

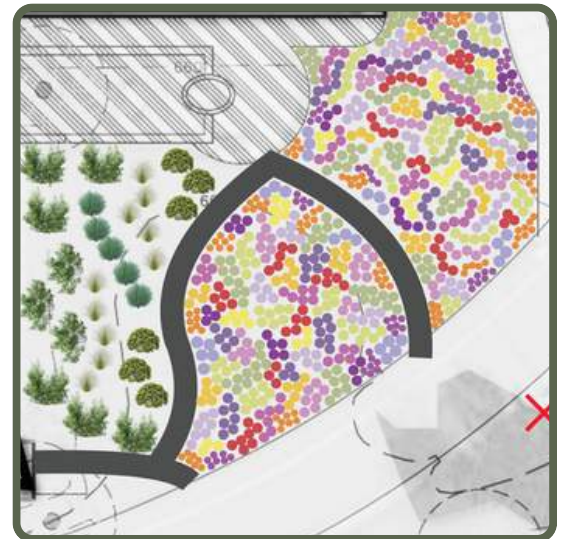
Design



Thoughtful waterwise landscape design not only enhances the visual appeal of a property, it also ensures that the outdoor space remains an enjoyable and enduring sanctuary, harmoniously blending beauty, functionality, and environmental responsibility. By thoughtfully selecting native and drought-resistant plants, a landscape can provide many benefits with minimal irrigation, lower incidence of pests and disease, and fewer inputs like fertilizers and pesticides.

Style

When designing a garden, styles range from formal to informal. **Formal gardens feature more symmetrical layouts, geometric shapes, and precise organization**, often with hedges and classical elements. This style requires more regular upkeep. **Informal gardens offer a natural look with asymmetrical designs and native plants**, requiring less maintenance. Transitional styles, like cottage gardens, blend both approaches. When selecting a style, consider the landscape, personal taste, and maintenance level.



Negative Space



Incorporating **negative space** in garden design is essential for creating a balanced and visually appealing composition. By leaving open areas or using minimalistic features, you allow the eye to rest, which enhances the impact of focal elements like specimen plants and drifts. This thoughtful use of negative space not only prevents the garden from feeling cluttered but also highlights the beauty of the natural landscape.

Important Terms



Functional turfgrass: Turf grass that serves a purpose beyond just aesthetics. The purpose can be for kids, dogs, etc.

Non-functional turfgrass: Seldom used turfgrass that is only walked on or used when it is mowed.

Waterwise Landscape: a landscape that prioritizes plants and materials that minimize supplemental irrigation.

Coloradoscape: as contrasted from a xeriscape, a waterwise landscape that prioritizes and incorporates native and waterwise plants instead of just hardscape.

Native: Plants that have evolved in and are adapted to a specific region or ecosystem.

Introduced: A plant species moved outside of its native or natural range.

Waterwise Plant: Plants that may or may not be native, but can survive with little to no supplemental water once established.

Invasive Species: An introduced species that grows and multiplies rapidly, causing harm to the environment, economy, or human health.

Noxious Weed: A noxious weed is a plant that has been deemed harmful to crops, natural habitats or ecosystems, or humans or livestock. Many, but not all, noxious weeds are also invasive species.

Hydrozone: a portion of a landscape where plants with similar water requirements are grouped within the same irrigation zone to allow for efficient, uniform irrigation that minimizes overwatering or underwatering.

Microclimate: a local atmospheric zone where the climate differs from the surrounding area.

Firewise: a strategy, practice, or procedure that minimizes fire risk.

Hardscape: the non-living, man-made part of a landscape, made from hard materials like stone, concrete, and wood.

Mulch: a material spread around or over a plant to enrich or insulate the soil. Mulch can be organic, like bark or leaves, or inorganic, like chipped rock or sand.

Exposure: the amount of direct sunlight a particular area receives, especially with reference to cardinal directions and slopes.

Meadowscape: a practice that involves replacing traditional lawns with a diverse planting of native grasses and wildflowers to mimic a natural meadow.

Permaculture: the development of home agricultural ecosystems intended to be sustainable and self-sufficient.



Sections



Design Considerations

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Mountain Region Characteristics

Landscaping in mountainous regions poses distinct challenges, largely due to the unpredictable and often severe climate, which features drastic temperature changes, windy exposures, harsh sun, and heavy snowfall.

These conditions complicate the plant selection, landscape composition, and maintenance needs of a property. Knowing and working with your site as-is is the best way to set yourself up for success.



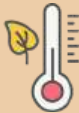
The mountain region is defined by a few distinct features:



Short Growing Season



Strong Winds



Cool Nighttime Temps



Intense Sunlight



High Altitude



Low Humidity

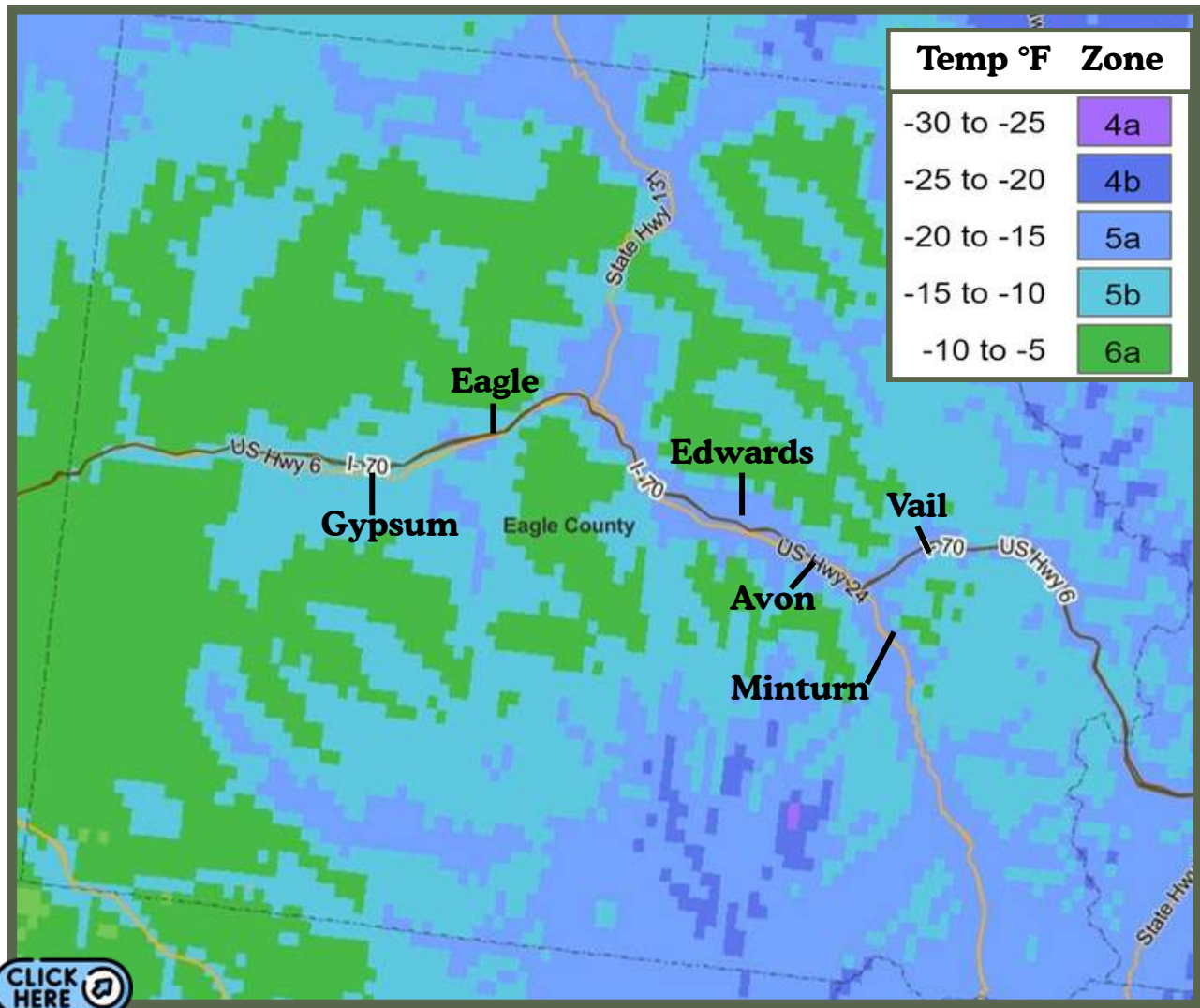
Besides climate, there are a number of challenges with completing a landscape conversion in the mountains:

- **Costs can be substantial**, as labor is limited and the cost of living and running a business are high. Our area requires specialized expertise for working with the varied topography, specific microclimates, and an understanding of the plants that live and thrive.
- **Sourcing appropriate materials remains a challenge.** Mountains are rural areas with limited options for sourcing materials. Where your materials are coming from can be the difference between a project that is on time and on budget or a project that runs late and over budget.
- **Maintenance is necessary.** There is no such thing as a “no maintenance garden.” Accounting for the needs of your landscape ahead of time will help minimize surprises and guide your landscape transformation process.

Eagle County Hardiness Zones



Understanding your USDA hardiness zone is essential for plant selection, as it helps identify the physical limitations of the plants that are able to survive in your climate. By choosing plants that match your zone, you enhance the likelihood of successful growth and survival.



Hardiness zones in Eagle County range from 4a-6a. Most of the more heavily populated areas of the county are in zone 5a or 5b. **However, because of our harsh climate, altitude variation, and lack of humidity, a good rule-of-thumb is to purchase species suited to a zone lower than the zone you are in.** In Eagle County, there are a number of zone 5b and 6a plants that are theoretically able to grow here that have very low survivability. There are also a handful of plants that will theoretically grow here that also won't survive because of limitations outside of the lowest average temperatures. For a list of those, please see the "[Buyer Beware](#)" section later in the guide.

Foundational Environments

Montane woodlands and semi-desert shrublands are two distinct ecosystem types that significantly influence the types of plants you can cultivate. Your foundational environment should inform your decisions about the composition of your landscape.



← **Montane woodlands**, typically found at higher elevations and on north-facing exposures, are characterized by cooler temperatures, higher elevations, and greater precipitation. These forests support a diverse range of flora, including conifers, deciduous trees, and an understory of shrubs and herbaceous plants.

→ **Semi-desert shrublands** typically found at lower elevations and on south-facing exposures, are arid regions with sparse vegetation, dominated by drought-resistant shrubs, grasses, and scattered trees. Water is less abundant in semi desert shrubland, which is also characterized by poorer soils with low organic matter content.



The foundational environment of your property—whether montane woodland or semi-desert shrubland—will determine the types of plants that are best suited for your landscape. Montane woodlands offer a robust foundation for a lush, diverse garden, while semi-desert shrublands require consideration of water conservation and heat-tolerant species. Understanding these ecological foundations will guide you in creating a landscape that is sustainable, aesthetically pleasing, and works in tandem with the natural environment.

Xeriscape vs Coloradoscape

Xeriscaping and Coloradoscaping are both landscaping methods designed to promote water conservation, but they have distinct approaches and aesthetics.

Coloradoscaping incorporates the intention of xeriscaping but emphasizes the living parts of the landscape—including the soil—to ensure that most of the ground is covered with waterwise vegetation. We have beautiful green landscapes in Colorado, so let's make sure our landscapes reflect and enhance our greater environments!



← **Xeriscaping**, a term derived from the Greek word "xeros," meaning dry, focuses on reducing or eliminating the need for supplemental water from irrigation by using drought-tolerant plants, efficient irrigation techniques, and soil amendments that enhance water retention. While coined by Denver Water in the 1980s, this method is often associated with more arid regions. Though there are some desert environments in Colorado where xeriscaping is appropriate, for most places, a Coloradoscape is a more fitting approach.

→ **Coloradoscaping** is a subset of xeriscaping that specifically caters to the environment, climate, and native flora of Colorado. **It incorporates the principles of xeriscaping while highlighting the region's unique biodiversity**, using plants that are not only drought-tolerant but also contribute to the local ecosystem by providing habitat and food for native wildlife. Both methods seek to create sustainable landscapes, but Coloradoscaping uniquely celebrates and exemplifies Colorado's natural heritage.



Design Process



This is perhaps the most fun part of the a conversion. **A well thought-out plan can save you a lot of headaches down the line!** Allow plenty of time to plan and execute your conversion. It is a long-term investment with ups and downs, but it should leave you with a beautiful, functional, and sustainable landscape that will endure long into the future.

Before You Start



1. Define your goals



2. Evaluate your site



3. Find your inspiration



4. Create a site plan



5. Set up a timeline



5. Make a budget

Site Plan



Sketch out hardscapes



Define your hydrozones



Plan irrigation upgrades



Harness existing water



Mitigate fire danger



Add features



Plan your planting



Don't forget to take photos and videos of your site. **Seeing the before to after transformation is one of the most rewarding feelings!** You won't believe how far it's come.



Take a trip to **Betty Ford Alpine Gardens** in Vail to explore a variety of water-wise garden designs and themes! The waterwise garden is next to the welcome center along the footpath.

Hardscape Selection



Hardscapes are an important part of any landscape. **The hardscape you choose influences the microclimate and hydrology of your landscape. Larger, denser substrates absorb more heat** during the day and radiate it back out at night. **Substrates lacking gaps fail to replenish groundwater** and create potential for pooling, or they send water straight into ditches and stormdrains, exacerbating flooding events.



Flagstone with thyme or creeping veronica makes an attractive living, permeable hardscape

Flagstone with permeable grout is a low maintenance alternative to planted flagstone

Stairs can be made from a variety of permeable substrates for a more natural aesthetic

Cobblestone is another good hardscape alternative for patios and garden paths

Concrete has many applications, but it is impermeable and adds to the “heat island effect”

Grouted flagstone is also impermeable and doesn’t allow for water to percolate through

Selecting the right hardscape for your landscape involves balancing functionality with aesthetic appeal.

Consider the overall style of your home and garden to ensure that elements like patios, pathways, and retaining walls complement your existing environment. Materials such as stone, brick, or concrete each offer unique tradeoffs and visual characteristics, so choose options that not only fit your practical needs but also enhance the beauty and function of your outdoor space.

Zoning by Sun Exposure



When designing an efficient irrigation system, it's best not to mix zones of full sun, part-sun, and shade, as each area requires varying amounts of water based on their exposure to sunlight—even before taking plant composition into consideration. By keeping these zones separate, irrigation control can be maximized. Paired with proper hydrozoning (see below), these two strategies are the pillars of efficient irrigation design.

Full Sun



A full sun plant needs 6+ hours of direct sunlight each day to grow properly and produce flowers, fruit, or foliage. This doesn't have to be a continuous block of time; it can be a combination of morning and afternoon sun. Plants that need full sun typically require this amount of intense light to thrive, bloom, and produce new growth.

Part Sun



A part sun plant needs approximately 4 to 6 hours of direct sunlight per day. This can be direct morning and early afternoon sun, or a spot that receives filtered light throughout the day. Plants that require partial sun are those that do not need a full day of direct sun and can benefit from some shade during the hottest part of the afternoon.

Full Shade



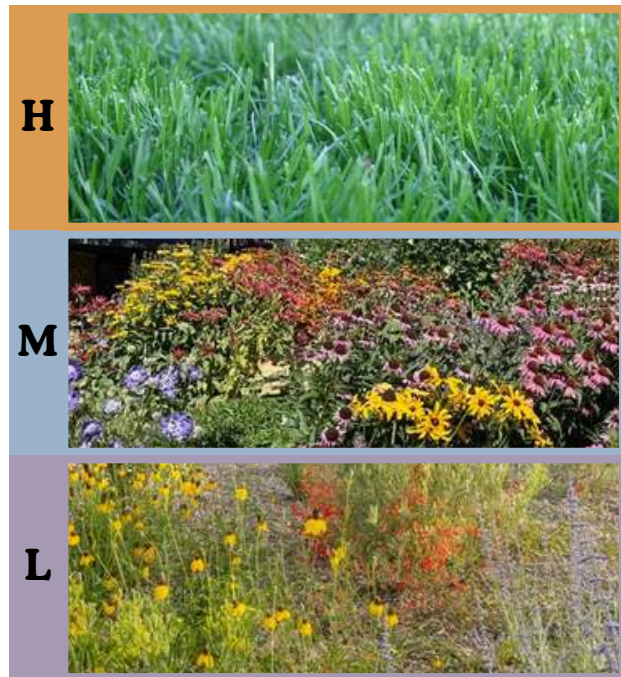
A full shade plant is one that thrives in areas receiving <4 hours of direct sunlight per day. These plants can often be found in the deep shade under dense trees, large shrubs, or on the north side of buildings where they receive very little direct sun, but still benefit from reflected ambient light.

Zone	Microclimate factor	Daily (gal/ft ²)	Weekly (gal/ft ²)	30-day (gal/ft ²)	Daily difference vs full sun (gal)	% less H ₂ O than full sun
Full sun (baseline)	1	0.10	0.70	2.99	0	0.00%
Part-sun	0.8	0.08	0.56	2.39	0.02	20.0% less
Full shade	0.5	0.05	0.35	1.49	0.05	50.0% less

Hydrozoning



Hydrozoning is a crucial landscape design strategy that involves grouping plants with similar water, sun, and soil requirements together, ensuring the efficient use of water resources and promoting healthy plant growth. By organizing plants into zones based on their irrigation requirements, property owners and landscapers can minimize water waste, reduce water bills, and prevent overwatering or underwatering. By understanding and adapting your irrigation system to these hydrozones, you can create a more efficient and sustainable landscape.



Types of Hydrozones

High-Water Use Zone: Contains plants that require frequent watering due to shallow roots or thrive in moist soil conditions.

Moderate-Water Use Zone: Includes plants that have average water needs and can tolerate periods of drought once established, such as trees, shrubs, and perennials.

Low-Water Use Zone: Comprises drought-tolerant plants that require minimal irrigation once established, including many native trees, shrubs, perennials, and grasses.



Practical Hydrozoning Considerations

Some places are ideal spots for lower water plants. For example:

- **Slopes** can be water hogs. Slopes tend to lose water to run-off, so typically, they're ideal places for plants that need less irrigation.
- **Southern and western exposures** tend to use a lot of water. These can be great spots for plants that are well-adapted to hot, dry, sunny settings and don't need much irrigation.
- **Awkward lawn areas** (like hell strips between the sidewalk and street) can be ideal spots for low-water perennials and shrubs instead.



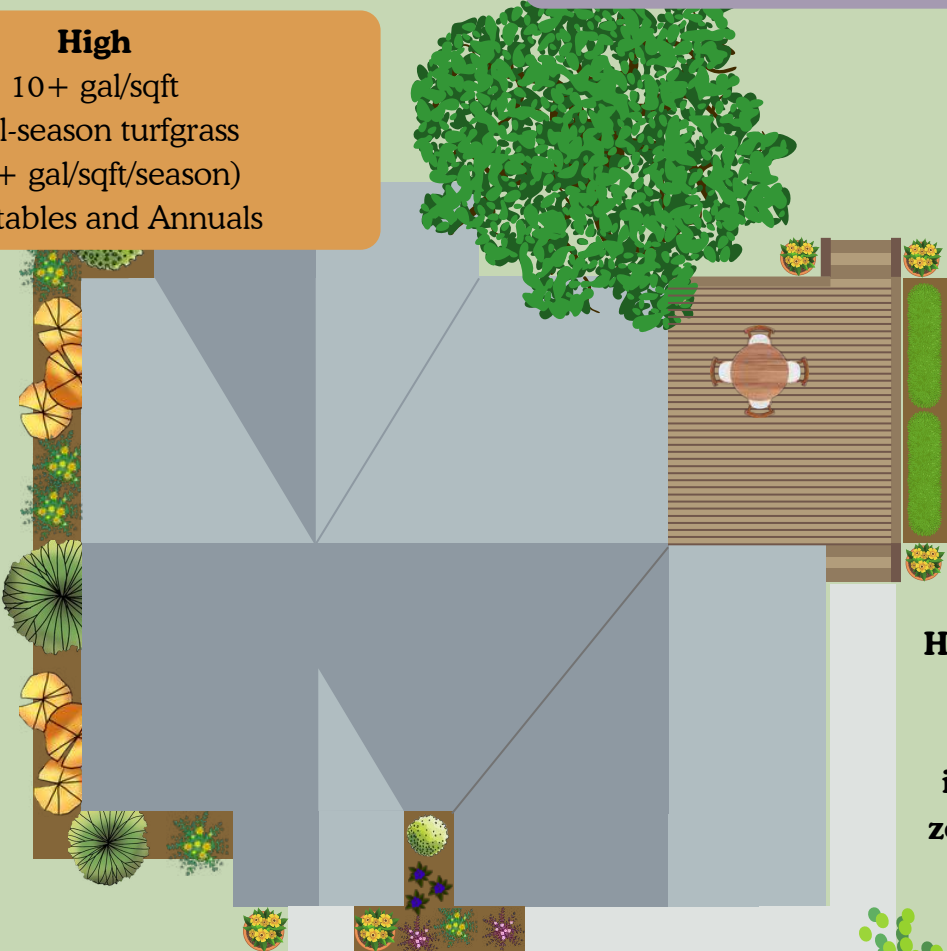
Hydrozoning

The goal of hydrozoning is to place plants of similar water need in irrigation zones with other plants of the same need.

Low
0-5 gal/sqft
Native Grasses & Wildflowers
Native Shrubs & Trees*

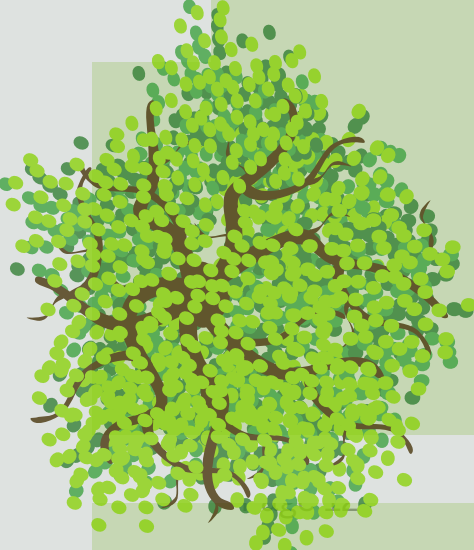
High
10+ gal/sqft
Cool-season turfgrass
(15+ gal/sqft/season)
Vegetables and Annuals

Medium
5-10 gal/sqft
Perennials*
Shrubs*
Nonnative Trees*



**Hydrozones
MUST
MATCH
irrigation
zones to be
effective**

***Not all perennials,
trees, and shrubs fall in
the same hydrozones.**
Use the plant list for
accurate grouping.



Creating a Water Budget



Creating a water budget for your landscape is an effective approach to sustainable gardening that offers numerous benefits. It helps conserve water by ensuring that each plant receives the appropriate amount of water. This not only aids in maintaining healthy plants and reducing the risk of diseases, but it also lowers water bills and conserves vital resources. A water budget can enhance the resilience of your landscape by promoting deep root growth, making plants more drought-tolerant and adaptable to changing climate conditions. Furthermore, by understanding your landscape's specific water needs, you can make informed decisions about plant selection and placement, fostering a more sustainable and environmentally friendly garden.

To create a water budget for your landscape using hydrozoning:

1. Start by assessing your garden's layout and identifying different hydrozones based on plant water needs.
2. Map out your landscape and irrigation zones and categorize areas into high, medium, and low water need hydrozones.
3. Next, group plants with similar water needs together within these zones.
4. Once grouped, tailor your plant composition and irrigation strategies to match each zone's requirements.

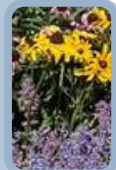
High

~ 10+ gal/sqft/
season



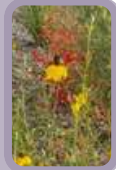
Medium

~ 7.5 gal/sqft/
season



Low

~ 5 gal/sqft/
season



A	B	C
Landscape Type	Area (sf)	Seasonal ET (in)
Cool Season Lawn	1	Avon
Trees	1	Avon
Perennials & Shrubs	1	Avon
Irrigated Native	1	Avon
--		Avon
--		Avon
--		Avon
Total Expected Seasonal Water Use (gal)	30.7 (A)	
Total Irrigated Area (sf)	4 (B)	
al Expected Seasonal Water Use (gal/sf) A / B =		7.7

To calculate your water budget:

1. **Categorize** each area by hydrozone
2. **Measure** the square footage of each hydrozone
3. **Multiply** the hydrozone by the average water consumption per season of each hydrozone. Use the budget calculator tool to help!
4. **Tally** the water use by square foot by the total square footage for a final sum







Use Beyond Lawn's Water Budget Calculator to determine the appropriate water budget for your property. If your current consumption is significantly over or under your budget, you may be over- or underwatering.

Plan Irrigation Upgrades



Planning irrigation upgrades during the design process is essential for minimizing water waste and ensuring the success of a landscape renovation project. Working with your existing system to improve efficiency is the most effective way to save water, but if embarking on a conversion project, implementing smart technologies and best practices ensures your system's effectiveness well into the future.

-  **Inspect**
-  **Connect**
-  **Direct**
-  **Select**

Irrigation Upgrades to Consider

- Install a Smart Controller
- Use Flow Management Tools
- Convert to Drip
- Fix Leaks & Broken Heads
- Ensure Distribution Uniformity
- Match Precipitation Rates
- Install Check Valves
- Install Rotary Nozzles
- Raise and Straighten Heads
- Correct Overspray
- Prune Plant Obstructions
- Install a Rain Sensor
- Fix High or Low Pressure

Ensuring your irrigation system functions optimally is crucial for maintaining healthy, waterwise landscape, and it can be effectively managed through inspecting, connecting, directing, and selecting.

- **Inspect** the system regularly, checking for leaks, clogs, or damaged components that could hinder performance.
- **Connect** all loose components and fix apparent efficiency issues.
- **Direct** the flow of water strategically, ensuring that each plant receives the necessary amount without waste.
- **Select** high-quality, water-efficient equipment and plants suited to your climate and soil type, which will not only conserve water but also promote a thriving garden.

! Irrigation is complex, and using a professional is recommended for many irrigation retrofits, depending on the scope and scale of the project. Click here for a list of contractors to help you upgrade your system.

Slow, Sink, Spread!



Harnessing existing water can be one of the simplest and most cost-effective ways to reduce supplemental water needs and improve the sustainability of your landscape. Think **slow, sink, spread** when approaching how to maximize the availability of water in your landscape.



Stormwater retention features help harvest rainwater to **percolate and infiltrate water into our soils slowly.**



- **Rain gardens** lie below the level of their surroundings to absorb rainwater that runs off of a surface such as a patio or roof and spread it through a space.



- **Rock gardens** use roughly 2” pebbles or gravel as mulch to increase water retention by up to 80% through preventing evaporation.



- **Rain Barrels** collect rainwater from your roof into a reservoir with a **combined storage of 110 gallons or less** to use in the garden.

Colorado Rain Barrel Rules and Regulations



- You must live in a house or townhouse with fewer than 4 units
- Maximum of two rain barrels with combined storage 110 gallons or less
- All water collected must be used OUTSIDE and on YOUR PROPERTY
- Untreated rainwater collected from roofs is not safe to drink
- Remember to always check with your HOA
- The container must be equipped with a sealable lid, to prevent mosquitos



Check out our website at [beyondlawn.org](https://www.beyondlawn.org) for upcoming **rain barrel, landscape, and irrigation workshops!**



Rain Gardens



Rain gardens are an innovative and sustainable landscaping solution that effectively manage and harness stormwater runoff. By strategically planting native and waterwise shrubs, perennials, and grasses in a shallow, bowl-shaped depression, rain gardens capture, absorb, and spread rainwater from impervious surfaces such as roofs, driveways, and sidewalks into the landscape. This not only reduces the burden on stormwater systems but also facilitates the natural infiltration of water into the ground, replenishing local groundwater supplies and reducing the need for supplemental irrigation. Rain gardens also contribute to the health of local ecosystems by filtering out harmful environmental pollutants and providing habitat for wildlife, enhancing biodiversity.

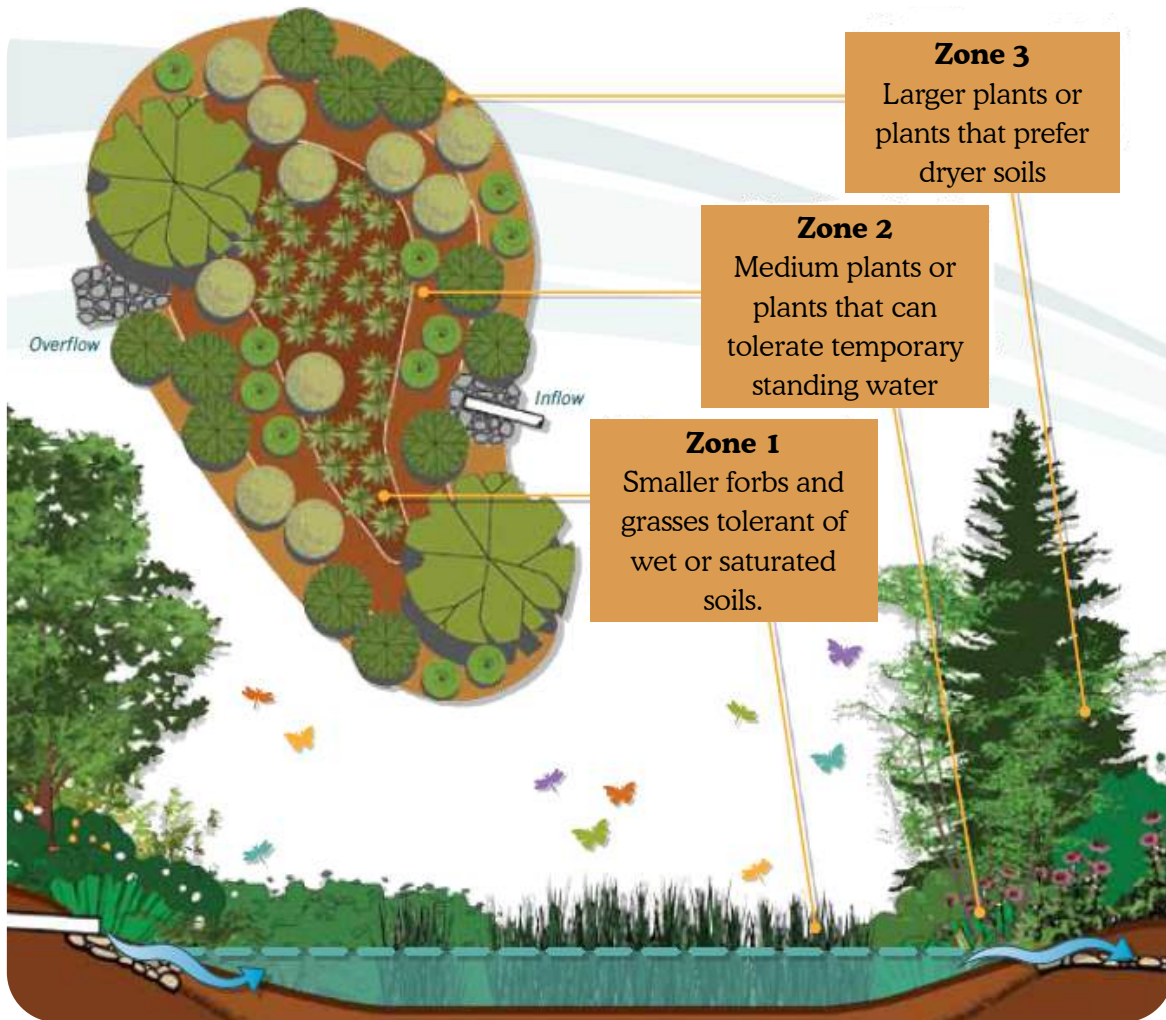


← **Dry creek beds are an excellent way to create the backbone of your rain garden,** offering not only functional benefits but also enhancing aesthetic appeal. They create natural-looking negative spaces that provide a visual resting place for the eye, bringing balance to the landscape. They also improve access for maintenance tasks such as weeding and deadheading and provide valuable habitat for many invertebrate species.

→ **Rain gardens are great alternatives to turf for replenishing groundwater next to large impermeable surfaces, like parking lots.** These areas can significantly reduce stormwater runoff, improve water quality, and enhance local biodiversity by providing a habitat for various plant and animal species.



Rain Garden Compostion



Best practices for establishing a rain garden:

- The rain garden **SHOULD NOT** be over any utilities. To find where your utility lines are, **call 811 to mark out utilities on your property**
- Develop the rain garden at least 10 feet away from your home to make sure flooding does not occur in your basement or crawl space
- A rain garden does best in areas of full or partial sun
- For ease of construction, try to find a flat area to develop the rain garden



Know what's below.
Call before you dig.

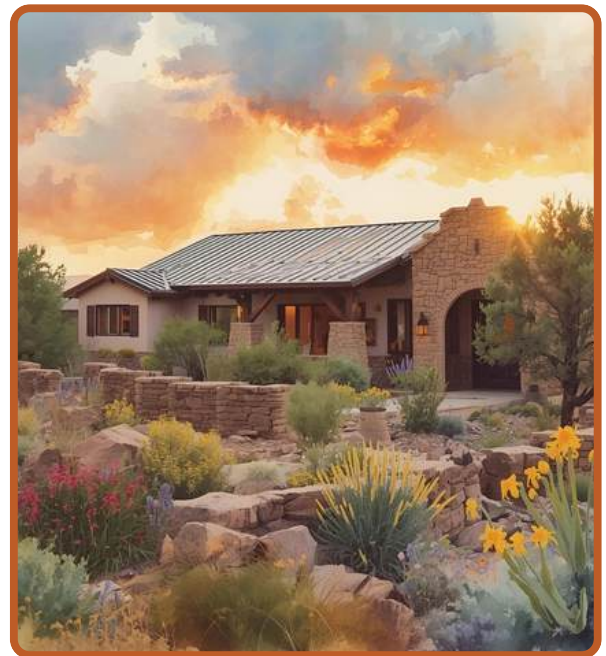
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Creating Fire-Resilient Landscapes



As climate change intensifies, the risk of wildfires is increasing, making it essential for us to rethink how we design and modify our homes, landscapes, and communities. Rising temperatures and prolonged droughts have created conditions where fires spread rapidly, threatening lives and property. In response, we need to adapt by developing sustainable and resilient spaces that minimize fire risk. This includes integrating fire-resistant materials in construction, maintaining defensible spaces around structures, and implementing community-wide fire management practices. By taking proactive measures, we can better protect our homes and landscapes and ensure safer living environments for everyone.



Fire Resilient Landscaping



The Resource Central fire-resilient webinar series is an invaluable resource for those looking to enhance their understanding of fire-resistant landscaping. This series offers expert insights and practical strategies for creating landscapes that not only withstand fires but also thrive in their aftermath. Whether you're a novice gardener or an experienced landscaper, these sessions will empower you to make informed decisions to protect your home and community.

Reducing Fire Danger



REALFire® is a wildfire risk reduction program that provides homeowners in Eagle County with free property assessments to educate residents on how their property may be susceptible to wildfire, providing specific ways to reduce wildfire threat.

“Fire Free Five”

The most vulnerable area around a structure is within the first five feet. This area acts as a natural trap for embers. **If this area contains flammable materials, these embers are likely to cause the ignition of the structure.** In areas of high density, one burning structure may rapidly spread to others.

Within this area, recommended landscaping includes:

- Hardscaping such as on-grade patios, walkways, driveways, etc.
- Non-combustible mulch such as pea gravel, cobble, or stone
- Well maintained and irrigated lawn
- Perennial flower beds with low-growing, non-woody species
- Perennial ground covers



Within the five-foot zone from your house, AVOID:

- Trees and shrubs.
- Trees outside the five-foot zone that hang over into the zone should be limbed up to a height of six feet or one-third the total height, whichever is less, and should be trimmed to leave at least a two-foot gap between the nearest branch and the building.
- Combustible materials such as firewood, construction materials, gasolines or other fuels, or household items like brooms or combustible door mats.

Reimbursements program for “Fire Free Five” action:

This program will reimburse the property owner up to 75% of the actual costs of materials and labor. The property owner must provide a minimum 25% match. Creation of Fire Free Five around outbuildings is an eligible expense but is not eligible for a separate reimbursement.



Reimbursement limits are as follows:

- Single Family Dwelling: \$2,000
- Duplex: \$3,000



[Click here for info on Colorado statewide tax incentives for wildfire mitigation work](#)

Wildland-Urban Interface (WUI)

The Wildland-Urban Interface (WUI), is a geographical area where human development meets or intermingles with undeveloped wildland or vegetation. It's a zone with a high risk for wildfires because it contains both flammable vegetation and human structures, increasing the potential for fires to spread from wildland to communities.

The majority of Coloradans live in the WUI in places with at least some risk of wildfire, and that number continues to increase with development. In order to increase the likelihood that homes and infrastructure survive a wildfire, all landowners must work together to reduce fire hazards within and adjacent to communities.



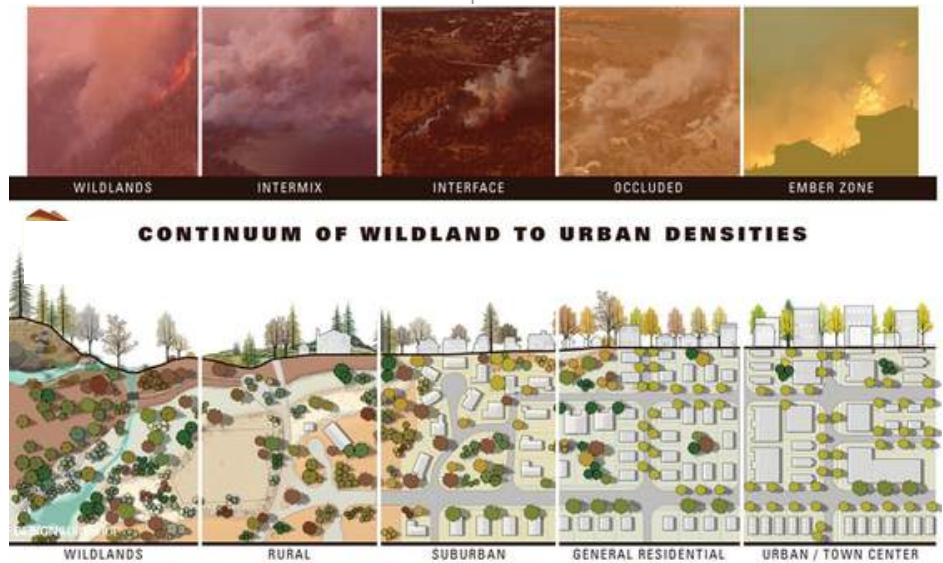
WHAT'S YOUR WUI RISK?

MORE THAN HALF of Colorado residents live in the wildland-urban interface and are at some risk of being affected by wildfire.

Source: CSFS WUI Risk Assessment 2017

This includes work on individual home sites and common areas within communities.

Every community member has a role in fire adaptation, from civic leaders, to developers, to first responders, to homeowners, HOAs, districts, and land management agencies.



What is the wildland urban interface?

The wildland urban interface (WUI) is where human development and the wildlands meet. Knowing if you're located within this area will help you better understand the risks of fire to your home.



Resource Central's Firewise Landscaping Series



Creating a Fire-Resilient Landscape: Defensible Space & Design Principles

Presented by Chris Woods of Woods Landscape Design

1:28:56

The Home Ignition Zone (HIZ)

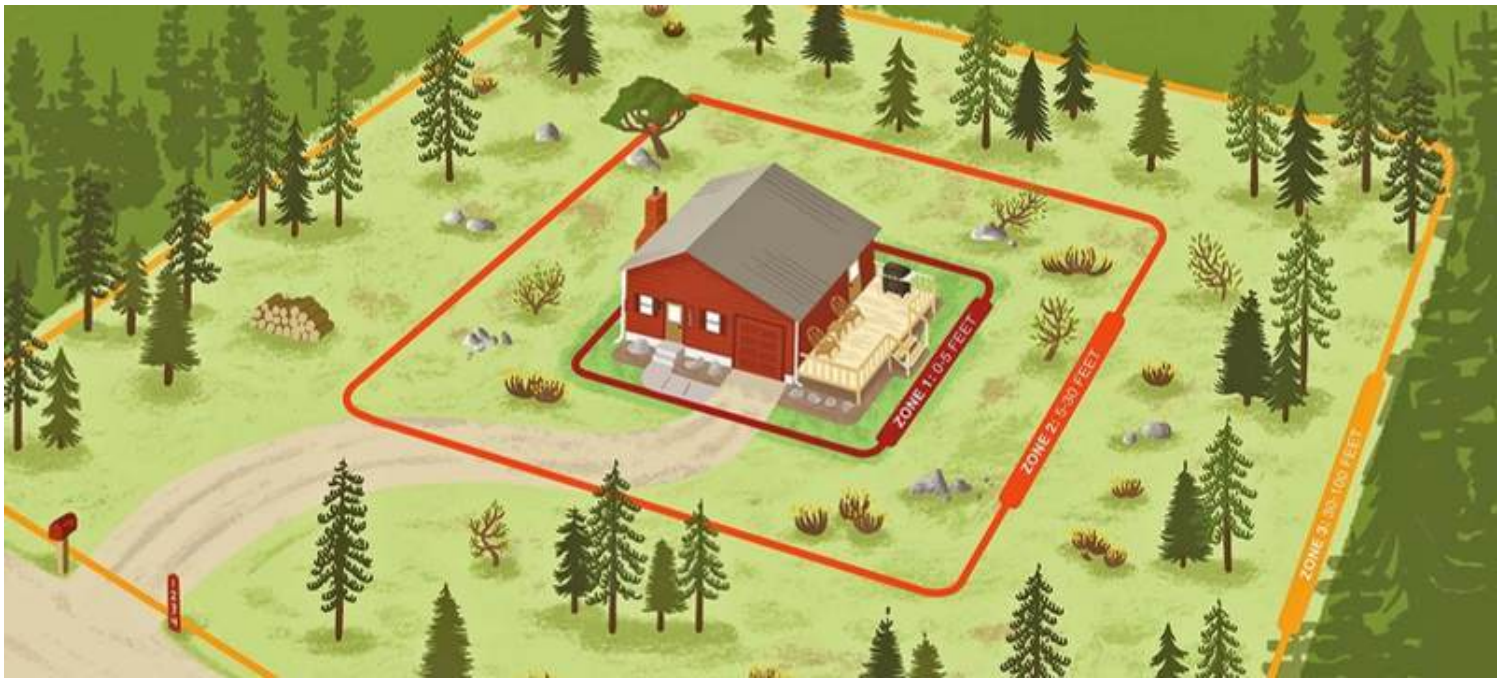


Illustration: Bonnie Palmatory, Colorado State University

HOME IGNITION ZONE (HIZ) is the home and the area around the home (or structure). The HIZ takes into account both the potential of the structure to ignite and the quality of defensible space surrounding it.

Zone 1

0-5 FEET FROM THE HOME

The area nearest the home. This zone requires the most vigilant work in order to reduce or eliminate ember ignition and direct flame contact with your home.

<5'

Zone 2

5-30 FEET FROM THE HOME

The area transitioning away from the home where fuels should be reduced. This zone is designed to minimize a fire's intensity and its ability to spread while significantly reducing the likelihood a structure ignites because of radiant heat.

<30'

Zone 3

30-100 FEET FROM THE HOME

The area farthest from the home. It extends 100 feet from the home on relatively flat ground. Efforts in this zone are focused on ways to keep fire on the ground and to get fire that may be active in tree crowns (crown fire) to move to the ground (surface fire), where it will be less intense.

<100'

Home Ignition Zone 1



GOAL: This zone is designed to prevent flames from coming in direct contact with the structure. Use nonflammable, hard surface materials in this zone, such as rock, gravel, sand, cement, bare earth or stone/concrete pavers.

CRITICAL STEPS

- Remove all flammable vegetation, including shrubs, slash, mulch, and other woody debris
- Do not store firewood or other combustible materials inside zone 1
- Prune tree branches hanging over the roof and remove all fuels within 10 feet of the chimney.
- Regularly remove all pine needles and other debris from the roof, deck, and gutters.
- Rake and dispose of pine needles, dead leaves, mulch and other organic debris within 5 feet of all decks and structures. Farther than 5 feet from structures, raking material will not significantly reduce the likelihood of ignition and can negatively affect other trees.
- Do not use space under decks for storage.

This webinar offers insight into safeguarding your home from wildfires. It covers essential strategies for creating a defensible space around your property, focusing on the crucial first five feet. Whether you're a homeowner or a community member, this webinar equips you with the knowledge needed to protect your home and improve your overall fire preparedness.

The First Five Feet



Home Ignition Zone 2



GOAL: This zone is designed to give an approaching fire less fuel, which will help reduce its intensity as it gets nearer to your home or any structures.

CRITICAL STEPS

- Mow grasses to 4 inches tall or less.
- Avoid large accumulations of surface fuels such as logs, branches, slash, and mulch.
- Remove enough trees to create at least 10 feet* of space between crowns. Measure from the outermost branch of one tree to the nearest branch on the next tree.
- Small groups of two or three trees may be left in some areas of Zone 2. Spacing of 30 feet* should be maintained between remaining tree groups to ensure fire doesn't jump from one group to another.
- Remove ladder fuels under remaining trees. This is any vegetation that can bring fire from the ground up into taller fuels.
- Prune tree branches to a height of 6-10 feet from the ground or a third of the total height of the tree, whichever is less.
- Remove stressed, diseased, dead or dying trees and shrubs. This reduces the amount of vegetation available to burn and improves forest health.
- Common ground junipers should be removed whenever possible because they are highly flammable and tend to hold a layer of flammable material beneath them.
- You can keep isolated shrubs in Zone 2, as long as they're not growing under trees. Keep shrubs at least 10 feet* away from the edge of tree branches.
- Periodically prune and maintain shrubs to prevent excessive growth. Remove dead stems annually.
- Spacing between clumps of shrubs should be at least 2 1/2 times* their mature height. Each clump should have a diameter no more than twice the mature height of the vegetation. Example: For shrubs that grow 6 feet tall, space clumps 15 feet apart or more (measured from the edge of the crowns of vegetation clumps). Each clump of these shrubs should not exceed 12 feet in diameter.
- * *Horizontal spacing recommendations are minimums and can be increased to reduce potential fire behavior, particularly on slopes. Consult a forestry, fire or natural resource professional for guidance with spacing on slopes.*

Home Ignition Zone 3

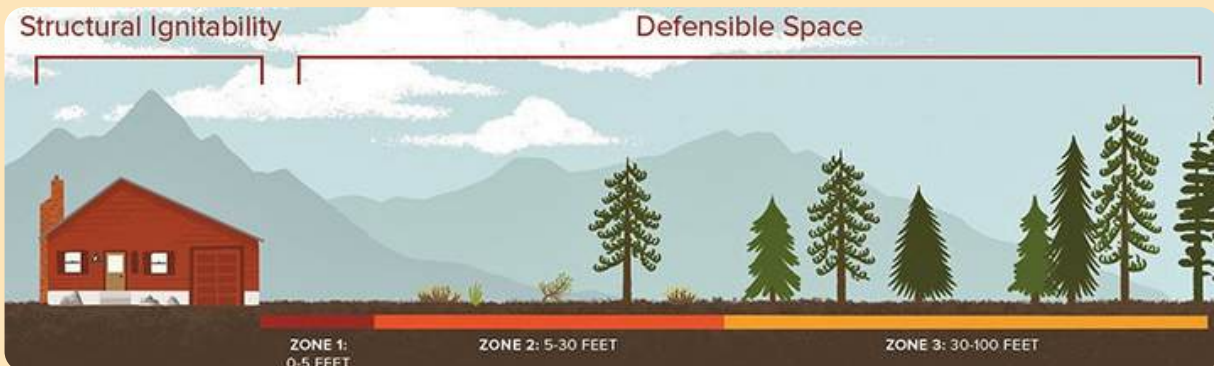


GOAL: This zone focuses on mitigation that keeps fire on the ground, but it's also a space to make choices that can improve forest health. Healthy forests include trees of multiple ages, sizes and species, where adequate growing room is maintained over time.

If the distance of 100 feet to the edge of Zone 3 stretches beyond your property lines, it's encouraged to work with adjoining property owners to complete an appropriate defensible space. If your house is on steep slopes or has certain topographic considerations, this zone may be larger.

STEPS TO CONSIDER

- Mowing grasses is not necessary in Zone 3.
- Watch for hazards associated with ladder fuels. The chance of a surface fire climbing into the trees is reduced in a forest where surface fuels are widely separated and low tree branches are removed.
- Tree crown spacing of 6-10 feet is suggested. Consider creating openings or meadows between small clumps of trees so fire must transition to the ground to keep moving.
- Any approved method of slash treatment is acceptable in this zone, including removal, piling and burning, lop and scatter, or mulching. Lop-and-scatter or mulching treatments should be minimized in favor of treatments that reduce the amount of woody material in the zone. The farther this material is from the home, the better.



EC Wildfire Collaborative



**EAGLE COUNTY
WILDFIRE
COLLABORATIVE**

! [Click here to navigate to ECWC wildfire preparedness resources.](#)



The Eagle County Wildfire Collaborative (ECWC) is a group of stakeholders within Eagle County working together to help mitigate wildfire threats through collaboration and partnerships.

The Collaborative works in all aspects of mitigation planning, grants, stakeholder engagement, recovery, project guidance, and other areas within wildfire mitigation management. Stakeholders within the ECWC include all Fire Agencies within Eagle County, Federal and State partners, Eagle County Government, watershed and sustainability partners, community leaders, wildlife experts, smoke and health experts, and leaders from various groups in ecosystem sustainability.

Hardening Your Home Against **Wildfire**: A Guide to Eagle County's Safety Codes

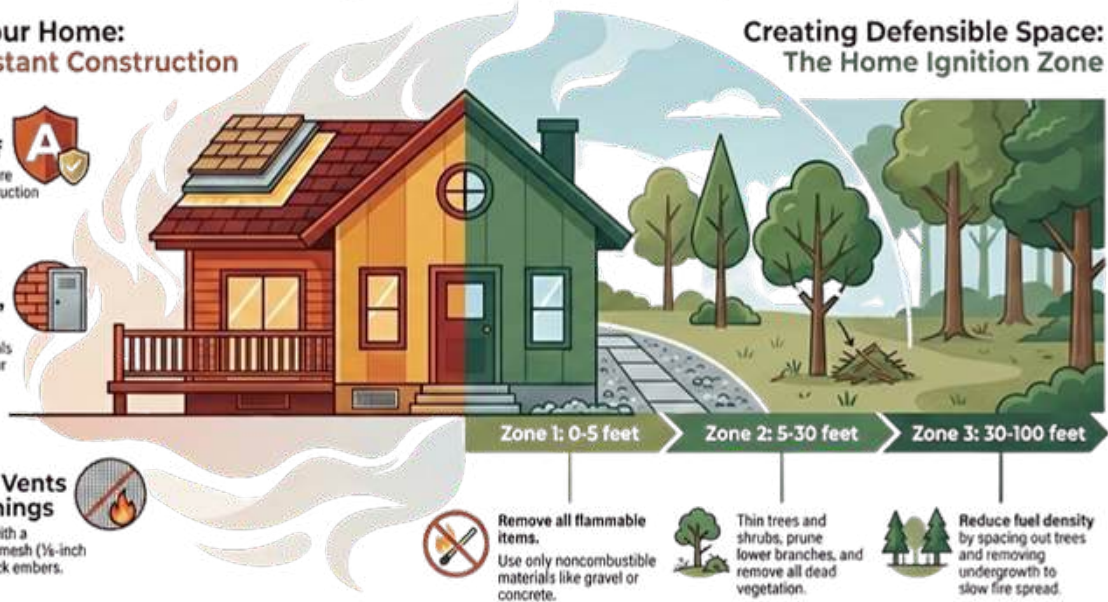
Hardening Your Home: Ignition-Resistant Construction

Use a Class A Fire-Rated Roof 
Wood shakes and shingles are not permitted for new construction or major replacements.

Construct Fire-Resistant Walls, Decks & Doors 
Use noncombustible materials or those with at least a 1-hour fire-resistance rating.

Secure All Vents and Openings 
Cover all vents with a noncombustible mesh (1/8-inch openings) to block embers.

Creating Defensible Space: The Home Ignition Zone



Designing for Nature



Landscapes are integral components of broader ecosystems, often serving as vital habitats for local flora and fauna. By implementing strategies such as planting native species, creating pollinator gardens, incorporating rainwater harvesting systems, and improving wildlife corridors, property owners can provide benefits well beyond just aesthetics. These practices not only support wildlife and plant health by providing food and shelter, but also benefit humans by improving air quality, reducing urban heat, and fostering a sense of connection with nature. Thoughtful landscape management can thus create a harmonious balance, promoting ecological resilience and sustainability for all our of community members, human or otherwise.

The Resource Central webinar on creating pollinator, edible, and nature-connected landscapes offers valuable insights into designing spaces that support biodiversity and sustainability. Participants learn how to cultivate gardens that attract vital pollinators, grow edible plants for personal and community nourishment, and foster a deeper connection with nature, all while enhancing the ecological health of their surroundings.

Resource Central Webinar



Home Ecosystem Services

Developed landscapes, often overlooked in their ecological role and contributions, play an important part in delivering a variety of ecosystem services that enhance our environments and make them safe, clean, and comfortable.



The vegetation in residential areas aids in regulating temperatures by providing shade, reducing the urban heat island effect, and conserving energy by lowering the need for air conditioning. Lawns and gardens facilitate water management by absorbing rainwater, reducing runoff, and replenishing groundwater supplies.

Well-vegetated residential areas have the remarkable ability to create their own microclimates, offering a unique buffer against extreme weather conditions. The dense foliage and varied plant life can significantly reduce wind speed, providing a natural shield that protects homes and creates more livable spaces.

Moreover, these green spaces contribute to improved air quality by filtering pollutants and capturing dust, which can lead to healthier living conditions for residents. Trees and plants absorb carbon dioxide, a crucial factor in mitigating climate change while releasing oxygen, which is essential for life.

In addition to these environmental benefits, developed landscapes support biodiversity by providing habitats for a wide range of species, from plants and insects to birds and mammals. These habitats encourage the presence of pollinators, like bees and butterflies, which are necessary for the reproduction of many plants and food crops.

Social and psychological benefits also emerge from well-maintained green spaces. They offer aesthetic pleasure, reduce stress, and create opportunities for recreation and community interaction.



Northern Flicker



Wildlife & Corridors



Incorporating beneficial habitat in the home landscape can significantly enhance biodiversity by attracting wildlife and creating corridors.

Simple additions like native plant gardens, birdhouses, and pollinator-friendly plantings can provide essential resources for homes and safe passage for various species. By connecting fragmented habitats and providing food, water, cover, and nesting spots, home landscapes can not only support the movement and survival of wildlife but also contribute to a healthier ecosystem right at your doorstep.

Create a bountiful backyard:

1. Provide water
2. Offer natural food sources
3. Skip the lawn chemicals
4. Make your windows bird-safe
5. Shrink your lawn
6. Build a brush pile
7. Be a friend to bees
8. Put up bird and bat houses
9. Help out insects
10. Keep cats inside



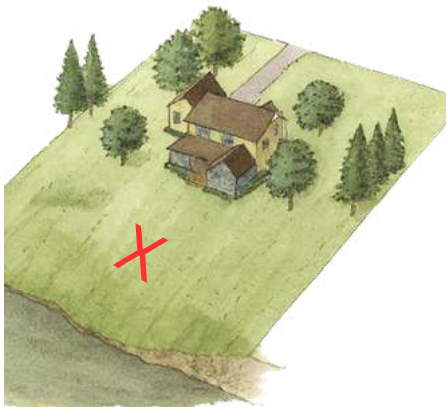
Stellar Jay



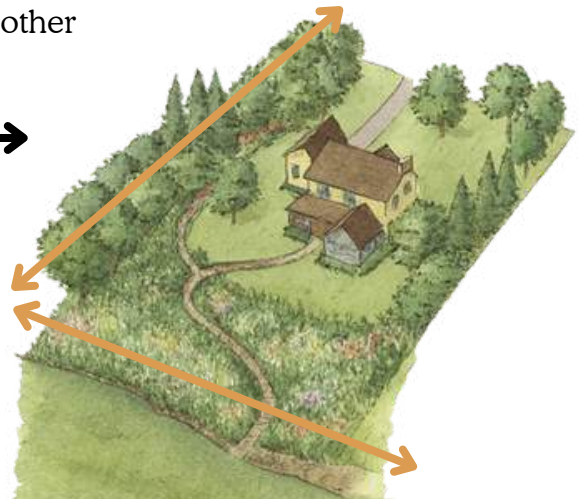
**NATIONAL
WILDLIFE
FEDERATION**

[Click here for the NWF Keystone Native Plant List for our region.](#) Keystone native plants are plants that support the most native hymenoptera (bees) and lepidoptera (butterflies and moths) species. These species, in turn, support higher orders of the food chain and are essential for ecosystem health and function.

↓ The landscaping of this property leaves little for the other plants and animals we share a home with.



Adding continuous →
vegetation provides safe passage for animals and unifies and connects islands of habitat, improving the flow of resources and contributing to ecological health.



Promoting Pollinators



Creating a thriving garden is about more than just aesthetics; it's about fostering an ecosystem that supports pollinators like bees, birds, beetles, butterflies, bats, moths, and flies. By planting native species, which are adapted to the local environment and have evolved alongside other native species, you provide essential resources while promoting biodiversity and creating a humming, buzzing, chirping oasis at home.



Margined Calligrapher Hoverfly

Some pollinators, like this hoverfly, are bee mimics. Flies have two wings, while bees have four. ←



White-lined Sphinx Moth

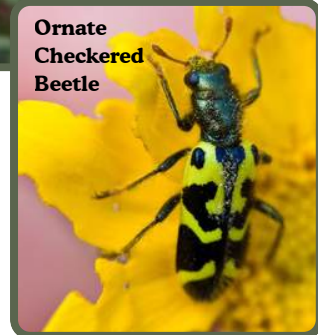
Many beetle species are also pollinators. Identify insects before assuming they're pests! ↓

Many pollinators are migratory, including all four CO hummingbird species. →



Rufous Hummingbird

Some sphinx moths are commonly mistaken for hummingbirds. There are more than two dozen sphinx moths found in Colorado! ↑



Ornate Checkered Beetle



Avoid using pesticides and herbicides where possible. These chemicals can harm pollinators and create cascading imbalances that move up the food chain. Neonicotinoids are especially harmful to bee populations. Some neonicotinoids commonly found on store shelves include: Imidacloprid, Clothianidin, Acetamiprid, Thiamethoxam, Dinotefuran and Thiacloprid. [Click here for more information from the Xerces Society for Invertebrate Conservation.](#)



Rocky Mountain Penstemon

Pollinator Preference



The best way to attract and maintain pollinator activity in your landscape is to provide habitat for pollinators and to ensure that there is always variety and continuity of blooms. Some pollinators are incredibly specialized, while others are generalists. Knowing which kinds of pollinators visit which flowers will help you attract your favorites and keep them coming back year after year.



Enriching Elements



Companion Planting: Companion planting involves strategically placing plants that benefit each other in terms of growth, pest control, or aesthetics, such as pairing mints with plants that deer graze to help deter them.



Bee Hotels: These structures provide crucial nesting sites for solitary bees, which are essential pollinators. By encouraging their presence, biophilic gardens boost biodiversity and help ensure the health and productivity of both ornamental and edible plants and also the broader ecosystem.



Dead Wood: Serving as natural habitats, dead wood fosters a diverse ecosystem by providing shelter and food for insects, fungi, and small animals. It also contributes to soil health by gradually decomposing and enriching the ground with organic matter.



Bird Houses and Feeders: Attracting a variety of bird species, these features support the local avian population, which can aid in pest control by eating insects. Additionally, birds contribute to seed dispersal, promoting the growth of native plant species in the garden. They're also a joy to watch!



Overwintering Habitat: Leaving areas of the garden undisturbed through winter, such as leaf litter or brush piles, offers critical shelter for hibernating insects, amphibians, and small mammals. This practice supports a healthy ecosystem year-round and enhances soil fertility as organic material breaks down.



Rock and Boulders: Incorporating rocks and boulders into a garden not only enhances visual interest but also provides essential habitat for beneficial insects and small wildlife. Additionally, these natural elements offer insulation for plant roots, helping to regulate soil temperature and moisture levels.

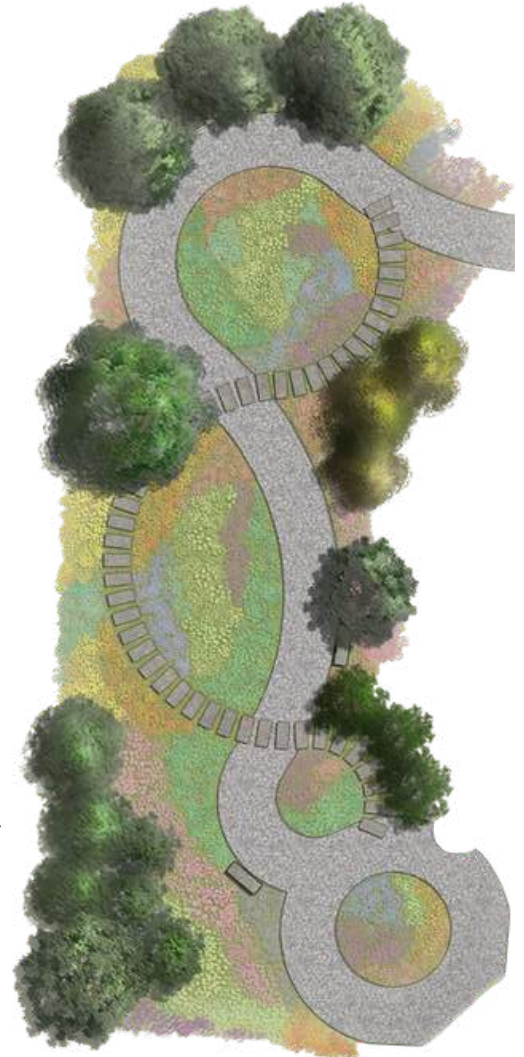
Plant Layout



Arrange plants from large to small. Start with the tallest and largest at the back as focal anchors to create a natural backdrop. Use towering perennials or shrubs for height and structure, then transition to medium-sized plants like shrubs and larger perennials. Finish with small plants, such as ground covers, at the front. This setup ensures adequate sunlight for each plant and offers a dynamic, layered appearance.

The rule of threes and the use of odd numbers are fundamental principles that enhance visual interest and balance. Grouping plants in sets of three or other odd numbers creates a more dynamic and natural appearance, as odd groupings prevent symmetry, which can often be static and less engaging. This approach encourages the eye to move across the landscape, creating a sense of rhythm that is both aesthetically pleasing and reflective of the asymmetry inherent in native landscapes.

The use of drifts can transform a garden into a varied and visually captivating space. Drifts involve planting groups of the same species or similar blends of plants in undulating, natural-looking sweeps across the landscape. This technique mimics the way plants grow in the wild, creating a more organic and cohesive appearance.



Drifts soften hard edges, enhance the sense of movement, and provide seasonal interest with blooms and foliage that change throughout the year. The result is a balanced and aesthetically pleasing garden that feels both intentional and naturally beautiful.

When designing your layout, experiment with compositions, but don't feel like you need to stick to the plan exactly when it comes to the install! A little field adjustment is totally normal.

Plant Layering



Plant layering is a fundamental technique in garden design that enhances both aesthetic appeal and year-round interest. By strategically arranging plants of varying sizes, habits, textures, and colors, gardeners can create a dynamic landscape that draws the eye and maintains visual interest across the seasons. This layered approach not only ensures a garden that captivates in every season—from the vibrant blooms of spring to the rich hues of autumn foliage—but also promotes a healthy ecosystem by supporting diverse plant and wildlife interactions.



- **Size:** When layering plants by size, start with taller plants—large trees, then medium trees, then multistemmed medium trees and shrubs. Next, transition to small shrubs and medium-sized perennials, and finally add the low-growing ground covers in the front to create depth and dimension.



- **Habit:** Consider the growth habit of plants to ensure a dynamic and balanced design; use upright species to add vertical interest, while spreading or mounding plants can fill spaces and soften edges, maintaining the landscape's cohesiveness.



- **Texture:** Incorporate a mix of plant textures to enhance visual appeal; contrast fine-textured plants like silvermound with coarser ones like shell leaf penstemon to create a captivating interplay that thrives in Colorado's dry climate.



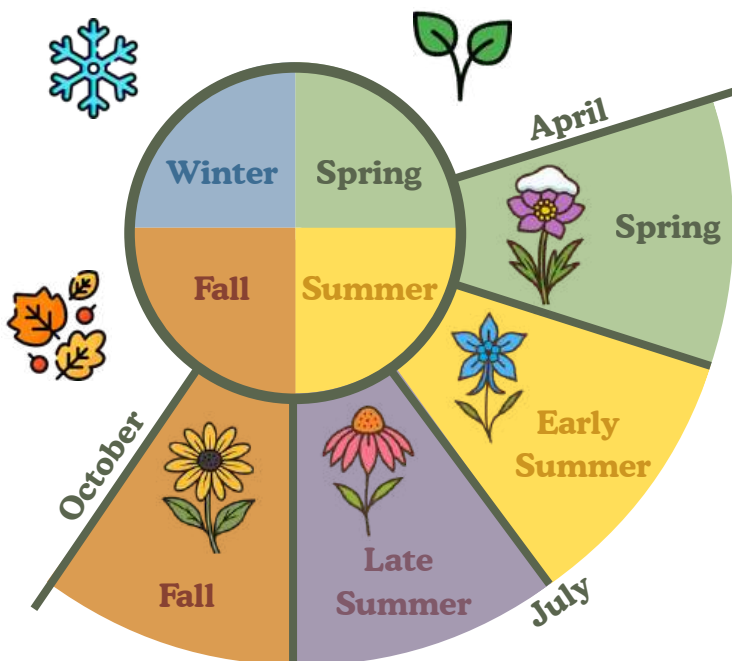
- **Color:** Use a strategic color palette to bring vibrancy and harmony to the landscape, selecting plants with complementary or contrasting colors that provide year-round interest thorough foliage, stems, or flowers.

Seasonality



Designing a home landscape that maximizes seasonal variation requires a focus on both seasons and specific blooming periods. Start by selecting plants that offer interest year-round, like evergreens and trees and shrubs with unique bark, as the foundation of your landscape. In spring, vibrant spring ephemeral bulbs like tulips and daffodils provide early color, while early summer can be enhanced with perennials such as lupine and irises. For late summer, consider black-eyed susan, coneflower, and asters, which thrive in the warmth and look great against waving ornamental grasses that take the spotlight in the fall. In winter, focus on textures and plants that pop. By layering these elements, you create a landscape that evolves throughout the seasons, providing dynamism and interest year-round.

Seasonality and the Plant Explorer



Look for the “Early” filter in the plant explorer for spring- blooming flowers.

This period extends from when the first snow has melted through late May.

Look for the “Early to Mid” in the plant explorer for early-summer blooming flowers.

This period extends from early June through mid-July.

Look for the “Late” filter in the plant explorer for fall-blooming flowers.

This period extends from late August through mid-October.

Look for the “Mid to Late” filter in the plant explorer for late-summer blooming flowers.

This period extends from mid-July through the end of August.

Access the plant explorer here. These are guidelines only, as many plants will bloom outside of these periods.

Meadowscaping



Creating a waterwise meadowscape with Colorado native wildflowers or grasses is an excellent way to implement sustainable landscaping, especially for larger areas. By selecting a curated mix of native grasses and wildflowers suited to Colorado's climate, meadowscaping is a low-maintenance solution for areas large and small.



← **Blue Grama** is a Colorado native warm-season grass suitable as a turf alternative. It has a low water requirement, minimal maintenance need, and it has a root system that reaches deeper water, prevents soil erosion, and promotes healthy soil structure, enhancing the resilience of your landscape. It can be mown like a turf, but unlike cool-season turfs, regular mowing is not necessary.

→ **Meadowscapes are especially suited to sloped or bermed areas, side yards, and transitional areas.**

Meadowscapes are not one-size-fits-all! Different conditions will require different species composition, dependent on elevation, slope, soil, and intended use or aesthetic.



The Eagle County Conservation District sells various grass and wildflower seed mixes to suit your needs, from low-growing to pasture mixes. Click [here](#), visit our website at eccdistrict.org, or refer to the link in our useful links page. We're here to help!



Flip the Strip

Transforming hell strips—those often neglected patches of grass between sidewalks and streets—into drought-resistant gardens can significantly reduce water use. By replacing thirsty turf with street trees, native plants, waterwise shrubs and perennials, and rock, homeowners not only conserve water but enhance curb appeal, reduce water waste, lessen maintenance, and support local biodiversity.

Hell strips are often simple, effective conversions for a few reasons:

1. They are narrow areas, which are very challenging to irrigate efficiently with overhead spray systems
2. They are surrounded by dense surfaces that absorb heat, requiring even more water to keep them looking nice
3. Turf in hell strips is rarely functional beyond being used for pets to relieve themselves; it is mostly non-functional
4. They frequently have their own irrigation zones, making conversion to drip irrigation fast and simple



Converting your hell strip is one of the best ways to conserve water, lower bills, enhance curb appeal, and reduce maintenance.



1

Sustainable, waterwise landscapes limit turf to where its functional, observe defensible space around the property, and create beautiful, biodiverse spaces for all.

2

3

4

5

Waterwise Colorado Landscape

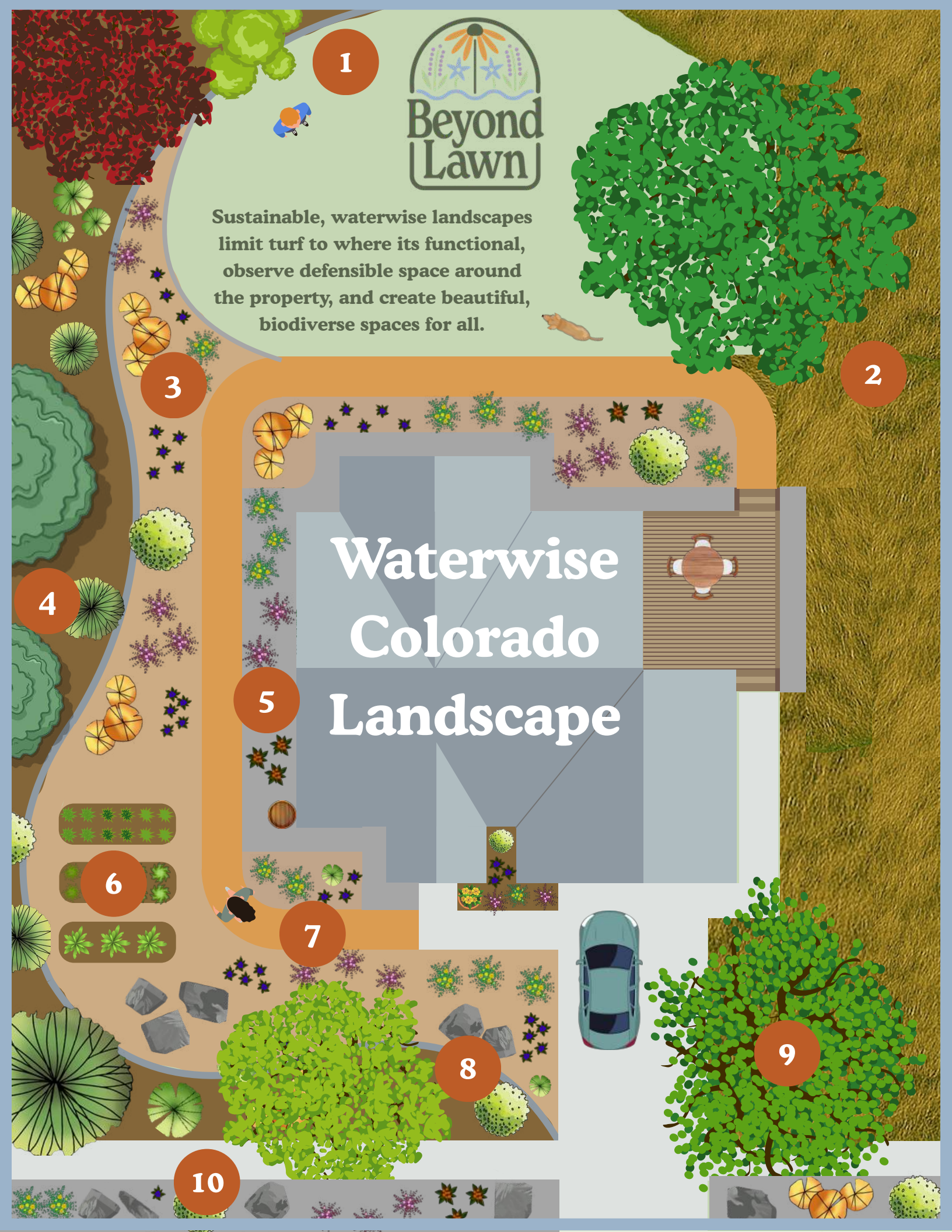
6

7

8

9

10



1

Turf is kept where it is functional and efficient to irrigate. The large tree also helps to reduce the water needs of the turf and provides shade during the hottest part of the day.

2

Native grasses are used in marginal areas, where it is difficult to irrigate efficiently, such as narrow strips, odd shapes, or on slopes. This reduces inputs and maintenance, provides valuable habitat, and fill large spaces effectively.

3

Perennial beds are used strategically where turf was barely used, especially in front and side yards. Repeating elements of the same waterwise, native, and firewise perennials keep inputs, fire risk, and maintenance minimal.

4

Mulched tree and shrub beds provide greenery, layering, and privacy. Ideally, perennial beds and tree and shrub beds should be on drip irrigation and split into separate zones where possible.

5

Rock is used as mulch for a minimum of 1.5ft from the the base of the structure. Select non-woody, herbaceous perennials can be planted in the rock mulch with minimal fire risk, but are not necessary.

6

Edible and medicinal gardens can be added to the landscape. Note the rain barrel to provide supplemental water. Annual fruits and vegetables are water-intensive but functional and productive parts of the home landscape.

7

A crusher fine, flagstone, or other type of permeable hardscape path is added for enhanced access around the property and to add another buffer for enhanced fire defensibility.

8

Decorative boulders and other garden elements can enhance the appeal of the property while requiring no inputs and creating microclimates and habitat for flora and fauna.

9

Trees are spaced appropriately away from the structure and other trees. They are limbed up 6ft or $\frac{1}{3}$ of the total height of the tree, if less than 6ft. Shrubs and other woody or flammable material is removed from under trees.

10

The hell strip has been converted to drip and planted with a variety of waterwise, native, and durable perennials and small shrubs to increase curb appeal and minimize non-functional turf.

Design Best Practices



Start With the Big Picture

- Permanent elements first: Place patios, paths, shade structures, seating, utilities, and decoration before thinking about plants.
- Design for function, not aspiration: Create spaces you'll actually use and maintain, not ones you wish you would.
- Think in zones: Organize your landscape into activity zones (gathering, circulation, play, veggie garden, habitat).



Design With Maintenance in Mind

- Choose durable materials: Hardscape and edging choices should withstand weather and irrigation.
- Keep access clear: Leave space for mowers, wheelbarrows, and irrigation maintenance.
- Plan for growth: Give trees and shrubs the root and canopy space they will need long-term.
- Mulch is non-negotiable: For weed suppression, moisture retention, and plant health.



Design for Durability in Colorado's Climate

- Plan for wind and snow: Choose resilient plants and sturdy plant supports where needed.
- Manage drainage: Direct water away from buildings and into rain gardens or infiltration areas.
- Hot sun strategy: Use heat- and drought-adapted species for full-sun exposures.
- Fire-wise awareness: Maintain defensible space and avoid flammable plantings near structures.



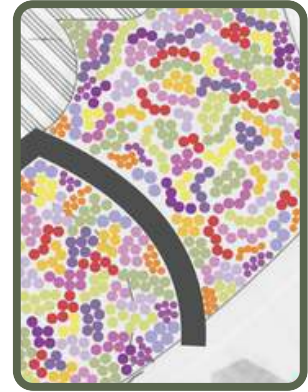
Water-Wise From the Start

- Minimize lawn: Use functional turf only.
- Zone for Sun: Zone first based on the amount of sun
- Hydrozones drive irrigation: Design plant groupings with irrigation systems in mind from the beginning.
- Plan for drip: Perennial beds, trees, and shrubs should be laid out thoughtfully to accommodate efficient drip irrigation.



Simple, Cohesive Aesthetics

- Repeat, don't scatter: Use repeating plant masses, colors, and textures for a unified look.
- Layer planting heights: Tall in back, mid in middle, low in front
- Four-season interest: Mix evergreens, perennials, grasses, and shrubs for year-round texture and color.



Right Plant, Right Place

- Sun, soil, slope: Pick plants based on existing site conditions, not personal preference
- Group by water need: Keep high-water plants together; keep low-water plants separate—each on their own irrigation zone.
- Prioritize natives and waterwise: Work with your site conditions
- Plant for mature size: Avoid overcrowding or future removals.



Support Habitat

- Layered structure: Include groundcovers, perennials, shrubs, and small trees to support wildlife.
- Bloom succession: Choose plants that provide pollen and nectar from early spring to late fall.
- Leave the leaves: Design dedicated areas where fall leaves and winter stems can stay as habitat.
- Avoid invasives: Choose regionally appropriate natives or well-behaved ornamentals.























Start Small and Iterate

- Start with small projects, learn the process, rinse and repeat
- Implement tried and true water-saving strategies: meadowscape, flip the strip, or convert to drip!
- Celebrate milestones: Recognize and appreciate the beauty and benefits your garden brings, both for you and the local ecosystem. Whether it's the first bloom of the season or the sight of a visiting pollinator, every achievement is worth celebrating.



DESIGN CHECKLIST ✓

	Are you prioritizing native & keystone species?	<input type="checkbox"/>		Are you considering your microclimates?	<input type="checkbox"/>
	Are you varying plant habits and textures?	<input type="checkbox"/>		Are you incorporating any edible plants?	<input type="checkbox"/>
	Are you adding any topographic features?	<input type="checkbox"/>		Are you planting water-wise plant species?	<input type="checkbox"/>
	Are you trying to attract or repel certain wildlife?	<input type="checkbox"/>		Are you creating focal points & view windows?	<input type="checkbox"/>
	Are you designing for seasonality?	<input type="checkbox"/>		Are you adding any design features?	<input type="checkbox"/>
	Are you planning for mature plant sizes?	<input type="checkbox"/>		Are you designing to harness existing water?	<input type="checkbox"/>
	Are you installing any landscape lighting?	<input type="checkbox"/>		Are you adding spaces for rest and leisure?	<input type="checkbox"/>
	Are you keeping your space fire-defensible?	<input type="checkbox"/>		Are you accounting for maintenance needs?	<input type="checkbox"/>
	Are you matching up plants and hydrozones?	<input type="checkbox"/>		Are you adding any permeable hardscapes?	<input type="checkbox"/>
	Are you varying color or keeping it thematic?	<input type="checkbox"/>		Are you designing for needs of kids or pets?	<input type="checkbox"/>