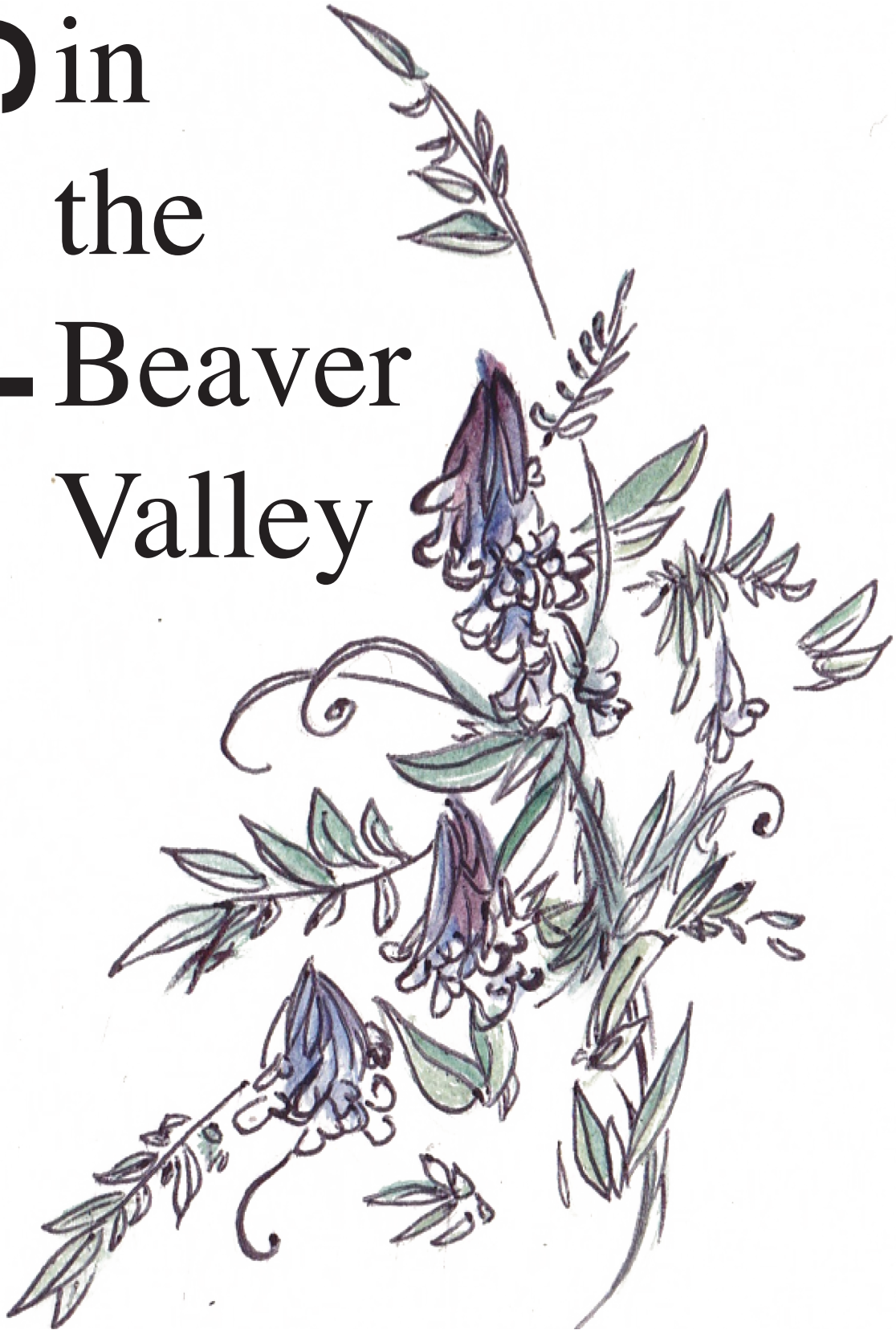
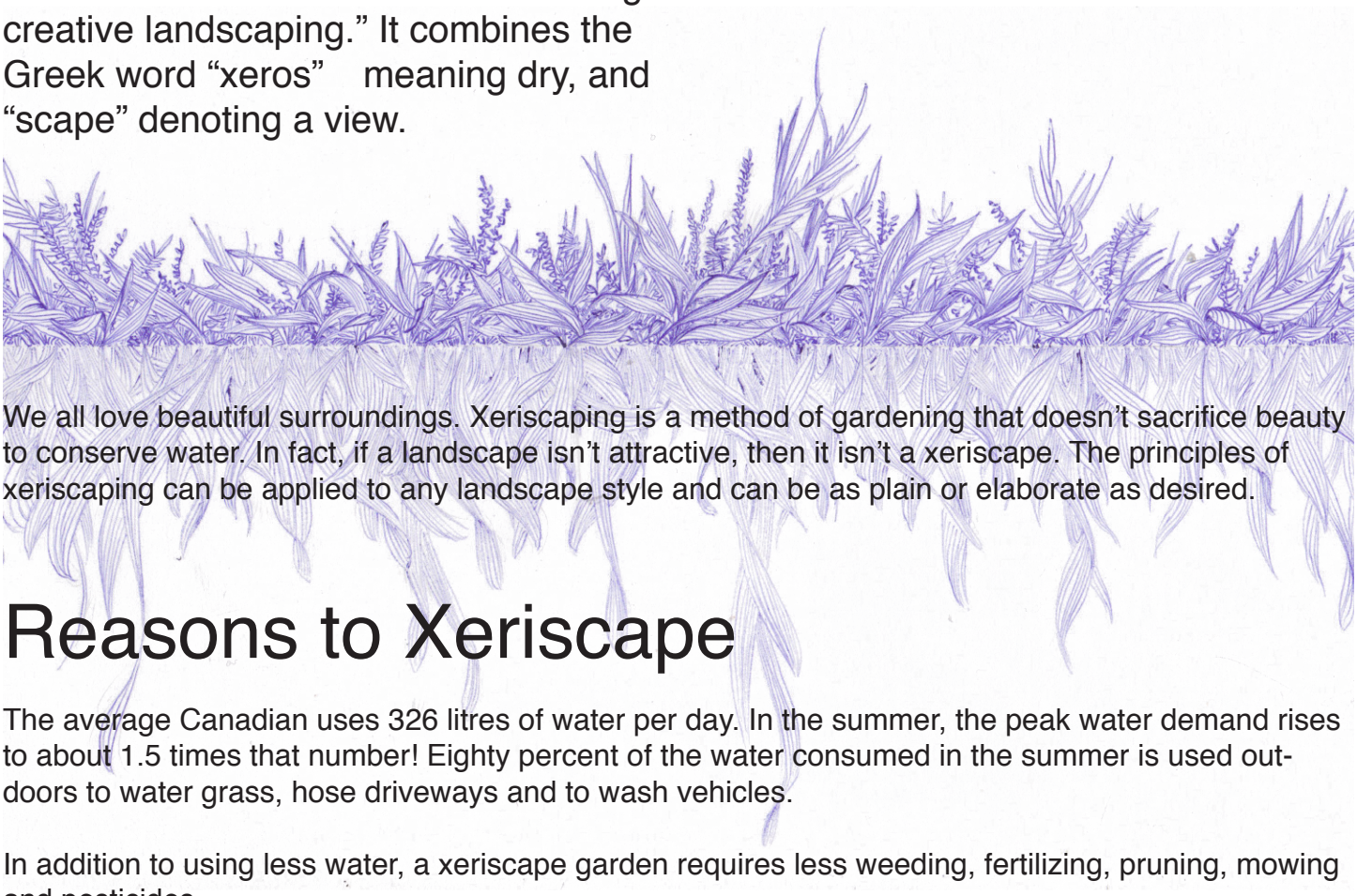
Landscaping in the Beaver Valley



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?

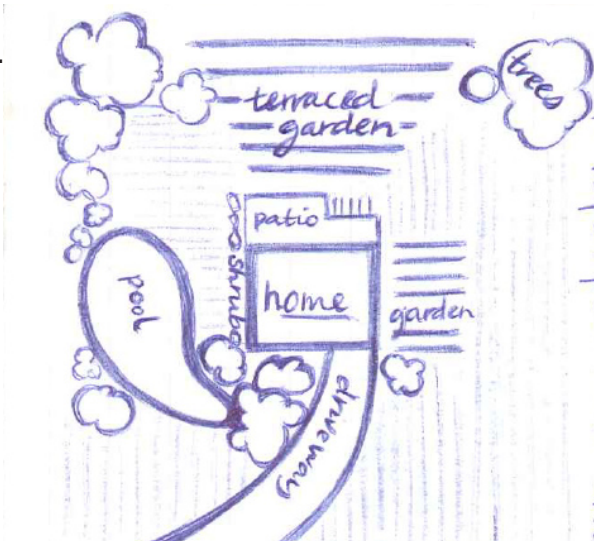
Here are two simple steps that will make a difference:

- 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, walk-ways, 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 shelterfrom 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.

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 ofsoil is likely to contain billions of orgaisms 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

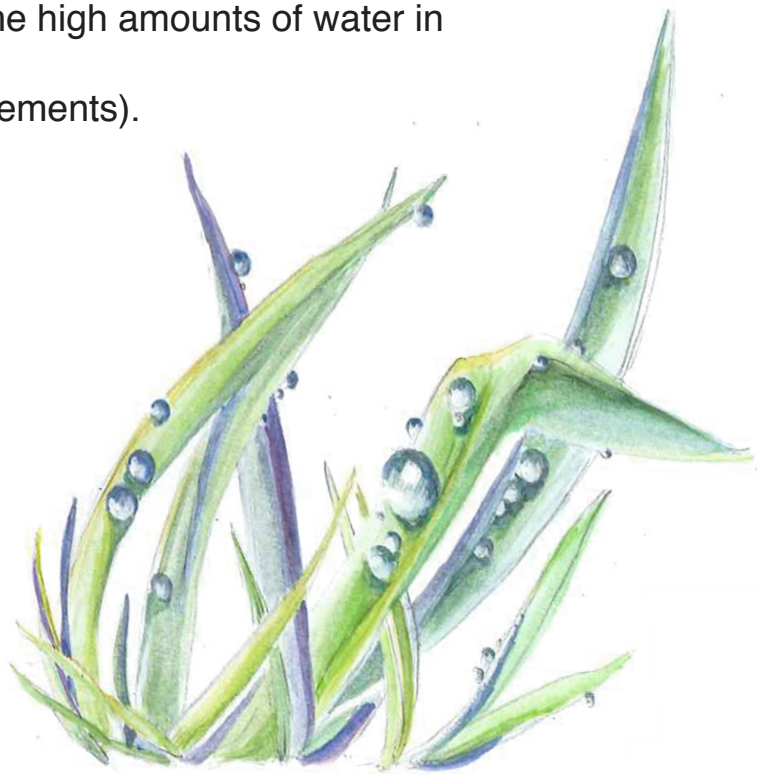
realistically meet your gardening time constraints.

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

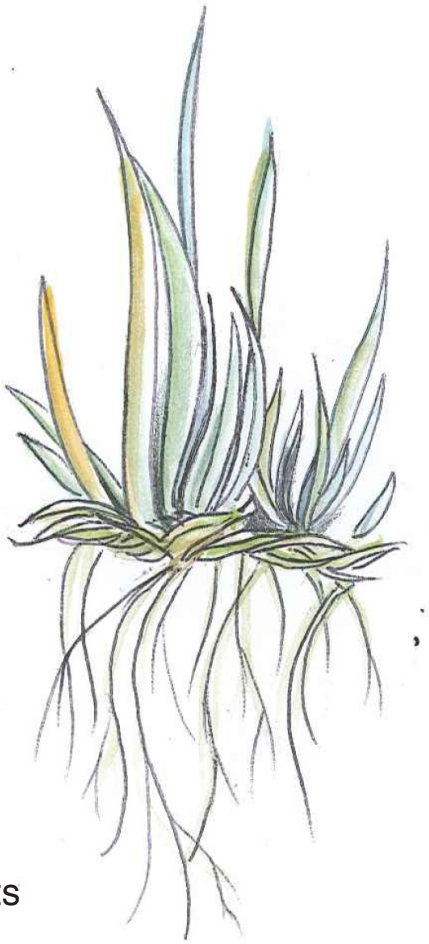
The amount of volatile organic compounds emitted by a 3.5 hp lawnmower running for one hour is equal to the emissions of a car being driven 550 kms.

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.

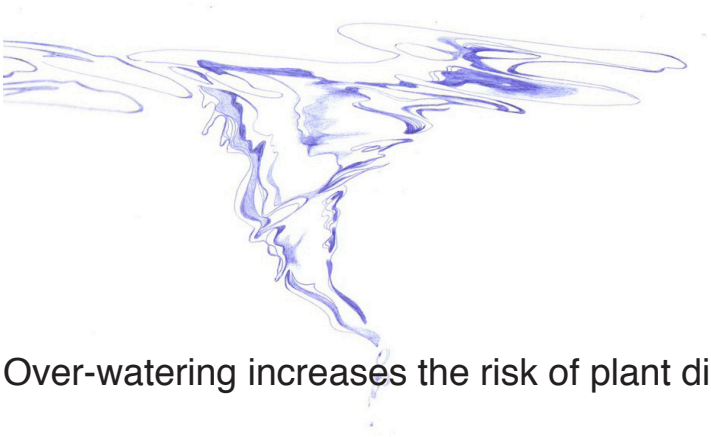
Dethatch: Thatch is a mixture of dead grass and roots that accumulate and form a tough layer at the soil surface. Excessive watering, nitrogen or pesticides may contribute to a situation where the thatch exceeds 1 cm (0.4”.) Excess thatch can be removed using a stiff rake or specialized de-thatching 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 benei cial microorganisms. It also increases water absorption and reduces surface runof .

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. Top-dressing is essential on bare areas and on lawns with little topsoil. Add ¼ to ½ 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 dif erent 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

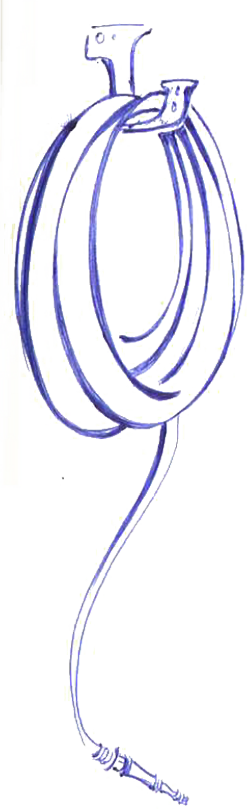
Try this test to determine when to water for YOUR lawn:

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 effecively 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 benei t 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.

For more information on Xeriscape Landscaping, contact:

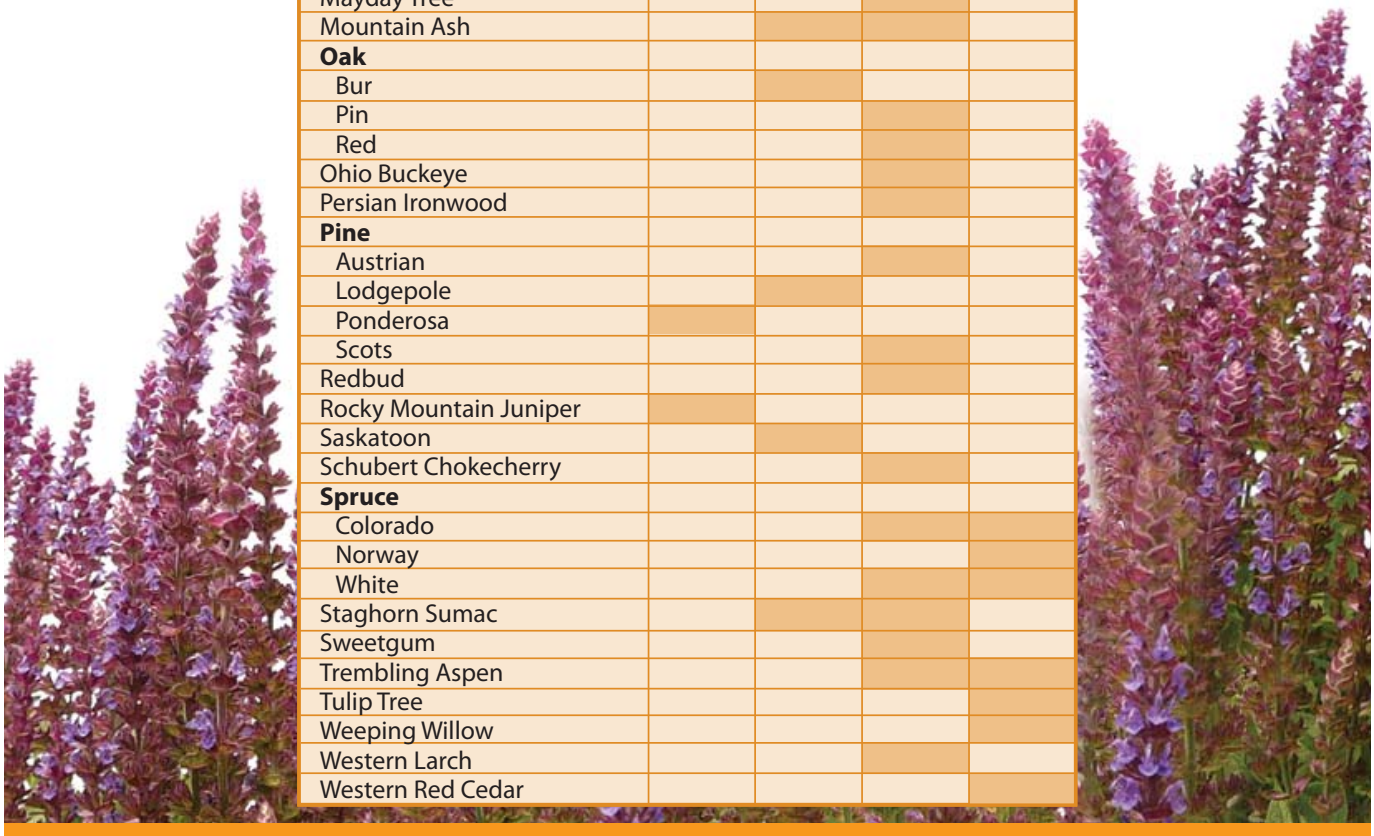
Parks, Recreation and Cultural Services
ph: (250) 828-3888 • email: healthylandscapes@kamloops.ca

For more information on conserving water, contact:

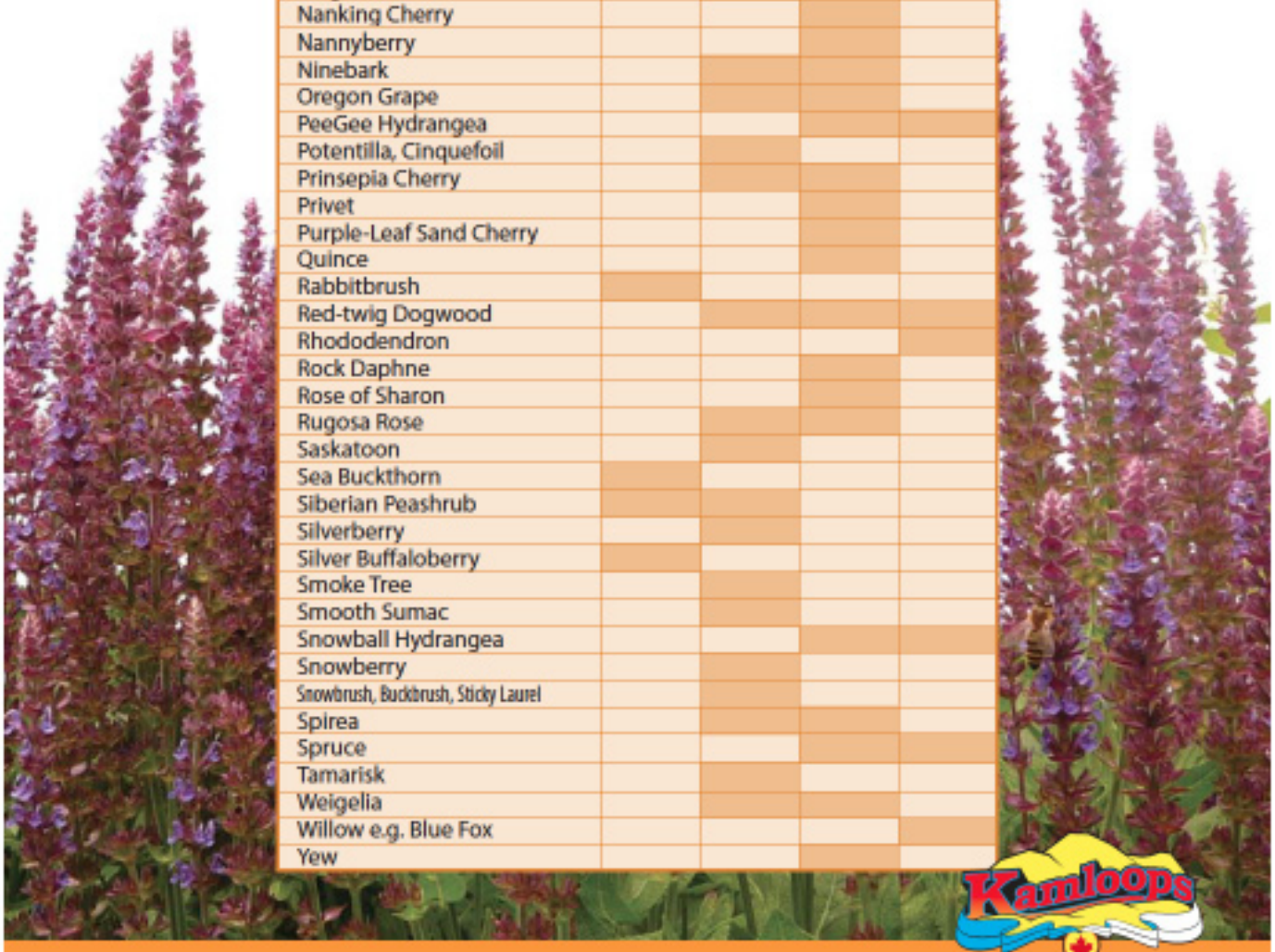
Environmental Services
ph: (250) 828-3377 • email: ecoinfo@kamloops.ca • web: www.kamloops.ca

Information by the City of Kamloops; images and layout by Diana Lupieri

TREES	WATER USE CATEGORY			
	Very Low	Low	Med.	High
American Elm			■	
Amur Cherry			■	
Armur Maackii			■	
Black Locust		■		
Black Walnut			■	
Catalpa			■	
Common Hackberry			■	
Crab Apple - Ornamental		■	■	
Douglas Fir	■	■		
Eastern Redbud			■	
European Beech				■
European White Birch				■
Flowering Plum		■		
Ginkgo, Maidenhair Tree			■	
Green Ash		■	■	■
Hackberry		■	■	■
Hawthorn			■	
Honeylocust		■		
Hornbeam			■	
Horsechestnut			■	
Japanese Tree Lilac			■	■
Katsura			■	
Kousa Dogwood			■	
Linden			■	
Lombardy Poplar			■	
London Planetree			■	
Maple				
Amur			■	
Japanese				■
Norway			■	■
Red				■
Silver			■	
Tartarian			■	
Mayday Tree			■	
Mountain Ash		■	■	
Oak				
Bur		■		
Pin			■	
Red			■	
Ohio Buckeye			■	
Persian Ironwood			■	
Pine				
Austrian			■	
Lodgepole		■		
Ponderosa	■			
Scots			■	
Redbud			■	
Rocky Mountain Juniper	■			
Saskatoon		■		
Schubert Chokecherry			■	
Spruce				
Colorado			■	■
Norway				■
White			■	■
Staghorn Sumac		■	■	
Sweetgum			■	
Trembling Aspen			■	■
Tulip Tree				■
Weeping Willow				■
Western Larch			■	
Western Red Cedar				■



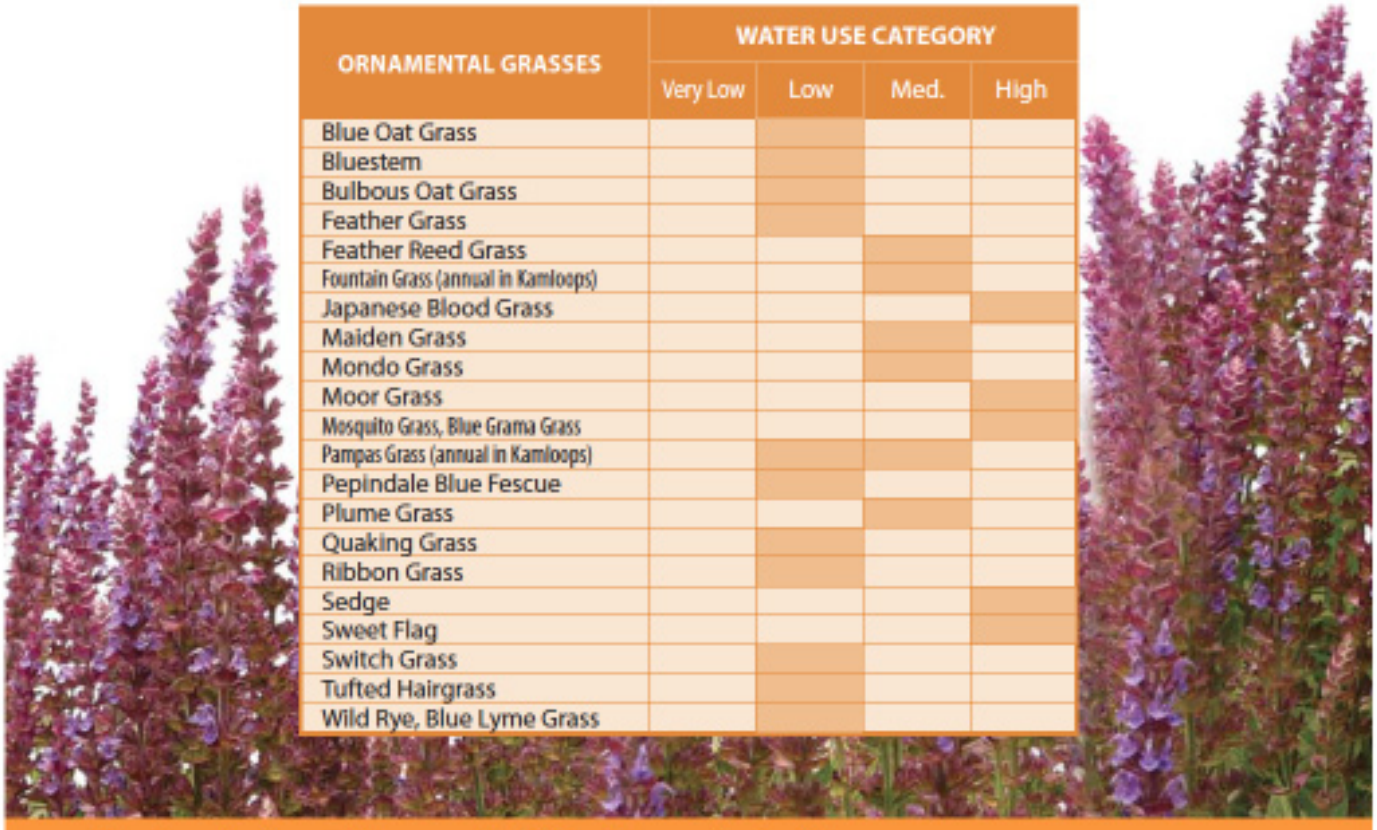
SHRUBS	WATER USE CATEGORY			
	Very Low	Low	Med.	High
Alpine Currant				
Barberry				
Beauty Bush				
Big Sagebrush				
Boxwood				
Burning Bush				
Cedar				
Cotoneaster				
Cranberry Bush				
Elderberry				
False Cypress				
False Spirea				
Firethorn / Pyrcantha				
Flowering Almond/Double Flowering Plum				
Forsythia				
Fragrant Sumac				
Harry Lauder's Walking Stick				
Holly				
Japanese Kerria				
Japanese Pieris				
Juniper				
Lilac				
Lydia Broom				
Magnolia				
Mock Orange				
Mugho Pine				
Nanking Cherry				
Nannyberry				
Ninebark				
Oregon Grape				
PeeGee Hydrangea				
Potentilla, Cinquefoil				
Prinsepia Cherry				
Privet				
Purple-Leaf Sand Cherry				
Quince				
Rabbitbrush				
Red-twig Dogwood				
Rhododendron				
Rock Daphne				
Rose of Sharon				
Rugosa Rose				
Saskatoon				
Sea Buckthorn				
Siberian Peashrub				
Silverberry				
Silver Buffaloberry				
Smoke Tree				
Smooth Sumac				
Snowball Hydrangea				
Snowberry				
Snowbrush, Buckbrush, Sticky Laurel				
Spirea				
Spruce				
Tamarisk				
Weigelia				
Willow e.g. Blue Fox				
Yew				



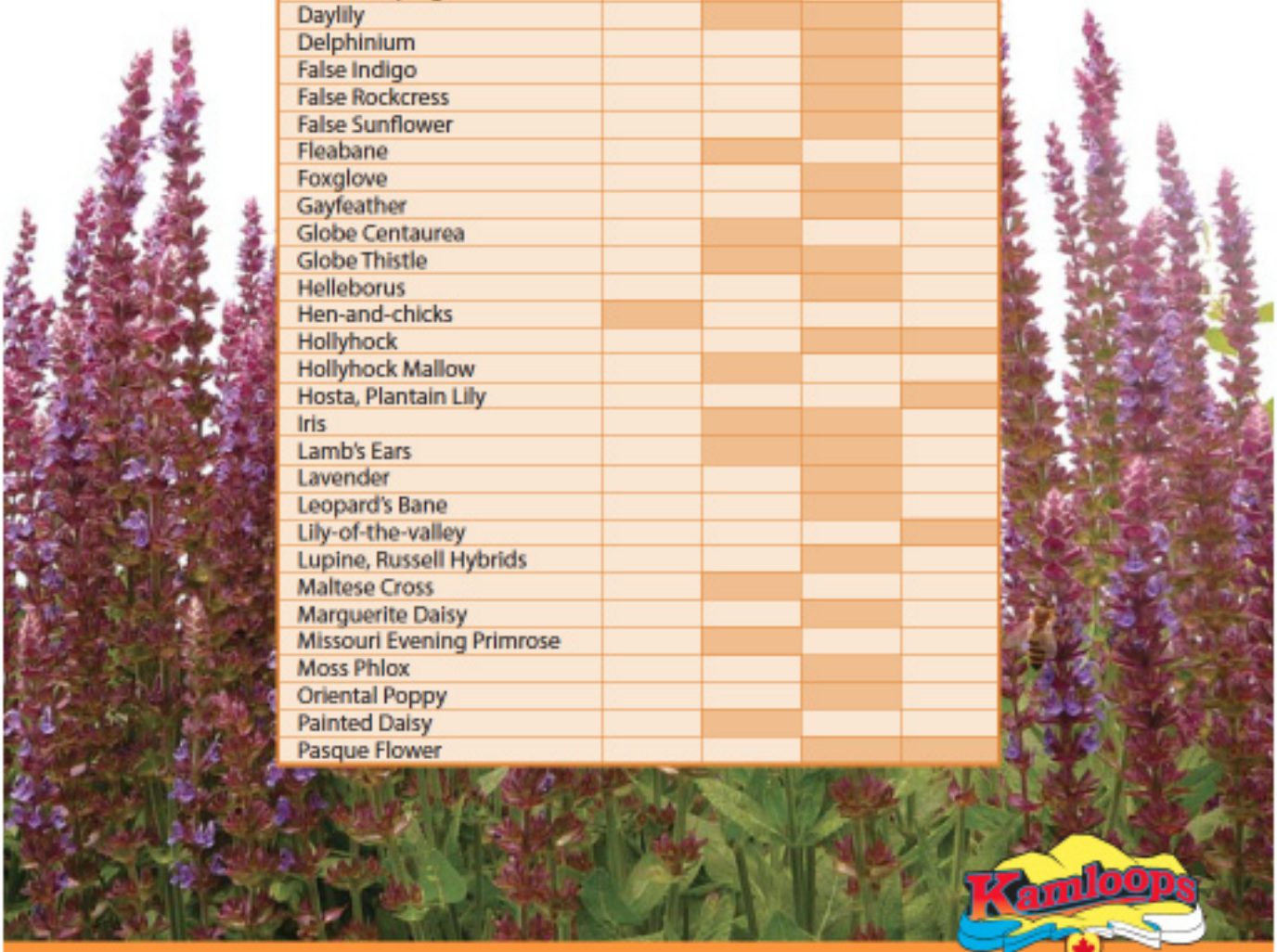
Kamloops
Canada's Tournament Capital

VINES & GROUNDCOVERS	WATER USE CATEGORY			
	Very Low	Low	Med.	High
American Bittersweet				
Boston Ivy				
Carpet Bugle				
Clematis				
Cliff Green / Rat-stripper				
Climbing Hydrangea				
Climbing Rose				
Dutchman's Pipe				
Goutweed				
Honeysuckle				
Horizontal Cotoneaster				
Horizontal Juniper				
Japanese Spurge				
Kinnickinnick				
Pussytoes				
Silver Lace Vine				
Snow-In-Summer				
Stonecrop, Sedum (creeping)				
Thrift				
Thyme				
Trumpet Vine				
Vancouver Gold Broom				
Virginia Creeper				
Wintercreeper				
Wisteria				
Wooly Thyme				
Wooly Yarrow				
Wormwood				

ORNAMENTAL GRASSES	WATER USE CATEGORY			
	Very Low	Low	Med.	High
Blue Oat Grass				
Bluestem				
Bulbous Oat Grass				
Feather Grass				
Feather Reed Grass				
Fountain Grass (annual in Kamloops)				
Japanese Blood Grass				
Maiden Grass				
Mondo Grass				
Moor Grass				
Mosquito Grass, Blue Grama Grass				
Pampas Grass (annual in Kamloops)				
Pepindale Blue Fescue				
Plume Grass				
Quaking Grass				
Ribbon Grass				
Sedge				
Sweet Flag				
Switch Grass				
Tufted Hairgrass				
Wild Rye, Blue Lyme Grass				



PERENNIALS & BIENNIALS	WATER USE CATEGORY			
	Very Low	Low	Med.	High
Alum Root			●	
Aster		●		
Astilbe, False Spirea				●
Avens, Geum		●	●	
Basket of Gold		●	●	
Bellflower			●	
Bergenia				●
Black-eyed Susan			●	
Blanket Flower		●		
Bleeding Heart			●	●
Blue Mist Shrub		●		
Candytuft			●	
Carnation			●	
Catmint		●	●	
Columbine			●	
Coral Bells, Heuchera		●	●	
Cornflower, Basketflower, Bachelor's Buttons		●		
Cranesbill		●	●	
Cushion Spurge		●		
Daylily		●	●	
Delphinium			●	
False Indigo			●	
False Rockcress			●	
False Sunflower			●	
Fleabane		●		
Foxglove			●	
Gayfeather			●	
Globe Centaurea		●		
Globe Thistle		●	●	
Helleborus			●	
Hen-and-chicks	●			
Hollyhock			●	●
Hollyhock Mallow		●		
Hosta, Plantain Lily				●
Iris		●	●	
Lamb's Ears		●	●	
Lavender			●	
Leopard's Bane			●	
Lily-of-the-valley				●
Lupine, Russell Hybrids			●	
Maltese Cross		●		
Marguerite Daisy			●	
Missouri Evening Primrose		●		
Moss Phlox			●	
Oriental Poppy			●	
Painted Daisy		●		
Pasque Flower			●	●



Kamloops

Canada's Tournament Capital

PERENNIALS & BIENNIALS	WATER USE CATEGORY			
	Very Low	Low	Med.	High
Penstemon				
Peony				
Perennial Flax				
Perennial Salvia, Sage				
Periwinkle				
Purple Coneflower				
Red Valerian				
Red-Hot Poker				
Rhubarb				
Rockcress				
Russian Sage				
Saxifrage				
Sea Holly				
Shasta Daisy				
Siberian Wallflower				
Sneezeweed				
Soapwort				
Stonecrop, Sedum (upright)				
Tickseed/Coreopsis				
Veronica, Speedwell				
Wild Bergamot				
Yarrow				
Yucca				

ANNUALS	WATER USE CATEGORY			
	Very Low	Low	Med.	High
Ageratum				
Bachelor's Buttons				
Bacopa				
Bidens				
Black-eyed Susan				
Calendula, Pot Marigold				
California Poppy				
Canna				
Castor Bean				
Celosia, Cockscomb				
Cosmos				
Dahlia				
Diascia				
Dichondra				
Dusty Miller				
English Daisy				
Fan Flower, Scaevola				
Forget-me-not				
Fuschia				
Gaillardia				
Gazania				
Geranium				
Gerbera Daisy				
Gladiolus				
Heliotrope				
Ice Plant				
Iceland Poppy				

ANNUALS	WATER USE CATEGORY			
	Very Low	Low	Med.	High
Impatiens				
Lantana				
Livingstone Daisy				
Love-lies-bleeding				
Marigold				
Nasturtium				
Nicotiana				
Osteospermum				
Pansy				
Portulaca				
Salvia				
Snapdragon				
Strawflower				
Sunflower				
Sweet Alyssum				
Sweet Pea				
Sweet William				
Verbena				
Wall Flower				
Wax Begonia				
Zinnia				

BULBS	WATER USE CATEGORY			
	Very Low	Low	Med.	High
Allium, Ornamental Onion				
Crocus				
Daffodil				
Fritillaria				
Hyacinth				
Lily				
Muscari				
Scilla, Siberian Squill				
Snowdrop				
Tulip				

LEGEND Total water requirements during growing season:	WATER USE CATEGORY			
	Very Low	Low	Med.	High
Less than 350 mm (14")				
About 350-450 mm (14-18")				
About 450 mm+ (18"+)				
About 500 mm+ (20"+)				

Kamloops receives about 218 mm (8.5") of rainfall per year.

Some plants fit into more than one water use category as they are more adaptable.

For greatest success and efficient water use, group plants together with similar water requirements.

Not all plants are suitable for every area of Kamloops. Check hardiness ratings and other plant-specific requirements.

Turfgrass is in a category all itself - it uses 890-1016 mm (35-40") per year.

Kamloops

Canada's Tournament Capital