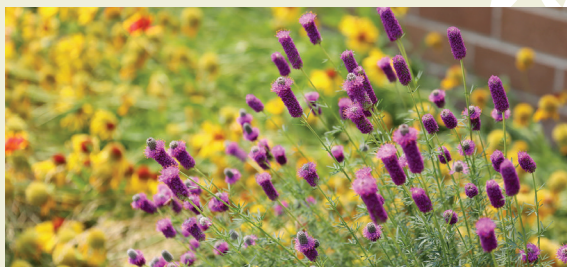


## MONTANA NATIVE GARDEN BED DESIGN APPROACH

The designer selected native plants that can grow more easily in home gardens – most of which are readily available at local nurseries with native plant selections. The plants are arranged in aesthetic combinations of foliage and flowers, and are very attractive to native pollinators. The raised beds provide good drainage, which is important for several of these plants.

### MAINTENANCE

Like any garden, this bed requires regular weeding to reduce competition. Some natives will self-seed, but most will not and are low maintenance. Shrubs will be pruned to keep them compact.



## MIXED SHRUB AND PERENNIAL GARDEN BED DESIGN APPROACH

What to plant behind a dinosaur! The bed has large blocks of plants to create a simple backdrop for Mike. Some of the plants have evergreen foliage, such as Kinnickinnick and Penstemon. The geranium are shade tolerant and provide an understory for the large shrubs.

### MAINTENANCE

Regular weeding is important. The larger shrubs are routinely pruned to keep the foliage high. Mulching helps to reduce the weeds, but the goal is for the plants to grow together and fend off weeds.



# WATER WISE DEMONSTRATION GARDEN



## INTERESTED IN A WATER-WISE GARDEN OF YOUR OWN?

The City of Bozeman offers resources and rebates to residents using Bozeman water on their landscape. Contact the city's Water Conservation Division for more information:  
[bozemanwater.com](http://bozemanwater.com) | 406.582.3220

A partnership between:



The City of Bozeman has partnered with Montana State University and Museum of the Rockies to showcase efficient irrigation techniques and low-water use plants suited to Bozeman's semi-arid climate.

Linda Iverson Landscape Design



## THE WATER-WISE DEMONSTRATION GARDEN FEATURES A VARIETY OF WATER SMART AND NATIVE DROUGHT TOLERANT PLANTS.

### WHAT MAKES A PLANT DROUGHT TOLERANT OR WATER SMART?

These plants have evolved to survive in areas of low rainfall for long periods of time. They have adapted various vegetative properties to help them survive during hot dry conditions. These include:

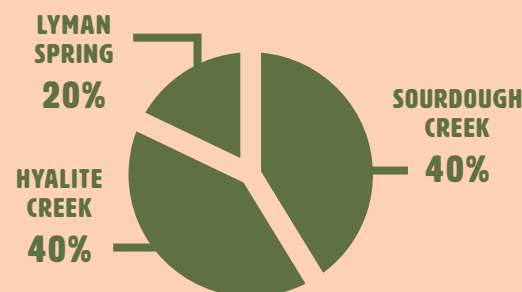
- Hairy leaves that hold water, like pussytoes and pasqueflowers
- Waxy leaf surfaces to prevent water loss, seen on sedums and yucca
- Small gray or silver leaves that reflect the sun's heat, such as sagebrush and rabbitbrush
- Deep taproots that grow vertically downward which store water
- Extensive lateral root systems that extend horizontally to capture more water

Some drought tolerant plants will go dormant during the hotter drier months. These plants aren't typically planted in demonstration gardens, but some of the bulbs planted in the gardens – such as spring blooming daffodil, hyacinth and tulips, exhibit this tendency.

Not all drought tolerant plants make good garden plants. Some have aggressive root systems. Some are short lived and produce copious amounts of seeds that out-compete their neighbors. Plants selected for these garden beds have proved their hardiness, longevity, and beauty.

## BOZEMAN'S WATER SUPPLY

Bozeman relies on snowpack for its water supply.



As climate patterns change, Bozeman's water supply is likely to become less reliable. More water is expected to arrive as rain instead of snow, and warmer temperatures will lead to earlier peak flows and drier summers.

Perched at the headwaters of the Missouri River Basin, Bozeman enjoys extremely high quality water. However, water supplies are very limited and Bozeman is drought-prone. With 50% of Bozeman's summer-time water use going into lawns and landscapes, the best place to help save water is right outside your door. Installing efficient irrigation and water-wise plants in your landscape is a great way to reduce outdoor water use and help move Bozeman toward becoming a more drought resilient community.

## WATER SMART PLANTS

These plants need occasional supplemental watering. They can withstand periods without watering, but will need deep, infrequent watering during hot and dry conditions.

Once established, these plants require 75% less water than turfgrass. They will receive deep soakings with progressively longer intervals between watering which enables plant roots to grow deeper. Letting the soil dry out between watering also helps supply needed oxygen to the root systems

## MAINTENANCE

Like any flower garden, these beds require regular weeding to reduce competition. The plants grow together as they mature, providing dense cover to suppress weeds – reducing the need for weeding over time. The plants are selectively cut back in the fall, while some of the attractive seed heads and foliage are retained for winter interest.

## EFFICIENT DRIP IRRIGATION

Drip irrigation delivers water directly to plant roots, eliminating water lost to evaporation and wind drift. Drip also waters plants at a slower rate (compared to overhead spray) – allowing more time for water to move deeper into the soil profile, reaching entire root zone.

The ½" drip tubing in the Museum Entry and Mixed Shrub and Perennial beds is laid in a grid pattern and has 'in-line' drip emitters spaced 12 inches apart, allowing for better water distribution as plant roots grow farther out. Raw surface water is used to irrigate these beds – conserving treated drinking water.

The ¼" drip tubing in the Montana Native bed is laid at the dripline (root edge) of each plant to target the roots as the plants become established. Once the native plants are established, they will likely not require additional watering.

## MUSEUM ENTRY BEDS DESIGN APPROACH

These beds are designed to have flowering all season long, starting with spring bulbs and pasqueflowers, ending with fall asters and sedums. The plants are grouped into pleasing combinations of color and texture, with repetition to create unity in the plant composition. The plants selected are hardy to this region and readily available at local nurseries. This is a perennial garden (except for the rabbitbrush) - all the plants die back to the ground each year, but are long-lived and adaptable to a wide range of soils. The plentiful flowers provide a food source for many pollinating insects.

## MONTANA NATIVE DROUGHT TOLERANT PLANTS

Montana native drought tolerant plants are accustomed to Bozeman's climate and survive off naturally occurring precipitation. The Montana native drought tolerant plants featured in the demonstration garden are the most drought resilient and have the lowest watering requirements.

Once established, these plants require 75% less water than turfgrass. These plants are carefully monitored to use irrigation during plant establishment only. Once established, they will solely rely on natural precipitation, except during prolonged hot dry conditions (during which the plants will need only occasional supplemental watering).

