

ENVIRONMENTALLY FRIENDLY OPTIONS

Water Conservation



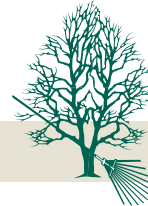
Energy Conservation



Waste Reduction



Landscaping



Materials



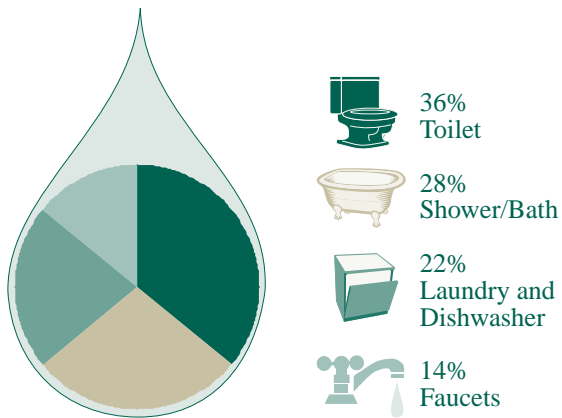
For Your Home

WATER CONSERVATION



WATER CONSERVATION is an issue that we should all be aware of. By conserving water we can save money immediately on water bills and protect one of our most important natural resources. Water conservation will also save you money in the long run by delaying or eliminating the need for new water treatment facilities saving millions of taxpayer dollars. Remember, water conservation is everyone's responsibility.

Average Indoor Water Use



Water Meters - how they can save you money!

Every new home built automatically receives a water meter free of charge. You have the option of activating it.

Water meters can reduce your water bill by up to 40% by helping you to monitor your water consumption and charging you only for the water you use.

- Water meters can be used to detect costly leaks.
- 97% of Calgarians who tried water meters for one year were satisfied with the results and continue to use them.
- On average, consumers save \$200.00 a year in water bills by using a water meter.

Did you know...

- *Less than 3% of the earth's water supply is fresh water, of which two-thirds is locked in polar ice caps and not available for human use.*
- *Water generates approximately \$15 billion annually to Canada's economy.*
- *Canadians, on a per capita basis, are the second largest users of water in the world.*
- *On average, each Calgarian uses 554 litres of water a day, which is enough water to fill your bathtub four times.*
- *Only 1% of the water produced at municipal water treatment facilities is used for drinking.*
- *An average family of four uses over 3,500 litres of water per week flushing the toilet.*

Count the Savings, One Drop At A Time!

Water Conservation Products



Low-flush Toilets: use 6-13 litres per flush as opposed to standard toilets which use about 23 litres.



Low-flow Shower Heads: reduce the shower's water flow from 20 litres to 10 litres per minute. Many of these shower heads are equipped with a shut-off button to stop the water while you lather up or shampoo.



Front-loading Washing Machines: use 40-50% less water than traditional top-loading models and are more energy efficient.



Faucet Aerators: will reduce tap water flow by 50% without reducing pressure, lowering water consumption to approximately 12 litres per minute.

Water Conservation Tips

Research indicates that most households can reduce their water consumption by 30-50% without affecting their lifestyle.

- Repair leaks immediately. In one year, a faucet can leak up to 10,000 litres of water and a toilet 200,000 litres which will cost \$13.00 and \$256.00 respectively.
- Do not leave the tap running while shaving, brushing your teeth, or doing the dishes. A running tap will waste approximately 23 litres of water per minute.
- Do not use the toilet as a garbage can. Each flush consumes approximately 23 litres of water on a standard toilet.
- Wash only full loads in your washing machine and dishwasher.
- Keep a jug of drinking water in the fridge to avoid running the water until it is cold.
- Use a broom, not a hose to clean your driveway and sidewalk.

More Conservation Tips

Water conservation tips for the yard can be found in the **Landscaping Section** of this brochure.

For More Information Contact:

Water Meter Incentive Program: 232-1000
Water Meter Questions: 268-4020
Water Efficiency Questions: 268-5721
Website: www.gov.calgary.ab.ca/eesd

ENERGY CONSERVATION

ENERGY CONSERVATION is important to protect non-renewable resources such as coal, oil and gas. When building a home, it is important to keep in mind that homes built to conserve energy are more livable and comfortable than conventional homes, and in addition provide long-term savings and reduce the impact on the environment.

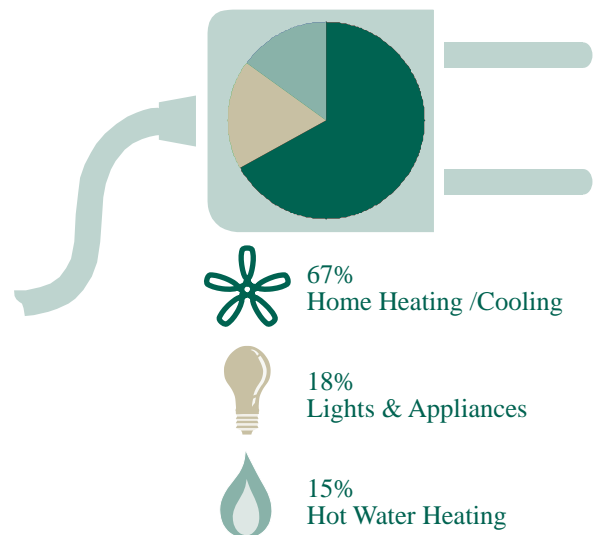
Tips - How you can save energy and money

- Choose appliances that are suited to the needs of your family.
- Turn the thermostat down 3-5°C at night or when you are away from your home for an extended period of time. A programmable thermostat can be used.
- Have your furnace cleaned regularly to enhance its performance.
- Switching from hot to warm water when doing laundry can reduce energy costs significantly.
- Select dryers with a moisture sensor, which shut off automatically when the clothes are dry. If possible, hang your clothes to dry.
- Clean the lint filter on your dryer after each use to increase its efficiency.
- Do not plug your car in for longer than four hours. You can use a timer to regulate this.
- Turn all lights off when not needed.
- Gas is a viable alternative for ranges, furnaces, dryers and hot water heaters. Gas burns very efficiently and clean in comparison to other fuel alternatives.

Did you know that...

- *Burning coal generates 90% of Alberta's electricity.*
- *On average, each Calgarian uses about 42 barrels of oil per year.*
- *The greatest heat loss in the home occurs through the roof.*
- *All new appliances are rated according to their energy efficiency. Read the Energuide label to compare models.*

Household Energy Use



Energy Conservation, One Bright Idea!

Energy Conservation in the Kitchen

- Use the microwave oven rather than the stove when possible.
- Keep the refrigerator out of direct sunlight and away from the oven, stove and dishwasher.
- Refrigerators that have the freezer on top (or bottom) rather than on the side are more energy efficient.
- Keep your freezer at least 2/3 full to reduce energy consumption.

Lighting Options

- One 100-watt **incandescent light bulb** produces more light and uses less electricity than two 60-watt bulbs.
- **Halogen bulbs** are more energy efficient and produce more light per watt than regular incandescent bulbs. Keep these bulbs away from any flammable objects as they burn very hot.
- **Fluorescent bulbs** last ten times longer and use 75% less energy than incandescent bulbs.
- **Timers and dimmer switches** can be used to regulate lighting.
- **Motion sensors** can be installed on outdoor lights to increase security and save money.

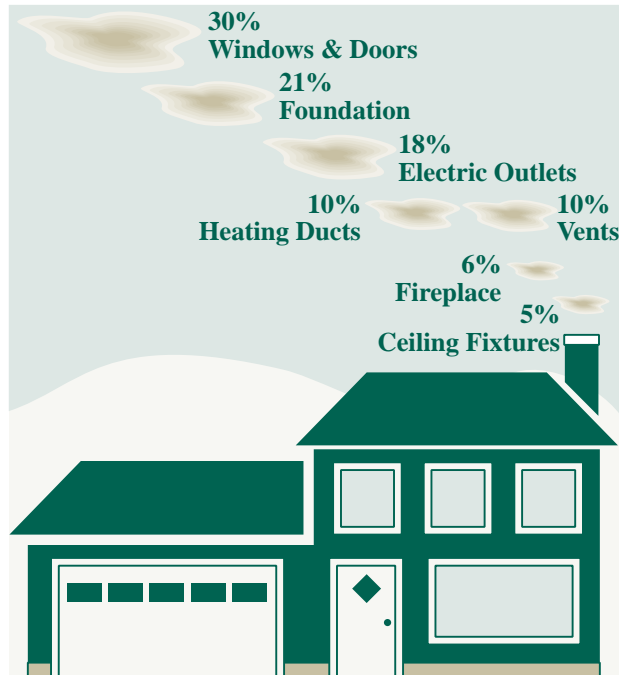
Energy Efficient Products

- **Chest Freezers** use less electricity than upright freezers.
- **Dishwashers** can be purchased with a “no-heat” dry cycle which can reduce energy costs by two-thirds.
- **Natural gas fireplaces** are a better alternative than traditional fireplaces or wood stoves as they can simulate the feel of a fireplace without consuming wood.
- **Power-saver cords** can be used to regulate the flow of electricity to your car block heater.
- **Weather-stripping** can be installed around all outside doors to reduce heat loss.

Benefits of a properly insulated and energy efficient home

- They are warmer in the winter and cooler in the summer.
- Virtually no drafts.
- Better insulated from outside noise.
- Less dust accumulation.
- Reduced fuel consumption, which translates into energy savings.
- Retain a higher resale value.

Where Does Air Escape?



For More Information Contact:

Enmax, Calgary's Electric System: 268-5858
(For questions on electrical appliances, lighting and energy efficiency.)

Website: www.enmax.com

WASTE REDUCTION



The three principles of WASTE REDUCTION are reduce, reuse and recycle.

Reducing the amount of household waste we generate is everyone's responsibility in order to conserve natural resources and reduce the amount of space required for landfill sites. In the long run this can help all of us save money and preserve the quality of our air, water, and soil.

Do you know what becomes of your recycled goods?

- | | | |
|-----------------------|---|--|
| • aluminum cans | → | new aluminum cans, aluminum products |
| • glass | → | an additive to paint (to make it reflective) and fiberglass insulation |
| • juice boxes | → | napkins, toilet paper |
| • milk jugs | → | plastic sheeting and lumber |
| • paper and cardboard | → | roof shingles, paper products, building materials |
| • plastic pop bottles | → | polyester carpet fibre |
| • scrap steel | → | reinforcement bar, wire for mesh, fencing |
| • tires | → | rubber bricks, playground surfaces, dairy cow mattresses |

Products Collected at City Drop-offs for Recycling

- corrugated cardboard
- food cans
- glass
- magazines
- mixed paper/cut paper
- newspapers



Did You Know...

- Each Calgarian generates approximately one tonne of garbage per year.
- 50% of all household waste can be recycled.
- In 1997 over 510,000 tonnes of waste was disposed of in the three City landfills.
- The City operates 36 recycling drop-offs throughout the city.
- The City collected 14,370 tonnes of recyclable material at its drop off centres in 1997.

Other recyclable items

- antifreeze
- appliances
- batteries
- building materials
- clothing
- glass
- household chemicals
- metal
- motor oil and filters
- plastic bags
- wood

Don't Throw Away The Future!

Hazardous Goods

Hazardous goods, chemicals, used oil and filters, fuels, antifreeze, some aerosol cans, batteries, and propane tanks can be dropped off at any landfill or select fire halls throughout the city free of charge.

Waste Reduction Tips

- Buy products that do not contain excess packaging.
- Buy bulk goods whenever possible.
- Take your own reusable bags to the grocery store.
- Buy durable or reusable products.
- Compost organic waste.
- Try to repair things when they break down.
- Build a recycling storage area in your kitchen, basement or garage.



Each year 1 Tonne of Garbage per Person Goes into the Landfill

Source:
Alberta Environment

Additional City Recycling Programs

- Hazardous waste and paint round-up days.
- Leaf drop-off program in the fall (the leaves are composted at City facilities).
- Christmas tree drop-off at Fire Halls (the trees are ground into wood chips which are used in displays at the Calgary Zoo and other public areas).

Composting - Mother Nature's Trash Disposal

Composting is the process whereby organic material found in your garden, lawn and kitchen is subjected to bacterial decomposition. The end product is humus, commonly referred to as compost. Composting reduces the amount of waste going into landfills and is an excellent soil supplement that can be placed on gardens, flowerbeds and lawns to improve plant growth.

25% of Household Waste Can Be Composted



For More Information Contact:

The Recycling Hotline: 277-7770
Website: www.gov.calgary.ab.ca/eesd

LANDSCAPING



Proper LANDSCAPING and maintenance is essential to reducing waste and water consumption in the yard. It can also help to improve your home's energy efficiency as well as creating a hospitable recreation area for the entire family.

Xeriscape

Xeriscape describes ecologically friendly landscaping that focuses on reducing water and herbicide consumption by using indigenous plants and shrubs. The seven principles of xeriscape are:

Planning and Design - A well planned landscape will be more water and energy efficient and require less maintenance.

Soil Analysis and Improvement - Soil analysis will help you to determine soil composition and identify which plants will thrive in the environment.

Appropriate Plant Selection - Select trees, flowers, plants and shrubs that are indigenous to the area.

Practical Turf Areas - Plant grass in areas that will be used for recreation only. Decks, patios, rocks and gravel are good alternatives to grass.

Efficient Irrigation - Water grass and plants only when required. Lawns require between 2.5 - 3 cm of water per week. Watering should occur in the early morning on windless days to prevent evaporation and to give plants the moisture they need to survive the heat of the day. Water plants thoroughly but less often to build up their root systems. Plants with similar water needs should be grouped together.

Mulches - Place mulch in flowerbeds and tree wells to reduce water evaporation and prevent weed growth.

Appropriate Maintenance - Proper weeding, fertilization, pruning and irrigation are essential to a well maintained xeriscape.

Did You Know...

- *Calgary's water use doubles in the summer because of outdoor water use.*
- *Watering lawns accounts for up to 50% of residential water use in the summer.*
- *Mulching your grass will provide your lawn with a natural fertilizer and reduce waste.*
- *Over fertilizing your lawn will result in excessive top growth which will weaken the root system and longevity of your lawn.*
- *The water collected in a rain barrel can be used to water your lawn and garden, saving up to \$100 annually in water bills.*
- *Trees can provide shade and act as a windbreak, keeping your house cooler in the summer and warmer in the winter.*

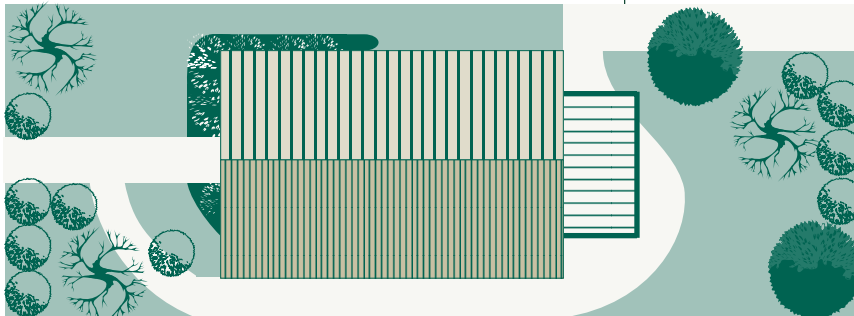


Benefits of Ecological Landscaping

1. It can reduce your summer and winter energy costs dramatically.
2. It provides protection for your home against winter wind and summer sun.
3. It can help reduce the consumption of water, pesticides, and fuel for landscaping and lawn maintenance.
4. It can help control noise and air pollution.

Landscaping Tips

- The house should be located and oriented to maximize the benefits of the sun, wind and other natural factors.



- Vines planted against walls will help to reduce heat build up in these areas.
- Provide adequate spacing between trees and shrubs to accommodate future growth.
- Select trees with manageable roots. Roots can damage sidewalks, the foundation and sewer lines.
- Cut grass approximately to a height of 6 cm. This will enable the grass to retain its water and protect the roots.
- Water your lawn only when needed. If the grass springs back when you step on it, it does not require watering.
- Use a drip irrigation system for shrubs and plants. This will allow the water to flow slowly to the roots, reducing evaporation.
- Keep your lawn and garden free of weeds which rob plants of nutrients and water.

Landscaping Products

Rain Barrels - are useful to collect water from the roof to be used on the garden and lawn.

Automatic sprinklers - are helpful to regulate the flow of water and prevent over watering. Some sprinklers come equipped with a rain sensor to regulate water distribution according to the amount of rainfall received.

Lawns - to have a heartier and more drought resistant lawn, plant or sod a mixture of Kentucky Bluegrass with either Creeping Red Fescue or Chewings Fescue.

Indigenous plants, trees, and shrubs - require less water and are accustomed to the climate. This will increase their odds of surviving and flourishing.

The following are examples of drought resistant plants which will thrive in Calgary:

Trees & Shrubs - bearberry, buffaloberry, chokecherry, cinquefoil, Colorado spruce, green ash, hawthorn, honeysuckle, jack pine, juniper, Manitoba maple,

mugo pine, nannyberry, pincherry and saskatoon berry.

Perennials - artemissa (sage), gaillardia, goldenrod, plains prickly pear cactus, prairie mallow and yucca.

Annuals - annual gaillardia, California poppy, marigold, snow-on-the-mountain, sunflower and zinnia.

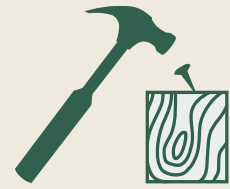
(Source: Creating the Prairie Xeriscape, by Sara Williams, University of Saskatchewan, 1997)

For More Information Contact:

Horticultural Information: 268-4678

Website: www.gov.calgary.ab.ca
(Horticultural Tips)

MATERIALS



Canadians spend approximately 90% of their time indoors. This makes it essential your home is a healthy and energy efficient living environment. It is important to choose MATERIALS that are durable, environmentally friendly, and that will add to the overall energy efficiency of your home.

Household Checklist:

Does your home pass the test?

Mechanical room

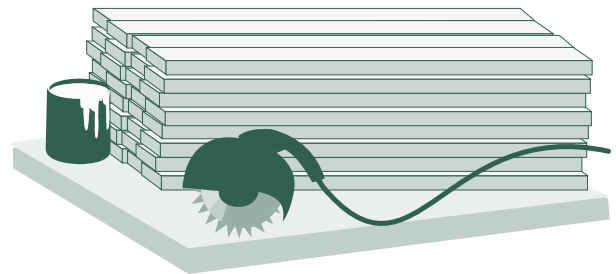
- ☐ Mid to high efficiency furnace.
- ☐ An insulated hot water heater that is the proper size for your household needs.
- ☐ Insulated ducts.

Interior of house

- ☐ Consider using carpets that contain natural or recycled materials.
- ☐ Tile and hardwood floors are durable and can be maintained or refurbished easily.
- ☐ Ceramic tiles and hardwoods (i.e. maple) are very durable, reduce off-gasing, and last much longer than conventional products used in kitchens.
- ☐ Choose paints, stains, sealants and adhesives that do not emit volatile organic compounds (VOC's). Look on the label for brands which list "no VOC's" or "clean-air formula."

Did you know...

- *2.5 tonnes of waste are generated in the construction of every new home.*
- *The easiest and most cost effective way to add insulation to a home is in the attic.*
- *It is beneficial (and often cheaper) to the local economy to purchase locally made products.*
- *Recycled or partially recycled building materials such as dry wall, plastic wood, carpet and other products are readily available.*



Build A Better Future

- ☐ Proper ventilation to the outside and air circulation.
- ☐ Wood products - use industry produced wood.
 - Do not use tropical hardwoods or old growth wood.
 - Use finger-jointed studs which reduce wood scrap by gluing together short pieces of wood that would otherwise be unusable.
 - I-joists are structurally sound engineered wood products that replace the need for using 2 x 10's.

Exterior of house

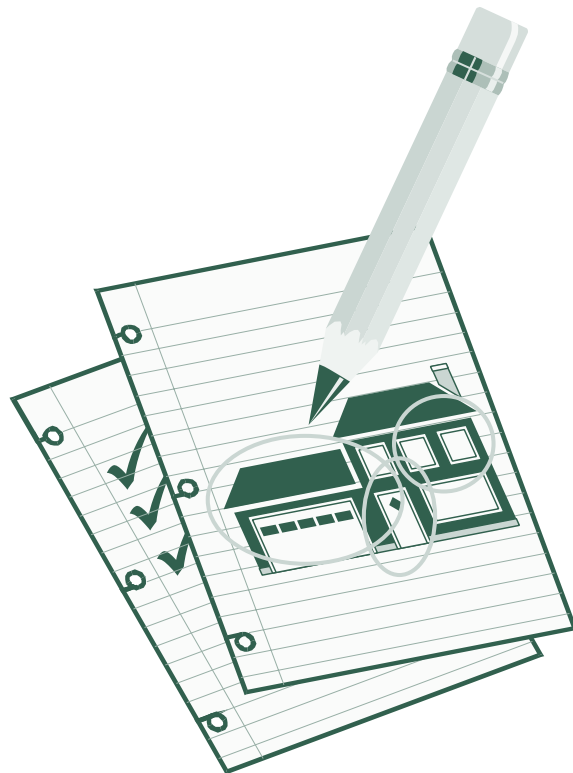
- ☐ Vinyl siding or stucco are good choices as they are maintenance free durable exteriors. Stucco also has good insulating qualities.
- ☐ Roofing products should have a life expectancy of 20-25 years.
- ☐ Doors insulated and weather stripped.
- ☐ Windows should be double-glazed, gas filled, with a low-emissivity coating.

Insulation

- ☐ Extra insulation in the attic is recommended to prevent heat loss.
- ☐ Use insulation that contains recycled products.
- ☐ Insulation placed on the exterior of the house prevents heat loss.

Garage

- ☐ Ensure that there is no air leakage into the house.
- ☐ Insulate garage door to reduce heat loss.



This brochure offers the best information The City of Calgary can offer at this time. The City, however, assumes no responsibility for any problems that may occur as a result of someone using this information.

Sponsored by:



THE CITY OF CALGARY
PLANNING & BUILDING DEPARTMENT



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