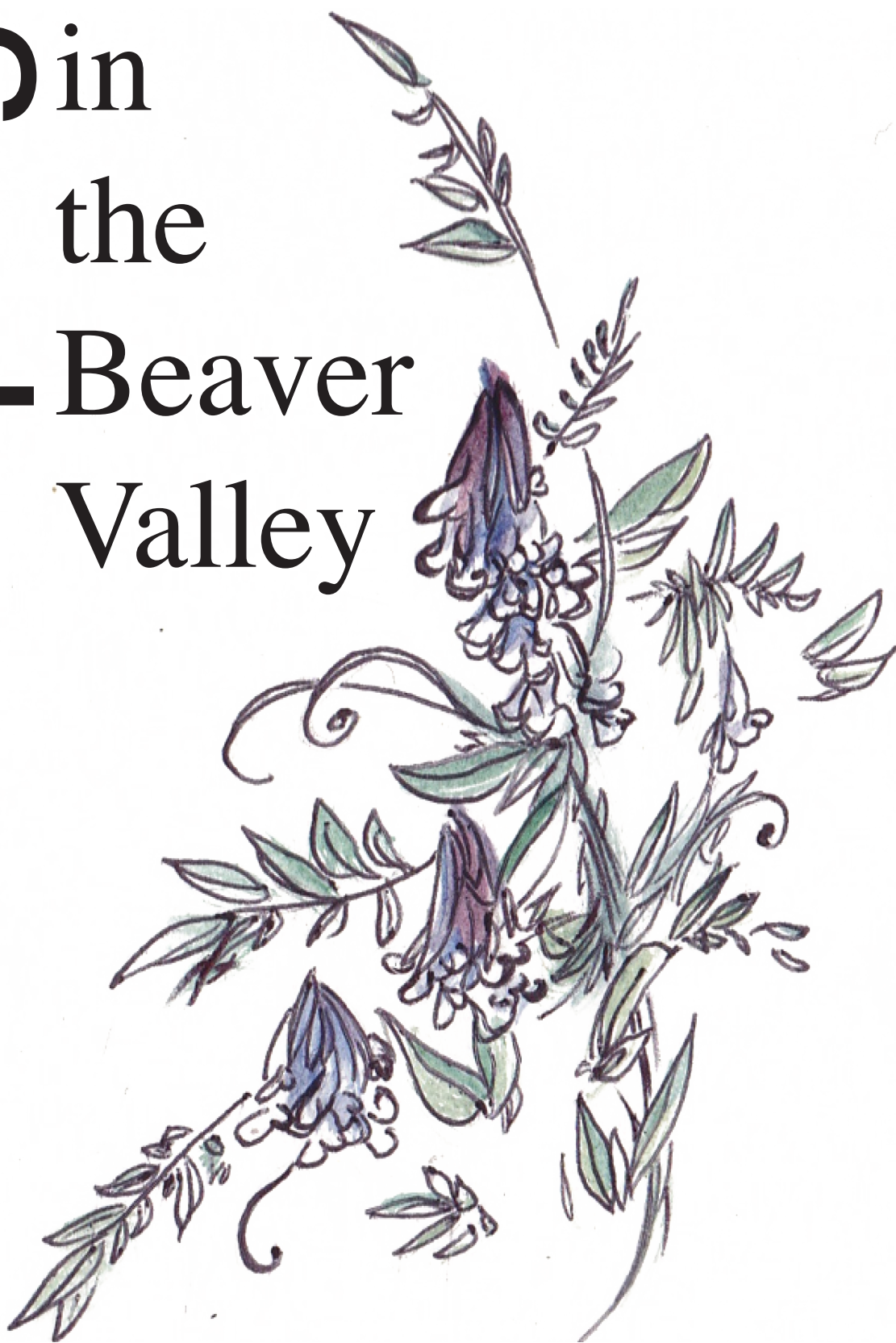


Landscaping

in
the
Beaver
Valley



Xeriscape is not “Zeroscape”

The term is pronounced “zair-i-scape” and means “water conservation through creative landscaping.” It combines the Greek word “xeros” meaning dry, and “scape” denoting a view.



We all love beautiful surroundings. Xeriscaping is a method of gardening that doesn't sacrifice beauty to conserve water. In fact, if a landscape isn't attractive, then it isn't a xeriscape. The principles of xeriscaping can be applied to any landscape style and can be as plain or elaborate as desired.

Reasons to Xeriscape

The average Canadian uses 326 litres of water per day. In the summer, the peak water demand rises to about 1.5 times that number! Eighty percent of the water consumed in the summer is used outdoors to water grass, hose driveways and to wash vehicles.

In addition to using less water, a xeriscape garden requires less weeding, fertilizing, pruning, mowing and pesticides.

Are You Ready?

Here are two simple steps that will make a difference:

- Alter your irrigation to match your plants actual water requirements, and
- Make adjustments to minimize overspray onto hard surfaces.

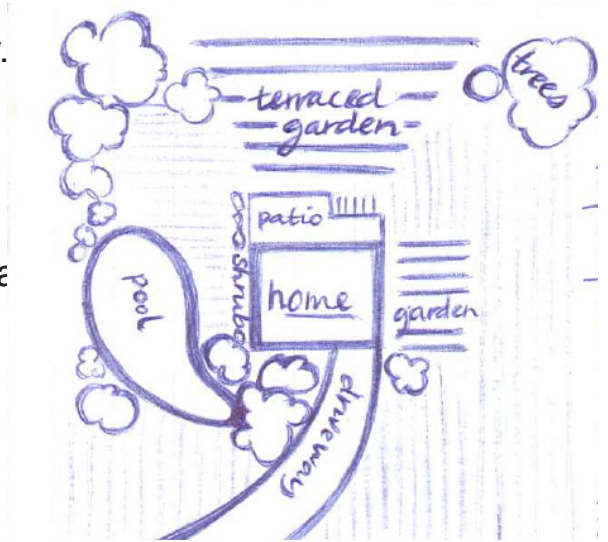
Xeriscape Principle #1

Planning & Design

The first and most important step in creating a successful xeriscape is careful planning. A good plan will save you time and money. There are professionals who can help you, but if you choose to do it yourself, here are a few tips:

Take an Inventory

- Sketch a simple bird's-eye view of your property.
- Take an inventory, walk around your yard and note what works well and what could change.
- Measure and locate all elements that must remain (property lines, fences, driveways, walkways, retaining walls, utilities).
- Identify conditions that will affect planting and water usage (sun, wind, shade, slopes, drainage, soil variations).
- Note views you wish to maintain or eliminate, and where an irrigation system could be connected.



Make a Wish List

- Determine what each member of the household would like from the available outdoor space (recreation space, a place for relaxation and entertaining, a showpiece, storage).
- Prioritize the wish list and decide when you would like to complete the project, and how much it will cost.
- Expand your horizons. Go for a drive and make notes on other yards. Visit garden centres and nurseries- ask at the Columbia Valley Greenhouse in Trail, or Nipkows in Fruitvale for help with drought-tolerant landscaping. Consult magazines, the library, and home and garden shows for ideas.

Prepare a Base Plan

- Draw an accurate map of your property to scale.
- Draw in all elements from your inventory that are to remain.

Design Your Xeriscape

By this stage, you will have set goals and identified any problem areas in your yard. Now it is time to find solutions to those problems, keeping in mind the constraints of your property, your aesthetic preferences, budget, and your functional and environmental objectives.

Prepare a Concept Plan

- Draw a simple sketch using bubble shapes to outline specific areas. To do this, lay tracing paper over your base plan, and see if your wish list is practical for your site.
- Divide your sketch into outdoor rooms (entry, cooking/dining, play, garden, dog run).
- Try a few alternatives to find the plan that best suits your needs.

Prepare a Master Plan

- Now, fill in the details on your master plan.
- Select suitable plant material. (See Xeriscape Plants for ideas).

Water Conservation Ideas

- Avoid steep slopes; create terraces instead. Plant slopes with ground covers to control erosion.
- Reduce lawn areas to the amount needed for use.
- Use hard-surfacing such as concrete, pavers, or wood decks for play courts, patios, entry areas and paths to reduce lawn.
- Slope hard surfaces to drain to planted areas to use all on-site drainage for irrigation.

- Consider creating an oasis, concentrate your water usage by grouping higher water use lawn and garden material in one area, and naturalize or use low-water using plants in the rest of your yard.
 - Use trees and shrubs to provide shade from the sun and shelter from the wind.
 - Use shrubs for background, accent and privacy.
 - Use perennials and annuals for fillers and accent.
 - Use ground covers for foreground to reduce lawn area.
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Xeriscape Principle #2

Soil

Sometimes we forget about the importance of soil. We cannot have landscape plants without it since plants need soil for support, air, water and nutrients. A good soil supports healthy plant life and conserves moisture.

The important characteristics of soil for growing plants are:

Texture: the relative proportion of sand, silt and clay. Most plants do well in loamy soil containing all three minerals. The soil texture in the Beaver Valley varies significantly.

Organic Matter: the non-mineral component of soil that was once alive.

Soil Life: includes things we can see (earthworms, insects, rodents, reptiles), and things we can't (bacteria, fungi, nematodes). Healthy soil is teeming with life - a handful of soil is likely to contain billions of organisms and relatively few are detrimental. Most are necessary for transforming organic matter into nutrients that can be taken up by your plants.



pH: the measure of acidity or alkalinity. Acidic soils are lower than pH 7.0. Alkaline soils are higher than pH 7.0. A good average range is pH 6.0-7.5.

Drainage: the rate at which excess water drains from a soil. Sandy soils drain faster than silt or clay soils.

Salinity: the level of potentially harmful salts, usually high in arid areas or poorly drained soils.

Fertility: the available nutrients for plant growth, generally low in the sandy soil of the Beaver Valley.

Soil Adjustments: It is easier to grow something appropriate for your soil type, than it is to significantly change it. Still, you can make improvements to soil structure and texture, as well as nutrient and water holding capacity by adding the following as necessary:

Organic Material: compost, aged manure, decomposed sawdust, and peat moss improve moisture-holding capacity in sandy soils and loosen clay soils.

Sand: improves drainage in clay soils and the structure of light organic soils.

Lime: raises the pH of acidic soils.

Sulphur: slightly reduces the pH of alkaline soils.

Fertilizer: adjusts soil nutrients to the requirements of proposed plants.

Leaching: uses water to reduce salinity.

A successful xeriscape depends on knowledge of your soil conditions. It is recommended you have your soil tested before making any changes.

Xeriscape Principle #3

Appropriate Plant Selection

Selecting the right plant for the right place depends on a number of factors.

Water Requirements

There are many beautiful trees, shrubs and flowers with low water requirements.

(See Xeriscape Plants for ideas.) If you choose plants with higher water requirements, group them together so you can water your yard more efficiently.

Cold Hardiness

Most plants are given a hardiness rating according to temperature zones, with Zone 1 being the coldest to Zone 8 being the mildest (in Canada). Our Beaver Valley climate ranges between Zone 3 at its highest levels, to Zone 6 at the valley bottom. Within these zones there are areas known as micro-climates, where the climate is affected by the surrounding area. Hedges, walls, and fencing may offer protection that alters growing conditions.

Exposure

Whether an area is sunny or shady, windy or protected, exposure will determine what plants will flourish where.



Landscape Value

Try to plan for year round interest and enjoyment by considering more than just flowers. Think about colour and texture of leaves, bark and fruit, along with overall branching and shape of various plants. Always keep in mind the mature size of plants when making your selection.

Maintenance

Plants vary greatly in the amount of care required to keep them looking attractive. Select plants that

realistically meet your gardening time constraints.

Size

Plant for size, do not prune for size.

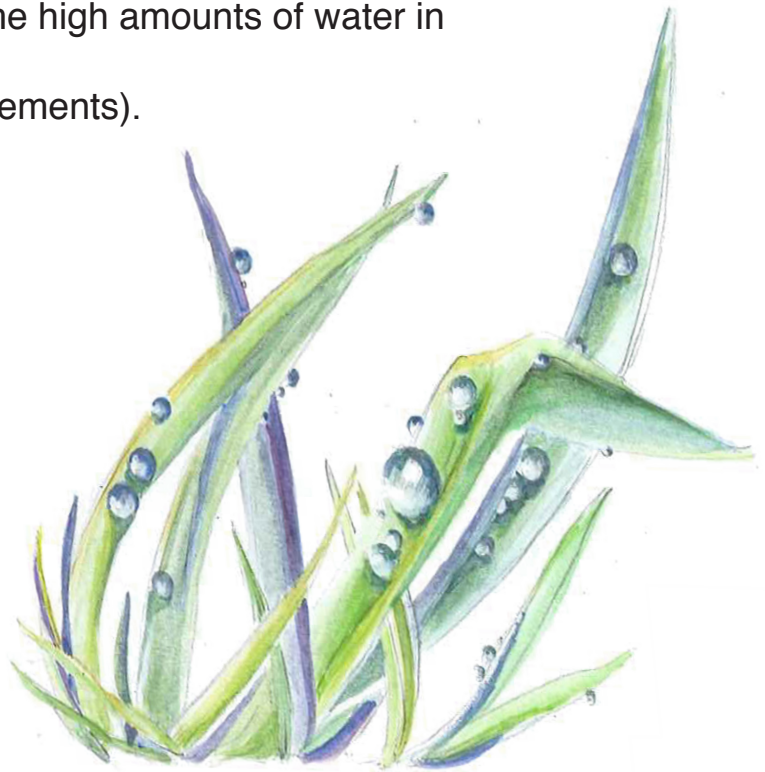
Xeriscape Principle #4 Practical Turf Areas

Lawns can add to the enjoyment of our yards, to property values, and help cool our homes in the summer, reducing energy for air-conditioners. However, most lawns are much larger than required and consume high amounts of water in comparison to most other plantings.

(See Xeriscape Plants for water requirements).

Take a look at your lawn and ask yourself these questions:

- How much of my lawn is actually walked or played on?
- Is it there because I don't know what else to do with that area?
- Are there areas that are difficult or dangerous to mow?
- Could sections of the lawn be replaced by groundcovers, shrubs or ornamental grasses that need less water and maintenance?
- Are there areas where hard surfaces like walkways or decks would make the living space more practical?



Here are additional reasons to reduce large areas of lawn:

Reduce Water Pollution

It is estimated that 60% of the nitrogen added to lawns ends up in our water supplies due to runoff from over-fertilizing and over-watering lawns. Pesticide use on lawns also contributes to water pollution through run-off. In the US, an estimated 17 million gallons of fuel are spilled each year while filling outdoor power equipment.

Reduce Air Pollution

The amount of volatile organic compounds emitted by a 3.5 hp lawnmower running for one hour is equal to the emissions of a car being driven 550 kms.

Reduce Noise Pollution

The less area of lawn you have to mow, the less disruption to the neighbourhood.

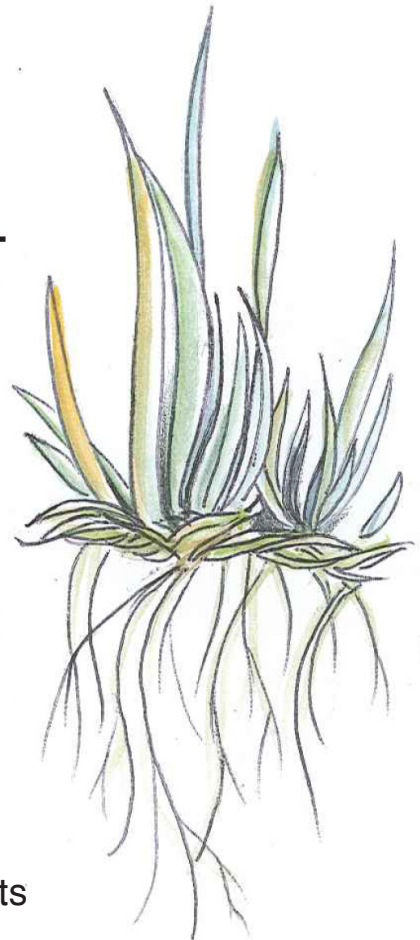
Reduce Inflow to Our Landfills

Grass clippings should be left on the lawn or composted; however, some still makes its way to our landfill.

Healthy Lawn Care Tips

Mow High: Leave grass 5 - 7.5 cm (2 - 3") tall. This shades the roots and helps prevent evaporation. It also helps your grass grow deep and strong roots that can overpower weeds and retain water. Leaving mulched grass clippings on your lawn can provide about one-third of your lawn's nutrient needs and are a valuable source of organic matter.

Dethatch: Thatch is a mixture of dead grass and roots that accumulate and form a tough layer at the soil surface. Excessive watering, nitrogen or pesticides may contribute to a situation where the thatch exceeds 1 cm (0.4"). Excess thatch can be removed using a stiff rake or specialized de-thatching equipment.

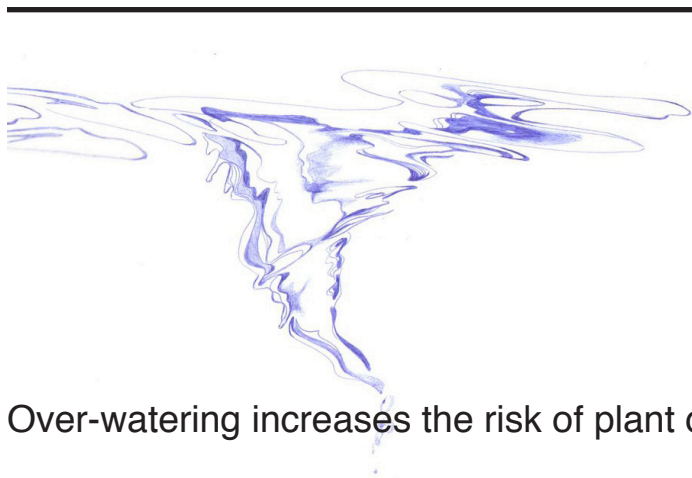


Aerate: Aeration is the process of removing plugs of soil from your lawn, or making holes in it with a tool like a pitch fork. This creates spaces for air, water and nutrients to penetrate into the soil and promotes the growth of beneficial microorganisms. It also increases water absorption and reduces surface runoff.

Topdress: Topdressing involves spreading good quality topsoil or compost on top of your lawn. This adds organic matter and improves the condition of the soil. Topdressing is essential on bare areas and on lawns with little topsoil. Add $\frac{1}{4}$ to $\frac{1}{2}$ inch of topsoil or compost. Don't smother the grass blades.

Overseed: Overseeding is the process of adding grass seed to your lawn. Use a high quality mix suited to the area.

Water Deeply: When watering a lawn, water deeply, but infrequently. This means watering about one to two days per week, but when you do water, water to a depth of 2.5 cm (1").



Xeriscape Principle #5 Water Wisely; Every Drop Counts

Over-watering increases the risk of plant disease as well as attracts certain insects that prefer lush, weak growth. To encourage deep rooting and drought-resistance, water deeply, thoroughly, and less often.

Water restrictions are in effect from May 1st to August 31st. Even house addresses may water on even days and odd addresses on odd days. However, it is not in your plants' best interests to water every second day.

Proper watering for your landscape will depend on:

- Soil type

- Weather
- Location
- Wind exposure
- Type of plants

Try this test to determine when to water for YOUR landscape beds:

Squeeze a handful of soil

- If too dry to form a ball - waited too long
- If it forms a crumbly ball - time to irrigate
- If it forms a ball and is slick - no need to water yet

Proper watering for your lawn:

A Beaver Valley lawn doesn't need to be watered every other day. It only requires about 2.5 cm (1") per week to keep it green. Water one to two days per week depending on weather and soil conditions (sandy soils drain faster than silt or clay soils). An empty tuna can is approximately 2.5 cm deep.

- Place several cans at different distances from your sprinkler
- Time how long it takes to collect an average of 2.5 cm
- Water this length of time about one to two times per week in the summer
- Reduce this time by up to half for spring and fall-time

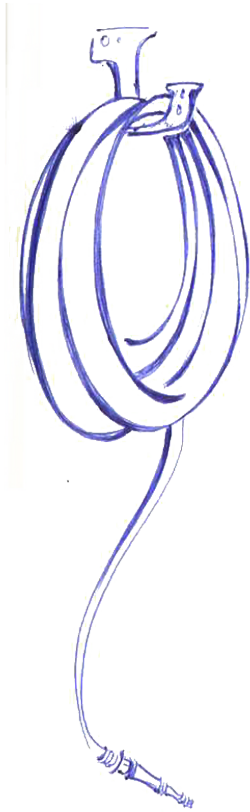
Try this test to determine when to water for YOUR lawn:

Step on your grass

- If readily bounces back - no watering required
- If it takes awhile to recover - it's time to water

- If it lies flat - you've waited too long

Other Watering Tips:



- Choose an irrigation method (hose-end sprinkler, automatic or drip system) that will water the plants in each area most effectively without water wastage.
- Consider collecting rainwater from your roof. A 100m² (1000 ft²) roof will catch an estimated 630 L of water in the course of a ¼" of rain. Roof downspouts can be extended to nearby plantings, or can be funneled into rain barrels or holding tanks for later use.
- Water when it is cool and calm, early morning is best, followed by early evening.
- Water close to the roots to avoid evaporation.
- Stop sprinkling if the water is running off the area.
- All plants will require more supplemental watering for the first year or two while they are becoming established.

Xeriscape Principle #6

Mulching

In nature, plants drop leaves, twigs and branches onto the soil below them. This layer of matter protects plant roots from heat, cold, and drought. It also enriches the soil and controls weeds. If we mimic nature and apply a layer of mulch to the surface of our soil, our landscapes can benefit in the same way.

Organic Mulch: Organic mulch must to be renewed periodically, as it breaks down after a period of time. It adds nutrients to the soil and improves soil structure as it decays. Types of organic mulch include:

- Bark – coarse or fine grades • Grass clippings
- Compost • Shredded newspaper
- Composted sawdust • Wood chips
- Leaf litter – pine needles, shredded leaves

Depth of Mulch: Generally create a layer of mulch about 7.5 cm (3”) thick, slightly less for smaller particles, up to 10 cm (4”) for larger pieces. Too much mulch will limit the air flow to plant roots, and too little won’t control weeds.

Time to Mulch: It is best to mulch in the spring after the soil has absorbed winter moisture, but before summer temperatures rise high enough to start pulling the moisture back out from the soil.

Inorganic Mulch: Inorganic mulch, depending on the colour, can cause heat buildup in the soil and around plants, which can then increase water requirements. It should be used carefully for this reason. Types of inorganic mulch include:

- Crushed gravel • River rock
- Lava rock • Pea gravel

Avoid plastic or other impermeable materials, which restrict the flow of water into the soil.

Although xeriscaping can reduce yard maintenance, no landscape is completely maintenance-free. While plants are establishing themselves, there is a period when they will require more care and attention. However, if a landscape is created by applying all seven xeriscape principles, it will require less maintenance over time.

Maintenance in a xeriscape, as in any landscape, includes weeding, mowing, pruning, fertilizing, pest control and watering.

Weeding: Pull weeds as soon as you notice them. It is easier and most effective when the soil is moist.

Many people look to landscape fabric as a solution; however, it has limited weed control effectiveness. It is most useful for keeping inorganic mulch from mixing with the soil. If you are considering landscape fabric here are some points to keep in mind:

- It doesn't allow the spread of groundcover plants.
- If planting flowers, it eventually becomes too holey to be effective.
- If using organic mulch over top, a layer is created (from decomposing material) that will grow weeds on top of the fabric.

Mowing: Keep your grass at least 5 - 7.5 cm (2 - 3") long. This helps shade the roots and hold in moisture.

Pruning: Over pruning can promote weak growth and actually increases a plant's water needs. Allowing plants to achieve their natural growth produces a better appearance and reduces the amount of pruning that is necessary.

Fertilizing: Excessive fertilizing will promote fast, but weak growth and actually increases a plant's water needs. A soil test will determine if fertilizing is required.

Pest Control: The best way to control pests is to provide the essentials for good plant growth: good soil, adequate light, and only the required amounts of water.

Watering: Over-watering contributes to rapid weak plant growth, fertilizer leaching, insect and disease problems, and weed growth. Please water wisely.

