawns, artificial turf, or invasive plant species on commercial, institutional or industrial property, common interest community property, or a street right-of-way, parking lot, median or transportation corridor.

\* Additional information on regulatory requirements is provided in Colorado WaterWise’s Best Practices Guidebook (page 179).



## LOCAL GUIDELINES

Before you put any shovels in the ground or start removing existing vegetation, it's important to understand local laws/rules and apply for applicable permits. Each community in Colorado has very different landscaping standards. Check with your local planning department, community development office and/or local public works department to understand the rules for your area.

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### 811: CALL BEFORE YOU DIG

Get your utility lines marked to prevent damage during landscaping projects. [Colorado811.org](https://www.colorado811.org)

### PERMITS & APPLICATIONS

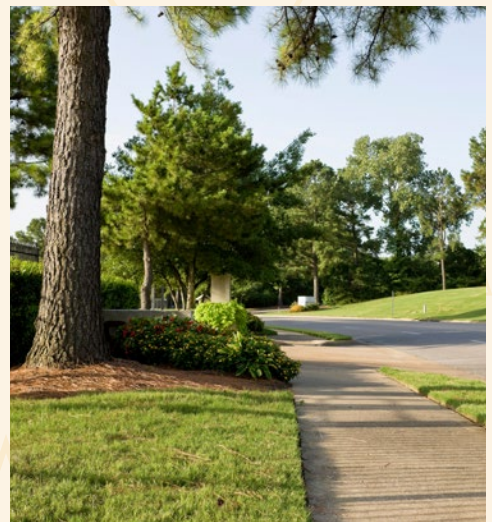
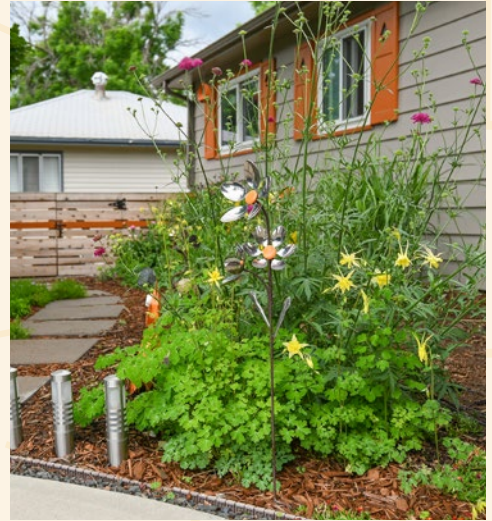
Depending on the size and location of your landscaping project, you may need to get approval from the local planning authority in the form of a permit. Some of these permits will also have a fee to cover the administrative costs of reviewing a landscape modification application. It is not uncommon for projects with concrete patios or other large hardscape areas to require a permit before work can commence.

### TREES

Many communities require a minimum number of trees on a property or in a given linear distance. Some communities may also have a list of approved trees that prevents certain types of trees from being planted.

### RIGHTS OF WAY (ROW)

These are areas of a property that are technically owned by a municipality for the placement of public utilities, but the homeowner is required to maintain the landscaping. ROWs are most common in areas between a sidewalk and the public roadway. Given the complexity of buried utilities, most communities have strict rules on landscaping within ROWs and will likely require approval for any landscape changes.



## SIGHT TRIANGLES

Most communities require sight triangles (unobstructed views to safety/security points, like driveways or street intersections). Sight triangles are generally located on the corner of any intersection on a property, including the intersection of a driveway and a public road. Some communities may place height restrictions on plants in areas adjacent to sight triangles, such as along a ROW.

## PLANT COVERAGE REQUIREMENTS

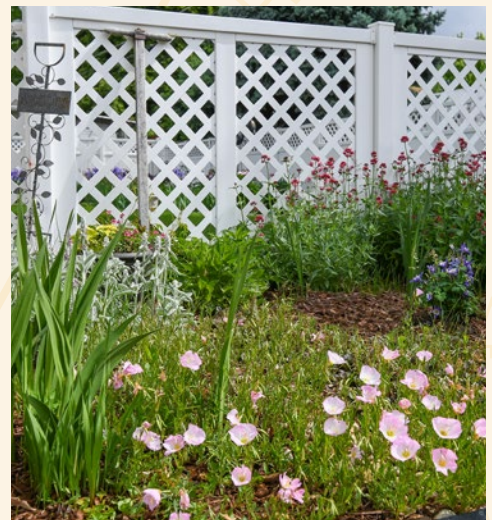
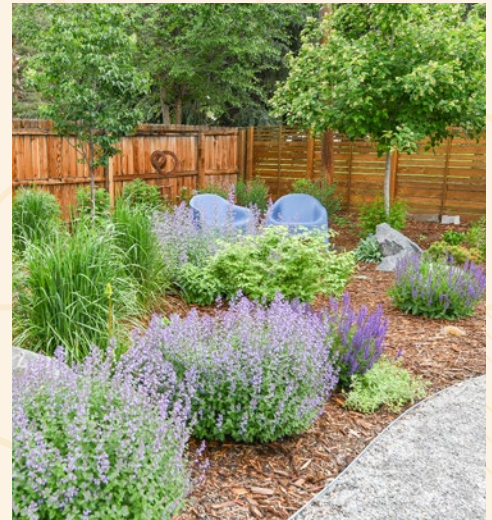
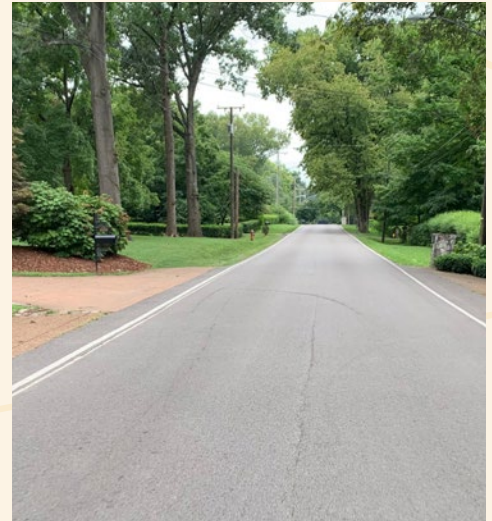
Community landscaping standards commonly include plant coverage requirements that specify a minimum amount of land that must be covered by plants at full maturity. Minimum plant coverage requirements generally range from 50-75% of the landscape and are intended to help prevent heat islands. This can limit the size of hardscape features like concrete patios and walkways.

If you live in a Homeowner's Association (HOA) or Metro District, there are likely additional rules you must follow. Most HOAs and Metro Districts have their own set of landscaping standards/guidelines, which are created to provide a more uniform style in the neighborhood. You will also likely have to submit an application and review fee to the Architectural Review Committee of the HOA/Metro District to receive approval before starting your project.



### PRO TIP:

While HOAs are no longer allowed to require detached single-family home landscapes to have a majority of cool-season grass, they are still allowed to enforce approved plant lists and other aesthetic requirements. Make sure you understand what your HOA/Metro District allows before purchasing your plants.





# REMOVING YOUR LAWN & EXISTING VEGETATION



If you are removing a lawn area from your landscape, there are several different options you can select. Those that yield quick results can require considerable effort, while less labor-intensive methods may take much longer to produce results.



Here are five techniques for turning well-established turf into a healthy plant bed. Each method has its pros and cons, so select the method that best suits your needs.



## PRO TIP:

Resource Central's Lawn Replacement Program offers discounted lawn removal for projects at least 200 square feet. Lawn removal services start at just \$1.00 per square foot (for customers of participating water utilities). Visit [resourcecentral.org/lawn](https://resourcecentral.org/lawn) for details.



# REMOVAL METHOD

This method produces quick, clean results and allows you to plant your garden immediately. If the sod is in good condition, you can reuse it in another part of your yard or flip it over to create contours, berms or level-out uneven areas. This technique can be done by hand or by renting a sod cutter. Larger jobs can be done by scraping the sod off with a skid loader or small earth mover.

## STEPS

1. Water the soil a few days ahead of time so it is softer and easier to work with. The soil should be moist at least 4 inches down, but not soggy.
2. Cut the sod into parallel strips approximately one foot wide using an edger or sharp spade. These strips can then be cross-cut into 1 to 2-foot lengths, depending on the density of the turf and the thickness of the pieces.
3. Next, pry up one end of a piece of sod and slide the spade or fork under it. Cut through any deep roots and lift out the pre-cut piece, making sure to include the grass's fibrous roots. If the underside of the sod contains much loose soil, this soil can be shaken back onto the surface when the sod is lifted.
4. If you skip the cross-cut step in part 2, roll up the strips as you keep peeling the strip back. Keep in mind that these rolls will be heavy.
5. Inspect your new bed's subsoil. Look for and destroy potential pests. Remove any rocks, remaining clumps of grass and sizable roots. At this point, you may want to add back in some compost, good topsoil or a combination of both to give your new plants a healthy start.



### PRO TIP:

If you're removing a large lawn area, consider renting a sod cutter. These steel-bladed, plow-like tools are more efficient than spades for large jobs. Sod cutters come in manual and gas-powered models.

## PROS

- Allows immediate planting
- Avoids the use of chemicals
- You can hire the work out or do it yourself
- Good for smaller properties, like single-family homes
- Good for starting from a clean pallet



## CONS

- Labor intensive
- Exposes subsoil to weed seeds by eliminating vegetative cover
- Removes organic matter and some of your best, most fertile topsoil
- Sod cutter rental charges
- Not ideal for areas with mature trees that may have their roots up on the surface
- Plant stolons may remain grow back. (Bluegrass can be very resilient.)



# SOLARIZATION/OCCULTATION

Solarization and occultation are two techniques used to kill lawns/vegetation by utilizing the sun's heat and light. Solarization uses clear plastic to trap the sun's heat and raise soil temperatures to levels that kill plant life. Occultation uses black plastic (tarp) to block light, preventing photosynthesis and eventually killing plant life.

## STEPS

1. Thoroughly water the area in which you wish to remove existing grass or vegetation. Water should soak 2-3 inches into the soil.
2. Spread clear or black plastic sheeting over the area to create a mini greenhouse effect.
3. Securely anchor all edges (not just the corners) so that heat cannot escape. You can use longboards (long, flat pieces of wood or metal) or edging to ensure a tight fit.
4. The temperature under the plastic will increase dramatically, eventually killing the grass.
5. Remove clear plastic within 4-6 weeks to avoid damaging the soil and beneficial microorganisms. Occultation can take a bit longer as the dark tarp reduces the heat underneath, so you may need to leave it on for a few additional weeks.
6. You can reuse the plastic sheeting and move it around to different areas of your lawn.

## PRO TIP:

There are different schools of thought on whether clear plastic (solarization) or black plastic (occultation) works best. You may want to try both methods and see which works best.



## PROS

- Effective and easy way to eliminate vegetation
- Great for residential properties
- Does not require as much physical effort
- Leaves existing organic matter in place
- Inexpensive
- No chemicals are used
- Can kill some soil-borne pathogens as well

## CONS

- Delays replanting up to several months
- May kill beneficial organisms if using plastic for too long
- Plastic isn't biodegradable and will eventually go into landfill
- Less practical for larger commercial or HOA properties
- Has the potential to kill some of the good microorganisms

# SMOTHERING/SHEET MULCHING

Smothering or sheet mulching (also known as “soil lasagna”) is an easy way to eliminate grass and/or weeds by smothering them with organic materials like newspaper or cardboard. These materials block light, causing chlorophyll to break down. Depending on the time of year and material used, this process can take weeks or even months.

## STEPS

1. Mow the grass short and leave grass clippings in place.
2. Layer cardboard or 6-8 sheets of newspaper over the grass. Cover the entire area with overlapping layers.
3. Wet the newspaper or cardboard thoroughly to help it decompose faster.
4. Cover it with biodegradable materials like grass clippings, leaves, mulch or compost to hold the layers in place, retain moisture and add organic matter.
5. Water each layer to encourage healthy organisms to break down the layers into a rich soil.



## PRO TIP:

If using newspaper, use pages with black and white ink only. Colored ink is more likely to contain chemicals that could potentially harm the soil.



## PROS

- Very effective
- Good way to build up soil organics and health if weighted down with compost
- Works best on smaller properties
- Fairly cost effective, especially if you have the materials on hand
- Safe around the base of trees, if materials are not placed over feeder roots or up against the bark
- Can be started in the fall and left all winter to build soil up
- Keeps organics onsite and available for use

## CONS

- Requires patience and hard work, including shoveling and moving materials
- Requires removing sod along curbs and sidewalks to bring the soil level down, so it isn't spilling out onto walkways.
- Sprinkler heads can be buried, so cap, mark, or move them beforehand
- Builds up more layers of soil, which can potentially make the soil too high
- Creates a soil that may be too rich for native plants that prefer a leaner soil



# HERBICIDE METHOD

Herbicides can be used to kill undesirable plants and grasses. Some herbicides will kill all plants, while others kill only grass or broadleaf plants. It is important to note that weed seeds will not be affected by the herbicide and may germinate later.

## STEPS

1. Choose an appropriate broad spectrum herbicide and carefully follow the directions on the label. If you are removing your lawn, be sure to select a product designed to kill grasses (not one specific to broad-leaved plants) and check the expiration date. For this method, you would use a broad-spectrum herbicide like glyphosate.
2. Do not apply herbicides when rain is expected, or it may wash off plants into the soil and nearby waterways. Avoid applying on windy days to prevent drifting onto adjacent plantings. Many herbicides volatilize at higher temperatures and can drift.
3. Always wear protective clothing such as gloves, long sleeves, long pants and a mask when applying herbicides.
4. For the herbicide to work well, the targeted grass should be actively growing, healthy and well-watered for maximum absorption and effectiveness. Well-established lawns may require more than one application as it takes several days for herbicides to be effectively absorbed.



### PRO TIP:

Horticultural vinegar is touted as a natural way to kill weeds and is available in stores. However, the amount of vinegar you would need to use per square foot to kill weeds and grass can make it cost-prohibitive.

## PROS

- Relatively quick and easy for gardeners experienced in herbicide use
- Depending on the pesticide, re-plant dates can be relatively short (5-10 days). Check the label of your herbicide for specifics
- Cost-effective
- Works well on larger properties as well as residential homes
- Relatively safe around the base of trees
- Can work well if you have the appropriate equipment and carefully follow safety instructions/application recommendations



## CONS

- Does not kill weed seeds
- Risks damaging/killing nearby plants
- Can pollute local waterways and habitats
- Chance of personal injury
- May harm beneficial organisms
- Need to keep children and pets off for the prescribed time on the label
- Glyphosate has negative public perception
- Must be applied at the right time for temperature/wind to prevent damage to nearby plants
- Will not work on dormant grass
- May take several applications (costs increase)
- Must use protective clothing, gloves, mask and eye protection



## ALTERNATIVE METHODS (NOT RECOMMENDED)

If you are considering one of the alternative methods described below, we strongly recommend reviewing the drawbacks and limitations before proceeding. Both the deficit irrigation method and tilling method are ineffective and thus highly discouraged.

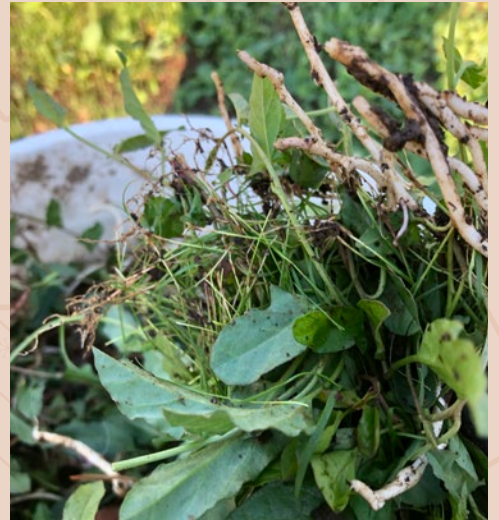
### DEFICIT IRRIGATION METHOD

You might assume an easy way to kill your lawn is by simply not watering it. While this method is free and simple, it takes extremely long and is largely ineffective.

Common lawn species like Kentucky bluegrass can go dormant for long periods of time before reviving with water. Even a brief rain or snowfall can be enough to regrow grass. Depriving your lawn of water can also have the adverse effect of killing nearby trees.

### TILLING METHOD

Tilling your lawn is very demanding physical labor. There's also no guarantee that it will kill your grass, as many species like bluegrass are extremely resilient. Worse yet, perennial grasses like Bermuda grass, quackgrass, thistle and bindweed will persist through tilling and eventually regrow. For these reasons, the tilling method is strongly discouraged.





# IRRIGATION EQUIPMENT

**One of the most important parts of your new water-wise landscape is the underlying irrigation system.**

If you inherited an old system when you purchased your home, the irrigation system will likely need updating. The type of irrigation in each zone must be well-suited to the vegetation and physical attributes of your property.

## THE PROBLEM

Traditional fixed spray head sprinklers are extremely inefficient and often require overwatering to ensure all areas are watered. This leads to water waste from runoff, wind and evaporation.

Fixed spray heads used in lawn areas range from 50-70% efficient, meaning a large portion of the water does not reach the plant roots. By comparison, rotary nozzles provide closer to 60-70% application efficiency. Drip systems can deliver around 90% of the water to the plant roots.

## DID YOU KNOW?

**The most common irrigation mistake is overwatering lawn areas by running sprinklers for more than 10 minutes. After 10 minutes, the soil is saturated and unable to absorb the water.**

## THE SOLUTION

### OPTION 1: ROTORS/ROTARY NOZZLES

New sprinkler head technology, called rotors and rotary nozzles, are far more effective at watering lawns and other landscape areas. Rotors are best suited to large areas like communal lawns and sports fields. Rotary nozzles are commonly used in small, residential applications.

While fixed spray heads emit a large spray of mist, rotary nozzles shoot out directed, rotating streams of water. This is advantageous for several reasons:

1. Rotors/rotary nozzles apply water more slowly and uniformly, enhancing absorption and reducing runoff.
2. They perform better in windy and/or warm conditions in which a high percentage of the water is often lost to wind and evaporation.
3. Rotors/rotary nozzles water more efficiently, using around 10-20% less water than fixed spray heads.



### PRO TIP:

You can easily replace fixed spray heads with rotary nozzles.



## OPTION 2: DRIP IRRIGATION

Another great option is to convert your non-functional lawn area to drip irrigation. Drip irrigation systems slowly emit small amounts of water in targeted areas. There are several benefits of drip systems:

1. Drip systems apply water directly to plant roots, minimizing water waste.
2. Water is applied at the soil level, minimizing water loss from wind and evaporation.
3. Drip systems are extremely water efficient, using up to 40% less water than spray heads to deliver the same amount of water to plant roots.



### PRO TIP:

You can install a drip irrigation system in an existing lawn. You do not need to remove the lawn and replant it.







## BEFORE CONVERTING YOUR SPRINKLER SYSTEM, ASK YOURSELF THESE QUESTIONS:

1. HOW WELL IS THE CURRENT SYSTEM PERFORMING?
2. ARE SOME ZONES PERFORMING BETTER THAN OTHERS?
3. ARE THERE EXISTING ZONES YOU DON'T USE?
4. ARE THERE AREAS THAT ARE DIFFICULT TO MAINTAIN?
5. IS THE SYSTEM EXPENSIVE TO OPERATE?



# MAIN SPRINKLER SYSTEM COMPONENTS

Component	Function	Role/Details
<b>CONTROLLER</b> 	Serves as the brain of the irrigation system.	Determines how much water is delivered, when and for how long based on pre-set schedules.
<b>BACKFLOW ASSEMBLY</b> 	Protects the public water supply from potential contamination.	Typically found in multi-family and commercial properties rather than single-family residences.
<b>MAINLINE</b> 	Carries water from the backflow assembly to the irrigation system components.	Runs underground on the property.
<b>VALVES</b> 	Acts as a gatekeeper to manage water flow.	Opens and closes to direct water to specific sprinkler zones.
<b>HEADS</b> 	Delivers water to the landscape.	Sprays or distributes water to lawns, plants and garden areas.

# Sprinkler Head Types

## FIXED SPRAY HEADS:

- Designed for covering areas 5-15 ft
- Sprays a mist in a set pattern
- Ideal pressure is 30 psi (pressure must be properly managed to minimize water loss from wind/evaporation)
- Older models apply large amounts of water in a short time (inefficient)
- Newer models apply smaller amounts of water (more efficient)
- Best suited for even surfaces
- Prone to clogging



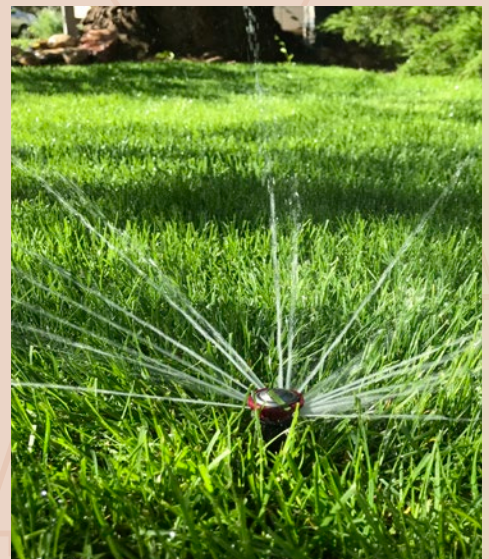
### PRO TIP:

City of Thornton's H2Overhaul website is a great resource for irrigation information:

<https://www.thorntonwater.com/h2overhaul/>

## ROTORS:

- Designed for covering areas 8-65 ft
- Sprays rotating streams of water (back and forth or in a circle)
- Interchangeable nozzles have different patterns based on the needs of the landscape
- Requires irrigation system pressure of 25-65 psi (45 psi minimum for areas over 20 ft)
- Best suited for large lawn areas and sloped landscapes
- Challenging to position
- Takes longer to install



## ROTARY NOZZLES:

- Designed for covering areas 8-30 ft
- Sprays small, rotating streams of water
- Requires irrigation system pressure of 35-45 psi (50 psi minimum to reach 30 ft)
- Best suited for small to mid-size landscape areas
- Easy to extend coverage to other zones
- Far more water efficient than fixed spray heads



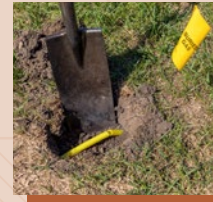
## DRIP IRRIGATION:

- Can effectively cover areas of all sizes
- Uses a system of tubing with tiny holes ("in-line drip") or emitters ("point-source drip")
- Allows small amounts of water to slowly trickle out in plant root zones for maximum absorption
- The type of drip you use should match the plant's water needs
- Requires irrigation system pressure of 20-40 psi
- 3/4 inch drip lines are ideal due to their durability and minimal pressure loss
- Works well for irregular landscape shapes and narrow areas
- Most efficient type of watering system
- Help prevent weed germination, disease, leaf burn and damage to houses/fences
- Readily available in big box stores and nurseries
- Relatively easy to set up
- Requires extra care and consideration when shoveling or using gardening tools (to prevent damage)

## IMPORTANT CONSIDERATIONS WHEN CONVERTING SPRINKLER HEADS:



1. If using drip conversion heads, the entire zone must be changed to drip.



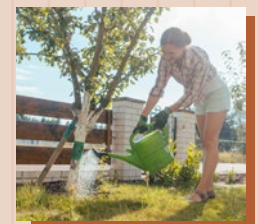
2. Use caution when digging around sprinkler zones to avoid damaging lines and equipment.

3. Cap unused sprinkler heads when converting to drip.



4. Remember that different plants have different water needs. Be careful not to mix plant zones or your plants and water bill will suffer.

5. Don't forget, your trees need water too.





# MULCH

**Why use mulch? Mulch is magical. It retains soil moisture, protects it from erosion and prevents weed growth.**

Be sure to add mulch as it thins out over time, particularly if it has been raked up or displaced by wind. Organic mulch must be replaced more often than inorganic mulch, as it naturally breaks down faster.

Have you ever noticed how much more attractive a garden looks with fresh mulch? In addition to looking great, mulch can slow weed growth, reduce soil compaction from rain and even improve soil quality when used correctly.



## PRO TIP:

Mounding mulch around less hardy plants can protect roots during winter. After heavy snow, rake and fluff mulch to discourage weeds and improve appearance.

## HOW TO MULCH

1. Prepare the mulch area by removing weeds and watering the soil.
2. Lay down about 3 inches of mulch, covering the entire area from the plant roots to the drip line.
3. Create "earth basins" around small trees and shrubs by adding a higher rim of dirt around the base. Make sure to leave a few inches of space between the mulch and plant stems/tree trunks.
4. Be careful not to cover the crowns (area where the roots and tops come together) of perennial plants.
5. Replace or add mulch periodically to maintain a thickness of 2-3 inches.



## COMMON MULCH MYTHS:

### MYTH #1

Mulch is a fail-proof weed barrier.



### FACT

Mulch reduces weeds but won't completely prevent them.

### MYTH #2

Mulch attracts termites if placed close to your house.



### FACT

Moisture, not mulch, attracts termites.

Things like shrubs, irrigation systems, gravel and rocks can lure termites if placed too close to your house.

### MYTH #3

Compost is the same thing as mulch.



### FACT

Compost is a soil amendment that gets mixed into soil.




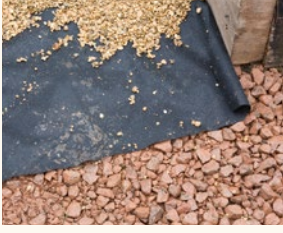
Mulch is placed on top of soil after plants and irrigation are installed.

## GET THE MOST FROM YOUR MULCH

1. **Don't get caught holding the bag.** Only buy mulch in bags if you're planning to use it right away. This prevents your mulch from molding.
2. **Get fluffy with it.** Agitate or "fluff" organic mulch at least once each year to slow weed growth and prolong mulch life.
3. **Protect your perennials.** Lighter organic mulches like shredded mulch or gorilla hair are much better for perennials. These plants are more likely to thrive when they don't have to compete for micronutrients in the soil.
4. **No fungus among us.** Keep bark and rock 1-2 inches away from plant stems to prevent fungal growth. Mulch creates a warm, humid environment that enables growth of fungi that can injure or kill plants.



# MEET THE MULCHES

Mulch Type	Examples	Advances	Pro Tips
<p><b>ORGANIC</b></p> 	<p>Garden bark chips; coarse compost</p>	<p>The most water-wise option; retains moisture and adds nutrients to the soil</p>	<p>Avoid using on steep slopes or drainage paths as they can wash away in heavy rain</p>
<p><b>INORGANIC</b></p> 	<p>Gravel; rocks; shale; ground rubber</p>	<p>Adds visual interest and texture to the landscape; rarely needs replacement</p>	<p>Inorganic mulch can get hot, so avoid using it near grass, plants and areas where children or dogs play</p>
<p><b>PLANT ALTERNATIVES</b></p> 	<p>Drought-tolerant ground cover, such as Turkish Veronica or Creeping Thyme</p>	<p>Retains soil moisture while adding an attractive green backdrop to surrounding plants; helps suppress pesky weeds</p>	<p>Avoid using in areas with foot traffic</p>
<p><b>LANDSCAPE FABRIC</b></p> 	<p>Not recommended for residential landscapes for several reasons: interrupts the life cycle of many native pollinators; can be costly; deteriorates in sunlight unless covered with another mulch material; requires regular replacement to remain effective</p>		



# WATER-WISE GRASS ALTERNATIVES

## NATIVE WATER-WISE GRASSES

Many homeowners want to replace their thirsty Bluegrass lawn with a native or water-wise grass species that offers the same lush lawn look. There are several great water-wises grasses available. Take care to choose the right grass and follow the proper process to ensure success.

The most sustainable option is native warm season grasses such as Buffalograss and Blue Gramma. Warm season grasses offer the highest water saving because supplemental water is only required from June through August (rather than March through November).

The Colorado Native Grass workgroup (ColoradoNativeGrass.org) has a variety of resources that can help you convert to a native grass lawn. Their handy resources include cases studies, grass species descriptions, a grass selection tool, videos, resource links and more. The website was developed for larger scale projects, but the process is the same for smaller projects as well.

## NON-NATIVE WATER-WISE GRASSES

Cold hardy Bermuda grasses like Dog Tuff and Tahoma 31 are water-wise varieties of Bermuda grass. While they are not native to Colorado, they can survive the cold winters. They also offer a great combination of water savings and traffic tolerance, holding up well to children, dogs and other forms of lawn entertainment.

Be sure to plant cold hardy Bermuda grasses in areas with at least six hours of sunlight per day. (Tahoma 31 may adapt to lower sun areas where sun is moving or dappled.) You can find these grasses at a variety of retail locations.



### PRO TIP:

While artificial turf may seem like an easy alternative to live grass, it is generally not recommended due to safety and environmental concerns.

Our colleagues at Western Resource Advocates have a great article that explores these concerns.

Visit [westernresourceadvocates.org](http://westernresourceadvocates.org) for more info.



# COLORADO NATIVE AND WATER-WISE GRASS TYPES

Grass Type	Uses	Notes
<p>Buffalograss</p> 	<ul style="list-style-type: none"> <li>• Lawn replacement</li> <li>• Groundcover for low to moderate traffic areas</li> <li>• Good groundcover for Front-Range, Colorado-style landscape designs</li> </ul>	<ul style="list-style-type: none"> <li>• Short grass, grows to 3 to 6 inches tall</li> <li>• Minimal mowing required</li> <li>• Best for full-sun sites up to 6,800 ft in elevation with clay content in the soil</li> <li>• Spreading habit makes it valuable for stabilizing slopes and tolerating moderate traffic</li> <li>• Can tolerate occasional flooding in stormwater infrastructure</li> </ul>
<p>Blue Grama Grass</p> 	<ul style="list-style-type: none"> <li>• Best used as a groundcover for low-traffic areas</li> <li>• Good groundcover for Colorado-style landscape designs</li> </ul>	<ul style="list-style-type: none"> <li>• Grows 6 to 18 inches tall (with seedheads)</li> <li>• Best for full-sun sites up to 8,500 ft in elevation</li> <li>• Tolerant of many soil types and growing conditions</li> <li>• Grows best when mowed three times per year or less</li> <li>• Not traffic tolerant</li> </ul>
<p>Buffalograss/Blue Grama Grass Mixture</p> 	<ul style="list-style-type: none"> <li>• Groundcover for low-traffic areas</li> <li>• "Low-grow," low-maintenance native grass mix for natural landscapes or restoration</li> <li>• Good groundcover for Colorado-style landscape designs</li> </ul>	<ul style="list-style-type: none"> <li>• More uniform appearance than native shortgrass prairie mixture.</li> <li>• Can be mowed for a lawn-like appearance or left unmowed for a more natural look; moderate traffic tolerance</li> <li>• Grows 6 to 18 inches tall (with seedheads).</li> <li>• Best for full-sun sites up to 7,000 ft in elevation</li> <li>• Tolerant of many soil types; good choice when soil type is variable or unknown</li> </ul>
<p>Native Shortgrass Prairie Mixture</p> 	<ul style="list-style-type: none"> <li>• Groundcover for low-traffic areas</li> <li>• Can provide wildlife, bird and pollinator habitat</li> <li>• Groundcover for ecological restoration</li> </ul>	<ul style="list-style-type: none"> <li>• Grasses can be customized for any elevation, height part shade and site conditions</li> <li>• Taller grasses can be included to maximize wildlife, bird and insect value</li> <li>• Flowers and shrubs can be included to support pollinators, birds and wildlife</li> <li>• Good choice for areas where irrigation will be turned off long-term</li> <li>• Not suitable for frequent foot traffic</li> </ul>
<p>Cold-Hardy Bermudagrass (<i>not native to Colorado</i>)</p> 	<ul style="list-style-type: none"> <li>• Lawn turfgrass replacement</li> </ul>	<ul style="list-style-type: none"> <li>• Considered experimental; winter hardiness is being evaluated in Front Range sites. May spread into natural areas, especially riparian sites</li> <li>• Traffic tolerant. Cold hardy to 6,500 ft in elevation; not native to Colorado</li> <li>• Mow to 1-2 inches for manicured look; unmowed it will grow to 4 inches tall</li> <li>• Slow vertical growth rate results in less mowing</li> </ul>



# GRASS CHARACTERISTICS

## by Species or Mixture Type

	Buffalograss	Buffalo Grama Grass	Buffalo/Blue Grama Grass Mix	Native Prairie Mix	Customized Native Grass Mix	Western Wheatgrass	Cold Hardy Bermudagrass	Fine Fescue
Requires 50-80% less irrigation water than a traditional lawn.	✓	✓	✓	✓	✓	✓	✓	
Tolerates shade (less than 6 hours of sun per day).							✓	✓
Can be used for a low-water lawn (uniform look and short height).	✓						✓	
Suitable where a uniform appearance is desired.	✓	✓	✓			✓	✓	✓
Will have variation in height, leaf color and leaf width.				✓	✓			
Grows best when mowed infrequently and allowed to grow 12-24 inches tall.		✓	✓	✓	✓			
Active growth is May through early October; grows best in midsummer heat.	✓	✓	✓				✓	
Active growth is April - November; slows in midsummer heat.				✓	✓	✓		✓
Suitable for elevations above 6,800 ft.		✓			✓	✓		✓
Tolerates sandy or gravelly soils.		✓	✓	✓				✓
Tolerates frequent salts from pet urine or de-icing salts.						✓	✓	
Tolerates periodic flooding.	✓				✓	✓		
Stabilizes slopes and prevents soil erosion.	✓		✓		✓	✓		
Native to Colorado; supports pollinators and bird.	✓	✓	✓	✓	✓	✓		
Suitable for six-foot pathway buffers or "beauty bands."	✓							
Can tolerate broadcast applications of weed control products.	✓	✓	✓			✓	✓	✓





# MAINTENANCE

## Maintenance During the Establishment Phase

### MULCHING

Mulch is important for retaining soil moisture and preventing weed growth. Visit the Mulch section of this guide for mulching tips, types and how-to guides.

### FERTILIZING

Fertilize according to the specific needs of your plants and soil, ensuring you provide the correct nutrients at the correct time. While some grass species benefit from periodic fertilizing, many native grass species do not need fertilizer – simply leave the grass clippings in place.

The best times to aerate and fertilize are typically in Spring and Fall. Aerate first, then follow the fertilizer product label for application instructions.

Generally speaking, organic fertilizers are recommended over synthetic fertilizers. Organic fertilizers do not dissolve in water, which enhances absorption and prevents contamination of local rivers/creeks. Instead, they are broken down by soil microorganisms – providing beneficial nutrients. While it takes slightly longer for organic fertilizers to start working, the slow release and soil nutrient benefits support healthy, fertile soil.

Visit [lovecoloradowater.org/care/](https://lovecoloradowater.org/care/) for more info.



### PRO TIP:

Choose phosphorus-free fertilizer to keep lawns green and local waterways blue. Fertilizers containing phosphorus can cause harmful algae blooms in local rivers and ponds.



## LAWN MAINTENANCE

Take proper care of any remaining lawn by mowing it at the appropriate height and frequency as well as treating for diseases/pests as needed. Aerate the lawn periodically to prevent soil compaction and improve water filtration.

**Lawnmower Blade Height:** Set the height of your lawnmower blade height to 3 inches. The leaves of taller grass photosynthesize more energy and grow deeper roots, making the grass more drought tolerant and disease/pest resistant. This height also shades weed seeds to prevent germination and blocks adequate sunlight for weed seedlings to grow.

**Mowing Frequency:** Mow the lawn often enough so that no more than one-third of the grass height is removed at a time. This may mean mowing bluegrass or fescue lawns every 3-4 days during the Spring growth period, but only once every 7-10 days at other times of the year when growth is slowed by heat, drought or cold. If weather or another factor prevents mowing at the proper time, raise the height of the mower blade temporarily to avoid cutting too much off at one time. Cut the grass again a few days later at the normal mowing height.

**Clippings:** Leave grass clippings on your lawn. Grass clippings provide nitrogen and free fertilizer. If you have good aeration and healthy soil that supports microorganisms, you will not have thatch issues.

**Disease and Pests:** There are various clues you can keep an eye out for to identify diseases/pests and their causes. Here are two helpful resources to identify lawn problems:

1. Diagnosing Common Lawn Problems by Dr. Tony Kosk (2021): [cmg.extension.colostate.edu](http://cmg.extension.colostate.edu)
2. Step-by-Step Guide to Organic Lawn Care from the City of Boulder: [bouldercolorado.gov](http://bouldercolorado.gov)



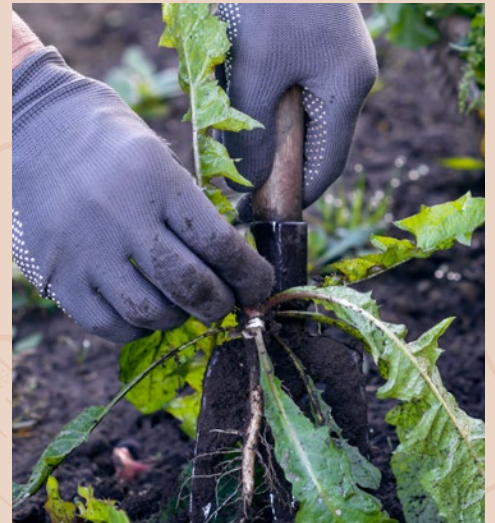
## PRUNING AND DEADHEADING

Periodically prune shrubs and trees to maintain their shape and health. It's best to prune plants in their dormant stage (early winter or early spring) to encourage growth. Generally speaking, pruning in Summer and Fall is harder on plants and limits growth. Some plants may have different pruning times, so be sure to follow the recommendations for your specific plants.

Deadhead flowering plants to encourage continuous blooming and prevent them from going to seed. This involves cutting the stem just below the spent flower – above a leaf node or a new bud. Frequent deadheading supports healthier, bushier growth and prolongs the blooming period.

## WEED CONTROL

Effective weeding involves removing the entire weed root to prevent regrowth. Weeding is easiest when the soil is damp and loose, such as after rain or watering. Weed barriers are not recommended as they can break down over time and make weeding more difficult.



## Long-Term Maintenance

### PLANT DIVISION

Divide plants every few years to prevent overcrowding. The best time is in early Spring or late Fall to avoid periods of active growth or blooming. Plant dividing supports healthy growth and prevents plants from becoming too dense.

### CONTINUOUS MONITORING

Regularly check soil moisture, plant health, mulch and irrigation systems. Adjust care practices based on seasonal changes and specific plant needs to ensure a thriving water-wise landscape.



# RESOURCES

Visit [lovecoloradowater.org/resources](https://lovecoloradowater.org/resources) to access these helpful resources and more.

## City of Boulder

Sustainable Grass Conversion  
A Step-by-Step Guide to Organic Lawn Care

## City of Thornton

H2Overhaul Kit

## Colorado Native Grass Guide

Colorado Native Grass Options

## Colorado Stormwater Center

Rain Garden Designs and Plants

## Denver Botanic Garden

Western Best Practices  
Soil and Mulch

## Northern Water

Landscape Resources  
Landscape Templates

## Plant Select

Plant Finder  
Free Landscape Designs

## City of Fountain

Colorado Plant Guide for Fountain, Colorado

## Colorado Native Plant Society

Design for Different Regions in Colorado

## Colorado State University Extension

Main Search Page  
Mulches for Home Grounds

## FEMA [2023] Marshall Fire Mitigation Assessment Team

Homeowner's Guide to Reducing Wildfire Risk  
Through Defensible Space

## Resource Central

Garden In A Box  
Lawn Replacement Program  
Waterwise Yard Seminars  
[Waterwiseyards.org](https://waterwiseyards.org)





# REFERENCES

Visit [lovecoloradowater.org/resources](https://lovecoloradowater.org/resources) to access these helpful resources and more.

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