MONTO









TABLE CONTENTS

NATURE & BIODIVERSITY 2
FOOD & AGRICULTURE9
WATER 15
AIR20
ENERGY
TRANSPORTATION29
SUSTAINABLE PURCHASING34
WASTE39
NOTES

NATURE & BIODIVERSITY

The natural environment provides many services to Edmontonians. It give us clean air to breathe and water to drink. It also provides opportunities for recreation, to enjoy nature and to clear our heads. You can do many things to preserve existing natural areas or to create new ones around your home.

Case study:

Bringing a yard back to nature

Cherry Dodd is a nature lover and an active member of the Edmonton Native Plant Group. When she originally moved into her home, it had a typical Edmonton yard with a lawn, a shrub, one large tree and one very small flower bed under the front window. Because she loves flowers, Cherry decided to dig up the lawn and replace it with native plants and regular garden perennials. While she didn't plan for her garden to be a habitat for wildlife, she now often sees many butterflies, birds, bees and ladybugs in her yard.

Cherry has a lot of advice for Edmontonians who are looking to create a more natural yard. One tip is to seek out places to get plants for free—for example, from neighbours or at events like seed and perennial swaps. Cherry believes that gardening doesn't have to cost a lot of money. She also believes that being environmentally friendly isn't hard; "I believe in being a lazy gardener and just sitting back and letting nature do most of the work." As native plants are suited to our climate, they are very resilient and don't need fertilizer. In fact, they prefer poor

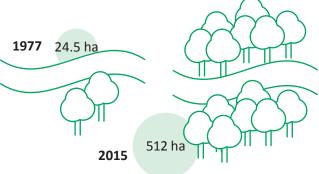
soil. And if planted in the right place, they require very little water.

When asked why she decided to naturalize her yard, Cherry says, "Lawns are boring. Flowers and trees are more exciting."



Photo credit: Cherry Dodd

LAND SECURED FOR NATURAL AREAS Hectares



Create an eco-landscape

Eco-landscaping involves a number of practices that are easy on the environment and your pocketbook. It includes designing your yard to conserve water, planting selectively, collecting rainwater, watering wisely, backyard composting, mulching, grasscycling (leaving clippings on the lawn) and using a push or electric mower.

Eco-landscaping reduces waste, fertilizer and chemical needs, conserves water and cuts down on energy and yard maintenance costs. It also helps reduce greenhouse gas (GHG) emissions responsible for climate change.

Edmonton is located in the 3b Plant Hardiness Zone. When you're shopping in the garden centre, look for plants suitable for our zone.

planthardiness.gc.ca



Photo credit: Cherry Dodd



Photo credit: Edmonton Horticultural Society Jon D. Brehaut

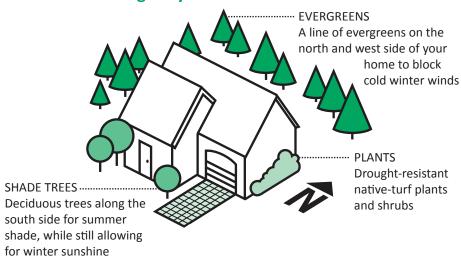
Choose drought-resistant trees and plants



Choose heat-loving, drought-resistant trees and shrubs for a xeriscape garden. Remember that even hardy plants will need at least weekly watering while they get established during the first growing season.

edmonton.ca/droughtresistantplants

Place trees strategically



A well-placed line of evergreens on the north and west side of your home provides shelter against winter winds and reduces your home's demand for heat. Deciduous trees on the south side of your house provide shade in the summer while still allowing sunshine in during the winter. Be sure to plant trees a safe distance from the home, or they could cause structural problems as they mature.

Collect rainwater

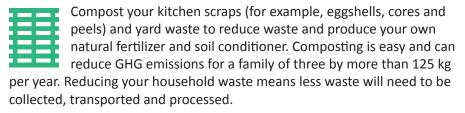


Use a cistern or rain barrel with a lid or screen to capture and store rainwater for irrigation or for topping up your fish pond. Using rainwater reduces run-off and the GHGs that come from producing tap water. Rainwater is also better for pet fish than tap water. A lid helps to keep the water clean and stop mosquitoes from breeding in it.

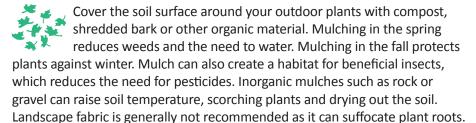
Water the lawn early in the morning

More than half of the water applied to lawns can be lost to evaporation and run-off due to overwatering. Watering during the cool part of the day reduces losses to evaporation. A single, deep watering (2.5 cm / 1 inch once every 7-10 days) is more effective than several light waterings. Adding compost or 12-15 cm (5-6 inches) of good-quality topsoil will help hold water and fertilizer, reducing your need for watering.

Set up a backyard compost



Spread mulch



Use a push or electric mower



Consider using a manual push or electric mower. A typical gaspowered mower produces 48 kg of GHG emissions in a season and as much air pollution as a car driven 550 km.

Grasscycle



Leave grass clippings on your lawn when you mow. Clippings will quickly break down, helping your lawn retain moisture, adding nutrients and reducing the need for fertilizers. Keeping grass out of your garbage by grasscycling can reduce your household's GHG

emissions by more than 500 kg per year. It also eliminates the need to bag the clippings, saving both time and money.

Grass height of 6-8 cm (2.5-3 inches) is best for for good root development and moisture retention. Try not to cut more than 1/3 of the leaf blade. Always use sharp mower blades—clean cuts help grass recover better after mowing.

edmonton.ca/gobagless

Learn more

Want to see some different ways you can compost? Visit the compost school at the John Janzen Nature Centre.

edmonton.ca/compost

Guard against invasive species

Invasive species are species that live outside of their natural area. They can disrupt non-native ecosystems, reduce agricultural production and damage infrastructure. Some can even harm human health. Invasive plants reduce native vegetation. They can cause long-term changes in soil and reduce available plants for wildlife such as deer, birds and insects. In water, invasive mussels can attach to any hard surface and clog up pipes. Removal costs are very high and could affect the cost of water.

Most invasive species are first brought to a new area by humans, on purpose or by accident. Areas with high population densities, like the city of Edmonton, are main points of entry for invasive species in a country or province.

We can all help prevent the introduction and spread of invasive species by following these tips:

- Before you buy plants for your yard, make sure they are not invasive species.
- If you buy a new house, check the yard for invasive weeds and get rid of them right away.
- The Alberta Weed Spotter smartphone app can help you to identify and report dangerous species.
- When you visit another country, clean your boots and clothes before you come home.
- Avoid transporting firewood with bark or storing elm wood.

- Avoid releasing domestic animals into the wild (e.g. fish from aquariums).
- Clean, drain and dry your boat when you take it out of the water.

edmonton.ca/pests

edmonton.ca/wantedweeds

abinvasives.ca/resources

Manage pests using Integrated Pest Management (IPM)

Integrated Pest Management (IPM) practices use natural methods to keep pests at bay and to minimize pesticide use in your yard.

Plant a variety of native perennials, shrubs and trees. A range of native plants that give nectar at all times through the growing season can help to attract natural enemies of plant pests.

You can also create habitat for native pollinators and predators of pests. Here are a few things to try:

- Build a pollinator block that houses bees and wasps that will forage for pollen or hunt for insect pests such as aphids in your yard.
- Plant a butterfly garden to attract other pollinators.
- Hang out bird feeders and provide water sources to encourage a wider range of birds to come to your yard in winter.
- Build a bat box.

Healthy grass helps to reduce pest problems in your lawn. Here are few tips for a healthy lawn:

- Add compost to the soil. It adds nutrients and helps hold water.
- Remove thatch in the spring so that water, air and nutrients can go into the soil.
- Mow at about 6 cm (2 ½ inches) to help your lawn retain water and grow strong roots.
- Water your lawn deeply to the roots. Apply 2.5 cm (1 inch) of water once a week in a single watering.
- Aerate when your lawn is compacted so water, air and nutrients can go to the roots.

- In fall, top your lawn with a thin layer of compost or topsoil, grass seed and slow-release fertilizer to keep nutrients levels up.
- Regularly inspect your lawn for weeds and remove them right away before they go to seed.

edmonton.ca/goodgrowing

Root for Trees

Edmonton needs more trees! We want you to help us plant more trees to double the size of our urban forest. The goal of the Root for Trees initiative is to increase tree planting within the city through continued partnerships with corporations, individual residents and community groups. The target of this initiative is to plant an additional 16,000 trees annually on public and private land.

Whether you participate as a family or individual, school, community group or business, you can make a difference. Celebrate trees at our special events, and participate in our tree planting projects.

edmonton.ca/rootfortrees

Check out yegTreeMap

This online interactive map allows citizens, community groups and government to collaboratively keep an inventory of the trees in Edmonton's urban forest (including trees on both public and private property). The tool can also be used to map stewardship activities in Edmonton's Urban Forest.

opentreemap.org/edmonton/map

Celebrate Front Yards in Bloom

The Front Yards in Bloom recognition program is all about celebrating Edmontonians' efforts to beautify our neighbourhoods. There are now categories for natural and edible front yards.

edmonton.ca/frontyardsinbloom

FOOD & AGRICULTURE

The food we eat is a major source of the carbon emissions we create. Whether it is grapes from Chile or garlic from China, it takes a lot of energy and emissions to get a foreign product to our kitchens in Edmonton. Many Edmontonians are recognizing that food and urban agriculture are an important opportunity to decrease emissions and to increase sustainability and quality of life in their communities.

fresh: Edmonton's Food and Urban Agriculture Strategy imagines how new approaches to food and urban agriculture can make Edmonton an even better place to live, work, play and invest.

Case study:

Jasper Place High School

Something different is growing in the schoolyard at Jasper Place High School.

Led by teacher, permaculture designer and master gardener Dustin Bajer, the JPHS permaculture program allows students to grow local food in an ecologically sound way.

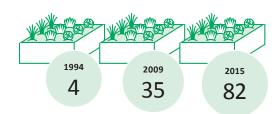
The program focuses on hands-on learning. Students gain experience in aquaponics (growing fish and plants together in tanks), indoor herb propagation and managing a food forest.

The food produced by the permaculture program is used by the school's culinary arts program.

EDMONTON'S FARMERS MARKETSMarkets



EDMONTON'S COMMUNITY GARDENSGardens



What is local food?

A few questions determine what is and what is not local: Who owns the company and where is it headquartered? Where do production, processing and distribution take place? And where does the labour force live?

SHADES OF LOCAL



Visit farmers markets

Farmers markets are probably the best and easiest place to purchase local food. The policy at most markets in Edmonton is that the food sold at the market must be produced by the person selling it.

So if you are buying whole vegetables or fruit, you know the person you're buying that food from had a hand in growing it somewhere close to the city. Some markets allow out-of-province vendors, like orchards in British Columbia (BC). This lets us purchase apples, peaches and pears from BC instead of somewhere much further, like Chile or China.

Substitute imports with local products

Whenever possible, try to replace foreign imports with domestic products. At the grocery store, think about things you can buy that are produced locally. For example, buy your grains, meat and vegetables that can easily be grown in Alberta at the farmers market and use those precious food miles for things that we can't grow here, like mangoes, avocados, coffee and chocolate.

Grow your own food

Set up a garden

At the turn of the century, almost all of the food consumed in the Edmonton region was grown here.

Having a large garden was commonplace. The environmental benefits of gardening include increased biodiversity and animal habitat, less use of pesticides and fertilizers than in commercial agriculture and fewer food miles because the food has not been shipped.

There are many ways to learn about vegetable and fruit gardening. The Edmonton Public Library has lots of excellent books for the first-time gardener. You can also check out groups like Prairie Urban Farm or Sustainable Food Edmonton for workshop listings.

Find out the best planting dates for the Edmonton area: almanac.com/gardening/planting-dates/ab/edmonton



Join a community garden

Edmonton has over 80 community gardens that operate independently. If you're a new gardener, a community garden is a great way to meet other gardeners who you can ask for advice and swap seeds with.

Community gardens bring many benefits to Edmontonians:

- Provide recreation for people of all ages
- Make neighbourhoods more beautiful
- Produce healthy food
- Create community spirit
- Share gardening knowledge and experience

The City of Edmonton supports community gardens by:

- Providing municipal land (with Partners in Parks agreements)
- Offering community leagues advice and help with coordination
- Funding Sustainable Food Edmonton

Contact Sustainable Food Edmonton to find the community garden nearest to your home, get in touch with a specific garden or learn how to start a new community garden.

Before starting your community garden project, please contact your local Community Recreation Coordinator for more information.

edmonton.ca/communitygardens edmonton.ca/communityrecreationcoordinators

Buy organic

Buying organic food has many ecological benefits. It encourages healthy soil structure, reduces run-off of pesticides and herbicides into waterways, cuts energy use by reducing chemicals that require fossil fuels and promotes biodiversity.

Plan more, waste less

According the United Nations Food and Agriculture Organization, close to half of all of the food produced worldwide is wasted. Careful meal planning can help you cut down on food waste.

Plan out your meals for the week and buy exactly what you will need to make them. If a recipe calls for two apples, buy just two apples instead of a whole bag. Shopping in the bulk aisle can help you buy exactly the right amounts. Try to avoid impulse purchases at the grocery store, especially for perishable items.

Eat less meat

Scientific studies have shown that a large portion of global carbon emissions come from livestock production. Livestock production also uses a lot of water.

To help cut emissions, why not start off your week with meatless Mondays? When you do eat meat, choose chicken or pork, which have less impact than beef, and purchase from a local producer to reduce food miles. Many local producers practise free-range and organic agriculture, methods that cut down on the greenhouse gases that are produced per kilogram of meat.

Buy products with less packaging

A lot of our food comes packaged in cardboard, plastic or Styrofoam[™]. One way to avoid waste from packaging is to purchase whole foods and raw ingredients to cook from scratch. Farmers markets are good places to buy food without unnecessary packaging. You might also consider buying low-waste brands. For instance, some brands of cereal are only packaged in plastic bags, not a plastic bag and then a box.

Preserve your bounty

Did you harvest a bumper crop from your garden or get a good deal on a case of fruit from the farmers market?

Consider preserving these summer delights to eat later on in the year. Canning, drying, freezing and pressing are all preservation methods that will cut down on food waste. They also reduce packaging waste because the containers for preserved foods are often reused.

Keep bees and hens

Urban beekeeping produces honey, a local sweetener that can be used to replace sugar. The bees also help to pollinate flowers.

In 2015, the City of Edmonton passed a bylaw that allows Edmontonians to keep backyard bees.

Urban hens provide a local source of eggs and meat. They eat organic food waste scraps, are pest managers and can help to fertilize your yard naturally.

At present, the City of Edmonton is engaged in an Urban Hen Keeping Pilot Project to study the potential issues and concerns that are associated with keeping urban hens. The results of the pilot will help to ensure that there are appropriate regulations, care and management of urban hens in Edmonton.

edmonton.ca/bees edmonton.ca/hens



WATER

In Edmonton, all the water we drink and use to brush our teeth comes from the North Saskatchewan River through EPCOR's Rossdale and E.L. Smith Water Treatment Plants.

Once the water is used, it is treated at EPCOR's Gold Bar Wastewater Treatment Plant and returned to the same watershed. Your daily activities can affect the water quality in the North Saskatchewan River. We need to remember that we all live downstream of someone and try to follow "good neighbour" practices.

Case study:

What is a rain garden?

A rain garden, also known as a biorentention, is a planted area designed to soak up stormwater run-off from rooftops, driveways and other impermeable areas.

Replicating the natural hydrological (water cycle) processes, rain gardens filter contaminants and reduce the run-off flowing out onto the streets or into the sewer systems.

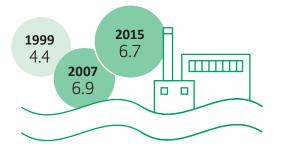
Rain gardens are:

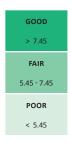
- Adaptable in size and shape.
- Landscaped with a variety of plants to fit the surroundings.
- Dry most of the time.
- Expected to have standing water during storms and is emptied within 48 hours.

For more information on rain gardens, visit edmonton.ca/raingarden. For other types of low impact development, visit edmonton.ca/lid.



EDMONTON'S WATERSHED CONTAMINANT REDUCTION INDEX (EWCRI) FOR THE NORTH SASKATCHEWAN RIVER





Protect your watershed

Here are some things you can do to help protect your watershed:

- Use environmentally friendly products whenever possible. See the section on environmental certifications in the Sustainable Purchasing chapter for ways to identify these products.
- Compost or mulch yard waste to keep it out of waterways.
- Prevent soil erosion by landscaping to minimize run-off into the storm sewer system.
- Wash your car at a dedicated car wash, instead of on your driveway.
 Some car washes reuse water multiple times, and this water is treated afterward.
- Prevent leaks from motor vehicles by performing regular maintenance.
 When it rains, all of the oil that has leaked out of vehicles gets washed into the storm sewer system.
- Dispose of your hazardous materials at collection facilities. Hazardous materials include used batteries and motor oil.
- Whenever possible, avoid using fertilizer, pesticide and herbicide.
- Avoid using in-sink garbage disposal systems, which overload the water treatment facilities.

What is a watershed?

A watershed is the area of land that drains into one body of water.
A watershed can be as small as the area of land that drains into a pond, or as large as the area of land that drains into a major river system.

Another way you can help is by participating in citizens' groups to protect the watershed, or form your own watershed group. If you want to form your own watershed team, EPCOR and the North Saskatchewan Watershed Alliance can support your efforts.

Watch what you flush

Trash it, don't splash it!



As society uses more convenient, disposable products, the City's Drainage Services is dealing with sewer clogs caused by items that were never meant to be disposed of in the sewer system.

Some of the items being discovered in sewers are listed below.

Drainage Services calls these items "unflushables". Even if the packaging claims that these items are flushable, they usually aren't. Unflushables cause sewer and pump blockages resulting in backups that can be costly for homeowners and the City.

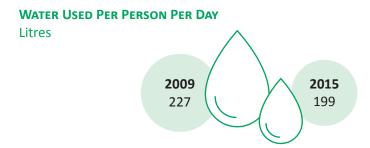
- Dental floss
- Disposable diapers
- Baby/cleaning/facial wipes
- Cotton swabs
- Pharmaceuticals/medicine
- Feminine products (including tampons)

edmonton.ca/unflushables

Keep chemicals out of the watershed

Wastewater treatment facilities are not designed to remove most medicines, personal care products and household hazardous wastes. As a result, these products will be returned untreated into our lakes and rivers.

Avoid using products with micro-beads and return unused pharmaceuticals to any local pharmacy for proper disposal. You can take household hazardous wastes to any Eco Station.

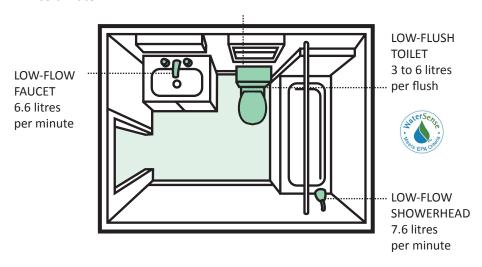


Conserve water

According to EPCOR, the average household uses 16,600 litres of water per month! Doing our part to conserve water now will ensure that future generations have access to this precious, finite resource. Climate change also poses a threat to our reliable water supply and makes conservation efforts more important than ever.

Here are some quick tips to help you lower your day-to-day water consumption:

- Fix any leaky fixtures and regularly check your toilets, pipes and faucets. Undetected leaks can account for up to 14% of a typical family's water usage, and they can waste hundreds of litres of treated water in a year.
- Put a jug of water in the fridge so you don't have to run the tap to get cold water.



- Turn off the tap while brushing your teeth.
- If you handwash dishes, don't leave the tap running to rinse.
- Wash only full loads in both the clothes washer and dishwasher, and use the lightest setting you can.
- Use a broom, not a hose, to clean your driveway.
- Install a rain barrel. In a year with regular rain patterns, a rain barrel (or barrels) can meet almost all your water needs for gardens and outdoor cleaning. You don't have to pay for rainwater, and it's much better for the environment than watering your plants with treated water!

Replacing your appliances can also help.

- Replace a top-loading washer with a high-efficiency washer.
- Reduce the amount of water used per flush by installing a low-flush toilet.
- Install low-flow faucet aerators and showerheads.



Toilet leak test

In just minutes, you can find out if your toilet is wasting thousands of litres of water due to a leak.

Here's how:

- 1. Remove the tank lid, then flush.
- 2. After the flapper/tank ball drops and the tank refills, add several drops of dark food colouring.
- 3. Wait at least 20 minutes without flushing.

If any trace of colour appears in the toilet bowl, there is a leak.

Leaks often occur at the flapper valve, which is simple and inexpensive to replace. Your local hardware store can recommend the best valve for you.

Source: EPCOR Water





The quality of the air we breathe has a major effect on our health. The decisions we make every day in our homes and businesses affect the quality of the air we breathe. We are all responsible for keeping our air clean to maintain healthy communities, healthy ecosystems and a sustainable economy for the future.

Case study:

Citizen science in air quality monitoring in Edmonton



Alberta Capital

Air quality in the Edmonton region is monitored by eight stations. The data from these stations is used to Airshed calculate the air quality health index daily.

The Alberta Capital Airshed (ACA) is a group made up of government, non-government organizations and industry representatives. It monitors air quality, provides air quality information to the public and other stakeholders and promotes education and awareness of air quality issues.

The ACA and the City of Edmonton would like to be the first Alberta municipality to partner with residents in a citizen science initiative. They will be making AirBeams, handheld monitoring devices, available to individual residents and organizations like schools and community leagues. Data collected using the monitors will be uploaded to an online map that will be available to the public. The monitors and software are made available through a non-profit group

called HabitatMap that aims to help citizens improve the environment in their city.

capitalairshed.ca



Improve indoor air quality

The average Canadian spends a lot of time inside at home, work or school. The air quality inside of these buildings is not always as good as outside. It may contain pollutants from cooking, paints, chemical cleaning agents, air fresheners, perfumes or just poor ventilation. We can help improve indoor air by simple measures like having more plants. Plants absorb carbon dioxide and emit clean oxygen. Some plants also purify the air.

Plant species that promote clean air:

Areca palm Reed palm Dwarf date palm Boston fern Janet Craig dracaena English ivy Australian sword fern Peace lily Rubber plant Weeping fig



Photo credit: KENPEI CC BY GFDL gnu.org/copyleft/fdl.html via Wikimedia Commons





Photo credit: Digigalos CC BY GFDL gnu.org/copyleft/fdl.html via Wikimedia Commons



Photo credit: Mokkie CC BY-SA 3.0 creativecommons.org via Wikimedia Commons

Here are some other things that you can do to improve indoor air quality:

- Use HEPA filters in vacuums and air cleaners.
- Keep the humidity level between 30% and 50%.
- Do not idle cars, lawnmowers or other engines in the garage, especially if the garage is attached to the house.
- Use exhaust fans in kitchens and washrooms.
- Buy low volatile organic compound (VOC) paint, flooring and furniture.
- Avoid smoking inside.



- Choose low-emitting household and personal cleaners and detergents that have been certified as green by a third party (see the Sustainable Purchasing chapter).
- Minimize the use of harsh cleaners, solvent-based cleaners or cleaners with strong fragrances.

DAYS WHEN AIR QUALITY HEALTH RISK IS LOW

Percentage



Help improve outdoor air quality

The Edmonton Capital Region is currently not meeting federal standards for fine particles in the air. Since 2010, two monitoring stations in the region have consistently reported levels above the national standard. Exposure to these levels can have immediate and long-term health effects.

For more information on air quality, visit edmonton.ca/airquality.

We can all take actions to improve air quality in Edmonton:

- Limit the burning of wood in backyard fires, fireplaces and wood stoves. If you do have a fire, be sure to burn dry, untreated wood. Stoves should meet the Canadian Standards Association emissions standards.
- Drive less. Transportation causes about 32% of the emissions in Edmonton. Plan your vehicle trips wisely, rideshare and walk, cycle or use transit whenever possible.

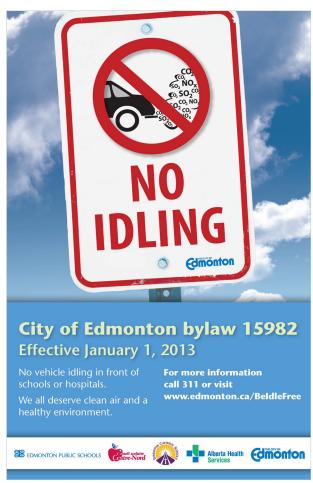
Be idle free

What is idling?

Idling means letting your car run when you are not driving. Unnecessary idling costs Canadians millions of dollars every year, and it's a major contributor to climate change.

What can you do to reduce idling?

- Download our Be Idle Free resources to start your own Be Idle Free campaign: edmonton.ca/beidlefree
- Be more aware of the amount of time you idle.
- Reduce "warm-up" idling to 60 seconds before driving away—just
 make sure your vehicle's windows are clear. Wheel bearings, steering,
 suspension, transmission and tires only warm up when the vehicle is
 moving. It typically takes at least five kilometres of driving to warm up
 these components.
- Turn your engine off if parked for more than 60 seconds during reasonably warm weather (above -10°C).
- Avoid using a remote car starter during reasonably warm weather (above -10°C).
- If you're stuck in traffic, using a drive-through, picking up someone at school or waiting for a train to go by, shut off the vehicle. Ten seconds of idling uses more fuel than restarting your engine.



ENERGY

We can conserve energy by making upgrades to our houses, like adding insulation and replacing windows. But we can also decrease household energy use just by making simple changes to what we do in our homes each day.

Case study:

Reaching net zero

Architect Shafraaz Kaba lives with his wife, Serena, and their son, Adar, in a netzero house that they designed and built overlooking Edmonton's river valley. A netzero house is designed to be very energy efficient and to generate as much electricity as it uses over the course of a year.

Although the house is energy efficient, they are still careful with their everyday energy use.

For example, they turn out the lights when they aren't in a room. They also have energy-efficient appliances like an induction stove.

Serena and Shafraaz conserve energy to ensure a healthy planet for Adar and future generations.

And Adar stays involved too: "I turn off the power bar to all my gaming devices!" he says. "And I really like how we rely on the sun to heat our house and not a furnace!"

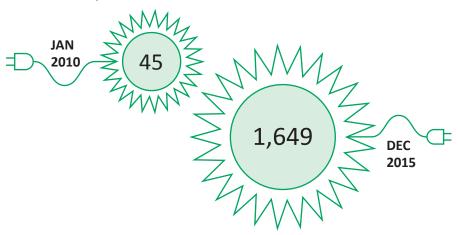




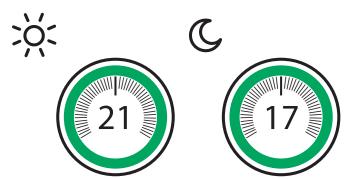
Photo credit: Shafraaz Kaba

INSTALLED CAPACITY OF SOLAR ENERGY GENERATED (PER MONTH)

Kilowatt hours per month



Keep warm with less energy



A programmable thermostat lets you set the furnace to turn down automatically at times when you don't typically need as much heat (for example, at night and during work or school hours) and to turn it up when you do.

You can also change or clean your furnace filter monthly during the cold season to improve efficiency. For better air flow and heat distribution, make sure there's no furniture blocking your heat vents.

And instead of turning up the heat when you feel a little chilly, consider putting on a sweater.

Use a fan instead of air conditioning



Air conditioning uses a tremendous amount of energy. Fans can provide comfort and air movement on hot summer days, and they use far less energy than air conditioning. Better yet, if there is a cool breeze, open a window.

Let the sun in...or keep it out!



You can use the sun's energy to heat and light up your house when it is cold and block it from your house when it is warm and sunny. Simply open your blinds on winter days and close them on summer days.

Get the most out of your appliances



Always try to use the right appliance for the job. Heating up something small? Consider using the toaster oven instead of the full-size oven. Smaller appliances such as toaster ovens, microwaves and slow cookers use less energy than the stove, even if cooking takes longer. Matching pots and pans to the right size of burner and using lids also save energy.



There is no need to keep that fridge cooler than the suggested setting or to use the heat-dry setting on your dishwasher. If possible, run the appliance only when there is a full load, maximizing energy efficiency. Some appliances even come with eco-setting suggestions. These will help you use less energy.



Basic maintenance to ensure appliances are working as efficiently as possible can also cut down on electricity costs. Examples include vacuuming the coils at the back of your fridge, ensuring

the seals on your fridge and stove are tight and draining the sediment from the bottom of your hot water tank.

When you need to replace an appliance, look for the Energy Star® symbol. Energy Star is a voluntary labelling program to identify and promote energy-efficient products.

Take a bite out of vampire power



Phantom or vampire power is electricity used by a device when it is turned off. This wasted power is responsible for up to 10% of home electricity use. An easy way to avoid this problem is to plug your devices into a power bar and turn the bar off when

not in use. Some power bars can leave one or two items fully powered while automatically shutting off the others when not in use.

Energy Star products are the lowest consumers of vampire power when they are in standby mode. To find the most energy-efficient electric appliances, check out nrcan.gc.ca/energy/products/energystar/why-buy/13604. But remember, even with energy-efficient appliances, it is still better to unplug them or turn off the power bar when they're not in use.

No-power alternatives

There are many instances where there are alternatives to using electricity. Use the stairs not the elevator. Use a clothesline instead of a clothes dryer. Use hand-powered kitchen tools such as manual mixing beaters, coffee grinders, juicers and can openers. Sit by a window to take advantage of natural light instead of turning the lights on. Use a push mower to mow your lawn.

Make easy upgrades and adjustments

Insulate pipes

Insulating hot water pipes keeps the water in the pipes warmer. That way, less water needs to be heated to bring hot water to a faucet.

Install weatherstripping

Keep cold air out of your home by weatherstripping around windows and doors. You can also insulate around wall sockets and light switches on outside walls.

Save computer power



Laptops, being smaller, use less energy than desktop computers. But whichever you have, you should set the computer to go into standby mode whenever it hasn't been used for minutes.

If you're away from the computer for an extended time, it's best to turn it off (including the monitor if you're using a desktop).

Adjust the lighting



The best energy-saving device is the light switch. Try to get into the habit of turning off the lights when a room is not occupied. Consider using compact fluorescent bulbs or LEDs, which are more energy efficient and longer lasting. Also, think about how many bulbs you actually require in a room. Task lighting, such as a reading lamp, can focus light only where you need it.

Lighting controls such as automatic timers, motion sensors and dimmer

switches can also help reduce electricity usage.

Get an energy audit

If you're not sure how you can use energy more efficiently, consider having an energy audit done in your home. Watch an energy auditor at work and see how an audit can help reduce your home's utility bills and environmental impact.

edmonton.ca/energyauditvideo

Buy sustainable power

In Alberta, we have the option of purchasing our electricity from a number of retailers. Some of these retailers offer energy produced in renewable ways using technologies such as solar, wind and hydro.

Access incentives and services

Energy Efficiency Alberta is a new provincial agency providing programs and services to help Albertans save money and energy. These programs offer incentives and energy efficiency products for individuals and organizations.

efficiencyalberta.ca

TRANSPORTATION

Get around sustainably

We are shaping an Edmonton that will meet the needs of our diverse and growing urban and regional population. Our transportation priorities must take into account increasing environmental concerns, as well as the ongoing investment needed to maintain our transportation infrastructure.

The City of Edmonton's Transportation Master Plan, The Way We Move (thewaywemove.ca), aims to encourage Edmontonians to get around in ways that are sustainable in the long term. That means shifting away from single-occupant cars toward cycling, walking, ridesharing or public transit.

Sustainable transportation choices support healthy, vibrant and livable communities.

edmonton.ca/sustainabletransportation

Case Study:

Edmonton Bicycle Commuters Society



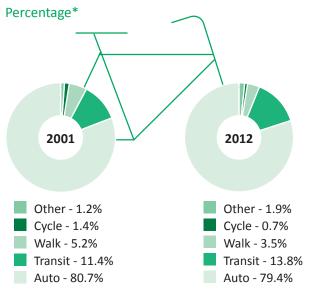
The Edmonton Bicycle Commuters Society (EBC) is a non-profit organization run by Edmontonians who are committed to promoting cycling in our city. EBC offers many services for individuals who are looking to start cycling or to increase their safety and comfort on the road.

It will organize presentations for workplaces and community groups on cycling to work, help to map out bike routes for individuals and hold workshops on do-it-yourself bike maintenance and riding topics.

EBC runs two community bike shops in Edmonton: BikeWorks North and BikeWorks South. At these shops, you can get help tuning up your bike, buy an affordable used bike or purchase new parts for your bike.

edmontonbikes.ca

MODE OF TRANSPORTATION FOR COMMUTE TO WORK



* The 2001 commute to work data was obtained from the Federal Census while the 2012 data was obtained from the Edmonton Municipal Census. Direct comparisons are not recommended given the different data collection methods used.

Cycle

The City of Edmonton is actively working to create a comprehensive cycling network for Edmontonians. There are already many great mixed-use paths, on-street bike lanes and river valley trails that cyclists can use to get around our city. Riding your bike can often be faster for

Cycling has many personal benefits: it's convenient, it saves money, it helps reduce stress and it's good exercise. Leaving your car at home and travelling by bike also has many benefits for the community and the environment. It helps to improve air quality in our city and to combat climate change because it's a zero-emission mode of transportation. It also reduces traffic, which means fewer idling cars.

And finally, cycling is fun! Nothing can make you feel the joy of childhood again like jumping in the saddle.

To learn more about how to use our bike routes, visit:

shorter trips, and you don't have to find and pay for parking.

edmonton.ca/cycling edmonton.ca/bikevideos edmonton.ca/bikemap



Walk



Walking is another healthy and environmentally friendly way to get around. It reduces traffic congestion and also helps keep your neighbourhood safe by putting eyes on the street.

Here are some ways you can get yourself and your community walking more:

Start a walking school bus for your local school

A walking school bus is a group of children, led by a parent or adult volunteer, that walks to and from school together. It's similar to a regular school bus in that it has a set route with set stops to pick up students along the way. A walking school bus has many benefits. It gets kids active, improves air quality, reduces congestion and increases traffic safety around school zones. It's also an easy way for busy parents to volunteer in the school community.

shapeab.com

Get strolling with a community walking group

This is another great way to get active and to give residents a first taste of what it is like to walk around their community. It might be more enjoyable and take less time to walk to that local coffee shop or grocery store than you thought!

Develop a community walking map

Walkable Edmonton works with community leagues around the city to develop community walking maps for their areas. These maps bring neighbours together and build a more walkable community by providing resources and supporting active living.

Walkable Edmonton has resources and staff to help you develop a walking map of your community if one does not already exist.

edmonton.ca/walkmap

Rideshare



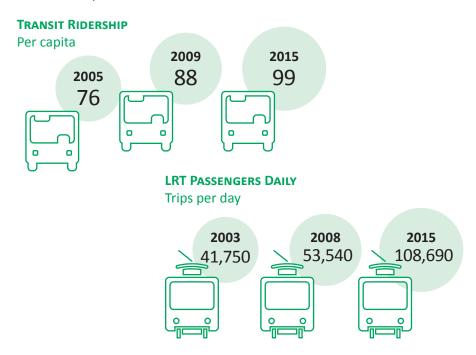
Save money and reduce the stress of your everyday commute.

Ridesharing means prearranging a ride with someone who lives close to your home and works in a similar location. Ridesharing

once a week can save you more than 10% of your commuting costs.

You can also create a van pool for kids' sports and lessons. This will reduce resource use and emissions and give busy parents a break from having to drive kids back and forth.

edmonton.ca/rideshare



Take transit and LRT



Hop on board—let someone else do the driving! As Edmonton grows, light rail transit (LRT) and buses are two very important strategies for reducing congestion, improving air quality and getting people around quickly and efficiently.

Plan your trip with the ETS Trip Planner.

edmonton.ca/takeETS

Track your bus anywhere, anytime from your phone or computer. All ETS buses can now be tracked in real-time, using the recommended tools - ETS Live® Bus Finder, Transit app or Google Maps.

edmonton.ca/ETSLive

In partnership with Edmonton employers, the ETS@Work program offers employees a 25% discount on a regular adult monthly pass. Employees can also claim a federal tax credit.

edmonton.ca/ETSatwork

You don't have to give up your car entirely to use transit. Try park and ride! edmonton.ca/parkandride

Also, remember that bikes are allowed on buses and LRT.

edmonton.ca/bikesonETS

Transit-oriented development

Transit-oriented development (TOD) is an exciting approach to achieving Edmonton's vision of a more compact and sustainable city, where more people walk, cycle and use transit.

TOD brings together housing, shopping and employment along a network of walkable and bikeable streets within a five-minute walk in any direction of a transit station (approximately 400 m).

Over the next 30 years, TOD has the potential to transform neighbourhoods around LRT stations and transit centres into vibrant hubs of mixed-use activity.

How TOD can benefit residents:

- Increased transportation choices
- Fewer and shorter car trips
- Lower personal transportation costs
- Easy access to daily needs
- · Improved health through increased physical activity

How TOD can transform the city:

- Increased transit ridership and revenue
- More efficient use of infrastructure like LRT, sewers and other services
- Reduced air pollution and energy use
- Revitalization of neighbourhoods
- Greater possibility of aging in place

SUSTAINABLE **PURCHASING**

Every day, we purchase goods and services to fulfil our needs. Our purchasing decisions can have a huge impact on the environment, greenhouse emissions from production and transportation, and waste. The following tips can help you make environmentally friendly purchasing decisions.

Case study:

Sustainable purchasing at the University of Alberta



SUSTAINABILITY In 2011, the University of Alberta's Office of Sustainability set out to change the way that goods and services were purchased on

campus. It created a set of sustainable purchasing principles that take into account social, economic and environmental considerations for buying everyday goods.

The principles include recycled content, third-party certifications, durability, energy efficiency and excess packaging. The university has already had many successes in applying these principles.

For example, its preferred supplier for printing is certified by the Forest Stewardship Council (FSC), its primary food service provider seeks opportunities to buy local food, and all cleaning chemicals must have third-party green certification. All clothing branded for the University of Alberta has been produced under the guidelines of the Fair Labor Association (FLA) since 2001.

The Office of Sustainability also offers workshops on sustainable purchasing to help educate the campus community.

sustainability.ualberta.ca/en/campusinitiatives/purchasing.aspx

Sharing economy

A sharing economy allows people to borrow or rent items instead of buying them. The oldest and most popular example of a sharing economy is the library, where one book is read by hundreds of people over the course of its life. A newer example of the sharing economy is car sharing, where a fleet of cars are shared by people who pay just for the time they use them. Another example is tool lending libraries, where you can borrow a drill to use for a day or two instead of having to buy one.

Decide what you really need

Before purchasing a product, ask yourself the following questions: Are there alternatives to purchasing the product? Can something you already own be used instead? For example, you may be able to use a cleaning chemical for more than one purpose, or make a product from ingredients you have around the house.

If you can't find a substitute or make something on your own, could you borrow it from someone? For example, could you borrow a tool instead of buying one? Do you have things you don't use that you could trade for things you need?

Look for eco-labels

When a product has an eco-label, it means that a third party has extensively reviewed the product and confirmed its sustainability based on predetermined criteria. This reduces the guesswork for consumers and makes for a simple, sustainable purchase. Some common eco-labels are included on the next page. A full list of eco-labels and their descriptions can be found at ecolabelindex.com.

ECO LABELS



Eco Logo

Reduced environmental impact



Green Seal

Reduced environmental impact



Canada Organic

Contains at least 95% organic ingredients



USDA Organic

No antibiotics, pesticides or other harmful chemicals used in production



Energy Star

Energy-efficient equipment



Fair Trade

Produced in improved living/working conditions in disadvantaged regions



FSC Certified

Promotes environmental, social and ethical management of forests

Choose less paper and packaging

Try to purchase products with minimal packaging—for instance, bulk products instead of those that are individually wrapped.

When you buy products that come packaged in plastic, look for the recycling symbol on the pack. A lot of plastic packaging is made of mixed plastic sources and does not have this symbol because it is not recyclable.

Try to buy paper products and packaging that are FSC-certified or 100% post-consumer recycled. Buying products that contain a percentage of post-consumer waste helps reduce our consumption of natural resources.



Buy local

Buying local helps to support Edmonton's economy and encourages growth. You can buy local at farmers markets. Various organizations provide information on other ways to buy local on a regular basis.

sustainablefoodedmonton.org/resources

thelocalgood.ca

Buy used or second-hand

Another great way to cut down on our use of natural resources and energy and keep items out of the landfill is to buy used or second-hand products.

Edmonton has an extensive network of thrift stores where you can purchase personal, recreational and household items. Websites such as Kijiji and Used Edmonton also allow people to buy and sell used items. Often, you can save money by buying things that are slightly used instead of brand new.

Make your own



When you make your own products, you can reduce waste by using jars you already have at home. Also, homemade products are normally safe for the environment because they are chemically simple and non-toxic.

The David Suzuki Foundation has some good recipes for earth-friendly cleaning products.

davidsuzuki.org/publications/resources/2011/green-cleaning-recipes

Tips for green holidays, meetings and parties

Gift ideas

When you are looking for a gift, try to shop for locally made goods, whether at a local independent store or a farmers market. One practical gift idea is a subscription to a weekly food box from a local organic farm. Or if someone is hard to shop for, you might consider donating to a charity for something that person cares about. For example, you could donate to the local animal shelter as a gift for a pet lover, or to a charity that provides lunches to schoolchildren as a gift for a teacher.

Food and entertaining

If you are serving food at an event, try not to use disposable cups and plates. Instead, borrow extra dishes from neighbours and family members, or rent dishes from a catering service.

Making food from scratch using local and organic ingredients helps to reduce waste and food miles. If you are ordering food in, consider finding a caterer that uses local and organic food. Ask the caterer to bring your food on reusable platters.

Event logistics

Instead of using paper flip charts at a meeting, consider erasable white boards. You can also use a projector and screen to display materials such as the agenda so that you don't have to print them out.

And instead of using paper registration forms, you could register attendees electronically using one of many web-based services.

Encourage participants to bring their own:

- Reusable bag
- Water bottle or travel mug
- Reusable dish and cutlery
- Lanyard or name tag holder
- Portable electronic devices, such as iPads or laptops, for taking notes

WASTE

Edmonton is a world leader in urban waste management. With the help of residents who participate in our voluntary programs, we currently keep over 50% of household waste out of landfills, mainly through recycling and composting.

Residents sort items like household glass, plastic and paper for recycling. The organic portion of household waste, like banana peels and tissue paper, is sorted and composted at the Edmonton Waste Management Centre. An additional 30% will be turned into methanol and ethanol when the Waste-to-Biofuels Facility is fully operational. Edmonton's goal is to divert 90% of waste away from landfills.

edmonton.ca/waste

Case study:

Grasscycling

Debbie C., a Master Composter Recycler, tried grasscycling for the first time this year. She'd already been using grass in her compost and as a garden mulch, but found she could only use a small volume of the clippings she produced.

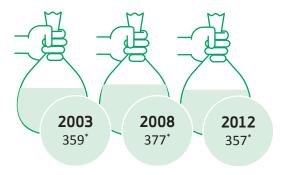
"I always thought you needed to live in a warm and humid climate to grasscycle," she says, "so I jumped at the chance to find out if it could be successful in Edmonton's cooler, drier climate."

Debbie decided to experiment and grasscycled on only half of her lawn. That side appeared more lush, required less water and had fewer weeds popping up. She also noticed that she saved a lot of time by not having to change and empty the bag. And of course, she didn't have to drag it to the curb.

Will Debbie be going bagless again next year?

"Definitely," she says. She'll also be repeating her experiment and using the results to convince others to make the change as well.

RESIDENTIAL WASTE COLLECTED PER PERSON Kilograms per person per year



*Figures include recyclables and household waste.

Go bagless



Going bagless is an easy and effective way to maintain a healthy lawn while saving the time and effort of bagging the clippings. Lawn-care experts agree that it's great for your lawn: "I never dispose of grass clippings. First of all, it's laborious to rake and bag. Secondly, you're taking away a valuable fertilizer resource,"

says Jim Hole, owner of Hole's Greenhouses.

When mowing your lawn, remove the bag from your lawn mower and leave the clippings on the lawn. By doing this, you can cut your household waste by half in the summer.

Tips for going bagless:

- Mow high: Only cut off the top 1/3 of the grass.
- Mow often: Mow every four to five days during spring/summer. When growth is slower, cutting once per week or less is enough.

edmonton.ca/gobagless

Reduce (avoid waste)

See the Sustainable Purchasing chapter.

Reuse



Reusing unwanted items conserves resources and can support local charities and the economy. Check out these easy ways to reuse your items year-round:

Reusable bags and cups

Whether you are going to a festival or just taking your morning trip to the coffee shop, bringing your own mug can reduce the resources and energy that are needed to produce single-use cups. The same can be said for reusable bags.

Reuse Directory

Visit edmonton.ca/reusedirectory to find an organization that will accept your unwanted items.

Reuse Centre

The Reuse Centre accepts various small items (such as wrapping paper and school supplies) free of charge and makes them available to individuals and organizations for a small fee.

Reuse Area at Ambleside and Kennedale Eco Stations

The Ambleside and Kennedale Eco Stations accept large items that are in good condition and make them available for others to pick up. The applicable Eco Station fees will apply for drop offs.

edmonton.ca/reuse

Recycle

It's eas

It's easy to recycle in Edmonton, and by doing so, you can reduce your waste by 20%.

Simply put clean, dry recyclables into a see-through blue bag if you live in a house or into your blue bin if you live in an apartment.

If your apartment does not have a blue bin for recycling, ask your property manager to call 780-496-5698 to find out if your site can accommodate a blue bin. Recyclables can also be taken to one of 20 Recycling Depots, conveniently located around the city.

edmonton.ca/recycling

Compost



Composting is a natural process that breaks down organic kitchen and yard material. Finished compost improves soil and makes vour plants, garden and lawn healthier. It also saves energy

because less material is processed through the city's waste system.

Composting at home with a backyard compost bin or a worm compost bin can reduce your waste, and it only takes 10 minutes a week.

Composting workshops and presentations are available. Visit the website for an up-to-date schedule of courses or to book a presentation.

edmonton.ca/compost

Use Eco Stations

Take all household hazardous waste, electrical items and big bulky items to an Eco Station for recycling and safe disposal. Electronic waste (anything with a cord or a battery) and household hazardous waste can be dropped off for free. Taking these items to an Eco Station keeps hazardous materials out of the environment and enables us

to reuse and recycle what we can. For example, used oil and paint are made into new products. You can also pick up paint at an Eco Station for free!

Visit edmonton.ca/ecostations for up-to-date fees, locations and hours.

SUMMER HOURS

Monday-Saturday: 9 a.m.-6:30 p.m.

Sunday, holidays: CLOSED

WINTER HOURS

Tuesday-Saturday: 9 a.m.-4:30 p.m. Sunday, Monday, holidays: CLOSED

STRATHCONA

5150-99 Street



CORONATION

11440-143 Street



AMBLESIDE

14710 Ellerslie Road 5355-127 Avenue



KENNEDALE



Learn more

Waste Management Services has offered tours of the Edmonton Waste Management Centre and classroom presentations for almost 20 years. We can accommodate any school or community group, including newcomers to Edmonton, seniors,



businesses, government groups, post-secondary students and visitors from around the world. Call 311 to book a tour or a presentation!

Volunteer with Waste Management Services

Waste Management Services is proud of its two volunteer programs, which are essential to helping Edmontonians reduce their waste.

Volunteer at the Reuse Centre

The Reuse Centre accepts various items from Edmonton residents free of charge and makes them available to organizations and individuals for reuse. There are both group and individual volunteer opportunities.

edmonton.ca/reusecentre

Volunteer as a Master Composter Recycler

Master Composter Recyclers teach residents about recycling, composting, grasscycling and more. Master Composter Recyclers:

- Complete a 40-hour training course
- Volunteer at least 35 hours
- Teach friends and neighbours what they learned

edmonton.ca/mcrp

Know what goes where

Find out what goes into your garbage, what you can recycle, what you can reuse and what you can take to Eco Stations. Try the WasteWise app, available on your computer or mobile device. Search for waste items, find your collection schedule and even play a fun family game. You can also download the City of Edmonton's "What Goes Where?" poster and place it near your household waste sorting area.

edmonton.ca/whatgoeswhere

Reuse Centre

These items can be reused either as they are or as part of a craft.

Arts and crafts supplies

- bingo dabbers (full)
- cellophane
- corks
- foam core
- packing peanuts
- sponges

Home decor

- carpet samples (small)
- countertop samples
- paint swatches
- wallpaper

Media

- cables
- records, cassettes, CDs, DVDs
- USB memory sticks
- video cartridges

Metal

- aluminum pie plates and tart shells
- beer bottle caps and can tabs
- frozen-juice lids
- kevs
- small hardware

Paper

- bookmarks
- cardboard tubes

Plastic

- bread-bag tags
- bubble wrap
- six-pack rings (from pop/beer cans)

Other items

- needle craft supplies
- office and school supplies

For the most updated list, visit edmonton.ca/reusecentre.



Recycling

ONLY the items listed here can go in your recycling.

Paper and cardboard

- newsprint, flyers, envelopes
- writing and computer paper (not shredded)
- paper egg cartons and paper bags
- magazines and paperbacks
- phone books
- cardboard boxes (flatten and remove liners)
- milk cartons, juice boxes

Plastic*

- household bottles and containers only (vinegar, shampoo, detergent, pop/ water, milk, yogurt, margarine, windshield washer, etc.)
- grocery, retail, bread and dry cleaning bags
- clear clamshell containers

Glass*

- jars and bottles only
- Metal*
 - cans (food, beverage, soup)
 - aluminum cans, trays, pie plates
 - empty non-hazardous aerosol cans
- * Must be empty, clean and dry. Remove caps and lids and place in blue bag or bin. Labels are okay.



Eco Stations

Charges may apply to some items. Visit edmonton.ca/ecostation.

NO CHARGE

Small appliances and scrap metal

- anything with a battery or cord (computers, TVs, toasters, etc.)
- BBQs, lawnmowers, tools, stoves, etc.

Automotive

- fluids (oil, antifreeze, gas, diesel) and empty containers
- oil filters, tires, batteries and parts

Corrosive/poisonous cleaners

 bleach, drain, toilet and oven cleaners, etc.

Lawn and garden

- herbicides, pesticides, fertilizer Lighting
 - all bulbs and fixtures, including fluorescents

Paint/stain

- paint/stain (empty or full cans, including aerosols)
- tinners, turpentine, varnishes

Other

- aerosol cans (partially full)
- batteries (any kind)
- fire extinguishers, propane bottles or tanks
- syringes (put in a thick plastic bottle)
- glues

CHARGES APPLY

Construction scrap

 lumber, windows, shingles, insulation, drywall, concrete, etc.

Large bulky items

• mattresses, sofas, fridges, etc.



Garbage

These items do not belong in your blue bag or blue bin.

Food

table scraps, spoiled food, peelings

Glass/ceramics

- dishes, cups, ceramic items
- plate glass, mirrors

Metal

• foil wrap, clothes hangers Paper and cardboard

- disposable diapers
- dirty or greasy paper or cardboard
- tissue paper, paper towels
- pet food bags
- shredded paper (or take to a Recycling Depot)
- disposable coffee/drink cups

Plastic

- Styrofoam
- chip bags, cellophane, food wrap, dirty plastic
- bubble wrap, strapping, string
- dishes and cutlery
- toys, wading pools
- garden hoses

Yard Waste

- grass—or leave it on your lawn
- leaves, brush, garden waste

Other

- shoes, cassettes, CDs, records
- floor sweepings, sawdust, vacuum cleaner bags (double bag)
- pet feces/kitty litter (double bag)
- ashes (double bag)



NOTES

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