The Low Maintenance Landscape

For the Mountain Southwest

by **Ken Lain**
the Mountain Gardener

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Introduction

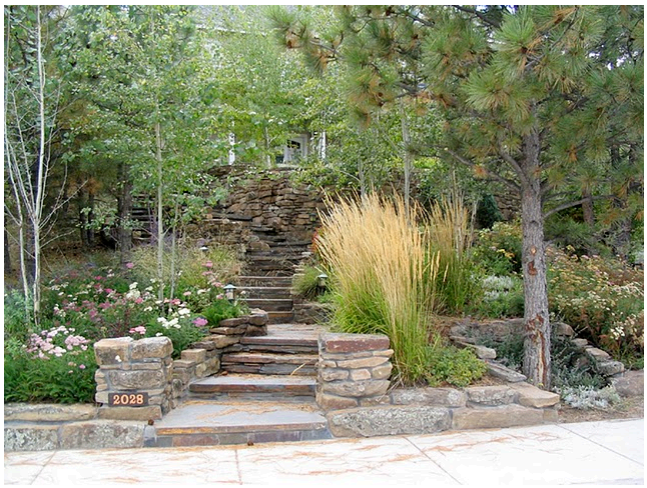
In today's busy, digitally connected world, who has time to slave behind a mower, hedge trimmer, or hose? It is possible to have a beautiful landscape that proclaims style and elegance without all the time and work, or heavy expense of a weekly gardener. This book sets the stage for a water bill that drops in half and cuts the weekend time tending to lawn and plants. By choosing the right plants and setting up a micro-drip irrigation system you can work with the environment instead of against it. You'll get an easy-to-maintain yard with so much flowering color your house will set the bar in the neighborhood. It doesn't take much, but you will need to up your garden know-how with a few of these tips, tricks, and techniques that move you into the digital garden age of irrigation, computerized clocks and values, and the lowest care plants needed to pull it all off.

This book introduces a new idea in water conservation, but more importantly, the need for low, Low, LOW maintenance of the plants in the landscape. Read on and you will have time for your golf game, visits with the grandchildren, time to hike, bike, kayak or just putz in the landscape because you want too, not because you have too.

Let's start with the most difficult part of the equation: choosing from the dizzying array of plants offered by garden centers. Which plants offer more color, less maintenance, less water usage, and stand out in the low, Low, LOW care landscape?

The Principles of Low Care Landscapes

Choose the Right Plants



Choose plants that are known to be reliable and problem free for your area, and varieties that won't outgrow the space you've allotted them.

Considering the bewildering supply of plants available at the garden center, choosing the best for your needs will require a little guidance. Start by making a list of plants you like. With camera phone in hand look around the neighborhood and photograph plants that appeal to you.

Take along the pictures when you ask a garden expert for proper identification. Consult gardening books, magazine articles, and the web to learn about the plants on your list. Enlist help at a garden center to learn how well local conditions suit each plant.

A common mistake is to choose plants that look just right on planting day, and then rapidly outgrow their spaces, creating a continual maintenance headache. Unlike an interior design that looks best the day it is installed, a landscape design should look its best several years after planting.

One trick is to look for compact varieties of plants. For instance, many traditional favorites, such as spirea, spruce, and butterfly bush are now available in compact forms that are much more likely to suit the scale of today's smaller gardens. Most often these plants have parts of their names in single quotes, and are referred to as "named varieties." Examples of some named, compact plants are 'Goldflame' spirea, dwarf 'Serbian' spruce, 'Indigo Blue' butterfly bush, and dwarf 'Yetti' hawthorn.

Named varieties offer resistance to pests and diseases that plague the common species. 'Prairiefire' crab-apple is resistant to both apple scab and fire blight, and 'Knockout' rose is rarely troubled by powdery mildew, a common rose disease. Choosing disease resistant varieties will result in fewer pests, which ultimately translates into lower maintenance and less care.

Some dwarf conifers, such as 'Globe' spruce, grow very slowly, as little as one inch per year. Such slow growers are more expensive initially because a plant that is only 4 to 6 feet tall may be 10 to 15 years old. Growers have invested as much time and materials in these plants as they did for plants that are much larger. The initial extra cost pays off over time because such plants need minimal if any pruning.

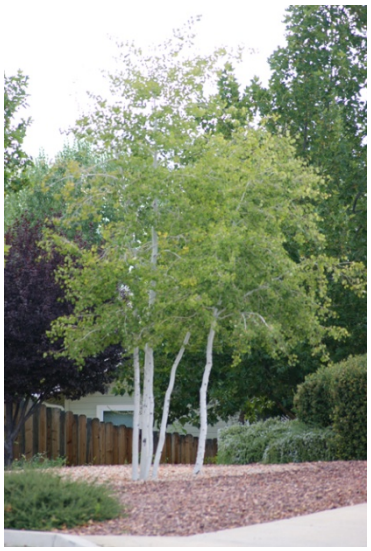
Friendly Low Care Plants

Friendly low care plants are selected for their ability to flourish in the area with limited amounts of water. These plants beautify the yard and are suited to your climate. They increase gardening success because you are using the right plants in the right place – using less water, less plant food and less maintenance in care and pruning.

Below are some friendly low care options. You can also learn more from our class video on native plants.

Native Trees

Most of us don't think of Aspens as low care plants. With their famous paper white bark these tall trees are striking in the landscape. Nature has designed them to take on local thick soils and extreme winds. Make sure to stay away from the European or Swiss varieties; they don't grow well in the mountain southwest.



Although shaped much like the East's most famous low water user, the Eastern Redbud, Desert Willow is 100% tough as nails. This summer-loving tree grows wild throughout the hot parts of the mountain west with deep-throated purple-and-white flowers that show all summer. Hummingbirds flock to it just for its nectar! Encourage this 12' tree to grow up to size, then cut it completely from all irrigation and watch it thrive.

Native Shrubs

These are fun to play with because of their great variety of textures, shapes, and sizes. The most famous is the Apache Plume. This tough, local native forms small white flowers resembling single rose blooms; they are followed by attractive, fluffy, white-ish plumes that persist throughout the fall. This hip-high bloomer is often covered in white flowers and plumes at the same time. Use it in the most hot, dry, and inhospitable places, around landscape boulders, in rock gardens, and behind drystone walls.

Gray Leaf Cotoneaster is an equally hardy evergreen shrub that boasts classic Arizona blue foliage year round. With its white spring flowers that form red berries, it guarantees interest throughout the year. Very tough and perfect for windy hilltops, it's also suited for areas troubled by javalinas. They despise the texture and flavor of this Western native!

You can't mention tough shrubs without suggesting an agave or yucca. The Artichoke Agave grows on hilltops all over the mountain west. These spiny, knee-high plants require virtually no care when fully rooted. This variety forms the 10' tall white flower that is so impressive. It also is a striking sight in containers in a classic Southwest or Mediterranean courtyard.

The Brakelights Yucca is a vibrant plant with brakelight-red blooms that cover it from summer through autumn. This compact new selection rarely sets seed pods, meaning more prolific flowering over an exceptionally long season. As many other western natives it's spectacular as a container specimen.

Native Perennial Flowers

The 'Red-Headed Beauty' penstemon blooms vigorously almost anywhere. It is so happy in the garden it frequently reseeds and multiplies. Hummingbirds are even distracted from their bickering antics when this unique, deep red flower begins to bloom.

Moonshine Yarrow – this hardy perennial flower is as soft as a baby's bottom and glows gold under the rays of the moon. Day or night, no other native blooms longer. Works beautifully in Western dry land gardens where it naturalizes much like a wildflower, and once established requires little if any care. The knee-high blooms are visible under a full moon and are as cheery as a yellow canary during the day. This is a very easy to grow plant that blooms well most of the year.

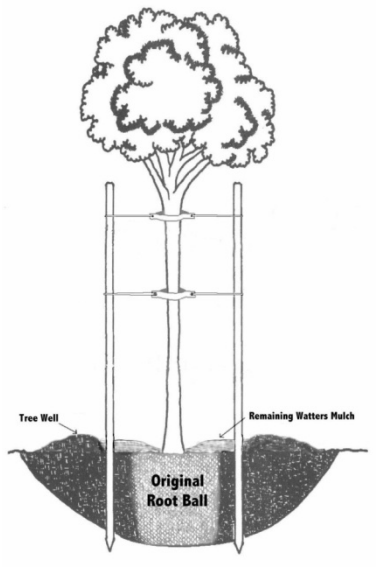
Plant Plants Properly

Finding the perfect plants for your landscape isn't worth the time it takes to look unless you plant them properly to encourage growth and reduce transplanting stress.

1. Kill or pull the weeds in the area where you intend to plant.
2. Dig a hole 2-3 times the width of the container but the same depth.
3. Check the drainage of the soil by filling the hole with water. All water should drain away within 12 hours. If not, you have hardpan and it will need to be penetrated – dig deeper and add a layer of gypsum.

4. Most soils in our mountain gardens are granite or heavy clay and need to have organic mulch added to improve the soil and give the plants a healthy start for deeper roots. This is the time to amend the soil. It will never mean more to the plant or be easier than when you've already loosened the soil by digging the hole. Blend one part mulch with two parts soil taken from hole and set aside.

5. Score (cut into the surface of) the root ball sides and bottom with a utility knife or pruners.
6. Blend the mulch mix with plant food and Aqua Boost soil polymer (discussed on page 9) and pack firmly around root ball.



7. Install stakes just outside the roots, making sure the stakes are deeper than soil mix. Remove the original shipping stake – it won't help as the plant grows larger and heavier. Use V-Straps around tree trunks to support trees from wind. Use one strap just under the tree canopy and a second 18" below the first. If necessary, use a small nail or screw on lodge pole to stop the wire from slipping.
8. Use remaining mulch inside the tree well as a top dressing. This will keep weeds down, insulate roots from heat and cold, and keep the roots moist.
9. Build a well around the tree and water with a root growth mixture. Water with the root growth mixture every 2 weeks for the first 2 months.

10. Water newly planted trees and shrubs deeply with a garden hose in addition to your irrigation system for at least one month (2 months in summer). Watering frequency will vary according to season, exposure and plant size.

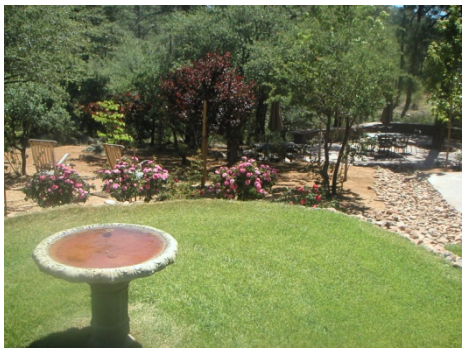
The Mountain Gardener *recommends "Root & Grow" for strong, sturdy, young roots!*

Give Turf a Chance

Cotoneaster as ground cover

Turf has its place in a low water landscape when it provides a functional benefit. Substitute ground covers in areas where turf is hard to grow. This would be steep slopes, shady areas, or very narrow spaces. We need to give turf a chance in many landscapes. Turf can survive heat stress and releases enough oxygen each day for a family of four. Few landscape plants provide this much health benefit. Lawn areas are traffic tolerant and remove dust and dirt from the air. The proper turf uses less water than most xeriscape plants. Air temperature near the ground stays cooler with grass by as much as 30 degrees compared to decks, patios, dirt areas, or walkways.

***Mountain Gardener Tip**: Don't over-water turf and only water in early morning.*



Water Efficiently

Plan the irrigation system at the same time you design your landscape. Water turf areas separately and group the plantings by water requirements. Use drip system irrigation for trees, shrubs & perennials. Avoid oscillating sprinklers – they lose too much water to evaporation. Water only between 2:00 a.m. and 8:00 a.m., and never when it's raining or with high winds. Adjust your sprinkler system regularly to account for changes in climate. This will be discussed in the "Drip Irrigation" section on page 12.

Also, use soil polymers to increase the effectiveness of watering. What are soil polymers, you ask? That's a good question...

Soil Polymers

Soil polymers are new compounds designed to save tremendous amounts of water and help get your plants off to a healthy and vigorous start. Mixed with the soil at planting time, these polyacrylamide crystals will absorb 200 to 300 times their weight in water and hold it in the root zone where the plant can use it. The crystals turn into a gel as they absorb water and nutrients and provide the plant with a consistent supply of water even through periods of drought.

Soil polymers also improve soil structure by expanding and contracting as the pieces of gel absorb and release water. This action increases air spaces in the soil which plant roots need to exchange oxygen and carbon dioxide. The polyacrylamide crystals that we offer will remain active and save water for 5 to 8 years.

Mountain Gardener Tip: *Try Aqua Boost Crystals – These specially formulated crystals easily double the length of time between irrigation cycles. Even better, the crystals have been laced with seven different beneficial mycorrhizae fungi that stimulate plants to root into their surrounding soils. I find it so helpful that, as I plant, every plant in my raised beds and container gardens gets a generous dose of these health-infused crystals.*

Which Plants Will Benefit?

Soil polymers have been tested on all types of vegetables, trees, landscape shrubs, bedding plants, ornamentals, houseplants, seed and sod. In all cases, they contribute to greater yields, less transplant shock, greater drought tolerance, and healthier plants.

A houseplant with polymer mixed in the soil can be watered generally half as frequently as the same plant without the polymer. In the landscape, polymers basically grab and hold the water that normally seeps deep into the ground out of the reach of the roots of most plants.

How to Use It?

Installing Sod – Quick Start Program: This method reduces transplant shock and accelerates establishment by 50%, with less care and less water. Apply with a spreader, 5 pounds of dry crystals per 1,000 square feet before laying the sod. It is not necessary to rake in the polymer crystals. Apply 25% extra along the top of slopes and around the perimeter of the installation area to eliminate the possibility of the new sod drying out. Install sod in the normal manner and water thoroughly.

Keep your new lawn moist with deep watering as needed. Your lawn will become established more rapidly and require less attention than sod that isn't treated with the soil polymer. After the lawn is established you will be able to water and fertilize less frequently because the polymer gel will hold water and nutrients in the root zone for longer periods of time.

New Container Grown Plants: When planting in containers, obtain the best results by mixing pre-moistened polymer gel with the potting soil. Use one part water-expanded granules to six parts of soil. Pot the plant into the container as usual. Mixing the polymer crystals with a fertilizer solution prior to adding the soil will provide a time released source of nutrients for the plant.

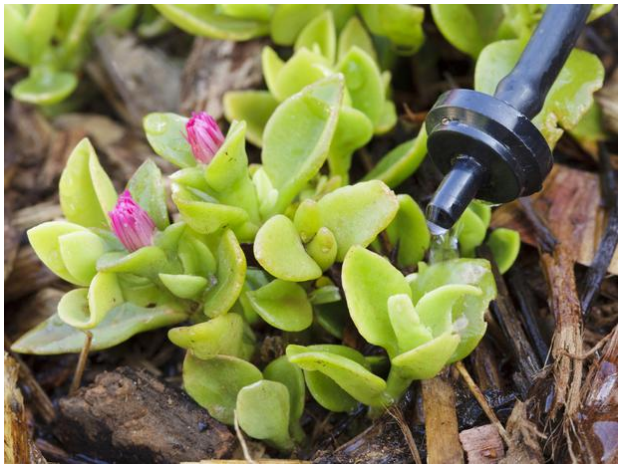
Adding to Existing Container-Grown Plants: This method is less efficient than mixing with the soil prior to planting, but it can also save on water and maintenance. Simply poke several holes into the soil with a pencil to about 2/3 the depth of the pot and pour a small amount of the dry crystals into each hole. Cover soil and drench. For a 6 inch pot, make 4 holes and distribute 1/2 teaspoon among the holes. For an 8 inch pot, make six holes and use 2 teaspoons.

How to Water: It takes about two weeks for the roots of the plants to grow into the water holding gel. Water the polymer treated soils at regular levels for the first two weeks. Subsequent watering should be made at about one-half the frequency of untreated soil.

Soil polymers are a great tool for saving water and maintenance. They also improve the plant's growing conditions and contribute to a healthier, more vigorous plant.

However, even plants treated with soil polymers need to be watered on a regular basis. That's where drip irrigation systems come in.

Drip Irrigation



When you combine the words "drip" and "water" you might think of waste, as in a leaky faucet. But when you're talking about an irrigation system, drip is a good thing. What is commonly known as drip irrigation is actually a combination of several types of low-pressure, low-volume water delivery systems. The correct term for these systems is micro-irrigation. Each micro-irrigation system is distinguished by a different style of emitter (the part that discharges the water). These micro-irrigation systems originated with commercial growers and farmers.

With the ever increasing desire and necessity for water conservation, drip irrigation is a great idea for the home landscape. Some of these systems deliver water literally one drop at a time. Far from water torture, this type of system is the best way to maximize your water resources and get the most from your plants. By keeping the plant's roots moist (but not to the point of saturation) you actually use less water than with conventional watering techniques. Systems can be also configured to mist and provide humidity.

Made from flexible vinyl or polyethylene pipe, drip systems are commonly installed in the subsoil in commercial agricultural applications. At home, you can "hide" the system with a layer of mulch or rock. Leaving it on top of the ground is fine, especially if you are troubled by mice or gophers. As smaller plants mature and spread, the water supply lines become less visible. To help prevent clogging, make sure that any part that emits water remains above ground.

Why a Drip System?

The list of the benefits of drip irrigation over hand watering applies both to plants and gardeners.

- Reduces water needs by as much as 50%
- Reduces weed growth by delivering water exactly where needed.
- Targets the exact area where you want the water and allows delivery at the exact time needed.
- Installs easily, plus the system components are relatively inexpensive. Kits are available or you can purchase individual components to customize and expand the system.

- Delivers water without creating an overly moist environment that promotes fungal diseases.
- Adapts easily to changes in landscape. Systems can be used for containers, raised beds, vegetable rows or balconies.
- Reduces erosion on slopes when emitters are placed up-slope, above the plant.
- Improves water-holding capacity in sandy soils.

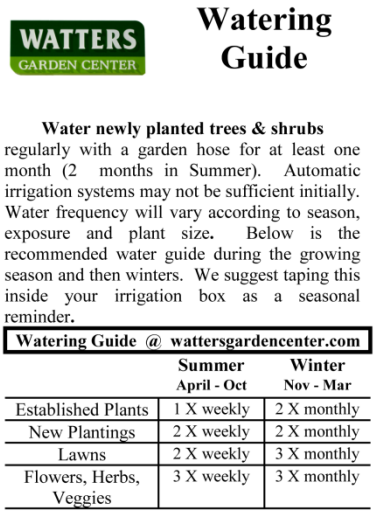
Timing

As gardeners are putting new plants into the ground one of the most common questions asked at the garden center is, "When do I turn on the water?" The answer is simple: Our growing season is from April through October and irrigation systems should be activated during this time.

Mountain Gardener Tip: *I've gleaned many best practices for watering from my years of trial and error. The best time to test and turn on irrigation systems is after the last big snow or freeze of the winter melts away. This is sometime in February or March. Set your irrigation clocks to water trees and shrubs once every 7 to 10 days. In June, the weather heats up, so that is when, delivering the same volume of water, I bump up frequency to every 5 to 7 days. The key to efficient, effective use of water is occasional long, deep irrigation rather than a more frequent and shallow watering. A drip system should run for 2 – 3 hours at a time to properly penetrate a plant's entire root zone.*

These are just guidelines, but they provide a good starting point to a garden's specific needs. They usually work well with heavy soils, but you might need to increase the frequency if you live in areas with fast draining sand or loose granite soils. Because water requirements are contingent upon the soil bands going through each yard, these are only general guidelines. Ultimately, your yard will be slightly different from anyone else's. Your backyard can even be different from your front yard!

When the weather warms, it's a good practice to keep tabs on how things are growing and monitor soils so that irrigation can be adjusted to the best schedule. A simple visual inspection can be tricky because the soil surface can be dry and crusty while the soil just a few inches deeper can be wet. A water meter is a handy and sure way to test soil moisture five inches below the surface.



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Watering Guide

Water newly planted trees & shrubs regularly with a garden hose for at least one month (2 months in Summer). Automatic irrigation systems may not be sufficient initially. Water frequency will vary according to season, exposure and plant size. Below is the recommended water guide during the growing season and then winters. We suggest taping this inside your irrigation box as a seasonal reminder.

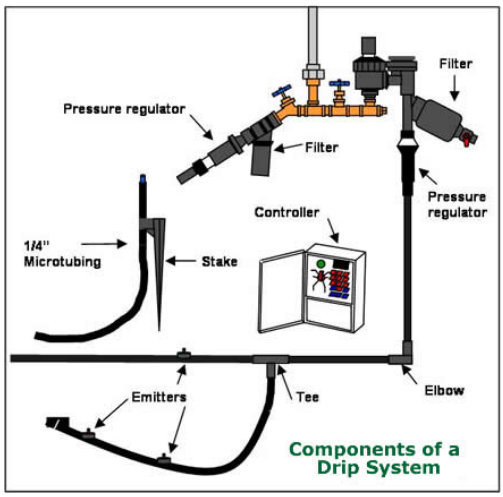
Watering Guide @ wattersgardencenter.com

	Summer April - Oct	Winter Nov - Mar
Established Plants	1 X weekly	2 X monthly
New Plantings	2 X weekly	2 X monthly
Lawns	2 X weekly	3 X monthly
Flowers, Herbs, Veggies	3 X weekly	3 X monthly

Mountain Gardener Tip: *Also useful is the excellent, compact, water guide I created that is sized to tape inside the cover of an irrigation timer. This simple guide instructs on both the summer and winter suggested irrigation schedules. Click on the image at left to get your free copy.*

Use an automatic clock to run your drip irrigation lines. Even for plants requiring only minimal water, a drip-irrigation system on a timer eliminates standing in the yard with a hose to water plants. Because drip irrigation delivers most of its water underground, it really cuts down on the amount of water used and on weed growth, particularly during the dry summer months.

The Parts



The irrigation system will only be as efficient as its components and their assembly. You may want to start with a kit and work your way up to a customized system. The basic parts are:

Back-flow preventer or anti-siphon device – required to prevent water from the system reentering your water supply when the system is turned off. Back flow prevention devices are required in most cities and highly recommended.

Pressure regulator or pressure reducer – The typical home water supply has too much pressure.

Hose fitting – connects the tubing to the pressure regulator.

Tubing – comes in ½", ¼", ⅜", ⅝", or .710 depending on the needs and manufacturer. Used for the main distribution line and smaller spaghetti lines for individual plants and containers. Tubing is usually made from black polyethylene.

Fittings – allow the system to continue on straight, or with 90 degree elbows, tee-joints, y-couplings, and end caps.

Emitters – available with different flow rates to accommodate the needs of the plant. Located at soil level or elevated on stakes or risers. There are several types, choose based on where you want the water to go. All are rated by their GPH (gallons per hour) delivery.

Bubblers – usually adjustable and often used for trees and shrubs. They deliver more water in less time.

Dripper – slow, low quantity delivery right at the root system usually in 1, 2, & 4 GPH delivery. In mountain terrain it is recommended you use pressure compensating emitters. These emitters will be more true to their rating even on steep grades.

Hole punch – used to make insertion points in the tubing where emitter will be located.

Goof plugs – No system is complete without them. Securely stop up the hole you punched by mistake. Also allows you to move an emitter without replacing the tubing.

Barbed Adapter – used to connect tubing and emitters

Riser – allows emitters to be placed above the plants

Pin or hook – attaches the tubing to the soil if necessary to anchor it.

Timers – Highly recommended with drip systems because of the long length of time a system runs. Electronic timers run with batteries or plugged into an electrical outlet to turn the water on and off. Look for timers that can run 2-4 hours with each cycle.

Soaker Hoses – Although they're not considered true micro-irrigation systems, soaker hoses are considered a form of drip irrigation. When using a soaker hose, use a timer to avoid wasting water.

The Details

Fine tuning the system to your plants and soil may require a few days of observation and tinkering. Monitor the soil moisture and adjust the watering time and placement of emitters accordingly. Larger plants need more water and may require more than one emitter. Also, as plants mature they need additional water.

When cutting tubing, use a sharp blade pruner or scissors and make sure the cut is square (not angled). If lines are buried, mark the spot where the end is located. This helps you locate it for flushing or draining. Attach a Y-coupling to the hose bib to allow use of a regular garden hose without disconnecting the system.

Maintaining sufficient pressure throughout the system is critical to success. Depending on the grade of the landscape most systems can distribute up to 500 feet of main line, or ½-inch line, and hundreds of emitters. Flush the system and clean filters annually, especially if your water supply contains a lot of minerals, or the water supply is from a well. Drain the system before freezing weather arrives.

Conclusion

For the low maintenance landscape the idea is four-fold:

1. Buy the right plant for the garden.
2. Place more energy into planting correctly and less into maintenance after you plant.
3. Reduce lawn areas so you need less time behind the mower.
4. And use automatic irrigation.

Implement even half of these strategies and you will notice your thumb has turned green and your back ache is gone!

As always, thanks for choosing Watters Garden Center. I look forward to seeing you soon!

Ken Lain

The Mountain Gardener