

Let's *Go Natural!*

*A gardener's guide
to composting,
grasscycling
and water smart
gardening in the
Central Okanagan*



Spring 2006

A partnership between
the Regional Waste Reduction Office,
the City of Kelowna, the Water Smart Program,
and Regional District Parks and Recreation



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A Note From the Editors:

The Central Okanagan is a unique and special place, and the City of Kelowna, Regional District of Central Okanagan and the Districts of Peachland and Lake Country want to make our community an even better place to live.

The beauty of it is we can play a part. Small changes to the way we live can have positive impacts for the environment, our community and our finances!

The Go Natural Gardener's Guide is designed to provide information and support to help you live and garden more sustainably. In addition to learning about composting, xeriscape and pest-free gardening and water conservation, this booklet provides information on some of the interesting agricultural and gardening initiatives in our community. And after reading about the One Tonne Challenge you may want to take action on climate change and reduce green house gases.

We trust you will find lots of useful and interesting information, and in some cases, financial assistance to help you do your bit to make the Central Okanagan a healthier and better place to live.

Why 'Go Natural' in Your Garden?

- You will have a healthier and more enjoyable garden
- You will encourage butterflies, birds and other wildlife to visit your garden
- You will have more leisure time to enjoy your garden
- You will save money on taxes, your water bill and on costly chemical fertilizers and pesticides
- You can help protect the natural habitat so native species thrive

Quick Facts

- Close to 40% of household waste in the Central Okanagan is organic and could be easily composted. By keeping yard trimmings and certain food wastes out of the municipal solid waste system, residents will save hundreds of thousands of tax dollars in the long run.
- Diverting organics from disposal helps reduce the production of leachate and greenhouse gases at landfills.
- Most residents in the Central Okanagan get their water from aquifers or mountain lakes and streams. Only a portion of the City of Kelowna gets its water from Lake Okanagan.
- If Kelowna residents could reduce water consumption in the month of July by just 16%, the City could defer or eliminate \$16 million in infrastructure expansions.
- By planting a water-wise garden residents can easily reduce garden watering by 60%.

Why Organics Don't belong in the Landfill

Putting organic materials in landfills not only takes up valuable space but also creates greenhouse gases and contributes to global warming. Like many materials sent to the landfill, organic materials can be easily handled in more environmentally conscious ways.

Contrary to what many believe, landfills are not like huge compost bins. When garbage arrives at the landfill it is spread evenly across the working face and compacted down to take up as little space as possible. After compaction, a layer of soil is added to cover the garbage. This keeps the elements out, especially oxygen. Without oxygen the garbage decomposes very slowly. In fact, it is not unusual to find 50 year old newspapers that you can still read.

Professor W.L. Rathje, the founder and director of the Garbage Project at the University of Arizona, found ten year-old romaine lettuce, 20 year-old Kaiser buns and 15 year-old hotdogs that were still recognizable while conducting archeological studies of modern landfills.

In the Okanagan over 40% of our garbage is composed of food and yard and paper wastes. These are the materials that cause the most problems in a landfill because of the moisture they add. If these materials weren't buried in landfills, odors and emissions like methane gas and liquid leachate, would be significantly reduced.

Solution: Composting, Chipping, and Mulching

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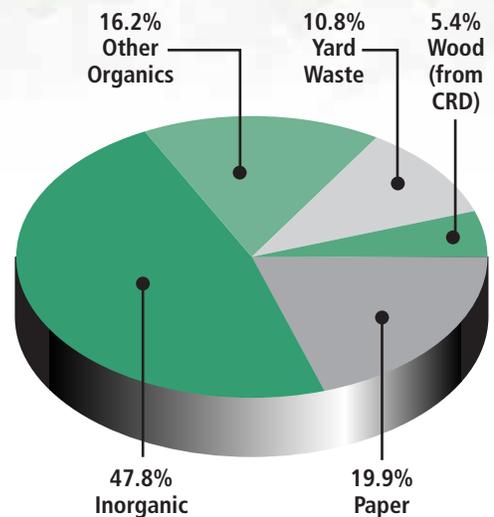
adjective

Food Waste – vegetable and fruit waste

Yard Waste

Compostable Paper – paper towels and tissues, newspaper, corrugated cardboard, cardboard, office paper

Composition of the Disposed Waste Stream at the Glenmore Landfill



Ironically, kitchen and yard waste like grass, leaves and potato peels could easily be composted in our backyards and turned into a rich soil amendment we could use on our gardens and lawns. Prunings can be chipped and used for mulching. Paper and cardboard are not only excellent choices for recycling but can be used as dry material in your compost bin. A well functioning compost bin uses oxygen to decompose materials. Instead of creating greenhouse gases, compost helps retain moisture and returns needed nutrients to depleted soil, which is an added bonus in the arid Okanagan.

Unless we reduce the amount of organic waste being buried in landfills we create greater environmental problems and economic burdens for future generations.

By implementing a few at-home waste reduction strategies, you not only enjoy a beautiful well-fed yard but also benefit our planet.

Composting is nature's way of turning yard, garden and kitchen scraps into rich, dark soil, called humus. Finished compost is an excellent conditioner for your soil, increasing the amount of air and moisture reaching the roots for larger, healthier, plants. Composting is also an easy and effective way to reduce household garbage by as much as 50%.

Composting is a simple process, suited to the amount of time and energy you want to devote to your compost pile. It's a unique way to return something to the soil, enriching the planet; right in your own backyard.



1. To Start

You will need:

- A compost container made from untreated wood products and chicken wire. Plans to build different types of composters are in this booklet; or
- A commercially sold composter made of durable plastic or wood; or
- Compost can also be made by raking materials into a pile, although this will increase chances of animals digging up

Backyard Composting

your kitchen scraps.

Other methods of composting include burying kitchen waste in trenches or mulching leaves and yard waste.

2. Where to place it

- In a location that is easy to reach, even in the middle of winter.
- Near your main source of compostables, such as the garden.
- On well drained soil. Avoid concrete or wood bases.
- In the sun; it will help to speed up the composting process.
- Ensure your composter is at least four to five feet away from building walls.

3. How to compost

Hot composting is the process where microorganisms break down yard and kitchen waste, turning it into 'black gold' or humus. Here's a step-by-step guide to get you started:

1. Add dry and brown materials, such as dead leaves and plants,

dried grass clippings, and straw. These are rich in carbon.

2. Add wet and green materials such as green lawn and garden trimmings, uncooked fruit and vegetable peelings, coffee grounds, tea bags and farm manures. These are rich in nitrogen.

3. Layer the brown, carbon-rich materials with the green, nitrogen-rich materials. These layers of carbon and nitrogen provide the perfect food for the decomposing microorganisms to eat!

4. Be sure to keep your compost pile as moist as a well wrung sponge. This provides the right amount of moisture for the decomposers to do their job.

5. As the microorganisms decompose the kitchen and yard waste they give off heat. In fact, a compost pile can reach temperatures of 55 degrees Celsius or more! As the microorganisms run out of nitrogen and carbon-rich materials, or if the pile dries out, it will cool down.

6. Turning the pile when it cools

down remixes the materials and allows the hot composting process to continue. Turning also mixes air into the pile — a necessary ingredient for those healthy, aerobic microorganisms.

7. Continue to mix and add materials. Your finished compost should be ready anywhere from six months to one year, depending on how often you tend to your compost pile.

8. Composting will continue to happen, even if you don't tend to your pile often. In this case, macroorganisms such as worms and bugs are doing the decomposing. Be sure to turn the pile occasionally to prevent odours and to mix the materials. While this cool composting takes longer, it's also less work.

4. What to do with the finished compost

Mix it into your flower beds or vegetable gardens. Use as a top dressing for your lawn. Place around the base of shrubs and trees to conserve moisture. Make potting soil by mixing 1/2 compost with 1/4 soil and 1/4 vermiculite.

What to feed your composter:

- Dry, brown materials such as dead leaves, plants, dry grass clippings, straw and corn stalks.
- Wet, green materials such as fruit and vegetable peelings or cores, leftovers from the kitchen, green grass, weeds that have not gone to seed, and manures.
- Other materials that can go in include crushed egg shells, coffee grounds and filters, tea bags, shredded paper or cardboard, dryer lint, hair, dirt.

What not to feed your composter:

- Meat, fish, poultry, dairy products, oil, dish water, BBQ ashes/coins, pet wastes, cooked foods, sauces, grease, wood, bones.
- Non-compostables like plastics, glass and tin.
- Weeds that have gone to seed, and grass clipping with weed killer residue.

Vermicomposting is simply composting with worms! It's ideal for apartment dwellers, or those with limited mobility, and for year-round and indoor composting. The type of worm used is the *red wiggler*, whose natural environment consists of slightly moist decomposing materials. This environment can be simulated by a properly built and maintained worm bin. Red wigglers eat their weight in waste every two days. They produce nutrient-rich castings, that become nutrient-rich compost. The worms survive between temperatures of 13°–25°C. If they are outside it is important to keep them in the shade during the summer, and insulated during the winter.

Before you decide on the size of box and amount of worms you will need, weigh the amount of organic waste you produce per day on average. The worm to waste ratio should be 2:1, so for one kilogram of waste you need two kilograms (or about 2,000) of worms.

1. To Start

You will need:

- a box
- bedding
- some soil
- worms
- moisture
- food scraps.

The box should be about 30 cm deep. Boxes are commercially available or can be built. Wooden bins should be sealed with paraffin wax, or a similar non-toxic substance, to increase bin longevity, and avoid bin rot.

Worm Composting

2. Bedding

You will need enough bedding to fill your worm bin to $\frac{2}{3}$ of its depth. Bedding must be moistened with water, to be as wet as a well wrung-out sponge. Mix this with two handfuls of soil, sand, or peat moss. Below are some suggested beddings:

| | Advantages | Disadvantages |
|----------------------|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Shredded paper | <ul style="list-style-type: none"> • free • clean • easy to prepare | <ul style="list-style-type: none"> • tends to dry out • can become matted if not occasionally forked through • coloured ink may contain toxins |
| Leaves | <ul style="list-style-type: none"> • free • natural environment for red wigglers | <ul style="list-style-type: none"> • can become matted • may contain toxins from air pollution • should be screened for undesirable insects |
| Corrugated Cardboard | <ul style="list-style-type: none"> • free • retains moisture well | <ul style="list-style-type: none"> • cannot use if waxed or treated • acidic |

Once you have set up bedding in your worm bin, and have added your desired amount of worms, you may begin adding kitchen scraps. Waste should always be buried, as the worms stay below the surface. This will discourage flies and odour. Bury your waste in one area of your

composter at a time, to keep the worm populations concentrated. This will make harvesting finished compost easier. Worms will produce compost more quickly if food is chopped or shredded.

3. To Harvest Finished Compost

When the contents of your worm bin are very brown, and the bedding is barely recognizable, you may harvest the finished compost from your bin. Here are two methods:

Easy:

- 1) Move all existing contents to one half of the bin, and put newly prepared bedding in the other half.
- 2) Place food scraps only in new bedding. In about a month the worms will migrate to the new side.
- 3) Remove finished compost and even out new contents.

Fast:

- 1) Place contents on a covered surface, such as a black plastic bag or burlap sheet, in sunlight or other light source.
- 2) Worms will avoid light and migrate down in the pile.
- 3) Remove top layer of castings until only small piles with mostly worms remain.
- 4) Return worms to bin, with freshly prepared bedding.

What to feed your worms

Yes

- vegetable scraps
- fruit peels
- coffee grounds and filters
- bread

No

- meats and animal products
- oils
- cheese
- fish



PLEASE: Take care of your worms! They are living creatures and when enclosed in a simulated environment they become your responsibility, just like a pet. Proper care and diet will allow your worms to thrive and continue to produce nutrient-rich compost for you!

Troubleshooting Compost Problems

| The Problem | The Cause | The Solution |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ammonia-like odor | Too much nitrogen-rich material | Add more dry brown material and turn more often |
| Strong odor | <ol style="list-style-type: none"> 1) Pile is too wet 2) Inappropriate food waste was added 3) Food waste was not buried | <ol style="list-style-type: none"> 1) Add more dry materials and turn the pile more often 2) Meats, oils, bones and processed foods are not good composting choices 3) Always be sure to bury your food waste. This not only keeps down the smell but helps prevent insects and other visiting pests. |
| Nothing seems to be happening | <ol style="list-style-type: none"> 1) Material is too big, dense 2) Not enough oxygen 3) Not enough nitrogen or carbon 4) Not enough moisture | <ol style="list-style-type: none"> 1) Try cutting materials into smaller pieces 2) Turn the pile more often to add oxygen 3) Add nitrogen rich organics like grass clippings and fruit and vegetable waste or carbon based materials like dried grass and leaves (there should be a 50/50 mix) 4) You may need to add water during the dry summer months <p>NOTE: Turning the pile always assists in the composting process.</p> |
| The pile is cold | The pile is too small or not enough nitrogen and carbon materials | Turn the pile more frequently and continue to add organic materials. |

Possible Problems: Worm Composting

| The Problem | The Cause | The Solution |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Unpleasant Odor | <ol style="list-style-type: none"> 1) Not enough air circulation 2) Too much food in the bin 3) Food exposed 4) Too moist | <ol style="list-style-type: none"> 1) Mix up the bedding and waste regularly 2) Put less food in the bin or add more worms 3) Bury food completely 4) Add more paper to absorb the water |
| Flies | Food exposed | Bury all waste and add small amounts of soil and peat moss. |
| Overly Moist | Too much water added or very moist foods | Stop adding water and add more shredded paper |

This unit can handle slow, low maintenance composting or fast 14-day method composting.

Construction

Cut each 12' 2" x 4" into four pieces 3' long. Cut a $\frac{3}{4}$ " deep and $3\frac{1}{2}$ " wide section out of each end, for a total of 32 lap cuts. If using a handsaw and chisel, cut $\frac{3}{4}$ " down at the $3\frac{1}{2}$ inch line — at "A" in diagram at right. Then cut a $\frac{1}{2}$ " deep groove into the end of the board — at "B" in the diagram. Place a thick wood chisel in the end groove and split the wood with a hammer to the $3\frac{1}{2}$ " cut. If using a radial arm saw, circular or table saw, set the blade to $\frac{3}{4}$ " depth and make multiple passes until the whole section is removed.

Make four 3' square frames from the lap-jointed 2" x 4"s. Put enough construction adhesive to fill the gaps when the lap joints are screwed together. Fasten each joint with four screws.

Cut the hardware cloth with tinsnips into four 3' square sections. Bend the edges of the cloth back over 1" for strength. Lay one onto each of the four frames. Centre and tack each

Build Your Own Composter: Backyard Wood & Wire Bin

corner with a poultry wire staple. Try to tension the cloth so it will not sag when filled with compost.

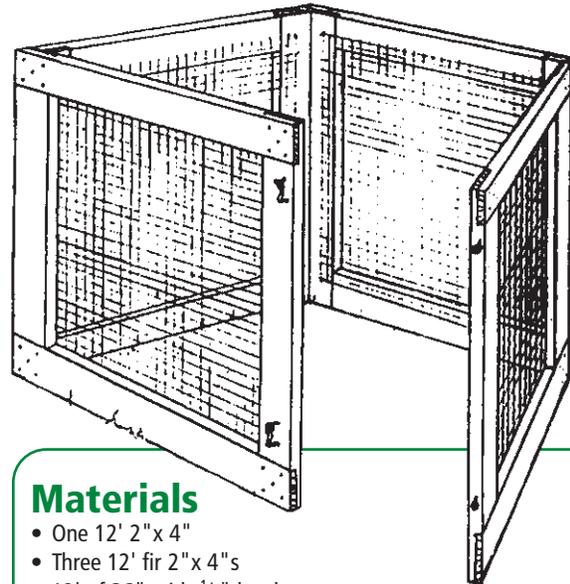
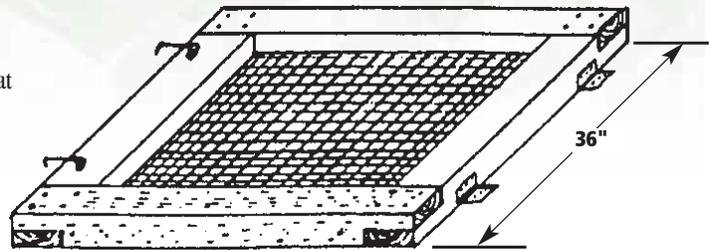
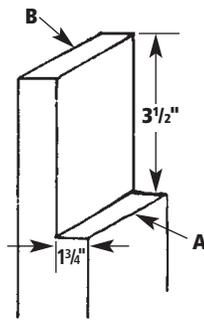
Connect each pair of frames together with two hinges. Then put the hook and eye gate latches on the other ends so that the sections latch together.

Note: Do not use pressure-treated or chemically-treated

wood. Prior to construction, treat the wood with a non-toxic wood preservative.

The Basics

- medium/large size yard, large amounts of organic waste
- need 2m x 1m space for unit
- easy to assemble
- portable
- approx \$70 to build using new supplies. We recommend creative recycling of materials whenever possible.



Low Maintenance Method

Fill the bin with layers of brown and green organic materials, and allow them to compost naturally. Ventilation is provided by the side screens. To speed up the composting process, the pile can be turned occasionally, and the materials chopped or shredded. When the finished compost forms in the pile, the bin can be disassembled and set up in a new location. The unfinished materials can be used to start the new pile and finished compost from the old pile can be used.

14 Day Method

Requires a well built and maintained portable bin. To turn the pile, unhook the sides and reassemble the bin in a new location. Use a pitchfork to move the pile into the new bin location. The pile should be turned every couple of days and moisture or dry materials added as is necessary, so that it is as moist as a well wrung-out sponge.

Materials

- One 12' 2" x 4"
- Three 12' fir 2" x 4"s
- 12' of 36" wide $\frac{1}{2}$ " hardware cloth
- 100 - $\frac{1}{2}$ " galvanized No. 8 wood screws
- Four 3" galvanized butt door hinges
- 150 poultry wire staples or power stapler
- One 10 oz. tube exterior wood adhesive
- Four large hook and eye gate latches

Tools

- Handsaw and chisel, or radial arm saw with dado blade, or circular saw, or table saw
- Hammer
- Screwdriver
- Tinsnip
- Caulking gun
- Pencil
- Small carpenter's square

The Basics

- for large yard, large amounts of waste.
- multi-family/strata complex.
- need 3m x 1m location for unit.
- approx. \$245 to build using new materials. We recommend creative recycling of materials whenever possible.

This unit can be used as a holding unit, where layers of organic materials are left to compost naturally, or as a five week method composter where greater maintenance is required. Ventilation is provided by the wire screens.

Five Week Method

Begin with a traditional layered compost pile of brown and green organic materials already built up in the centre bin.

- **WEEK ONE:** Start a dry materials layer in the first bin. Add kitchen and other green and brown organic waste to this pile.
- **WEEKS TWO & THREE:** Keep adding waste to the first bin. To turn the large volume of matter in the centre bin, remove the front boards from this bin and mix the pile.
- **WEEK FOUR:** Transfer the centre pile to the third bin, the first pile to the centre bin, and begin a new holding pile in the first bin.
- **WEEK FIVE:** The compost in the third bin should be ready to use. This five week process of transferring materials from bin to bin ensures complete mixing of the materials and promotes rapid production of finished compost. Continue this five week process for a constant supply of finished compost.

Wood and Wire 3 Bin Composter

Construction

Build Dividers Cut two 31½" and two 36" pieces from each 12' 2"x 4". Butt end nail the four pieces into a 35" x 36" square. Repeat for the other three sections. Cut four 37" long sections of hardware cloth, and bend back the edges 1". Stretch the hardware cloth across each frame, check for squareness of the frame, and staple the screen tightly into place every 4" around the edge.

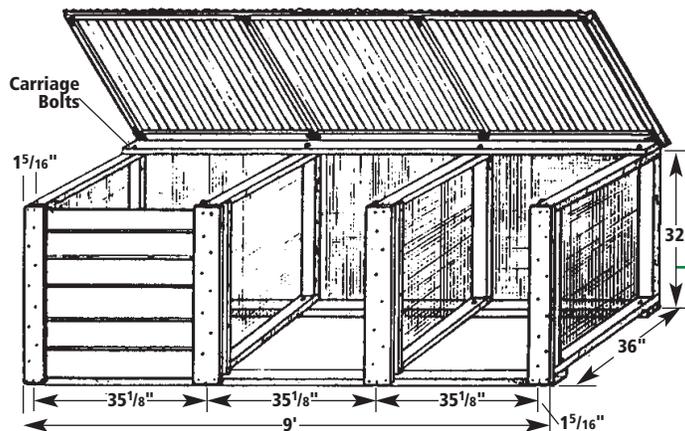
Set Up Dividers Set up dividers parallel to one another and 3 feet apart. Measure and mark centre for the two inside dividers. Cut boards on top of the dividers and measure the positions for the two inside dividers. Mark a centre line for each divider on the 9' 2"x 4". With each divider line up the centre lines and make

the base board flush against the outer edge of the divider. Drill a ½" hole through each junction centred 1" in from the inside edge. Secure the base boards with carriage bolts, but do not tighten yet. Turn the unit right side up and repeat the process for the 9' board. Using the carpenter's square or measuring between opposing corners, make sure the bin is square, and tighten all bolts securely. Fasten a 9' long piece of hardware cloth securely to the back side of the bin with staples every 4" around the frame.

Front Slats and Runners

Cut four 36" long 2"x 4"s for front slat runners. Rip cut two of these boards to 4¾" wide and nail them securely to the front of the outside dividers and base-board, making them flush on top

and outside edges. Save the remainder of rip but for use as back runners. Centre the remaining full width boards on the front of the inside dividers flush with the top edge, and nail securely. To create back runners, cut the remaining 2"x 6"s into a 34" long piece and then rip cut into 4 equal pieces, 1¼"x 34". Nail the back runner parallel to the front runners on side of divider leaving a 1" gap for slats. Cut all the 1"x 6" cedar boards into slats 31¼" long. **Fibreglass Lid** Use the remaining 9' 2"x 4"s for the back of the lid. Cut four 32½" 2"x 2"s and one 9' 2"x 2". Lay out into position on the ground (as illustrated on the front) and check for squareness. Screw in the corner braces and T braces on the bottom side of the frame. Centre the lid frame, brace side down, on the bin structure and attach with hinges. Cut the wiggle board to fit the front and back 9' sections of the lid frame. Pre-drill the wiggle board with ⅛" drill bit and nail with 2½" casement nails. Cut fibreglass to fit flush with the front and back edges. Overlay the pieces at least one channel wide. Pre-drill the fibreglass and wiggle board for each nail hole. Nail on top of every third hump with gasketed nails.



Materials

- Two 18' 2"x 4"s
- Four 12' or eight - 6' 2"x 4"s
- One 9' and two 6' 2"x 4"s
- One 16' cedar 2"x 6"
- Nine 6' cedar 1"x 6"s
- 22 feet of 36" wide ½" hardware cloth
- Twelve ½" carriage bolts 4" long
- Twelve washers and twelve nuts for bolts
- Two lbs. of 3½" galvanized nails
- Half lb. 2½" galvanized casement nails
- 200 poultry wire staples (or rent power stapler with 1" staples)
- One 12' and one 8' sheet 4 oz. clear corrugated fibreglass
- 40 gasket aluminum nails for corrugated fibreglass roofing
- Three 8' lengths of wiggle moulding

- Two 3" zinc-plated hinges for lid
- Eight flat 4" corner braces with screws
- Four flat 3" T-braces with screws

Tools

- Handsaw or circular power saw
 - Drill with ½" and ⅛" bits
 - Screwdriver • Hammer
 - Tinsnips • Tape Measure
 - Pencil • ¾" wrench
 - Carpenter's square
 - Safety glasses and ear protection
- Note:** Do not use pressure-treated or chemically-treated wood. Prior to construction, treat the wood with a non-toxic wood preservative.

A compost screen can be made in various sizes depending on your needs. These instructions are for a screen that measures 15"x 20". Place it over a wheelbarrow or box when screening your finished compost. Coarse or incompletely decomposed materials that remain on top of the screen, such as nut shells or twigs, can be returned to the compost pile. The finely textured compost materials that passes through the screen is ready to use. You can use either a 1/4" or 1/2" mesh, depending on how fine a finished material you want. You may prefer the finer mesh if you plan to use the finished compost as a top dressing on your lawn or for a seed starting mix.

Materials

- One 1" x 3" x 72" strapping or scrap lumber pieces
- Two feet of 1/4" galvanized mesh
- Carpenter's glue
- Nails
- One 72" quarter-round trim
- Staples

Tools

- Handsaw and chisel
- Hammer
- Tinsnip
- Pencil
- Carpenter's square

Construction

Cut 6' of the 1"x 3" into four pieces, two at 20" and two at 15". Cut a 1/2" deep and 1" wide (or the width of your strapping) section out of the two 15" ends.

Compost Screen

Use handsaw and chisel to cut out the four lap cuts (see detail A).

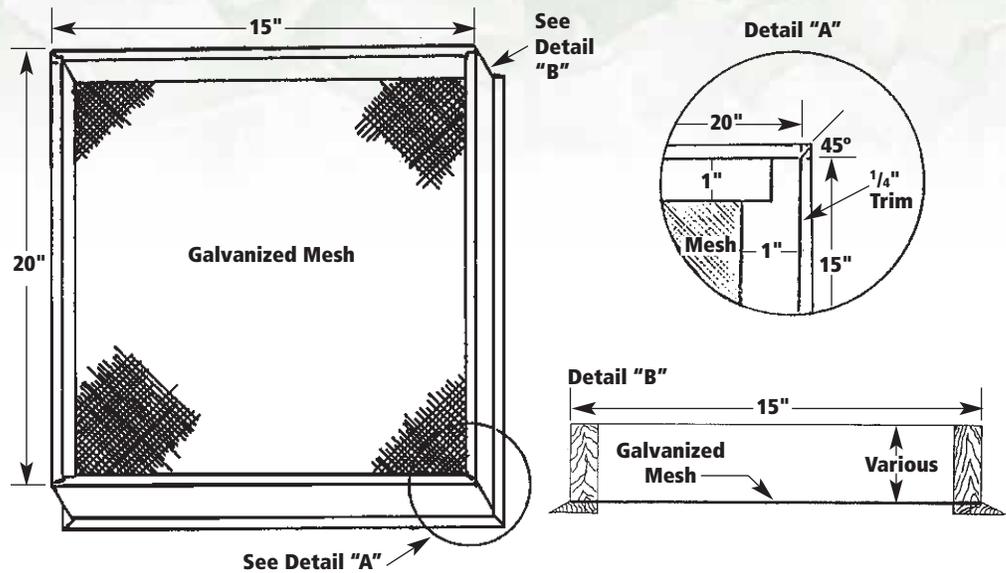
Make square frame fitting the 20" sides into the 15" lap joints. Put enough carpenter's glue to

hold it together, then nail it.

Cut the galvanized mesh to the size of your square and staple it to the frame, or staple your mesh to the frame and then cut around the edges with tinsnips.

Try to tension the galvanized mesh so it will not sag when filled with compost.

Once the mesh is secure on the bottom of the frame, nail the quarter-round on 2" strapping over the mesh so it will hold the mesh in place and prevent it from stabbing fingers and hands with sharp mesh ends. (See detail B.)



Compost Tea

One way to use finished compost is to make compost tea. Place the compost in a burlap bag and insert it in a barrel of water. Let it steep for a few days. The nutrient-rich tea can then be used on your garden.

Procedure

Place a tap at the bottom of the drum. Seal it with silicone and place a wire mesh over the tap from the inside

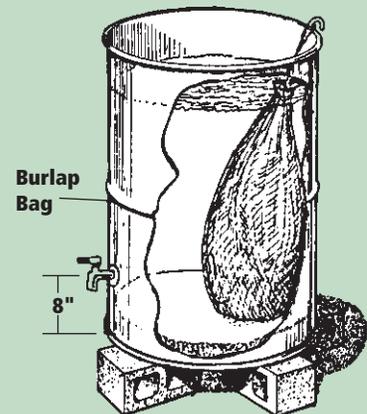
of the drum. You can add a lid if you wish.

Variation

On a smaller scale you can fill a watering can half and half with water and finished compost, and let it steep until the compost tea is ready.

Materials

- Plastic drum
- Tap
- Silicone
- Screen Mesh



What is Grasscycling?

Grasscycling is leaving the grass clippings on the lawn after mowing, allowing them to work their way back into the soil. Grasscycling provides a number of benefits including more leisure time and less garbage going to our landfills. It's easy to do and works wonders for your lawn!

Why Grasscycle?

It's easy! No more need to bag grass clippings. Grasscycled grass clippings disappear into your lawn and leave it healthy and green.

Save time!

You can reduce the amount of time you spend on your lawn by more than 35%. No more fuss and muss bagging clippings means more time to spend on the golf course, at the beach or just enjoying the sunny Okanagan!

Save money!

- Buy less fertilizer! Grass clippings left on the lawn can make up 25% of your lawn's fertilizer requirements.
- Buy fewer garbage bags! No

Grasscycling

need to bag clippings.

- Buy fewer extra garbage tags! Less grass clippings means fewer garbage tags are needed and fewer trips to the landfill. Currently, only two bags or containers per week are accepted by City and Regional District garbage haulers without buying extra tags.
- Any mower can be used to grasscycle. No special equipment required!

Have a Healthier Lawn!

- Grass clippings are made up of the same nutrients found in lawn fertilizers: nitrogen, phosphorus and potassium. Clippings left on the lawn act as a slow release fertilizer, returning these nutrients back to your lawn as they decompose.
- Grass clippings also help to shade and protect the roots of your lawn.
- Grass clippings reduce water loss through evaporation, an important consideration in the Okanagan!

How do I Grasscycle?

A few simple changes can start your Grasscycling:

Let it Grow!

- Keep your lawn a little longer, at least 6 cm, or about 2½ to 3 inches. A longer grass blade provides more protection from heat and water loss and makes for a healthier root system.
- Mow as needed to keep lawn height at 6 cm or about 2½ to 3 inches. This may involve mowing the lawn more often in peak growing seasons, and less often towards late sum-

mer and fall.

- When you mow, take off the top ⅓ or ¼ of the blade, no more than one inch, to keep your lawn at 6 cm, or 2½ to 3 inches.

Let it Lie!

- Mow late in the day and give the grass clippings a chance to settle overnight. On average, the grass clippings should be gone in two to three days. This may vary depending on moisture content. Drier clippings will decompose more slowly than moist clippings.
- Mowing in different directions each time will avoid ruts developing in your lawn.

Mow it Dry!

- Mow when grass is dry. If grass is wet it may clump. If this happens, simply mow over it again, or collect the excess for your composter. Dried grass clippings can be used as a protective cover for garden and shrubs, to reduce water loss and control weed growth.

Keep it Sharp!

- Keep your blade sharp for best results.
- Some mowers can have a mulching blade installed to chop grass clippings up even finer each time you mow. The smaller the clipping, the faster it will break down and disappear. Check with your local dealer. And if you're in the market for a new mower, consider the benefits of a mulching mower.

No Thatch!

- Thatch is a buildup of grass roots and stems at the base of your lawn that can hinder lawn

growth. Grasscycling does not contribute to thatch, which is actually caused by over watering and over fertilizing. Clippings from grasscycling are made up mostly of water (85%) and break down quickly.

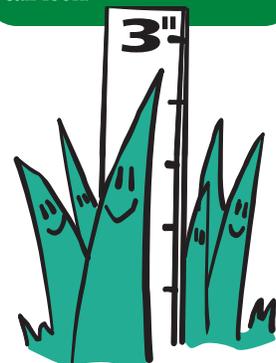
- Core aeration in the spring and fall will prevent thatch buildup, allowing moisture and nutrients to penetrate the roots. Care is needed when it comes to de-thatching your lawn — check with your local lawn professional.

Compost!

- If clippings are too long, or wet, you may want to collect them for composting. Grass clippings are an excellent source of nitrogen for your composter. Remember not to compost your lawn clippings if weed killer has been applied. These harmful chemicals don't break down in the composting process.

Grasscycling in Action

For more information on composting, visit the Composting Education Garden at Mission Creek Regional Park on Springfield Road or contact the Waste Reduction Office at 469-6250. See for yourself how easy Grasscycling can be and how great your lawn can look.



12-Step Program to Grow Great Grass!

1. **AERATE** in spring or fall to reduce soil compaction and allow air, water and nutrients to reach roots.
2. **TOPDRESS** with fine organic compost to improve water retention and soil condition.
3. **OVERSEED** heavily with a rye/fescue mix; bare patches invite weed invasions.
4. **DETHATCH** in fall to allow water, air and nutrients to reach roots and discourage insects and disease.
5. **MOW HIGH** to 6-8 cm to retain moisture, provide shade, and develop deep roots.
6. **GRASSCYCLE** your lawn clippings to provide 25% of your lawn's nutrient needs.
7. **SHARPEN UP** your mower blades; grass recovers faster from a clean cut than from many tears.
8. **WATER DEEPLY** but infrequently, striving for 2.5 cm of water per week; overwatering leads to disease and insects.
9. **SKIP THE WEED AND FEED** — blanket fertilizers and herbicides can harm beneficial insects, soil and lawn health and do not address the root of your weed problem. Try pesticide alternatives such as hand-digging or biological controls.
10. **LIMIT YOUR LAWN** and plant drought tolerant ground covers and native plants. Increase diversity in your landscape and create a more balanced ecosystem.
11. **TOLERATE THE ODD "PEST"** and accept clover, dandelions and ants as part of the landscape; these and many "pests" are actually beneficial.
12. **CORRECTLY IDENTIFY** the insect, disease or weed and determine if they are a problem and why they are thriving. Use pesticide alternatives.

Green Lawns  Healthy Families:
Be Pesticide Free



For more information contact
enviro@kelowna.ca or phone
469-8982 or 469-8688



Xeriscaping is an approach to garden design, choice of plants, and gardening techniques that conserves water and helps to protect the environment. In order to save water, the concept is to group plants according to their water needs.

Why Xeriscape Gardening?

Plants in their natural environment in the Okanagan are generally healthy, pest resistant and drought tolerant. Therefore, by planting locally grown native Okanagan or drought tolerant plants, the use of pesticides and water will be reduced. Other great benefits of water wise gardening are that it requires less maintenance, less money, and less time than other landscaping, leaving you more time to enjoy your garden.

Seven easy steps to having a Xeriscape Garden

1. Planning

Take the time to plan your garden. In the end it will pay off! Design the landscape to make the best use of what your garden offers in the way of site, climate and soil. Consider such things as soil type, sunlight requirements, wind, and drainage patterns. The premise is to group plants with similar water needs close to each other.

2. Turf

Your grass area is the most time, money and water intensive part of the landscape. Keep an area for lawn activities (animal areas, play space for children) if desired and limit the rest of the grass in the yard. Use grass that is naturally drought resistant and consider how much shade/sun time it will receive. Sheep fescues and perennial ryegrasses are

hardy and will lie dormant in the hot summer and then rebound when the rain returns. Plant native grasses or ground cover instead of turf to reduce water requirements.

3. Plants

To have healthy, successful plants, group the plants with similar water and light needs as well as complementary pH and soil requirements. Consider the plants' ecology, the colors at bloom, and water needs.

Hint: Place plants that require more moisture along north and east facing slopes and walls.

4. Mulches

In order to keep moisture in the soil, protect the plant roots and

reduce weed growth. Use organic mulches such as compost, wood chips, leaf debris, bark mulch and grass clippings.

5. Soil

Whenever you plant, add organic matter to add essential nutrients, which the plant will take up as needed. Increasing the organic content of the soil improves the moisture retention and lowers water use.

6. Irrigation

Well designed, installed, and maintained irrigation systems can reduce water consumption by 60%.

Hint: You may still need to water – but water where it counts!

7. Maintenance

Plants will need more frequent watering to become established, then water according to the plants' requirements. And remember not all plants need the same amount of water. Keep irrigation working efficiently to save water and money!

An added Bonus!

Many of the xeriscape plants will attract beneficial insects such as butterflies, ladybird beetles, and dragonflies, as well as birds and other wildlife. In addition, you will be providing habitat and improving biodiversity while increasing the quality of your air, water, and soil systems.



Xeriscape garden at Mission Creek Regional Park.

Okanagan Xeriscape and Native Plants

This list is an excellent example of native and xeriscape plant varieties available from most Okanagan growers. Please visit your local nursery for more information and ideas on other native and non-native xeriscape plants.

List compiled by Gwen Steele, Rick's Garden World, and the Regional Parks Department

TYPE V- vine, T- tree, S- shrub,
P- perennial, GC- ground cover,
G- grass

WATER #1 prefers dry well drained soils, #2 needs
some moisture,
#3 prefers moist to wet soil

LIGHT F-full sun, P-part shade, Sh- shade

PAGE page reference in "Plants of the Southern
Interior" by Parish, Coupe and Lloyd

PLANTS NATIVE TO THE OKANAGAN

| LATIN NAME | COMMON NAME | TYPE | WATER | LIGHT | PAGE |
|-------------------------------------|-----------------------|------|-------|-------|------|
| <i>Purshia tridentata</i> | Antelope-Bush | S | 1 | F | 66 |
| <i>Salix bebbiana</i> | Bebb's Willow | S | 2,3 | F | 76 |
| <i>Artemesia tridentata</i> | Big Sagebrush | S | 1 | F | 67 |
| <i>Spirea betulifolia</i> | Birch-leaved Spirea | S | 1,2 | F | 55 |
| <i>Ribes lacustre</i> | Black Gooseberry | S | 1,2,3 | F/P | 52 |
| <i>Sambucus carulea</i> | Blue Elderberry | S | 1,2,3 | F | 81 |
| <i>Linum perenne</i> | Blue Flax | P | 1 | F | 264 |
| <i>Elymus spicatus</i> | Bluebunch Wheatgrass | G | 1 | F | 313 |
| <i>Gaillardia aristata</i> | Brown Eyed Susan | P | 1 | F | 133 |
| <i>Crataegus columbiana</i> | Columbian Hawthorne | S/T | 2,3 | F/P | 57 |
| <i>Juniperus communis</i> | Common Juniper | GC | 1 | F | 99 |
| <i>Salix exigua</i> | Coyote Willow | S | 3 | F | 75 |
| <i>Psuedotsuga menziesii</i> | Douglas Fir | T | 1,2 | F/P | 47 |
| <i>Acer glabrum</i> | Douglas Maple | S/T | 1,2 | F/P | 73 |
| <i>Elymus cinereus</i> | Giant Wildrye | G | 2 | F | 315 |
| <i>Aruncus diocus</i> | Goatsbeard | P | 2,3 | P/S | 218 |
| <i>Festuca idahoensis</i> | Idaho Fescue | G | 1,2 | P/Sh | 331 |
| <i>Koeleria cristata</i> | Junegrass | G | 1,2 | F | 319 |
| <i>Rosa woodsii "Kimberley"</i> | Kimberley Wild Rose | S | 1 | F/P | 65 |
| <i>Arctostaphylos uva-ursi</i> | Kinnikinnick | GC | 1,2 | F/P | 85 |
| <i>Aster cileolatus</i> | Lindley's Aster | P | 2 | S | 122 |
| <i>Pinus contorta latifolia</i> | Lodgepole Pine | T | 1,2,3 | F | 35 |
| <i>Philadelphus lewisii</i> | Mock Orange | S | 1,2 | F/P | 80 |
| <i>Alnus incana ssp. tenuifolia</i> | Mountain Alder | T | 3 | F | 79 |
| <i>Salix discolor</i> | Native Pussy Willow | S | 2,3 | F | |
| <i>Holodiscus discolor</i> | Ocean Spray | S | 1 | F | 62 |
| <i>Mahonia aquifolium</i> | Oregon Grape Holly | S | 1,2 | F/P | 72 |
| <i>Matteucia struthiopteris</i> | Ostrich Fern | P | 1,2,3 | P/Sh | 364 |
| <i>Salix lucida ssp. lasiandra</i> | Pacific Willow | S | 3 | F/P | 75 |
| <i>Betula papyrifera</i> | Paper Birch | T | 3 | F | 30 |
| <i>Artemesia frigida</i> | Pasture Sage | P | 1 | F | 143 |
| <i>Anaphalis margaritacea</i> | Pearly Everlasting | P | 1 | F | 141 |
| <i>Pinus ponderosa</i> | Ponderosa Pine | T | 1 | F | 34 |
| <i>Rosa woodsii</i> | Prairie Rose | S | 1 | F/P | 65 |
| <i>Rosa acicularis</i> | Prickly Rose | S | 1,2 | F/P | 64 |
| <i>Populus tremuloides</i> | Quaking Aspen | T | 1,2 | F | 29 |
| <i>Cornus sericea</i> | Red Osier Dogwood | S | 2,3 | F/P | 80 |
| <i>Antennaria rubra</i> | Red Pussytoes | GC | 1,2 | F/P | 138 |
| <i>Ceanothus sanguineus</i> | Red Stemmed Ceanothus | S | 1-Feb | F/P | 68 |

Okanagan Xeriscape and Native Plants

PLANTS NATIVE TO THE OKANAGAN (continued)

| LATIN NAME | COMMON NAME | TYPE | WATER | LIGHT | PAGE |
|-------------------------------------------|------------------------|------|-------|-------|------|
| <i>Juniperus scopulorum</i> | Rocky Mountain Juniper | T | 1 | F | 99 |
| <i>Sporobolus cryptandrus</i> | Sand Dropseed | G | 1 | F | 326 |
| <i>Amelanchier alnifolia</i> | Saskatoon | S | 1,2 | F/P | 55 |
| <i>Salix scouleriana</i> | Scouler's Willow | S | 2,3 | F | 77 |
| <i>Penstemon fruitcosus</i> "Purple Haze" | Shrubby Penstemon | S | 1 | F | 69 |
| <i>Rhus glabra</i> | Smooth Sumac | S | 1,2 | F | 70 |
| <i>Symphiocarpus albus</i> | Snowberry | S | 1,2 | F/P | 82 |
| <i>Sheherdia canadensis</i> | Soopallalie | S | 2,1 | F/P | 71 |
| <i>Ribes cereum</i> | Squaw Currant | S | 1 | F | 53 |
| <i>Artemesia dracunculus</i> | Tarragon | P | 1 | F | 143 |
| <i>Clematis ligusticifolia</i> | White Clematis | V | 2 | F/P | 210 |
| <i>Eleagnus commutata</i> | Wolf Willow | S | 2,3 | F | 71 |
| <i>Achillea millefolium</i> | Yarrow (white) | P | 1 | F | 116 |
| <i>Potentilla fruticosa</i> "Yellow Gem" | Yellow Gem Potentilla | S | 1,2 | F | 66 |

Other xeriscape plants which may be found at the Mission Creek Regional Park Demonstration Garden

| LATIN NAME | COMMON NAME |
|-------------------------------------|-------------------------------|
| <i>Yucca filamentosa</i> | Adam's Needle |
| <i>Sedum spectabilis</i> | Autmn Joy Sedum |
| <i>Iris germanica</i> | Bearded Iris |
| <i>Rubeckia fulgida</i> 'Goldstrum' | Black-eyed Susan |
| <i>Liatris spictata</i> | Blazing Star |
| <i>Helictotrichon sempervirens</i> | Blue Oat Grass |
| <i>Buddelia davidii</i> | Butterfly Bush |
| <i>Asclepias tuberosa</i> | Butterfly Weed |
| <i>Hemerocrallis</i> | Daylily |
| <i>Nepta</i> | Dropmore Blue Catmint |
| <i>Heliopsis helianthoides</i> | False Sunflower |
| <i>Calamagrostis acutiflora</i> | Feather Reed Grass |
| <i>Achillea filipendula</i> | Fern-leaved Yarrow |
| <i>Echinops ritro</i> | Globe Thistle |
| <i>Stachys lantana</i> | Lamb's Ear |
| <i>Coreopsis verticillata</i> | Moonbeam Threadleaf Coreopsis |
| <i>Lavendula angustiflora</i> | Munstead Lavender |
| <i>Echinacea purpurea</i> | Purple Coneflower |
| <i>Gaillardia grandiflora</i> | Red Blanket Flower |
| <i>Panicum virgatum</i> | Red Switch Grass |
| <i>Knifophia uvaria</i> | Red-hot Poker |
| <i>Perovskia atriplicifolia</i> | Russian Sage |
| <i>Artemisia schmidtiana</i> | Silver Mound Artemisia |
| <i>Echinacea purpurea</i> | White Coneflower |

Okanagan Essentials

Quick Tips from Kim Kendal
of Rick's Garden World

1. Xeriscape is more than just silvery fuzz.

There is an endless selection of flowering and non-flowering xeriscape plants in all shapes and colors. Visit your local nursery for information and ideas.

2. Check the plant tag for its hardiness rating.

Most of the Okanagan is within hardiness **zone 5**. A plant, which is drought tolerant in zone 6, may not be able to live through the cold Okanagan winter nights.

3. Use Compost.

There are many compost products on the market which, when used properly, will increase the health of your plants and their ability to be drought tolerant.

4. Plan twice, plant once.

To ensure the most success, draw your garden plan to scale and label the available sunlight, water and soil condition. This will help you avoid having to move struggling drought tolerant plants later.

Local Suppliers

Composters and drought tolerant plants availability

March, 2006

| Company | phone | Composters | Drought tolerant plants |
|--------------------------------------------------|----------------------|-----------------------------------|---------------------------------|
| All Things Organic (www.allthingsorganic.com) | 372-1835 | Vermicomposters and worms | |
| Art Knapps | 860-5633 | Garden Gourmet Earth Machine | Yes |
| Briteland Agricultural Supplies | 545-3420 | Earth Machine Briteland Biobarrel | |
| Bylands Garden Centre | 769-7272 | Earth Machine | Yes |
| Dogwood Nursery | 768-3355 | Earth Machine | Yes |
| Elysium Garden Nursery | 491-1368 | | Yes |
| Grasslands Nursery | 494-4617 | | Xeriscape plants |
| The Greenery | 762-7411 | | Xeriscape plants |
| Home Hardware | 860-4663 768-3125 | Scepter Garden Gourmet | |
| Home Depot | 979-4500 | Garden Gourmet | Yes |
| Okanagan Plant Ranch | 491-4142 | | Drought tolerant plants |
| Old Ski Bowl Nursery | 765-9381 | | Trees, shrubs and ground cover |
| Rona Revy | 762-7389 | Garden Gourmet | |
| Rick's Garden World | 712-9500 | No | Specializes in xeriscape plants |
| Sagebrush Nursery | 498-8892 | | Drought tolerant plants |
| West-Wind Nursery Ltd. | 860-0025 862-8065 | | Yes |
| Wild West Nursery | 809-8400 | | Specializes in Native Plants |
| Wonderful World of Worms | 762-5907 | Worm Castings | |

Gardening Workshops

- Native Plants • Xeriscape
- Perennials and Ornamental Grasses
- Planting & Maintenance

For information call:

Gwen Steele at **762-6018**

Kim Kendal (Rick's Garden World) at **712-9500**

Grasslands Nursery at **494-4617** (Workshops on how to convert a garden to xeriscape)



Healthy Yards Healthy Families: Pesticide Free

The best remedy to combat weeds, insects and disease in your lawn and garden is to create healthy soil and a balanced ecosystem. Blanketing your landscape in pesticides and synthetic fertilizers is a band-aid solution which can amplify lawn and garden problems and threaten people, pets, wildlife and beneficial insects. It can also pollute our waterways, impacting the health and habitat of fish and aquatic organisms.

Building Blocks to a Pesticide Free Yard

- Consider soil type and available nutrients, light, and moisture when planning a healthy landscape.
- Choose drought tolerant ground covers and native plants; plants suited to their environment will be stronger, healthier and more

resistant to disease and insects.

- Diversify your plant selection to provide habitat for beneficial insects and wildlife; this will also create a more balanced ecosystem.
- Avoid overwatering, which leads to insects and disease.
- Rotate annual plants from year to year to prevent disease and insects from becoming established.



Ladybugs feed on soft-bodied insects such as aphids. You can even add these beneficial insects to your garden!

- Use an organic compost or fertilizer to provide a slow release of nutrients.
- Learn to tolerate the odd “pest” and give nature a chance to work.
- Use Pesticide Alternatives!

“When we kill off the natural enemies of a pest, we inherit their work.”

— Carl Huffaker

Pesticide Alternatives

Pesticides include products such as insecticides, herbicides, fungicides and rodenticides. There are many environmentally friendly, less toxic, pesticide alternatives available, such as mineral oil, acetic acid (vinegar), sulphur and insecticidal soaps. You can also try creating your own home remedies with common household ingredients, such as “Vinegar Weed ERADICATOR.”

Vinegar Weed Eradicator

Ingredients:

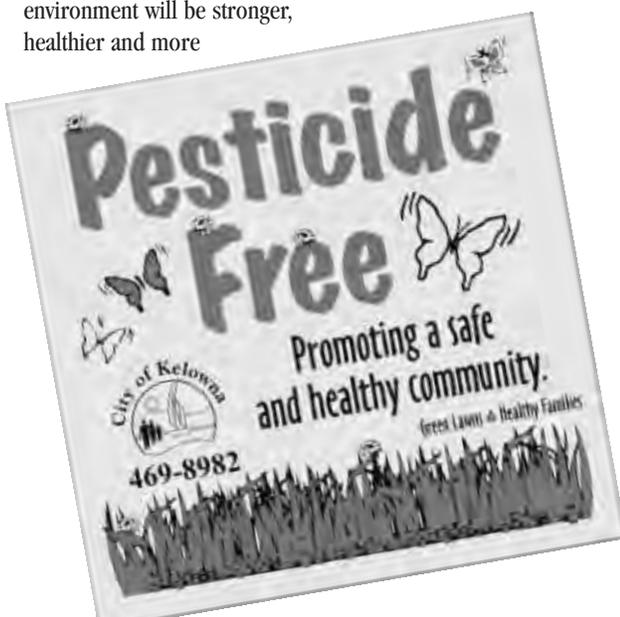
1 L water
2 tbsp salt
5 tbsp white or apple cider vinegar

Directions:

Add salt and vinegar to boiling water. While still hot, apply mixture to undesirable weeds growing in walkways, driveways and your lawn and garden.

NOTE:

This is non-specific; therefore, apply to your target only.



To receive your FREE Lawn Sign or alternative recipe keychain, visit www.kelowna.ca, email enviro@kelowna.ca or phone 469-8982.



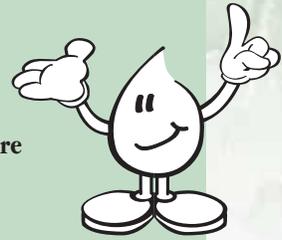
Photo: Esther Wyatt

Water Conservation

THE BIG THREE:

Three reasons why we use so much water.

The top three reasons we use so much water in the Okanagan could be grass, grass, grass, but that would be a little too simple. While lawn watering is the biggest use of water at the average home, there are reasons we need to use more water here than in other parts of the country. The top three reasons are...



1. Climate

We live in a semi-arid climate but we plant lawns and gardens like we live in the Lower Mainland. If you want to grow lush plants in the desert, you'll need a lot of water to do it. Why not consider converting parts of your landscaping to include native, drought tolerant plants? Native plants are not dull looking. Visit a local nursery and you'll be surprised at the variety and colour of drought tolerant plants.

2. Poor Soil Conditions

Soil conditions in Kelowna are not conducive to growing grass. In some areas, the soil is little more than sand and gravel, while in others it is almost solid clay. But you can improve your soil by topdressing with organic material like compost. In sandy soil, compost will create aggregates that will hold moisture. On the other hand, compost will help break down clay soil so that it, too, can hold more moisture.

3. Irrigation Systems

Don't assume that just because you have an automatic irrigation system you are watering efficiently. Irrigation systems are only as efficient as the person who sets the timer. You should inspect your system regularly to make sure the water is landing where it is supposed to be landing. Also, if you do not have a water budget function on your timer, you should consider upgrading your timer. A water budget will allow you to change the timings for all your zones with just one button. This makes it easy to adjust your watering times for the seasons, or cooler, wet weather.

Core Sampling

How a 13 cm piece of your soil can help you conserve water

The health of your lawn is not determined by how green it is on the surface. The main indicator of your lawn's health is the stuff underground that you can't see.

By taking a core sample of your soil you can determine the health of your grass and see if there is damage created by excessive fertilizer and watering.

A core sample is simply a 13 cm

(5 inch) plug of your lawn that exposes your grass and the root system below the ground.

The first sign of over-watering is the depth of the roots. Healthy grass roots will be from 4 - 6 inches. If your grass roots are very short, that's a sure sign of watering too much.

The next indicator is thatch. This is the layer of spongy brown stuff between the grass and the dirt. A thick layer of thatch is another sign of watering too much.

If the soil is extremely compacted, this could be a sign of excessive fertilizer use, which leads to excessive watering.

You can actually create a water thirsty lawn when you manage it from the top, not from the bottom. Just looking at the colour of your grass may lead you to make decisions

that are ultimately harmful.

To grow a strong, healthy lawn that can survive a little drought, you really want to work on what's underneath the grass.

Creating a Monster

Here's how so many lawns in Kelowna become monsters with a voracious thirst for water

1. In the rush to have a green lawn as quickly as possible, many people use fertilizers with high nitrogen content in the spring.
2. High nitrogen fertilizers require a lot of water to prevent the grass from burning.

continues on page 18

Water Conservation

Creating a Monster

continued from page 17

3. Excess lawn watering leads to shallow roots. All the nutrients and water are on the surface, so the roots get lazy, not bothering to dig deep.
4. Shallow roots leads to thatch.
5. Thatch repels water and shallow roots require excess water to survive the heat of summer.
6. Voila! You have created a monster lawn that is addicted to water.

So that's what NOT to do. If you want to tame the monster and create a lawn that requires far less water and maintenance, take these tips from a Kelowna homeowner who watered his lawn just six times in the Summer of 2005 (and yes, the grass looked fine).

1. Top dress your lawn with organic material (compost, Glenmore Grow, etc.) as often as you can.
2. Leave grass clippings on your lawn. They contain beneficial nitrogen and moisture.
3. Aerate often. This will loosen your soil, allowing moisture, oxygen, and nutrients to penetrate to the root level.
4. Get rid of the nitrogen fertilizers for your lawn. Don't use them. Ever!
5. Avoid excessive watering. This will encourage shallow root growth.

And that's it! Granted, it might take a few years to build up your topsoil, especially if you have a lot of clay or sand, or if the soil has been compacted by excessive watering and

fertilizers. But in the long run, you'll have a healthier, happier lawn. And it all starts by taking a look at that 13 cm piece of your soil.



Water Smart staff are available to help you save water.

The 12x12 Challenge:

To reduce water consumption by 12% by 2012.

The City of Kelowna Water Utility is challenging every resident, business and institution to reduce their water consumption by a minimum of 12% by 2012. The Water Smart program can help by providing:

- Free assessments
- Free sampling
- Cost shared programs:

These services are available to customers of the City of Kelowna Water Utility



HOW TO CONTACT US

City of Kelowna Water Smart Program
 Phone: 868-3339
 Email: watersmart@look.ca
 Web: www.getwatersmart.com



Only Rain Down the Drain!

Did you know that storm water run-off is the largest single contributor to urban stream pollution? Rain and snowmelt washes over our streets, driveways, and lawns carrying with it a nasty cocktail that includes pesticides, fertilizers, animal feces, oil, antifreeze and soaps. These pollutants flow directly into storm drains which flow to our streams and lakes untreated!

Help preserve our natural environment. Follow these tips to make sure that **ONLY RAIN GOES DOWN THE DRAIN!**

Car Care

- Fix all vehicle fluid leaks promptly.
- Use one or more of the following methods when washing your car:
 - Use phosphate-free soap
 - Wash it over a gravel or grassy area
 - Use a commercial carwash where wastewater is treated



Pet Waste

- Flush pet waste down the toilet or throw it in a trashcan. Nutrients from pet waste may wash into lakes and streams affecting water quality.

General Clean-Up

- Never dump oil, antifreeze, paint or any other toxic materials down a storm drain or on the ground. Instead, take it to a proper collection facility, the Battery Doctors in Kelowna or Boucherie Bottle Depot on the Westside or to the **Household Hazardous Waste Roundup** in October.
- Sweep the driveway, sidewalk, and patio instead of hosing them off. This reduces both water consumption and the transport of sediments and pollutants into storm drains.
- Keep storm drain grates clear of leaves and debris so water can drain properly.

Around the home

- Aim downspouts onto grassy or porous areas.
- Sweep up and properly dispose of construction debris like concrete and mortar. **DO NOT** rinse down the gutter or driveway, as concrete mixes are toxic to aquatic life.
- Rinse latex paint-contaminated brushes and rollers in the sink, not outdoors; it will enter the sanitary treatment plant and **NOT** the creek!

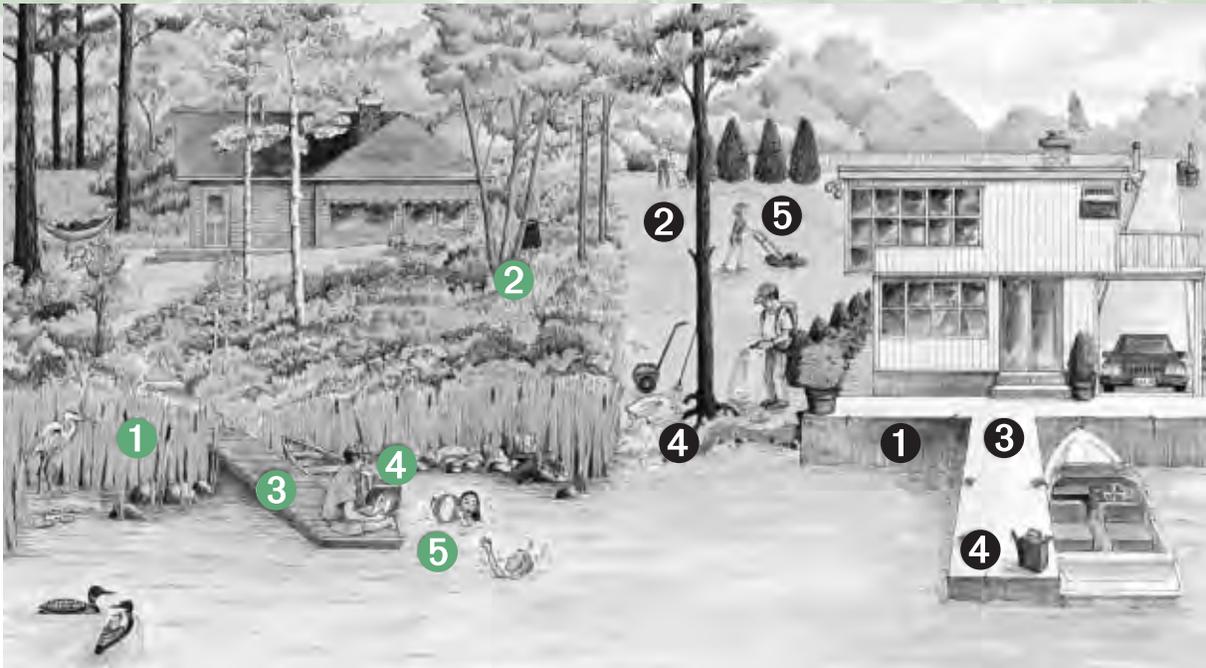
Yard Care

- Use the Go Natural gardening, grass and pest control techniques outlined in this brochure to keep fertilizers and pesticides out of streams and lakes.
- Around the home, choose to use more porous surfaces such as paving stones or gravel in place of concrete. Allowing storm water to filter through the ground removes pollutants, reduces flooding and replenishes the ground waters that nourish streams.



For more information contact the
City of Kelowna
 Environmental Division
 at 469-8983 or e-mail
enviro@kelowna.ca

Living by Water - Let's Enjoy



let's enjoy

- 1 Natural shoreline provides great wildlife habitat and can prevent erosion.
- 2 Native plants provide shoreline buffer and natural air conditioning.
- 3 Small floating dock has low impact on "ribbon of life" by allowing unimpeded flow and minimizing the erosive force of water.
- 4 Well-maintained four-stroke or electric motors use less energy and produce less pollutants.
- 5 Allow nature to take care of itself. Then you can work less and relax more!

let's talk

- 1 Hardened shore line eliminates "natural filter," degrades water quality and blocks wildlife access.
- 2 Removal of natural vegetation and shade trees leads to overworked air conditioners which adds to electricity bills.
- 3 Solid dock destroys wildlife habitat, alters currents, and causes erosion elsewhere.
- 4 Fertilizer spills, chemical run-off and poor fuel management can deteriorate water quality.
- 5 You work more, destroy more habitat and create more pollution!

You don't live near a stream or lake?

Storm drains connect us all to our drinking water. Make sure you repair vehicle leaks, avoid fertilizer and pesticide use, and NEVER dump anything down a storm drain. Together we CAN make a difference!



For more information contact the
City of Kelowna
Environmental Division
at 469-8983 or e-mail
enviro@kelowna.ca



Central Okanagan Community Gardens

“Gardens Grow Healthy Communities”

Community gardening is an activity for persons of all ages and abilities. A plot of land is provided to interested gardeners at the cost of fifteen dollars per season (March to November) to help cover the cost of the garden's upkeep. Gardeners have access to irrigation water, compost bins, tools and information at each garden site. Gardeners are encouraged to grow vegetables, herbs and flowering plants. It is each gardener's responsibility to maintain their plot and surrounding areas using the principles of Integrated Pest Management. The use of pesticides in all Central Okanagan Community Gardens gardens is discouraged. Community activities and work bees are an integral part of each garden, providing opportunities for fun, community building. COCG is a non-profit society with four gardens located throughout the area.

Cawston Avenue Community Garden:

The Cawston garden is located adjacent to the Unitarian Church, north of downtown Kelowna. The Church kindly donated the land; the City of Kelowna provided the funding and numerous businesses donated or reduced the costs of most of the materials. This garden has ten 4' X 4' raised beds and three wheelchair accessible boxes. In addition to the shed, compost bins and rain barrels on-site, Cawston

also offers a 'free food' box. This box is planted and cared for by the gardeners with the resulting produce being available to anyone who needs it.

Hartman Road Community Garden:

The Hartman Road Community Garden has thirty-four plots (10' X 20" and 10' X 13'). The site is located on land donated by the City of Kelowna Parks Department. Community volunteers, including the youth from the Rutland Boys & Girls Club, built the Hartman site in May 2005. Funding for this project was generously provided by grants from the TD Friends of the Environment Foundation, the Diggers and Weeders, Canadian Federation of University Women

and the Central Okanagan Foundation. On-site there are areas dedicated to the food bank and two raised beds for wheelchair gardeners. Compost bins, rain barrels and several picnic tables are also available for the gardener's use.

Barlee Road Community Garden:

Coming in April 2006... the Barlee Road Community Garden! Gardeners in the Springfield Road area, surrounding Orchard Park Mall, will be pleased to know that plots are now available. Located on City of Kelowna land, the garden design will incorporate many of the same features as at Hartman Road including large plots, a tool shed, compost bins and a shady-grove for picnics.

Winfield Community Garden:

New in 2006! Lake Country gardeners will have a community garden on land provided by Paul and Judy Shoemaker of Nurturing Nature Organics. The Winfield garden, located on Bottom Wood Lake Road, will offer numerous, large plots. Tools, irrigation water and compost bins will be incorporated into the garden design. Plots are available for May 2006.

Gardeners interested in a plot or volunteering in any of the four community gardens are asked to call the COCG Secretary – **Becky Vien** at 862-8825 or Coordinator – **Molly Thurston** at 764-7009 or e-mail us cocg@silk.net



Buying Local means Living Greener

This page is brought to you by the Agricultural Advisory Committees of the City of Kelowna and the Regional District of Central Okanagan. These Committees are an important liaison between local government and the agricultural community and play a role in ensuring that agricultural land and the work of farmers is respected and protected.

FOR MORE INFORMATION:
www.kelowna.ca
www.regionaldistrict.com

Agriculture in the Central Okanagan provides many benefits, including:

- a high-quality, accessible food supply;
- \$75 million in annual sales, \$20 million in annual wages and \$829.5 million in capital investment (2001 data);
- preservation of open spaces;
- an appealing balance between urban and rural lifestyles which attracts both residents and visitors.

Farms occupy approximately



Tony Cetinski of Suncatcher Farm is a local organic grower and a member of the RDCO AAC.

2400 hectares of land in our region. These farms provide tree and berry fruits, grapes, poultry and eggs, meat, dairy products including artisan cheeses, vegetables, herbs and more. Processors and world-famous chefs have been attracted to our region by the bounty of foods available. They are establishing businesses and creating delicious products which are marketed locally and internationally. All of this activity depends on local agriculture as a source of high quality ingredients.

Buying Local Means Living Greener

- You get **better value** when you spend your money on **freshness, quality, and great taste**. A strawberry or tomato picked from a sun-warmed field and eaten within hours tastes better than a partially-ripe one shipped thousands of miles.
- **Reduce the environmental impact** by eliminating long-distance transportation, fuel consumption and packaging.
- **Get more nutrition per bite!** Eating food at its seasonal

peak means no preservatives and more food value.

- **Get to know local farmers** and show them your appreciation. Successful farms close to cities not only provide us with great food; they



also discourage urban sprawl.

- **What goes around comes around!** Every \$1 you spend locally will generate another \$3 to \$4 in economic activity. By supporting local farmers, you also support all of the suppliers who depend on their business.

Raven Ridge Fuji Ice – Raven Ridge Iced Ciders (from Kelowna Land and Orchard) are one example of a premium product made from local fruit.

Places where you can Buy Local in the Central Okanagan

- Seasonal Farmers' Markets in Lake Country and Kelowna
- Urban Harvest – Kelowna
- Quality Greens – Kelowna, Westbank
- Nature's Fare – Orchard Plaza, Kelowna
- Sunshine Market – Lakeshore Drive, Kelowna
- Paul's Produce, Okanagan Artisan Breads, L&D Meats – Guisachan Village, Kelowna
- BC Fruit Packers warehouse store – Kelowna
- Wineries
- Farm Direct Sales



Local market tomatoes

One-Tonne CHALLENGE

Take action on climate change

The One Tonne Challenge is asking Canadians to reduce their greenhouse gas emissions (GHG's) by 20% or 1 tonne to decrease the impact of climate change. Greenhouse gas emissions are created from burning fossil fuels and releasing other pollutants such

as CO² into the atmosphere, which affect our health and air quality.

Transportation is by far the biggest culprit for increasing GHG's and decreasing air quality. Every litre of gasoline used in your vehicle produces 2.4 kg of carbon dioxide. Cars and trucks contribute over 18% (over 134 million tonnes) of Canada's total GHG's.

In Kelowna there has been a noticeable decrease in air quality over the past 10 years.

Vehicle exhaust can account for almost two thirds of the smog-

causing pollutants, which can be especially harmful to children and the elderly and those with respiratory disease.



Take the One-Tonne Challenge. Get fit! Have fun!

How you can do your part for the One-Tonne Challenge

- **Use sustainable transportation.** Public transit and carpooling saves money and keeps more vehicles off the road.
- **Walking, cycling, rollerblading and jogging** will benefit your health, your livelihood, the environment and save you money.
- **Drive 10% less.** If you drive 20,000 km a year, reducing your mileage by 2,000 km annually will save fuel, maintenance and reduce your GHG's significantly.
- **Don't Idle.** 10 minutes of idling a day from waiting at a drive through restaurant or store can produce about a quarter of CO² emissions annually, and will cost you over \$70 in wasted fuel.
- **Buy a more fuel efficient vehicle.** A sports utility vehicle emits 6 tonnes of CO² per year, a mid sized sedan releases 4 tonnes, and a Hybrid vehicle emits 2 tonnes. Hybrids are 20-50% more efficient than a traditional vehicle and will save money in fuel costs.
- **Keep your vehicle well maintained.** Poorly maintained vehicles can use up to 50% more fuel and produce 50% more CO² than a properly maintained vehicle.

Health, economic and environmental benefits of using sustainable transportation

- **Walking, cycling, jogging or inline skating** enhances your physical and mental health and improves your overall well being. You can also increase your connection to the community and social interaction.
- **By walking or cycling 30-60 min each day**, you can enjoy significant health benefits and meet Canada's recommended physical activity guidelines (Health Canada Physical Activity Guide).
- **Reduce the air pollutants** that negatively affect the health of our lungs and heart. Vehicle emissions increase the chance of asthma attacks and respiratory infections like pneumonia and bronchitis, especially among the elderly and the young, or those with existing respiratory disease.
- **Enjoy the convenience of public transit** by relaxing on the bus, reading or taking a nap while someone else is driving, instead of dealing with the stress of traffic.
- **Save tons of money** by spending less on gas and vehicle maintenance.
- **Reduce health care costs** for all Canadians. Transport Canada has estimated that transportation related emissions will cost the health care system from \$11 billion in 1997 to \$38 billion by 2020.
- **Save tax dollars** by reducing road construction and maintenance costs.
- **Decrease traffic noise and traffic jams**, which are increasing each year in Kelowna.
- **Conserve natural habitat.** Fewer cars on the road will decrease the demand for more roads and parking lots, leaving more area as green space.
- **Reduce the threat of climate change** and join the One-Tonne Challenge!

Every time you drive a car, use energy or burn fossil fuels you are adding GHG's to the atmosphere, which increases climate change. It is important to do your part by taking the One-Tonne Challenge to improve Kelowna's health, create cleaner air, help the environment and save money!

www.climatechange.gc.ca

www.i-go.ca

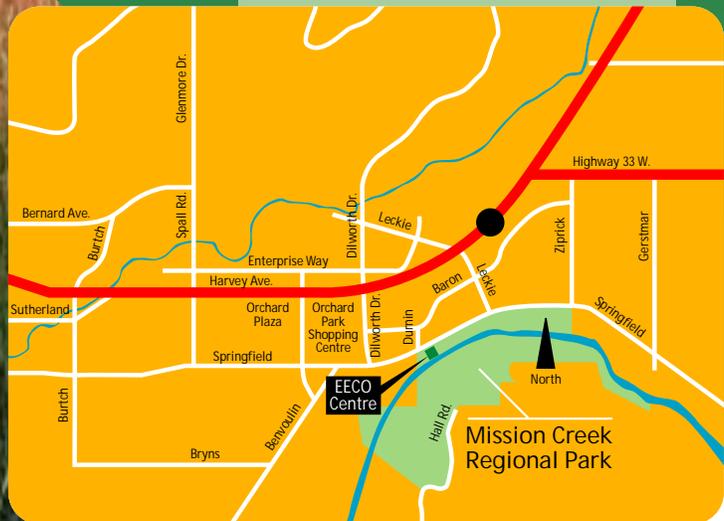
www.commuterchallenge.ca

THE BACKYARD BASICS

FOR MORE INFORMATION CONTACT:

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recycle@cord.bc.ca
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www.getwatersmart.com

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