

Spring/Summer 2024

Water Smart Planting Guide for the Bozeman Area



Welcome to your go-to handbook for diving into water wise gardening – because every drop counts, and so does your effort!
Learn more at www.bozemanwater.com.

CITY OF **BOZEMAN**
WATER CONSERVATION

Bozeman’s Blueprint for Water Wisdom

Water Smart Bozeman

What’s “Water Smart Bozeman” all about? It’s simple:

- **Understanding our water sources**
- **Recognizing there is a limited supply**
- **Acting to conserve it**

At the City of Bozeman, we’re here to give you all the tools, resources, and know-how you need to make water wise choices. With 50% of Bozeman’s summertime water use going to lawns and landscaping, the easiest and best place to start is right outside your door.

Use this guide to get water wise – with tips for your ground and your grass, as well as irrigation insights and step-by-step landscape makeover inspiration. Then, take advantage of the City of Bozeman’s water conservation incentives to transform your yard from thirsty to thriving.

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Bozeman’s Limited Water Supply

Precipitation to Preservation: Our Water Story

In Bozeman, we rely on snowpack for our water supply. 80% comes from snowmelt in the Gallatin Range, which feeds Bozeman Creek and Hyalite Creek, and the other 20% comes from a developed spring at the headwaters of Lyman Creek in the Bridger Range.

While Bozeman is lucky to have water of exceptional quality, our quantity is limited. With only 16 inches of average annual precipitation, Bozeman is considered semi-arid and drought-prone. Shifting climate patterns make these challenges more acute: more of our precipitation falls as rain instead of snow, and warmer weather causes snow to melt and flow into our rivers earlier in the year. That means less snow in the mountains to melt slowly during late spring and summer, when we need water the most.

Bozeman is focusing on water conservation to reduce the future supply-demand gap by 50%. And our landscaping choices can go a long way to help! Plants that are water smart, drought-tolerant, and native to our region are not only adapted to thrive with less water but also support the local ecosystem, making your garden beneficial to overall watershed health.

The City’s Water Conservation Division is dedicated to guiding residents on how they can save water by using it more efficiently.



Hyalite Reservoir, Gallatin Range south of Bozeman. One of Bozeman’s water sources.

Everyone Plays a Part

Big or small, every water-saving action counts towards keeping Bozeman green and thriving, even during times of drought. You could transform your garden with drought-tolerant plants, or start smaller with a free sprinkler system assessment. Every effort adds up!

Saving water also saves money! From swapping sprinklers to removing turfgrass, we have rebate and incentive programs for homes and businesses. Find the best ones for you on pages 12 and 20, and at bozemanwater.com—your yard, your wallet, and your thumb will all get a little more green.

Better Together: Join the Water-Saving Squad

The City of Bozeman invites you to join us! We’ve got a variety of programs and events designed to engage everyone in water conservation. Here’s what’s happening:

- **Free Sprinkler Assessments:** This summer, take advantage of our no-cost evaluations to ensure your sprinkler system is as efficient as possible. Details on page 12.
- **Shower Better Month:** In October, we’re giving away free WaterSense® showerheads. Upgrade to a high-efficiency showerhead and save water!
- **Water Smart Landscaping Classes:** Every spring, learn how to turn your yard into a drought-tolerant oasis by tuning into a LIVE virtual landscaping class.
- **Fun for the Little Ones:** Grab a Shower Better or Brush Better Kit filled with fun and educational activities for kids.
- **Summer Savings Tool Kit:** This free kit is packed with tips and tools to help you conserve water in your garden and landscape all summer long.
- **Fix-A-Leak Kit:** Detect and repair leaks in your home with our free kit. Don’t miss our special giveaway during Fix-A-Leak Week every March.
- **Garden Party:** Kick off summer by taking home drought-tolerant plants, seed mixes, and compost. You’ll also have the chance to learn from local experts about healthy soils, native plants, pollinators, bird-friendly gardening, irrigation, and tackling weeds.



What’s in a Name?

Water Smart vs. Water Wise vs. Drought-Tolerant

In Bozeman, “Water Smart” isn’t just a phrase—it’s a philosophy. But let’s break down the buzzwords:

You will also see the term “**water wise**”—just another way of talking about water conservation. All these terms are green flags for greener gardening!

Drought-Tolerant: These low-maintenance plants need minimal water once they’ve settled in after a few seasons, even during dry conditions—perfect for our local landscape.

Water Smart: These plants can handle dry spells too but perk up with a deep drink during the hottest days.

The City of Bozeman Drought Equation

TRUE OR FALSE?

When Bozeman experiences a winter of heavy snowfall, there is no chance of drought the following summer.

FALSE. If we experience warmer than normal temperatures in the spring and/or rain instead of snow, we could end up short on water when we need it later in the summer.

The City relies on rainfall to boost its water supply in the spring.

FALSE. While rainfall does bolster streamflows immediately during and after rain events, the City relies on snowpack to serve as stored moisture to gradually melt throughout the spring and into summer months.

We have plenty of storage capacity for our water supplies.

FALSE. The City's only stored water comes from Hyalite Reservoir, which is used to support increased water demands associated with outdoor watering of lawns and landscapes during the summer months. The reservoir is fed by snowmelt in the spring.

DID YOU KNOW? The City of Bozeman relies on **SNOWPACK** for **100%** of its **WATER SUPPLY**.

50% of Bozeman's summertime water use GOES INTO LAWNS & LANDSCAPES.

What is the Drought Equation?



Other Factors in the Drought Equation



Below normal snowpack leads to reduced overall water supplies.



Early spring melt leads to decreased late summer streamflows.



Decreased late summer streamflows increase our reliance on Hyalite Reservoir.



Higher than normal summer temperatures lead to increased outdoor water use and reduced Hyalite Reservoir levels.



Reduced levels in Hyalite Reservoir lead to higher likelihood of outdoor water use restrictions.

Our water is limited, but by staying water-smart, we ensure our snowpack lasts us through the summer. Visit www.bozemanwater.com for tips, rebates, and more information about drought.



Drought Management Plan

Drought isn't just a possibility in Bozeman; it's part of our reality. The good news is, Bozeman's got a game plan! In 2022, the City of Bozeman rolled out our updated Drought Management Plan. This roadmap outlines how the City monitors drought conditions and kicks our response strategies into gear - including how we all can chip in to save water. This means, when drought is declared, the community has a clear guide on how to conserve.

The City of Bozeman evaluates local water supply data, such as Hyalite Reservoir volume, area streamflow, and snowpack - as well as national climate indices, to evaluate Bozeman's drought conditions throughout the year. If water supplies are stressed, the City may declare a drought stage with corresponding response measures that community members would be required to take in order to maximize available supplies for essential uses.

DID YOU KNOW?
The average Bozeman resident (one person) uses **150 gallons of water per day in the summer.**

- Reducing your water use by**
- 10% saves 15 gallons/day
 - 20% saves 30 gallons/day
 - 30% saves 45 gallons/day
 - 40% saves 60 gallons/day



Drought Stages, Explained

Stage 1 WATCH

Guidelines: Conserving water is encouraged, but not yet mandatory*.

Drought Surcharge: Your water bill could see an increase of 0-24.9%.

Your Action: Try to reduce your water use by 10%. Outdoor water use is a good place to start making changes.

Stage 2 ADVISORY

Guidelines: Additional outdoor watering restrictions may be mandatory*.

Drought Surcharge: Expect a rate increase of 10-41.6%.

Your Action: Cut back on water use by 20%. Limit outdoor watering to just two days a week. Restaurants and lodging facilities are required to provide water and linen services only upon request.

Stage 3 WARNING

Guidelines: Lawn watering ban will likely go into effect, and other outdoor water uses may be restricted.*

Drought Surcharge: Expect a rate increase of 20-100%.

Your Action: Reduce your water usage by 30%. Be mindful of the times and methods for watering trees, shrubs, and gardens.

Stage 4 EMERGENCY

Guidelines: Water may be rationed for essential uses only.*

Drought Surcharge: Your water bill could increase by 25-200.1%.

Your Action: Try to cut water use by 40%. Focus on essential water use only.

Drought Condition Updates

We're monitoring drought conditions and want to keep you in the know. The Bozeman Daily Chronicle will publish the Bozeman Drought Meter on the weather page every Friday throughout the summer. You can also gauge conditions at bozemanwater.com.

*Visit www.bozemanwater.com and click the Drought Management button for details on drought restriction guidelines for residences and businesses. Drought response measures may vary based on each unique drought event.

Thanks for making a difference!

A big shout-out to everyone who stepped up during the 2021 drought declaration! Your efforts helped cut down Bozeman's water use by 20%, ensuring our community had enough water to go around during times of shortage.

How to Help

Every drop counts! Whether we're in a drought or not, saving water is a big deal.

- Visit www.bozemanwater.com: Your go-to for all things water-saving. Find tips, tricks, and rebates to make your home and business water smart!
- Get rebates on indoor appliances like WaterSense® toilets, and outdoor items like efficient irrigation system components.

The Dirt on Dirt

Thriving landscapes grow from healthy soil. Understanding and caring for the soil beneath your lawn and garden beds is key to saving water and nurturing healthy plants. So take stock of your soil, show it some love with DIY compost, and mulch your way to a happy, water-friendly landscape.

Soil 101: Know Your Ground

Gardeners worth their salt know that lawns and landscapes depend on good dirt. Knowing your soil type is the secret to enhancing it – so you can water wisely, and grow gorgeous landscapes.

What's Under Your Garden?



- **Clay Loam:** Sticky and malleable when wet, this “peanut butter” of soils can be rock-hard when dry. It benefits greatly from the addition of sand and organic matter.
- **Sand Loam:** With a gritty texture, this soil breaks apart easily, even when moist, with quick water drainage.
- **Silt Loam:** The happy middle ground, with a smooth texture that supports ideal water and nutrient retention.

Bozeman primarily sits on clay loam. If you water this type of soil too fast, the water pools and runs off into the street and storm drains, picking up all kinds of contaminants that end up in our streams.

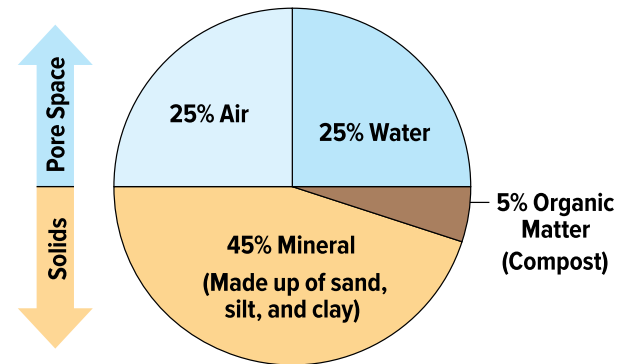
Knowing your soil type sets you up for smart strategies that minimize water waste. A simple “putty test” with a tablespoon of soil in the palm of your hand and a bit of water will reveal your soil type. For a thorough analysis, try the “Jar Test” (learn how at bozemanwater.com).

The best soil contains diverse particle sizes and organic materials, creating a balanced environment for root growth and water retention.

Improving Your Soil

Soil is the living, breathing foundation that supports all plant life. Good soil management helps your plants – and the living microbes critical to their health – get the water, oxygen, and nutrients they need to put down roots and thrive.

Air in soil is vital for roots, needing both water and oxygen. Healthy soil has 50% pore space, balancing oxygen and water for plants. Insufficient pore space limits water retention and soil infiltration, harming plant growth. Adding organic matter to your soil boosts microorganisms, enhancing pore space and soil quality for plants.



Once you know your soil type, make it even better:

- Aerate compacted soil to improve oxygen flow. Tilling, to a depth of about 6”, should be reserved for severely compacted areas to avoid disrupting soil structure.
- Add a top dressing of organic matter, like compost or shredded leaves. This not only feeds the soil but also improves its water-holding capacity. If tilling your soil, you can incorporate soil amendments as you go.
- A top layer of mulch retains moisture, suppresses weeds, and gradually improves soil health.

For more details on water wise soil amendments that support a healthy soil ecosystem resilient to drought, click on the Water Conservation button at bozemanwater.com.



Compost and Mulch

Doing the Groundwork

Compost, the outcome of decomposing organic material, is like a superfood for your garden. You can buy it, or make it yourself from leaves, lawn clippings, vegetable waste, and coffee grounds. Compost improves airflow in clay-rich soils and nutrient retention in sandy soils. Water wise bonus? Healthy plants in a well-amended landscape bed need less watering.

Adding compost benefits nearly all soil types, keeping moisture close to plant roots and evenly spread throughout the soil. It's perfect for prepping new beds and gardens, laying down sod, or planting trees and shrubs. Sprinkling compost as a top layer can also rejuvenate your existing lawn.

DIY Composting: A Simple Guide

Like baking cookies, composting is about the right ingredients – in the right ratios. Just follow the recipe!

Compost Ingredients:

- **Materials:** Balance ‘brown’ carbon-rich materials (dead leaves, wood chips, cardboard) with ‘green’ nitrogen-rich items (lawn clippings, veggie scraps, coffee grounds). Aim for a carbon-to-nitrogen ratio of about 30:1.
- **Living Organisms:** Little helpers like worms and the microorganisms in manure kickstart the decomposition process.
- **Oxygen & Water:** Essential for composting, they keep the pile active. Your compost should be moist but not waterlogged, like a wrung-out sponge.
- **Patience:** Give your compost pile time to do its work, turning it occasionally to introduce fresh air and maintain moisture levels. Your compost might be ready in a few months, or a year. Just put it all together to get things cooking!

The Power of Mulch

Mulch is a moisture-retaining hero. Most water evaporates before it ever reaches plant roots, but the addition of a 2- to 3-inch deep mulch barrier will help your trees, perennials, and shrubs keep water right where it belongs. Good mulch combats erosion, suppresses weeds, and nourishes the soil. It also helps regulate soil temperature, keeping plants protected year-round. It looks good, too, adding a polished appearance to landscaping!



Free Wood Mulch

In partnership with Gallatin County, the City of Bozeman is giving away FREE wood mulch to residents for drought-tolerant landscaping and trees along streets and sidewalks. Pick up free mulch at Gallatin County Regional Park or the Gallatin County Fairgrounds, both near Oak Street. Look for the mulch piles – they'll be there all summer!

Types of Mulch

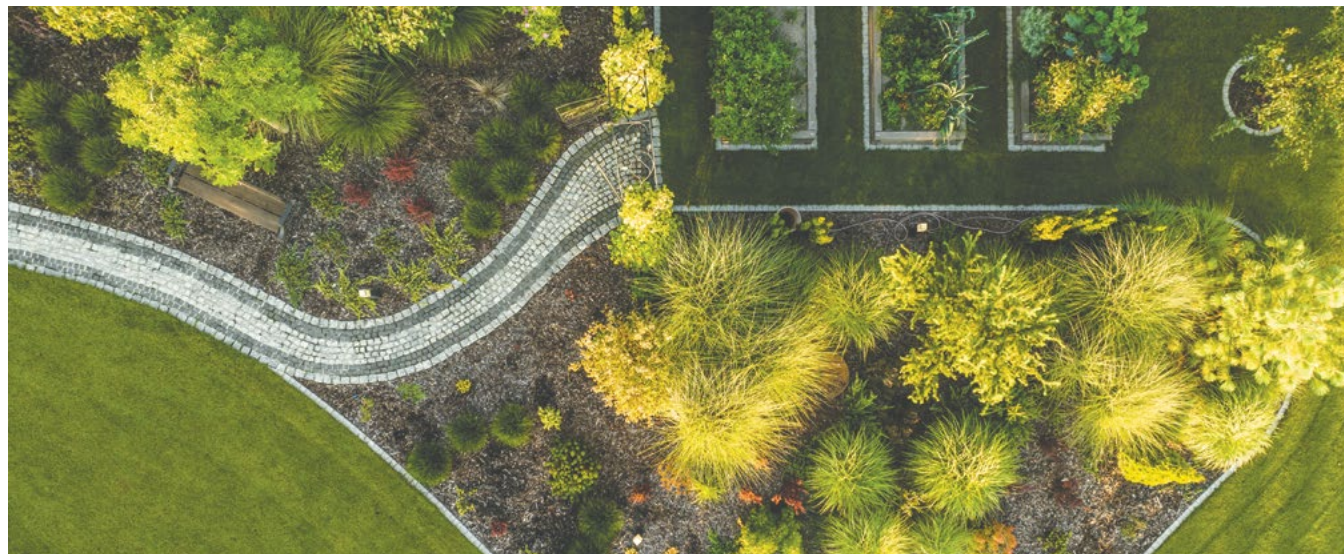
Not all types of mulch are created equal:

- **Arborist Wood Chips:** A natural mulch option that features non-processed, roughly graded wood chips, sourced directly from trees. Wood chips increase soil moisture retention, especially when installed around trees, and contribute to improved soil health over time. Stop by one of the City's free mulch sites to pick up FREE arborist wood chips all summer long- details at the bottom of this page.
- **Rock Mulch:** A low-maintenance option that stays put in windy conditions. Rock mulch is commonly used for landscape features such as pathways and rain gardens, but may raise the temperature of the soil beneath it, sometimes causing stress to plants in the surrounding area. For this reason, we don't recommend installing rock mulch around trees.
- **Dyed Mulches:** Often sourced from recycled wood, these may contain chemicals and may not improve soil quality as they break down. If opting for a dyed mulch, be sure to identify where the mulch was originally sourced.
- **Synthetic Mulches:** These increase soil temperature, are less effective in retaining moisture, and do not contribute to soil health - lacking the benefits of organic mulches.

Smart Mulching Tips

- Before mulching, especially around new shrubs and perennials, ensure the surrounding soil is moist. This step prevents the roots from drying out, especially during dry spells.
- Rake through your mulch at least once a season to prevent mold, which can occur if mulch remains damp and unturned.
- Aim for a mulch depth of 2 to 3 inches. Too much mulch might lead to crown disease from excessive moisture and heat, while too little won't adequately regulate soil temperature or retain moisture, inviting weeds.
- Since organic mulch decomposes over time, enriching the soil, remember to replenish your mulch layer each season to keep it effective and maintain a proper depth across your landscape.

Gardens and Grasses



Choosing the Right Green

Gone are the days of thirsty turf from fence line to fence line. In Bozeman, we're reimagining our outdoor spaces with a focus on drought-tolerant greenery. Want a veggie garden? Or deer-tolerant shrubs? Maybe you want to attract butterflies? Or do you need some soft turf for the neighborhood badminton tournament? There are water wise solutions for every space. So take a look out your window and imagine the possibilities.

Less Water, Less Work, More Value

Opting for drought-tolerant plants can cut your garden's water consumption by 75%. Watering aside, drought-tolerant plants just make outdoor gardening and landscaping easier. They need less maintenance, require less pesticides, and less fertilizing. Not to mention, switching to drought-tolerant plants can increase your property values. Ready for a change? Check out the City's Turf Removal Rebate Program for cash back when you remove turf from your landscape (just get pre-approval before starting your turf removal project).



Discovering Your Garden's Potential

Once you've pinpointed how to make your yard more water wise, check out our guide on page 16 for planning inspiration and a complete plant list starting on page 20. But why stop there? Here are more water-saving gardening concepts to consider:

Edible Plants That Save Water

- **Embrace plants with shorter growing seasons**, like radishes, beans, squash, and kale, which mature quickly and sip less water.
- **Choose deep-rooted perennial varieties** such as rhubarb and asparagus, which tap into underground moisture, reducing their need for surface watering.
- **Skip the space-hogging veggies** like broccoli and cauliflower, which demand more water for less yield.
- **Herbs, herbs, herbs!** Cultivate drought-tolerant herbs like thyme, oregano, and rosemary, known for their hardiness.

Welcoming Pollinators

Add a little life to your landscape by planting bee and butterfly favorites! Pollinators play a crucial role in our food supply, with every third bite of food owing to their hard work. Opting for drought-tolerant native plants not only beautifies your garden but naturally attracts the buzz and flutter, supporting local food growers. Take a stroll through Bozeman's Pollinator Garden at Langhor Park for more inspiration!

To Sod or Seed?

The Lowdown on Lawn Choices

In the Gallatin Valley, Kentucky bluegrass is a popular choice, but it is very thirsty, especially during the peak heat of July and August. For those aiming for a water smart lawn, consider going with drought-tolerant sod or seed options – great for dry summers, with less upkeep overall. The best time to sod or seed is in the spring or fall when temperatures are cooler.



Drought-Tolerant Sod: The Tall Fescue Advantage

Tall fescue sod is a fantastic, drought-tolerant option that stands up well to our hot summers with far less water than Kentucky bluegrass. It tolerates heavy traffic, grows well in both sun and shade, grows well in clay soils, and resists disease. Plus, it stays lush and green with minimal watering.

Before you lay down Tall Fescue blend sod, remember:

- Each fescue sod blend is different, so keep an eye on your lawn to make sure it's getting just the right amount of water.
- Overwatering can lead to disease and invasion of weeds, so be cautious not to drench it.
- Keep it mowed high – at least 3 inches – to keep it looking its best.
- It has deep roots that help it stay resilient in drought.
- Tall fescue might need a little extra seed come fall if the summer has been hot and harsh.
- When picking drought-tolerant sod, choose fescue blends without Kentucky bluegrass to prevent your water smart grasses from being crowded out over time.



Going with Drought-Tolerant Seeds

Choosing to seed your lawn is not only more budget-friendly but also lets you pick exactly the right type of grass for your yard's conditions. Drought-tolerant grasses grow deep roots right where they sprout, meaning they're naturally more equipped to handle dry conditions.

Consider these seed types for a robust, low-water lawn:

- Sheep fescue 'Covar'
- Fine fescue blends (hard, red and sheep fescues)
- Tuft Type Tall fescue
- Native Streambank Wheatgrass

For areas without foot traffic, think about using a blend of native drought-tolerant grasses and wildflowers. This mix not only creates a naturally beautiful Montana landscape but also thrives without additional watering once it's established. You can let it grow tall throughout the season, providing welcoming habitat for local wildlife.

Explore areas like the N. 27th medians or the Bozeman Public Safety Center to see how stunning these grasses look compared to more water-dependent varieties.



Starting Off New Lawns Right

As a rule of thumb, new lawns need daily watering for the first 21 days or so. After this time, the roots should be better established and watering can be reduced to 3 days per week. Follow the City's permanent outdoor watering restrictions and go to bozemanwater.com to learn about exemptions for new sod and seed.

Trees: The Roots of Conservation and Community

Trees are our natural allies in water wise landscaping! Trees are not only beautiful – they’re water savers, too. By providing ample shade, they reduce soil temperature and evaporation, which means less watering overall. Their roots are fantastic at managing stormwater, helping to prevent runoff and keep our rivers and streams clean. Plus, they naturally cool the air around homes and businesses, minimizing the need for air conditioning on those hot summer days.

Let’s dig deeper to see how trees can transform your landscape – and our shared spaces – into a water wise paradise.

Tree TLC

Keeping your trees happy is key to a happy landscape.

- Using wood mulch under the tree canopy allows better air and water flow to the tree roots, mimicking natural forest conditions.
- Trunk guards help to protect young trees from damage by lawnmowers and string trimmers, especially if a mulch area isn’t an option.



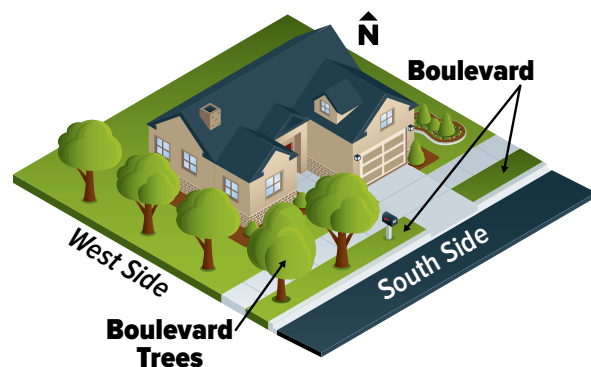
Boulevard Trees

Publicly-owned right-of-way strips bordering private lots between sidewalks and streets are called boulevards. The trees planted in these spaces are public property and benefit the entire community but are cared for in a partnership between residents and the City of Bozeman Forestry Division.

The Forestry Division is responsible for planting assistance, tree species selection, health assessments, pruning, and maintenance. They will even remove damaged or diseased trees when needed.

Bozeman residents are responsible for the watering, mulching, and protecting of the trunks of these trees.

If you would like to plant a tree in the boulevard by your residence, simply start by visiting the Forestry Division for a free permit and guidance on tree selection and planting location. Want some professional assistance? Check out Bozeman’s Cost Share Tree Program which provides a variety of tree species and planting at a shared cost between you and the City. For more information visit www.bozeman.net/forestry or call 406-582-3225.



Smart Planting Tree Tip

Planting your trees on the south and west side of your home provides soothing and cooling shade during the summer months.

Tree Watering 101

Trees love routine and watering them three times a week will help keep them from getting thirsty, but even watering once a week will work if you are trying to conserve even more water. Stick to Bozeman’s watering guidelines (page 11), even during drier times, and those roots will stay wet. Don’t stop watering even as trees mature – they all need water!

More ways to keep your trees hydrated:

- Young and new trees need about 20 gallons of water weekly from spring through early fall. Use a watering bag to deeply soak their growing roots.
- Wrap small trees (up to 3.5” diameter) with trunk guards and keep a healthy circle of mulch around them.
- Make sure you water the entire area under the tree canopy to ensure every root gets its share. If your tree relies on water from lawn irrigation, consider adding a drip system to better meet the watering needs of your trees.



Liquid Logistics for Lawns and Landscapes

Understanding your garden’s specific watering and maintenance needs is crucial for smart water usage. With more than 50% of our summer water usage going into lawns and landscapes, this is the best place to conserve. Taking the time to assess your irrigation system equipment, watering times, and your lawn and plant needs could help you save on your water bill.

The City of Bozeman offers several ways for you to save water and money in your landscape. Not only do we offer FREE sprinkler system assessments for your entire landscape, but we have rebates too on water efficient sprinkler heads and more. And to ensure we are all doing our part, permanent watering restrictions are in place for those connected to City of Bozeman water utilities.

If you are a DIY-er, check out the section on sprinkler system types, testing, adjustment, and troubleshooting on the following pages. And if you need a little help, rent a sprinkler assessment kit from the City of Bozeman to do your own assessment.



City of Bozeman Permanent Outdoor Watering Restrictions

The City of Bozeman has established permanent outdoor watering restrictions to conserve water in our community. These apply to all residences and businesses that are connected to City of Bozeman water for outdoor irrigation.

When can I water?

- Watering days are assigned based on your property’s physical address.
- Even addresses water on Tuesday, Thursday, and Saturday.
- Odd addresses water on Wednesday, Friday, and Sunday.
- Watering is allowed before 10am and after 8pm on your designated days.

Exceptions:

- Low-volume drip irrigation and hand watering (with a can or a hose with a shut-off nozzle) for trees, shrubs, perennials, food gardens, flower beds, and planters are allowed any day, anytime.
- New lawns are exempt for up to 45 days to ensure they become established. Contact the Water Conservation Division to notify staff of your 45 day exemption.

During a declared drought, additional outdoor watering restrictions may be in effect.

Visit bozemanwater.com to stay up to date on the latest drought conditions.

Residential Outdoor Watering Schedule

SUN	MON	TU	WED	TH	FRI	SAT
ODD Addresses		EVEN Addresses	ODD Addresses	EVEN Addresses	ODD Addresses	EVEN Addresses
NO WATERING BETWEEN 10AM AND 8PM						

Local Landscaping Rebates

Let the Rebates Rain! Dreaming of a yard that's both beautiful and water wise? The City of Bozeman is cheering you on with rebates that put the green back in your wallet. Transforming your outdoor space into a drought-tolerant paradise or upgrading your sprinklers isn't just good for our water supply – it can save you money, too.

- **Smart Controllers:** WaterSense® labeled controllers automate watering schedules based on weather and landscape needs. They're smart, simple to set up, and some even let you control them from your smart phone.
- **Efficient Nozzles:** Upgrade to Multiple Stream Multiple Trajectory (MSMT) or H2O Chip Technology nozzles designed to minimize evaporation, runoff and wind drift. Easy to install on your current system, they make every drop count.
- **Rain Sensors:** These are like a snooze button for your sprinkler system when it rains, saving water without lifting a finger. They'll automatically pause your watering schedule, then pick up where they left off once things dry up.
- **Drip Irrigation:** Directly watering the roots of your plants means less waste and happier plants. It's a win-win for everyone.
- **Drought-Tolerant Plants:** Embrace plants that thrive on less water for a yard that's gorgeous and easy to care for. Plus, they add a pop of color and life to your outdoor space.
- **Turf Removal:** Ready to ditch the thirsty lawn? We've got big incentives for swapping out turfgrass with alternatives that are just as pretty but way less needy.

Tips for Rebate Success:

- Before diving into upgrades, make sure your current system is working well to get the most bang for your buck.
- Be sure to set up your smart controller properly to keep your garden green without overwatering.
- When converting an existing spray zone to MSMT nozzles, you may need to increase that zone's run time to keep your grass green and healthy. Run times will vary, based on the MSMT model you choose to install.

Ready to start saving? Get the full details of Bozeman's Landscape and Sprinkler System Rebate Program by visiting bozemanwater.com and clicking on Water Conservation. Here's to making your yard the envy of the neighborhood, the water wise way!

Sprinkler Smarter, Not Harder

Our **FREE Sprinkler Assessments** not only help with a greener lawn but also a more sustainable Bozeman! Our trained city staff will visit your home or business, conduct a thorough analysis of your sprinkler system and execute a performance test. After the assessment, you'll receive a detailed report which includes:

- **System repair needs** for any broken, buried, or leaking components.
- **Ways to improve efficiency** through the City's rebate program, such as upgrading to high-efficiency nozzles and weather-based irrigation controllers.
- **A customized watering schedule** based on the seasonal needs of your landscape throughout spring, summer, and fall.
- **A site map of your property** with the locations of sprinkler components and zones.

From repairs to rebate-eligible upgrades, we make it simple to keep your yard green and your wallet greener while helping conserve water in Bozeman!



Claim your free Sprinkler Assessment and start saving money and water by calling 406-582-3220 or visiting www.bozeman.net/sprinklers.

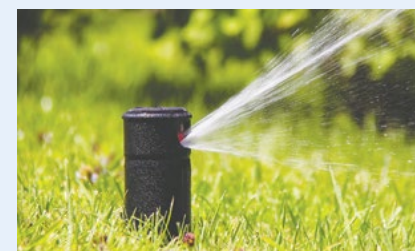
Sprinkler Systems

Perfecting the Sprinkle On Your Own

For a thriving, water wise lawn, it's important to use the right sprinkler setup for the size and specific conditions of your yard. If you're removing turf, switching from overhead spray to drip irrigation will save more water and improve the health of your landscape. For consistent and efficient watering, especially in drought conditions, make sure all the nozzles in a zone are of the same type to ensure even water distribution.

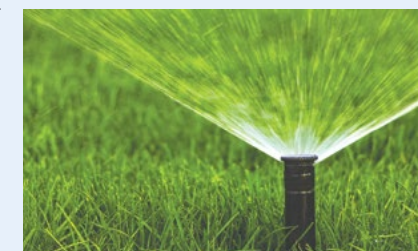
Understanding Sprinkler Nozzle Types and Their Uses

Each sprinkler nozzle type serves a unique purpose, catering to different lawn sizes and watering needs. Here's how they stack up:



Rotor Heads

- Delivers water in rotating jets.
- Good for larger areas, 16'-40' wide.
- Tends to reduce runoff and evaporation compared to standard spray nozzles.
- Requires a hex wrench or flathead screwdriver to adjust throw distance and arc.



Standard Spray Nozzles

- Most commonly used in smaller areas, like boulevards or sideyards, 4'-15' wide.
- Fixed nozzle heads are most common.
- Specialty variable arc nozzles (VANs) are available for tricky spaces (narrow strips, corners, short radius), but VAN nozzles can use up to 3x the water of fixed nozzles.
- The rapid delivery of water — 1.5 to 3 inches of water per hour — can lead to runoff.
- Light, misty spray is more prone to evaporation and wind drift.



Rotating/MSMT Nozzles

- Highly efficient for Bozeman's clay-rich soils.
- Hybrid design of multi-stream, multi-trajectory (MSMT) nozzles rotating pop-up nozzles offers precise control.
- Replaces standard nozzles on spray zones for more controlled watering.
- Ideal for medium spaces 8'-30' wide.
- Slow water delivery, at about 0.4 inches per hour, maximizes absorption rates.
- Rotating/MSMT pop-up nozzles qualify for a rebate from the City of Bozeman.

Going Drip for Efficiency

Drip irrigation systems are ideal for delivering water straight to your plants, reducing water loss due to evaporation and wind drift. Install these systems beneath the mulch layer to keep them protected.

Drip Tip: When choosing drip emitters, select ones with an appropriate GPH (gallons per hour). High-volume emitters often apply more water than the soil can rapidly absorb, creating runoff and water waste.



Testing Your Sprinkler System

Water Better with an Aqua Audit. Understand how much water your sprinkler system delivers by testing it. Use empty tuna cans to measure water output and adjust accordingly.

- 1. Placement:** Distribute 12 flat-bottomed cans (tuna or cat food cans work well) evenly across a lawn zone in a grid pattern around sprinkler heads.
- 2. Measurement:** After running your sprinklers for 15 minutes, measure the water depth in each can, record it, and calculate the average water depth. This tells you how much water your sprinklers deliver in 15 minutes.
- 3. Adjustment:** Look to the chart at the right to determine the total watering time needed to apply 1” of water per week to the landscape, ensuring a healthy lawn during hot summer months.

Sprinkler Run Times to Apply One Inch of Water Per Week								
Average Sprinkler Flow (in.) from Test	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
Watering Time (total min./week)	75	50	37	30	25	22	19	16

Cycle and Soak Schedule

To prevent water waste and runoff, adopt a cycle and soak watering method. Break the total run time into shorter intervals with soak periods in between to allow the water to move deeper into the soil profile.

Sprinkler Adjustment and Maintenance

Did you know your sprinkler system might use more water in a week than your entire household does in a month? A few simple adjustments can make for big water savings. Take a few minutes to dial in your spray before the heat of summer.

Fix the Flow. In Bozeman, many of us rely on automatic sprinkler systems for our lawns. While they’re great for water efficiency, they need regular check-ups and adjustments to perform their best. Be sure to adjust any buried or misaligned sprinkler heads to ensure they cover the area effectively, clear away anything that might block their spray, and carefully position them to avoid watering sidewalks, concrete, or walls where water would be wasted. Avoid letting water pool in gutters, streets, and alleys.

- Water with the Seasons:** Adjust your watering schedule as the season changes. Aim to water your lawn about 1 inch per week during the hot months of July and August. In cooler May and June, water less frequently. After Labor Day, cut back to watering just once a week to help your grass prepare for dormancy.
- Smart Scheduling:** Use the “Seasonal Adjust” or “Water Budget” feature on your irrigation controller to easily change watering times without having to reprogram everything. Start by setting your schedule for the hottest part of the summer, then lower the watering amount during cooler months.
- Pressure Regulation:** If you notice misting, it could be high pressure at work. Installing pressure-regulating sprinkler bodies helps maintain optimal pressure, so water goes where it’s needed, not lost into the air.
- Winter Preparations:** The best time for winterizing your system is between the beginning of September and mid-October. A proper winterization prevents freezing damage, saving you from repairs come spring.

Sprinkler Maintenance Checklist

Give your system a springtime health check-up. Run each zone for 2-3 minutes to make sure everything is working properly. Many controllers have an automatic test setting just for this reason. Use this checklist to observe the following, then adjust as needed:

- Inspect for any broken, clogged, or misaligned sprinkler heads or nozzles.
- Make sure rotating sprinklers are moving correctly.
- Check that each sprinkler pops up to its full height and isn’t blocked by obstacles like grass or plants.
- Look out for misting, which usually indicates high pressure.
- Confirm that your sprinklers are evenly spaced and provide head-to-head coverage in each zone.
- Assess if sprinklers have the correct arc and throw distance, without overspraying onto pavement.
- Make sure all zones deliver water at the correct rate, to avoid over or under-watering.

Troubleshooting Common Sprinkler Issues

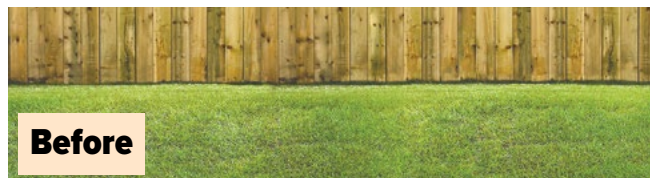
Issue	What To Look For	What To Fix
Broken or damaged sprinkler components	<ul style="list-style-type: none"> Spewing water Water pooling Water flowing quickly Low pressure Heads that might be trickling Minor sputtering 	<ul style="list-style-type: none"> Replace broken nozzle or sprinkler body. Replace broken or damaged piping below the surface. Remove nozzle/filter and clean any debris before replacing.
Mixed sprinkler equipment within a zone	<ul style="list-style-type: none"> Different sprinkler nozzles or head types within the same zone. Drip, pop-up spray, MSMT, and rotor sprinkler heads should all be on separate zones to ensure water is being applied evenly within the zone area. 	<ul style="list-style-type: none"> Select the most appropriate sprinkler nozzle or head type for the zone and replace any sprinkler equipment that does not match with the selected type.
Sunken or buried sprinkler heads	<ul style="list-style-type: none"> Heads that are not visible (below ground surface) when the system is off. Heads that cannot spray above the surrounding turf. 	<ul style="list-style-type: none"> Dig up the sprinkler head and reset it upright so the top of the nozzle is flush with the ground surface when the system is off.
Tilted or misaligned sprinkler heads	<ul style="list-style-type: none"> Heads are not upright and aligned perpendicular to the ground. May be indicated by yellowing areas (hot spots) or overthrow onto pavement. 	<ul style="list-style-type: none"> Dig up sprinkler head and align the body upright and level with the ground surface – this may require the installation of additional soil for support.
Obstructed sprinkler heads	<ul style="list-style-type: none"> Shrubs, trees, plant limbs, lamp posts, sheds, downspouts, electrical boxes, fences, furniture, toys, and mailboxes are just a few examples of items that might be in the path of sprinkler head’s throw. 	<ul style="list-style-type: none"> Remove the obstruction if possible or move the head away from the obstruction — turf removal surrounding the obstruction might also be an option if the sprinkler zone is converted to drip irrigation for additional plantings (see landscape makeover pages 16-19).

Sprinkler Tips

- When watering by hand, water only in the early morning, not the heat of the day, to minimize evaporation.
- Turn off your sprinklers when it rains or use rain sensors to do it for you automatically.
- Avoid watering during windy conditions to prevent drift and uneven distribution.
- Keep your grass at least three inches long to keep the soil cool and retain moisture.
- Try reducing the run time by two minutes for each zone. If your lawn stays green, take off another two minutes.



Step-by-Step Guide to Transform Your Landscape



Ready to roll up your sleeves and put your new water smarts to work? Use this step-by-step guide to transform your thirsty turf into a colorful, drought-tolerant wonderland. You'll learn how to remove turf, convert overhead spray to drip irrigation, select water smart plants, and install your new landscape.

Get the most bang for your backyard buck when you use the City's turf removal, drought-tolerant plant and drip irrigation rebate programs while you DIY your way to an OMGorgeous landscape.

Step 1: Yard Revolution: Planning Your Landscape Makeover

Let's kick things off with some smart planning:

- 1. Location:** Decide where in your landscape you want to make changes. Is it the front yard, backyard, or a specific section?
- 2. Objectives:** Define what you want to achieve with this makeover. Are you aiming for a low-maintenance patio, a functional playspace, a shaded haven, wildlife habitat, or something else?
- 3. Limitations:** Consider any constraints that might affect your project. Are you planning to do it yourself or hire professionals? What's your budget, and your timeline? If you belong to an HOA, you'll want to make sure your project aligns with your neighborhood's covenants.
- 4. Existing Features:** Identify which parts of your existing landscape you want to keep and which you plan to change or remove. Think about slopes, irrigation systems, trees, and any hardscaping elements.

Step 2: The Garden Architect: Designing Your Dream Landscape

Overall Design Approach: Start thinking big picture, considering both the hardscape (non-living elements like pathways and patios) and the landscape (plants, trees, and green areas). Also, think about how your current irrigation system might fit into your new design. Drawing sketches can help you visualize how each part will come together, especially when planning for water efficiency.

Understanding Your Landscape

- **Soil Type:** Knowing your soil type is crucial. Refer to the guide (see page 6) for identifying your soil texture and choosing plants that will thrive in those conditions.
- **Plant Selection:** Your goals—whether you're after continuous blooms, shade, or specific themes like a pollinator garden—will guide your choice of plants. Choosing plants suited for USDA Hardiness Zone 4 or lower ensures they can withstand the local climate. See our plant list starting on page 20.
- **Water-Wise Grouping:** To maximize water efficiency, group plants with similar watering needs together. This prevents over- or under-watering and helps every plant get just what it needs.

Hardscaping Considerations

- **Permeability:** Opt for permeable paving options like pavers for paths and patios to reduce runoff and enhance water infiltration.
- **Runoff Management:** Implement rain gardens to passively capture and store runoff, turning potential water waste into a resource for your garden.
- **Material Choice:** Avoid impermeable materials like concrete that contribute to runoff, and instead, select materials that allow water to percolate into the soil.

Sprinkler Systems

- **Drip Irrigation:** Embrace low-volume drip irrigation systems to minimize water waste. Map out your drip irrigation based on the layout of your new plantings.
- **Design for Your Landscape:** Consider the density and arrangement of your plants. Dense plantings might need a different drip design compared to sparser layouts. You might also explore in-line emitter grid designs for a comprehensive watering solution.
- **System Adaptation:** Assess your existing sprinkler heads. Some may need to be capped or converted to drip irrigation, especially in areas transitioning from lawn to drought-tolerant plantings. Evaluate whether you'll need professional help, especially if your system requires modifications to accommodate lower pressure needed for drip irrigation.

Step 3: Breaking Ground: Turf Removal Methods

Transforming your landscape starts with removing your existing turfgrass to make way for drought-tolerant plants. Here's how to do it effectively, keeping in mind that careful planning and execution can help you qualify for the City's turf removal rebate. Check the pre-approval requirements before you begin.



Sod Removal Method

This is the simplest, fastest way to tackle turf removal, best done in spring or early summer, early in the growing season.

- 1. Mark the Area:** Decide which part of your lawn you want to remove. Mark the boundaries clearly with a garden hose, string, or any marker that outlines the project space.
- 2. Check with Utilities:** Before you start digging, call 811 to mark the location of any underground lines. Also, flag any sprinkler heads to avoid damaging them.
- 3. Dig a Guide Trench:** Around the edges of your project area, especially near sidewalks or driveways, dig a small trench to guide your sod removal. This helps in areas where a sod cutter might not reach easily.
- 4. Use a Sod Cutter:** Rent a sod cutter (or a garden spade for smaller areas) to slice your lawn into strips. Roll these strips up as you go. It's quick and gets the job done. You can also just grab a shovel, which is just as effective but more time and labor intensive.
- 5. Deal with Removed Turf:** You've got options for the turf you remove:
 - **Rent a Dumpster:** Check with the City's Solid Waste Division for a dumpster to dispose of the turf. The size you need will depend on how much turf you're removing.
 - **Compost It:** Turn your old lawn into compost.
 - **Reuse the Soil:** Flip the removed turf upside down for the Sheet Mulching Method. This can take a couple of summers but ultimately kills off the grass and leaves you with usable soil.



Sheet Mulching Method

Done over the course of multiple seasons, this method is a gentle way to transition your lawn into a water-efficient garden, ideal for flat or moderately sized areas.

- 1. Outline Your Area:** Decide which part of the lawn you want to change. Mark the borders with something visible, like a garden hose or string, to define your workspace.
- 2. Prep the Lawn:** Mow the lawn as short as possible within the marked area, leaving the clippings on the ground. Give it a good watering once you're done mowing.
- 3. Address Sprinklers:** Find and temporarily disable or adjust any sprinkler heads within the area. You might cap them, turn off their specific zone, or switch them to a drip system. It is usually best to install new drip irrigation prior to installing new plants.
- 4. Layer with Compost:** Spread a generous layer of compost over the cut grass – use 1 inch if it's from an animal source or 2-3 inches if plant-based. Thoroughly water this compost layer.
- 5. Block Out Light:** Cover the compost with layers of painter's paper, newspaper, or cardboard, overlapping each piece by 6-8 inches to ensure no light reaches the grass below.
- 6. Top with Mulch:** Add a final layer of wood mulch over the paper or cardboard, watering it well to settle everything down.
- 7. Patience Pays Off:** Give the grass underneath time to die off naturally, which may take up to two seasons. Afterward, the area will be primed for planting your new, drought-tolerant garden.

Step 4: Beneath the Blooms: Prepare your Soil

Get your soil ready for planting with these steps:

1. **Enrich the Soil:** Mix in organic matter like compost or worm castings. If you've had a soil test, follow the recommendations for amendments. This step is crucial for healthy plant growth.
2. **Check Soil Depth:** Your garden needs at least 6 inches of good topsoil for roots to grow. If you're short, it's time to add more!
3. **Calculate Soil Needs:**
 - a. First, find out the area you're working with in square feet (SF).
 - b. Decide how many inches deep you want to layer new soil over this area. Convert this depth into feet by dividing by 12.
 - c. Multiply the project area by the depth in feet to get cubic feet (CF) needed.
 - d. Convert cubic feet to cubic yards (CY) by dividing by 27, since 1 cubic yard = 27 cubic feet. This calculation helps you understand how much soil, mulch, or compost you need.
4. **Mark Your Sprinklers:** Before you start adding soil or mulch, flag all sprinkler heads in the makeover zone to avoid covering them unintentionally.

Step 5: Water Works: Upgrade your Irrigation

Switch to Drip Irrigation: If you're moving away from a traditional spray system, now is the perfect opportunity to adopt drip irrigation, ideal for nourishing drought-tolerant landscapes efficiently. Drip systems deliver water right to the root zones, making every drop count.

Before starting your drip irrigation conversion, identify the physical boundaries of your irrigation zones. When converting to drip zones, convert entire zones in a single project. This will ensure that all plants within the same zone have similar water needs.

Essentials for Drip Conversion:

Many irrigation manufacturers create kits that do all three of the tasks required to convert overhead spray to drip irrigation. A good starting point is to identify the make and model of your spray heads and see if the manufacturer already makes a conversion kit for their product. If they do not, many of the kits are compatible with other manufacturers parts.

Kits should provide you with:

- Filtration device to ensure small openings don't become clogged with fine sediment.
- A pressure regulator to ensure that the drip system, which is designed to work at a lower pressure, is not damaged.
- Materials to convert the spray head into a 1/2" flexible poly pipe, most commonly used for drip irrigation.

Evaluate your new landscape design and identify any sprinkler heads that are no longer needed. These should be capped to prevent water waste, but should still be able to be winterized.

Be sure you have all the necessary tools and materials before beginning your drip system conversion. This proactive approach saves time and avoids interruptions. Documenting the process can help with future troubleshooting and maintenance.

Need help? Upgrading an irrigation system can be complex. If the transition seems daunting or technical issues arise, particularly concerning system pressure adjustments or compatibility with older irrigation setups, consider enlisting the help of a professional. Check out qwel.net/hire-a-qwel-pro or scan the QR code at right to find a local qualified water efficient landscaper (QWEL) to help.



QWEL Pros have been trained in efficient irrigation principles and sustainable landscaping practices, and can help to:

- Use water efficiently in your landscape.
- Reduce runoff and overspray.
- Select and install efficient irrigation equipment.
- Develop your irrigation schedule and program your irrigation controller.

Step 6: Green Debut: Install your Landscape

Hardscaping

Begin with installing any new paths, patios, or other hard structures. Tackling hardscaping first helps avoid damage to plants and soil compaction later on.

Plant Installation

Bring your Landscape to Life

- **Timing is Key:** Buy your plants when you have enough time set aside to plant them properly.
- **The Right Hole:** For each plant, dig a hole that's twice as wide as the pot and exactly as deep. This gives roots the room they need to spread out.
- **Planting Time:** Aim for early morning or late evening to avoid midday heat stress on your new plants.
- **Ease Them In:** Carefully remove each plant from its container, loosen the roots, and place it in the prepared hole. Fill the hole partially with soil, water it, then fill it completely with soil and water again.

Irrigation Check-Up

Once all plants are in the ground, test your drip irrigation system. Make sure water is reaching all plants, taking special care to check the flow at the end of the line. Adjustments or professional help might be needed if the system isn't covering all areas adequately.

Step 7: A Blanket of Benefits: Mulch!

See page 7 for the full lowdown on the magic of mulch including free mulch offered by the City of Bozeman.

- **Why Mulch Matters:** Mulch is essential for retaining soil moisture, reducing evaporation, and adding aesthetic appeal to your garden. It helps maintain soil temperature, suppresses weeds, and can contribute to soil health as it breaks down.
- **How Much to Use:** Apply a consistent layer of 3 inches of mulch around your plants. This thickness is ideal for moisture retention without suffocating plant roots or creating conditions for mold or fungus growth.
- **Choosing Your Mulch:** Opt for natural, untreated wood chips instead of dyed or synthetic options. Arborist wood chips are particularly effective for water retention and add organic matter to the soil as they decompose, enhancing soil health and structure.

Step 8: Keep It Growing: Ongoing Care

Your garden's looking gorgeous, but the journey doesn't end here. A thought-out plan helps maintain plant and soil health, keeps beneficial plants thriving while managing unwanted growth, and ensures efficient watering practices.

- **Regular Maintenance:** Even water wise landscapes need consistent care. Focus on nurturing the plants you want while removing those you don't. Regular upkeep prevents overgrowth and maintains the aesthetic and health of your garden.
- **Mulching for Moisture and Health:** Annually refresh your beds to maintain a 3-inch layer of organic mulch.
- **Irrigation System Vigilance:** Keep an eye on your irrigation set up to ensure it continues to operate efficiently. Run a two or three minute test cycle on your system once a month to see how it is performing. This way you can catch problems while they are still small and easy to fix.
- **Monitoring Soil Moisture:** Keep an eye on the moisture level in your soil to prevent the stress of over or under-watering, which is especially critical for drought-tolerant plants.
- **Weeding Wisely:** Stay on top of weeding to ensure your plants aren't competing for water and nutrients. Regular weeding keeps your landscape neat and healthy. Hand-pulling weeds is often the best approach to avoid disturbing the roots of desirable plants.
- **Pruning Practices:** Prune dormant shrubs and trees to control their shape and remove unhealthy sections. Limit pruning to no more than a third of the plant at a time to avoid stress. Also, deadhead perennials to encourage extended blooming.

Season-Specific Tips

- **Spring:** Kick off with irrigation checks, weeding, and mulching. Early spring is also a good time to prune many woody plants and prepare your landscape for the growing season.
- **Summer:** Adjust watering based on temperature and rainfall. Continue weeding and deadhead perennials to extend their bloom.
- **Fall:** Reduce watering as temperatures cool. Cut back dormant perennials and add mulch to protect against winter temperatures.
- **Winter:** Plan for next year! It's a great time to evaluate what worked and what you might want to change.

Plant Lists

Water Wise Plant Picks

Hardy Plants for Resilient Gardens

Starting your water wise gardening journey can feel like navigating a maze, especially with the diversity of plant options available at local nurseries. This guide is your compass to designing a yard that’s both beautiful and water efficient.

The guide is organized to help you quickly find plants that meet your garden’s specific needs. It includes options suitable for full sun, partial sun, and shade, all conveniently categorized into perennials and shrubs. Also listed are ornamental grasses and vines.

Understanding the Guide

This section introduces you to plants that are champions in conserving water in Bozeman’s unique climate. Plants are divided into three main categories:

- **Full Sun**
(sub-grouped alphabetically as Perennial or Shrub)
- **Part Sun & Shade**
(sub-grouped alphabetically as Perennial or Shrub)
- **Ornamental Grasses & Vines**
(listed alphabetically)

Navigating the Plant Lists

Within each category, you will find:

Common Name - The name you are familiar with, and which may have a regional influence.

Scientific Name - Standardized name used to precisely identify a species.

Native to Montana - These plants adapt to temperature fluctuations, accept native soil conditions, and are usually resilient to our changing local climate. Plus, including native plants on your landscape provides habitat for local pollinators and wildlife in our area.

Drought-Tolerant or Water Smart (DT or WS) -

Drought-Tolerant—These plants thrive in Bozeman’s climate. Once these plants are “established” (which usually takes about two to three growing seasons), they typically won’t require extra watering, even during extended dry periods.

Water Smart—These plants are resilient and can go without water for a time but will benefit from deep watering during particularly hot and dry spells.

Pollinator Friendly - These plants attract both bees and butterflies. Both are important pollinating insects and are crucial to the production of fruits, nuts, and berries.

Deer-resistant - These plants are less palatable to deer and less likely to be damaged by nibbling visitors.

Notes - The fundamental description of the plant.

Full Sun Perennials

Common Name	Scientific Name	Native to Montana	DT or WS*	Pollinator Friendly	Deer-Resistant	Notes
Perennial						
Alliums, Ornamental	<i>Allium spp.</i>		WS	●		Most of the ornamental alliums are Water Smart, 'Summer Beauty' is a sterile hybrid
Alyssum 'Basket of Gold'	<i>Aurinia saxatilis</i>		WS	●		Low growing, early yellow blooms, needs good drainage to persist
Aster, 'Dream of Beauty'	<i>Symphotrichum oblongifolium</i>		DT	●	●	Forms a wide, tight mound, light pink flowers in fall, needs room
Blanketflower	<i>Gaillardia aristata</i>	●	DT			Long blooming, several cultivars
Blue Flax	<i>Linum lewisii</i>	●	DT	●	●	Sky blue flowers with semi evergreen foliage, short lived but will reseed
Buckwheat Sulfur	<i>Eriogonum umbellatum</i>	●	DT	●	●	Forms tight mat over time, 'Kannah Creek' is a good cultivar, other species qualify
Butterflyweed	<i>Asclepias tuberosa</i>		WS	●		Bright orange flowers, needs well drained soil, spreads somewhat but not in any way invasive
Catmints	<i>Nepeta x faassenii</i>		WS	●	●	Long blooming, likes hot dry places, all species/cultivars qualify
Coneflower, Pale Purple	<i>Echinacea pallida</i>	●	DT	●	●	Great plant for butterflies
Coneflower, Prairie	<i>Ratibida columnifera</i>	●	DT	●	●	Upright, airy, mid to late summer blooming, short lived but reseeds
Coneflower, Purple	<i>Echinacea purpurea</i>		WS	●		Lots of cultivars available/qualify
Coreopsis 'Zagreb'	<i>Coreopsis verticillata</i>		WS	●	●	Long blooming yellow flower, forms delicate clumps
Cut-Leaf Fleabane Daisy	<i>Erigeron compositus</i>	●	DT	●		Low mounding with small white daisy-like flowers
Evening Primrose, Missouri	<i>Oenothera missouriensis</i>		WS	●		Large yellow flowers in mid summer, low growing
False Indigo	<i>Baptisia australis</i>		WS	●	●	Large, shrub-like plant, long lived, Lupine-like spikes of blue flowers in spring
Gayfeather, Dotted	<i>Liatris punctata</i>	●	DT	●	●	Also known as “Dotted Blazing Star,” needs good drainage but once established can be long lived, late blooming
Globe Thistle	<i>Echinops ritro</i>		WS	●	●	Tall plant with distinctive deep blue globe shape flowers
Gumbo Lily	<i>Oenothera caespitosa</i>	●	DT	●		Also known as “Evening-Primrose,” low growing with fragrant flowers blooms from May through August, can be short lived but reseeds
Hen and Chicks	<i>Sempervivum spp.</i>		DT	●		Also known as “Houseleek,” many species/cultivars, succulent leaves
Hollyhocks	<i>Alcea hybrids</i>		DT	●	●	Tall, short lived perennial that reseeds readily, <i>Alcea rugosa</i> is longest lived
Iris, Bearded	<i>Iris hybrids</i>		DT	●	●	Can take very dry conditions, need to be divided when they form tight clumps

* **Drought-Tolerant (DT)** - These low maintenance plants need minimal water once they’ve settled in after a few seasons—perfect for our local climate.

Water Smart (WS) - They can handle dry spells too but perk up with a deep drink during the hottest days.

Plant Rebate Guide

Greenery Givebacks

Transform your garden into a water-efficient paradise and get rewarded! The City of Bozeman’s Landscape and Sprinkler System Rebate Program offers cash back for planting drought-tolerant and water smart varieties. **Every shrub, perennial, and grass listed in our guide is rebate-eligible.**

How to Access Rebates

- **Prepare:** Before you head to the nursery, grab this guide or download the City of Bozeman Drought-Tolerant Plant Rebate Shopping List at www.bozemanwater.com. It’s your ticket to smart shopping, ensuring you choose plants that are not just beautiful, but also qualify for rebates.
- **Shop within a total budget** of \$100 to \$200 to maximize your rebate potential.
- **Plant:** Get your hands dirty! Plant your new water wise garden residents.
- **Claim Your Rebate:** After installation, submit your rebate application along with your proof of purchase and installation evidence. Then, sit back and wait for your rebate to roll in.
- **Get Started:** All the details, including the shopping list and application, are available at bozemanwater.com. Just click on the Water Conservation button to find everything you need.

Happy planting, and enjoy making your garden both beautiful and water smart!

Full Sun Perennials

Common Name	Scientific Name	Native to Montana	DT or WS*	Pollinator Friendly	Deer-Resistant	Notes
Perennial						
Lambs Ears	<i>Stachys byzantina</i>		WS		●	Low growing, wooly silver foliage, non-flowering cultivars recommended
Lavender 'Munstead'	<i>Lavandula angustifolia</i>		WS	●	●	Fragrant flowers and leaves
Pearly Everlasting	<i>Anaphalis margaritacea</i>	●	DT	●	●	Long lived, will form a large mound over time, needs good drainage
Penstemons	<i>Penstemon spp.</i>	●	DT	●	●	Wide range of native Penstemons, important pollinator plant, all species/cultivars qualify
Penstemon 'Husker Red'	<i>Penstemon digitalis</i>		WS	●	●	Burgundy-bronze foliage with spikes of whitish flowers, longer lived than most Penstemons
Penstemon, Pineleaf	<i>Penstemon pinifolius</i>		WS	●		Likes good drainage, striking orange blooms later in season, 'Mersea Yellow' has yellow flowers
Peonies	<i>Paeonia spp.</i>		DT	●		Even though they might not grow as large or bear as many flowers, this plant can survive without supplemental water! All species/cultivars qualify
Prairie Smoke	<i>Geum trifloru</i>	●	DT		●	Low growing, very distinctive feathery seedheads, a common name for this could also be "Old Man's Whiskers"
Purple Prairie Clover	<i>Dalea purpurea</i>	●	DT	●	●	Magenta spikes above ferny foliage, midseason bloomer
Pussytoes	<i>Antennaria microphylla</i> and <i>A. rosea</i>	●	DT		●	Low, silver-leaf, mat-forming groundcover, can take some shade
Sage, Meadow	<i>Salvia nemorosa</i>		DT	●	●	Long lived, lots of cultivars
Sage, Russian	<i>Perovskia atriplicifolia</i>		DT	●	●	Tall plant with silver foliage and lavender like flowers
Scarlet Hummingbird Flower	<i>Zauschneria garrettii</i>		DT	●		Bright scarlet-orange trumpet flowers bloom mid season through fall, can spread
Sea Lavender	<i>Limonium latifolium</i>		WS	●		Clouds of fine flowers in mid summer, salt tolerant
Sedums	<i>Sedum spp.</i>		DT	●		All species/cultivars qualify, short ground covers and taller plants, succulent leaves
Snow in Summer	<i>Cerastium tomentosum</i>		WS	●	●	Low growing, silver foliage, white blooms, spreads
Soapwort 'Max Frei'	<i>Saponaria lempergii</i>		WS	●	●	Low growing, later blooming, soft pink blooms, <i>Saponaria occymoides</i> also included
Thymes, Creeping	<i>Thymus spp.</i>		WS	●		Ground covers, ornamental species/cultivars qualify
Veronica, Turkish	<i>Veronica liwanensis</i>		WS	●		Very low growing ground cover, sky blue flowers
Yarrows	<i>Achillea hybrid</i>		DT	●	●	Moonshine is a good cultivar, the native white yarrow is aggressive and can out compete other garden species, over time. All cultivars qualify.

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Full Sun Perennials



Alliums, Ornamental



Alyssum 'Basket of Gold'



Aster, 'Dream of Beauty'



Blanketflower



Blue Flax



Buckwheat Sulfur



Butterflyweed



Catmints



Coreopsis 'Zagreb'



Evening Primrose, Missouri



Gayfeather, Dotted



Hen and Chicks

Full Sun Perennials



Hollyhocks



Iris, Bearded



Purple Coneflower



Pearly Everlasting



Penstemons



Penstemon Pineleaf



Peonies



Prairie Smoke



Russian Sage



Sedums



Snow in Summer



Yarrows

Full Sun Shrubs

Common Name	Scientific Name	Native to Montana	DT or WS*	Pollinator Friendly	Deer-Resistant	Notes
Shrub						
Apache Plume	<i>Fallugia paradoxa</i>		WS	●	●	Very irregular shape, white flowers form silky seed heads that persist all season
Barberries	<i>Berberis thunbergii</i>		WS		●	Lots of cultivars, some with red foliage, dense branching
Buffaloberry, Silver	<i>Shepherdia argentea</i>	●	DT	●	●	Large silver leaf shrub, orange berries on female plants, thorny
Caragana, Pygmy	<i>Caragana pygmaea</i>		DT	●	●	Fine textured, lower growing caragana, yellow flowers
Caragana, Siberian	<i>Caragana arborescens</i>		DT	●	●	Also known as "Siberian Peashrub," often used as a hedge or windbreak plant, yellow flowers attract hummingbirds
Chokecherry	<i>Prunus virginiana</i>	●	DT	●	●	Tall shrub with white flowers and edible berries, will sucker but can be pruned into multi stem shrub; tolerates part sun and shade
Cotoneaster, Peking	<i>Cotoneaster acutifolius</i>		DT		●	This tall shrub is usually hedged, black berries and glossy foliage; tolerates part sun and shade
Fernbush	<i>Chamaebatiaria millefolium</i>		WS	●	●	Soft fernlike foliage and white flowers, uncommon but very hardy
Golden Currant	<i>Ribes aureum</i>	●	DT	●		Can be pruned into a medium height hedge, early blooms benefit pollinators, edible berries; tolerates part sun and shade
Juniper, Common	<i>Juniperus communis</i>	●	DT		●	Soft foliage, low spreading form; tolerates part sun and shade
Junipers	<i>Juniperus spp.</i>		DT		●	Many cultivars and species, evergreen foliage
Kinnikinnick	<i>Arctostaphylos uva-ursi</i>	●	DT		●	Low spreading groundcover, one of our only broadleaf evergreens; tolerates part sun and shade
Lilacs	<i>Syringa spp.</i>		WS	●	●	Many cultivars and species, fragrant flowers; tolerates part sun and shade
Mockorange, Lewis	<i>Philadelphus lewisii</i>	●	WS	●		Fragrant white flowers, taller, several good cultivars
Mountain Mahogany, Curl Leaf	<i>Cercocarpus ledifolius</i>	●	DT		●	Large shrub, likes soils with good drainage
Oregon Grape	<i>Mahonia repens</i>	●	DT	●	●	Holly-like foliage, somewhat evergreen, foliage can brown over winter but pruning will renew; tolerates part sun and shade
Pine, Mugo	<i>Pinus mugo</i>		WS			Evergreen shrubs, lots of cultivars and sizes
Potentilla	<i>Potentilla fruticosa</i>	●	DT	●	●	Long blooming, compact shrub, lots of cultivars
Rabbitbrush, Dwarf Blue	<i>Ericameria nauseosa</i>	●	DT	●	●	Also known as "Chrysothamnus nauseosus/Rubber Rabbitbrush", stays dense and low without pruning, fall blooming
Rabbitbrush, Green or Yellow	<i>Chrysothamnus viscidiflorus</i>	●	DT	●	●	Green leaves, prune in early spring to keep compact, fall blooming

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Full Sun Shrubs

Common Name	Scientific Name	Native to Montana	DT or WS*	Pollinator Friendly	Deer-Resistant	Notes
Shrub						
Rabbitbrush, Silver	<i>Ericameria nauseosa</i>	●	DT	●	●	Also known as "Rubber Rabbitbrush," silvery leaves, prune in early spring to keep compact, fall blooming
Rose 'Harison's Yellow'	<i>Rosa harisonii</i>		DT	●		Often found naturalized in historic landscapes, spreads by root suckers
Rose, 'Woods'	<i>Rosa woodsii</i>	●	DT	●		Fragrant, pink flowers, edible rosehips, suckers to form thickets, best in naturalized settings
Sagebrush	<i>Artemisia tridentata</i>	●	DT		●	Can be pruned over time to keep interesting habitat. Montana subspecies: <i>vaseyana</i> , <i>wyomingensis</i> and <i>tridentata</i>
Sagebrush, Silver	<i>Artemisia cana</i>	●	DT		●	Good all season shrub, somewhat spreading
Sandcherry, Western	<i>Prunus besseyi</i>		DT	●		Early white flowers in spring and edible berries, 'Pawnee Buttes' is a low growing spreader
Serviceberry, Western	<i>Amelanchier alnifolia</i>	●	WS	●		Also called Juneberry, early white flowers, edible berries and red fall color
Spirea Birchleaf 'Tor'	<i>Spiraea betulifolia</i>	●	WS	●		Smaller shrub with white flowers and orange fall color
Spirea 'Bridalwreath'	<i>Spiraea x vanhouttei</i>		WS	●		Cascading white flowers in spring, orange fall color
Sumac 'Gro-Low'	<i>Rhus aromatica</i>		DT			Also known as "Fragrant Sumac," nice low growing shrub, shiny green leaves in summer, turning red and orange in fall; tolerates part sun and shade
Sumac, Staghorn	<i>Rhus typhina</i>		DT	●		Tall shrub, dramatic, airy structure, red-orange fall color, spreads by root suckers, good on dry slopes
Sumac, Trilobe	<i>Rhus trilobata</i>	●	DT			Also known as "Skunkbrush Sumac," stays low in the wild due to grazing, but will grow tall in landscape situations
Viburnum Wayfaring Tree	<i>Viburnum lantana</i>		WS	●	●	White flower clusters, blue to black berries, velvety leaves
Yucca, Great Plains	<i>Yucca glauca</i>	●	DT	●		Also known as "Soapweed Yucca," very drought-tolerant, will form colonies



Apache Plume



Buffaloberry, Silver



Chokecherry

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Full Sun Shrubs



Fernbush



Golden Currant



Juniper, Common



Kinnikinnick



Lilacs



Mockorange, Lewis



Oregon Grape



Rabbitbrush, Green or Yellow



Sandcherry, Western



Serviceberry, Western



Spirea Birchleaf 'Tor'



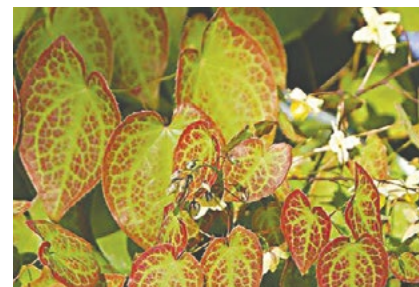
Sumac 'Gro-Low'

Part Sun & Shade

Common Name	Scientific Name	Native to Montana	DT or WS*	Pollinator Friendly	Deer-Resistant	Notes
Perennial						
Alumroot, Roundleaf	<i>Heuchera cylindrica</i> and <i>H. rotundifolia</i>	●	DT	●	●	Spikes of creamy flowers attractive to hummingbirds
Barrenwort, Bishops Hat	<i>Epimedium x versicolor sulpherium</i>		DT		●	Mainly a foliage plant, this species is hardy in Montana, good groundcover under trees
Columbines Assorted	<i>Aquilegia spp.</i>		DT	●		All species and cultivars qualify, long blooming, some native
Coral Bells	<i>Heuchera spp.</i>		WS	●	●	Many species and cultivars, 'Firefly' attractive to hummingbirds
Coral Bells 'Snow Angel'	<i>Heuchera sanguinea</i>		WS	●	●	Interesting variegated foliage
Geraniums, Big Leaf	<i>Geranium macrorrhizum</i>		WS	●		Spreading groundcover, 'Ingwersen's Variety' most drought-tolerant
Geranium, 'Biokovo' and 'Karmina'	<i>Geranium cantabrigiense</i>		WS	●		Great groundcover for shady places
Harebells	<i>Campanula rotundifolia</i>	●	WS	●	●	Forms colonies, delicate blue flowers
Lamium 'Hermans Pride'	<i>Lamium galeobdolon</i>		WS			Variegated foliage and yellow flowers
Lamiums	<i>Lamium maculatum</i>		WS	●	●	Low growing, variegated leaf, many cultivars
Pasqueflower	<i>Anemone patens</i>	●	WS	●	●	One of the earliest bloomers, Crocus-like flowers, silky seedheads, good foliage the rest of season
Pasqueflower, European	<i>Anemone vulgaris</i>		WS	●	●	Same characteristics as native, larger growing
Penstemon, Little Flower	<i>Penstemon procerus</i>	●	DT	●		Mat forming, early bloom, longer lived than most
Snow on the Mountain	<i>Aegopodium podagraria</i>		DT		●	Borders on invasive, needs to be in contained area but will grow in difficult dry shade
Shrub						
Currant, Greenmound	<i>Ribes alpinum</i>		WS			Also known as "Mountain Current," likes afternoon shade, variegated foliage and fragrant pink flowers in early spring
Daphne 'Carol Mackie'	<i>Daphne x burkwoodii</i>		WS	●		Can also take sun, dense branching, short mounding shrub



Alumroot, Roundleaf



Barrenwort, Bishops Hat



Columbines Assorted

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Part Sun & Shade



Columbines Assorted



Coral Bells 'Snow Angel'



Geraniums, Big Leaf



Geranium, 'Biokovo' and 'Karmina'



Harebells



Lamiums



Lamium 'Hermans Pride'



Penstemon Little Flower



Pasqueflower



Snow on the Mountain



Currant, Greenmound



Daphne 'Carol Mackie'

Ornamental Grasses & Vines

All grasses and vines listed are appropriate for both Full Sun or Part Sun & Shade

Common Name	Scientific Name	Native to Montana	DT or WS*	Pollinator Friendly	Deer-Resistant	Notes
Grasses						
Big Bluestem	<i>Andropogon gerardii</i>	●	DT		●	Tall, erect bunchgrass, may turn reddish to bronze in fall
Blue Grama	<i>Bouteloua gracilis</i>	●	DT		●	Forms dense tufts with unique one-sided seedheads, 'Blonde Ambition' is a great option if you are in need of a taller cultivar
Blue Oatgrass	<i>Helictotrichon sempervirens</i>		WS		●	Blue foliage color, large bunchgrass, needs space
Feather Reedgrass	<i>Calamagrostis x acutiflora</i>		WS		●	Several cultivars, tall upright
Fescue, Blue	<i>Festuca glauca</i>		DT		●	Tidy blue clump throughout the summer, all cultivars qualify
Fescue 'Siskiyou Blue'	<i>Festuca</i> hybrid		DT		●	Blue foliage
Korean Feather Reedgrass	<i>Calamagrostis brachytricha</i>		WS		●	Lovely plumed seedheads in fall
Little Bluestem	<i>Schizachyrium scoparium</i>	●	DT		●	Greens up later in spring, red fall color
Prairie Dropseed	<i>Sporobolus heterolepis</i>		WS		●	Lower growing clump, fine foliage, airy seedheads
Prairie Junegrass	<i>Koeleria macrantha</i>	●	DT		●	Shorter growing bunchgrass, blooms early
Side Oats Grama	<i>Bouteloua curtipendula</i>	●	DT		●	Distinctive seedhead
Switchgrass	<i>Panicum virgatum</i>	●	WS		●	Several cultivars, tall and upright, seed heads appear later in season
Tufted Hairgrass	<i>Deschampsia caespitosa</i>	●	WS		●	Several cultivars, frothy seed heads
Vines						
Clematis, Golden	<i>Clematis tangutica</i>		WS	●	●	Prolific flowers and lacy seed heads, can reseed itself
Grape	<i>Vitis hybrid</i>		WS			'Valiant' hardy cultivar, edible berries
Honeysuckle Dropmore Scarlet	<i>Lonicera brownii</i>		WS	●	●	Scarlet-orange tubular flowers, attract hummingbirds
Honeysuckle Kintzley Ghost	<i>Lonicera reticulata</i>		WS	●	●	Very full and fast growing, yellow flowers and blue-green foliage
Hops	<i>Humulus lupulus</i>		WS	●		Yellow-green flowers with papery cone-shaped fruits, lots of cultivars
Virginia Creeper	<i>Parthenocissus quinquefolia</i>		WS		●	Clings to fences and masonry, black berries and red fall foliage

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Ornamental Grasses



Blue Grama



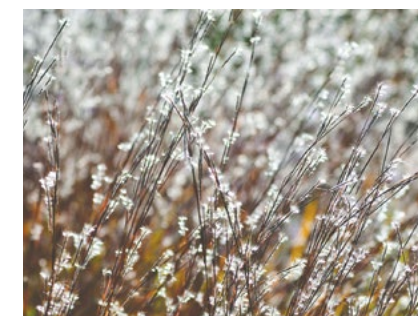
Fescue, Blue



Fescue 'Siskiyou Blue'



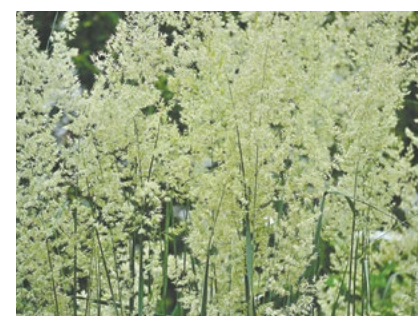
Little Bluestem



Little Bluestem



Prairie Dropseed



Prairie Junegrass



Switchgrass



Tufted Hairgrass

Vines



Clematis, Golden



Honeysuckle Dropmore Scarlet



Hops



Rebate Program

Indoor • Outdoor • Residential • Commercial

Does your home or business receive water from the City of Bozeman? Consider upgrading your plumbing fixtures, appliances, and irrigation systems for improved water efficiency. In return for your water conservation efforts, not only will you benefit from lower water bills, but you'll also receive a cash rebate.

Available rebates include:

Indoor

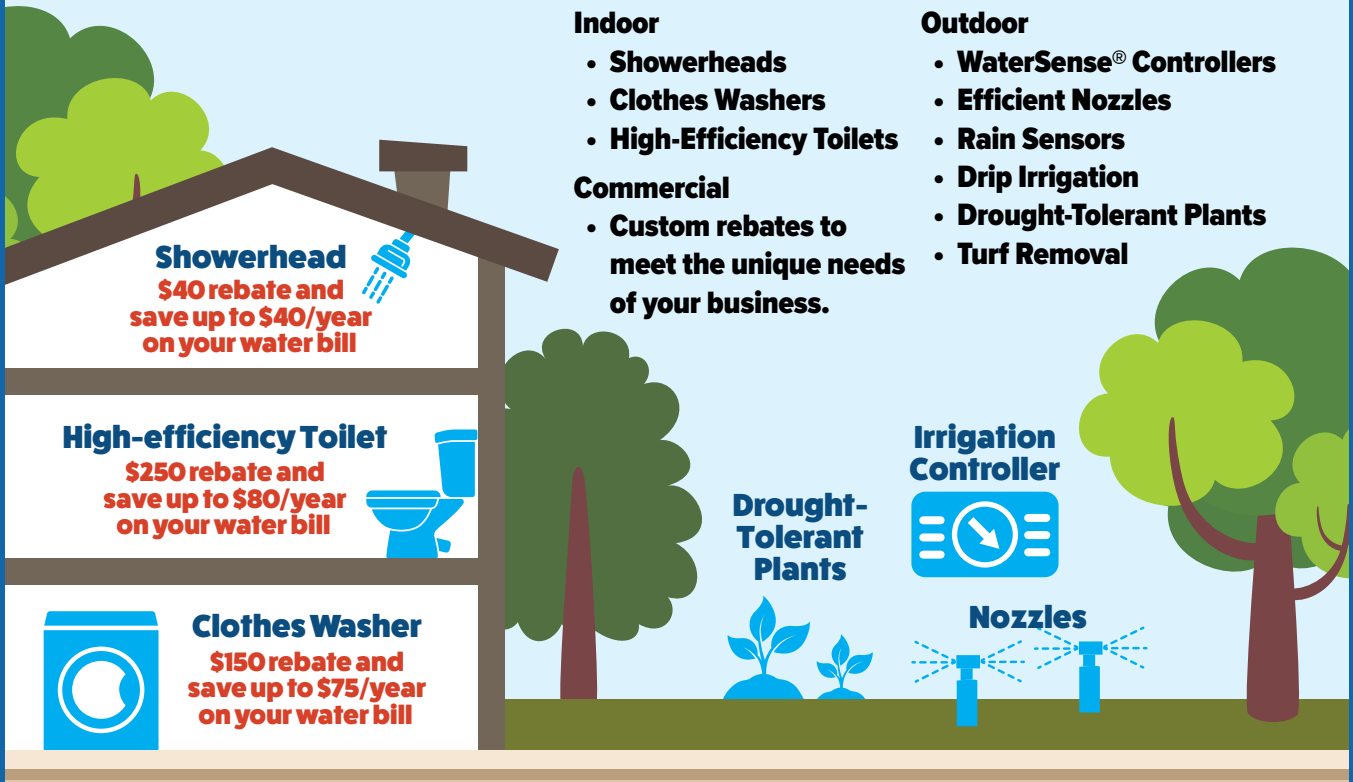
- Showerheads
- Clothes Washers
- High-Efficiency Toilets

Commercial

- Custom rebates to meet the unique needs of your business.

Outdoor

- WaterSense® Controllers
- Efficient Nozzles
- Rain Sensors
- Drip Irrigation
- Drought-Tolerant Plants
- Turf Removal



In addition to the City's rebate initiatives, the Water Conservation Division provides complimentary water-efficient products and valuable resources to all Bozeman residents connected to City water services.

Free items include:

- Faucet Aerators
- Fix-A-Leak Kits
- Leak Detection Dye Tabs
- Shower Timers
- Summer Savings Kits
- Kids Brush Better Kit
- Kids Shower Better Kit
- City of Bozeman Water Smart Indoor Guide

Visit our website at www.bozemanwater.com or visit us at the City's Water Conservation Division at 7 E. Beall St., Suite 100 (10am-2pm, Tues.-Thurs.) or give us a call at 406-582-3220.

