

What is Biodiversity?

Here are some important terms which will help you understand biodiversity conservation

Biodiversity: the variability among living organisms – animals, plants, their habitats and their genes – from all sources, including terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which we are a part. This includes diversity within species, between species, and of ecosystems.

Biome: Major ecological community, a division of the world’s vegetation that corresponds to a particular climate and is characterized by certain types of plants and animals, for example, tropical rain forest or desert.

Drivers of biodiversity loss: Any natural or human-induced factor that directly or indirectly causes biodiversity loss.

Ecosystem: a community of plants, animals and smaller organisms that live, feed, reproduce and interact in the same area or environment. Ecosystems have no fixed boundaries; a single lake, a watershed, or an entire region could be considered an ecosystem.

Ecosystem services: the benefits people obtain from the environment. Ecosystem services are the transformation of natural assets (soil, plants and animals, air and water) into things we value. They can be viewed as **provisioning** such as food and water; **regulating**, for example, flood and disease control; **cultural** such as spiritual, recreational, and cultural benefits; or **supporting** like nutrient cycling that maintain the conditions for life on Earth. Ecosystems ‘goods’ include food, medicinal plants, construction materials, tourism and recreation, and wild genes for domestic plants and animals.

Endemic: Restricted to a particular area. Used to describe a species or organism that is confined to a particular geographical region, for example, an island or river basin.

Habitat: The place or type of site where an organism or population naturally occurs.

Habitat change: Change in the local environmental conditions in which a particular organism lives. Habitat change can occur naturally through droughts, disease, fire, hurricanes, mudslides, volcanoes, earthquakes, slight increases or decreases in seasonal temperatures or precipitation, etc. However, it is

generally induced by human activities such as land change and physical modification of rivers or water withdrawal from rivers.

Invasive Alien Species: a species introduced outside its normal distribution. Its establishment and spread modify ecosystems, habitats, or species.

Land cover: The physical coverage of land, usually expressed in terms of vegetation cover or lack of it. The human use of a piece of land for a certain purpose (such as irrigated agriculture or recreation) influences land cover.

Taxon: Category of organisms, any of the groups to which organisms are assigned according to the principles of taxonomy, including subspecies, species, genus, family, order, class, and phylum.

Why we need biodiversity

The benefits that we gain from biodiversity go far beyond the mere provision of raw materials.

Our **food and energy security** strongly depend on biodiversity and so does our **vulnerability to natural hazards** such as fires and flooding. Biodiversity loss has negative effects on our **health, material wealth** and it largely limits our **freedom of choice**. As all cultures gain inspiration from or attach **spiritual and religious values** to ecosystems or their components – e.g. landscapes, trees, hills, rivers or particular species – biodiversity loss also strongly influences our **social relations**

Every decision we take that effects biodiversity, also affects our lives and the lives of other people. Biodiversity is crucial to **human wellbeing, sustainable development** and **poverty reduction**. But people – particularly those in the developed world – have become so far removed from nature that they have forgotten how much they, and others, rely on it.

In the long term, the value of services lost may greatly exceed the short-term economic benefits that are gained from transforming ecosystems. When we modify an ecosystem to improve a service it provides, this generally also results in changes to other ecosystem services. For example, actions to increase food production can lead to reduced water availability in terms of quantity and quality for other users. This can result in the degradation of many services, such as fisheries, water supply, and protection against natural hazards, seriously affecting people's well-being.

This information was obtained from the IUCN website. To gain more information on biodiversity please visit the website and search by typing in Biodiversity.

What can we do?

We can start by learning about biodiversity and its relations to our community and area.

Preserve: look after what we have such as; our creek, our trees and plants, our wildlife, our water quality, our soil, our parks/playgrounds and recreational areas. For example:

- Keep garbage out of the creek; don't put anything harmful into the creek
- Keep naturalized areas free and clean - for health of insects, micro-organisms, wildlife, wildflowers, and grasses
- Keep our parks/playgrounds and recreational areas free of garbage and animal feces
- Compost – to enrich the soil and keep it healthy
- Encourage the agricultural community to retain tree lines for moisture retention, and leave ditches to naturalize.
- Plant a wildflower garden area, or a native tree

Conserve: Use less and more wisely. For example:

- Use less water e.g. only water lawns deeply early morning, and less often
- Don't let the water run while brushing your teeth
- Refrain from flushing overnight
- When renovating (or building new) purchase low flush toilets.
- Become less reliant on purchasing vegetables by planting a garden
- Mow lawn at higher height to retain moisture
- Wash your car on the lawn or other surface that can soak up the water and use minimal, biodegradable soap
- Collect rainwater and use it to water lawns and gardens

Protect: Everything we do effects something so do all you can. For example:

- Do Not put anything harmful down your drain that can enter the storm sewer such as; unused pills and chemicals, etc. Search out environmentally friendly products.
- Keeping the trees disease free and healthy
- Retaining naturalized areas
- Refrain from adding harmful chemicals, fertilizers, etc. to your lawns and gardens. Purchase only environmentally friendly products
- Recycle to reduce landfill
- Reduce the use of plastic bags when shopping (take reusable bags with you)



What is Green Energy?

Green Energy: includes natural energetic processes that can be harnessed with little pollution. Anaerobic digestion, geothermal power, wind power, small-scale hydropower, solar energy, biomass power, tidal power, wave power fall under such a category. Some definitions may also include power derived from the incineration of waste. Nuclear power as green energy is debated because of the risk to the environment and humanity.

Renewable Energy: is energy which comes from natural resources such as sunlight, wind, rain, tides and geothermal heat, which are renewable (naturally replenished)

Sustainable Energy: is the provision of energy that meets the needs of the present without compromising the ability of the future generations to meet their needs such as hydroelectricity, solar energy, geothermal energy, bio energy and tidal power. It usually also includes technologies that improve energy efficiency

Energy Conservation: refers to efforts made to reduce energy consumption.

Energy conservation can be achieved through increased **efficient energy use** in conjunction with decreased **energy consumption** and/or reduced consumption from conventional energy sources.

Energy conservation can result in increased **financial capital, environmental quality, national security, personal security, and human comfort.**

- Individuals and organizations, as direct **consumers** can choose to reduce energy costs and promote **economic security.**
- Industrial and commercial users can increase energy use efficiency to maximize **profit**

What is a Green Building?

Green Building: refers to a structure and using process that is environmentally responsible and resource efficient throughout a building's life-cycle from siting to design, construction, operation, maintenance, renovation, and demolition. This practice expands and complements the classical building design concerns of economy, utility, durability and comfort.

Green building practices aim to reduce the environmental impact of buildings. Related areas to this are green roofs, green walls and natural buildings.

For more detailed information check Green Energy on the web.

What can we do?

The following are some examples of things we can do to reduce energy and save money but there are many more:

Be Energy Smart

- Use energy efficient light bulbs
- Turn off lights when leaving a room
- Purchasing new appliances? Look for energy efficient stoves, fridges, microwaves, washers and dryers
- New or replacement Christmas Light Sets or bulbs – buy low energy ones
- Consider installing a solar panel
- Make sure you have enough insulation
- Check doors and windows – Is the cold air getting in thus using more energy to heat your building
- Turn down thermostat at night
- When purchasing a new vehicle consider fuel efficiency, hybrids, size requirements
- Keep vehicle maintained
- Look at car pooling
- Before getting in your vehicle take time to consider all your errands, you could reduce the number of trips you have to take
- Consider walking or biking to do errands

Industries

- look at ways to increase energy efficiency, lower pollution and this will increase profit

Municipality

- look at ways to reduce energy use, increase energy efficiency in public buildings, vehicles, lighting sources, etc.



What is Brownfield?

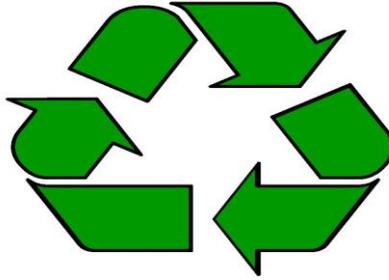
Brownfield sites are abandoned industrial and commercial facilities available for re-use. Expansion or redevelopment of such a facility may be complicated by real or perceived environmental contaminations.

Brownfield is land previously used for purposes or certain commercial uses. The land may be contaminated by low concentrations of hazardous waste or pollution, and has the potential to be reused once it is cleaned up.

Mothballed Brownfield's are properties that the owners are not willing to transfer or put to productive reuse.

For more detailed information check Brownfield on the web.

Compiled by Millet in Bloom from website information and CiB symposium sessions to assist Millet citizens, businesses and organizations, to promote understanding of our environment, and provide some ways we can all do to help our environment. We strongly recommend further research through the web. Just search Biodiversity, Green Energy, Brownfield, you will be amazed.



Recycling

What are we going to do about it?

Since we all produce garbage, we are all part of the problem, and we can also be a part of the solution.

Instead of throwing away items we no longer need, we can make sure they find their way to the next stage in their life cycle.

Reduce the amount of waste we produce in the first place.

Tips:

- Rent items you use infrequently
- Donate old clothes to charity
- Use cloth or paper bags
- Compost
- Purchase in bulk
- Educate others

Reuse an item or find someone who can use it.

Tips:

- Don't purchase over packaged products (see packaging information)
- Have a garage sale
- Use refillable mugs, glasses, bottles
- Share newspapers, magazines and books

Recycle the product so that our valuable natural resources are used again and again.

Tips:

- Use rechargeable, instead of disposable batteries
- Eliminate the purchase of disposable products
- Consider packaging lunches in reusable containers
- Choose products containing reusable containers
- Lend support to local recycling programs (call the Bottle Depot for a list of accepted items or go to www.bcmb.ab.ca)

Blue Bag Pick Up:

What can go in your Blue Bag:

Tin Cans & Deposit Items: Soup Cans, Pop Cans, Milk Cartons and Tetra-packs
(Items such as Pop Cans, Milk Cartons, and all other deposit items may be returned to the Bottle Depot for a refund.)

Plastic Containers: Rigid Plastics - #1-7 margarine & condiment containers, windshield washer jugs, etc.

Mixed Paper & Cardboard: Office paper, Cardboard, Newspaper, Magazines, Phone Books, Cereal Boxes, Catalogues & Shredded paper

REMEMBER TO: Rinse all containers, keep shredded paper in a separate bag from other materials, collapse all cardboard; bundle and place large volumes of over-sized corrugated cardboard under blue bag for collection.

NOT ALLOWED in blue bags: Styrofoam, diapers, ceramics, mirrors, plate glass, soiled paper, plastic film, plastic bags, and glass. When in doubt – leave it out.

Blue Bag Pick up is every second Monday. Check www.millet.ca for calendar dates.

Hazardous Waste

DO NOT dispose of chemical waste products in your garbage or pour into drains.

DO NOT let cement products enter the storm drains.

Take unused pills & medication to the pharmacy

Toxic Round up: scheduled annually in June from 2:00 p.m. to 6:00 p.m. at the parking lot across from Leanne's. Here is a list of some of the products that are accepted at the Toxic Round up.

Acetone	Acetic acid	Adhesives	Aerosols
Ammonia	Antifreeze	Brake fluid	Butane
Degreasers	Drain cleaners	Florescent light ballasts	Fungicides
Gasoline	Herbicides	Ink	Kerosene
Lithium batteries	Mercury	Mothballs	Auto oil
Paint	Latex oil	Paint thinner	Smoke detectors
Solvents	Liquid tar	Turpentine	Wax stripper
Wd40	Window cleaner	Wood finish	

Electronic Recyclables

E-Waste Round Up: scheduled annually in June from 2:00 p.m. to 6:00 p.m. at the parking lot across from Leanne's

Here is a list of items accepted at E-Waste Round up

TV's	Computer monitors
Keyboards	Cables / Ink & Toner Cartridges
Computer speakers	Laptop and notebook computers
Desk top printers	Printers with faxing and or scanning capabilities

Using the County Transfer Station?

Cost for half ton truck load is \$20.00 payable by voucher only. Vouchers available at the Town Administration office 5120-50 St. (hours: 8:30 a.m. to noon and 1:00pm to 4:30 p.m., Monday to Friday accept for holidays).

County Transfer Station Location: east of Petro-Canada across the tracks and ½ mile on your right hand side. Their hours of operation are: Tuesday 9:00 a.m. to 5:00 p.m., Thursday Noon to 8:00 p.m. and Saturday 9:00 a.m. to 5:00 p.m.

Accepted at the transfer station:

Scrap building materials	Household & demolition waste	Furniture & household garbage
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DO NOT Accept:

Branches	Tires	Appliances	Large metal	Concrete
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Using the Lagoon Site?

The lagoon site is open every other Saturday from 8:00 a.m. to Noon. Check www.millet.ca for calendar dates. Located on 56 Street (Power Line Road) in Millet.

Items accepted

Untreated wood and branches in 3 foot bundles

Organic Waste

Grass clippings and yard waste in **clear** plastic bags put out for collection every Monday from May to the end of October. Clear bags must be placed in front yard for pick up. Clear bags can be purchased at the Town Office 8 bags/\$1.00

Composting or grass cycling can reduce the amount of bags (see under composting & grass cycling)

Information on Blue Bag Pick up, Organic Waste, Lagoon/Burn Pit, Electronic Recyclables, Hazardous waste and County Transfer Station received from the Town of Millet

Packaging

Packaging has been redesigned to make it more reusable and recyclable. More and more packages and products are being made of recyclable materials (which keeps them out of the garbage).

Packages have become thinner and lighter. For example; since 1986 the average weight of soft drink cans has been reduced by 33% and the weight of plastic bottles by 14% even glass bottles have been lightened.

You can make a difference:

- Look for products with minimal packaging
- Go for unpackaged bulk goods and products in refillable containers
- Buy products in large "economy" or "family" size rather than single use sizes
- Bring your own shopping bags
- Bring your own dishware to work
- Educate yourself and others about packaging, find out what can be reduced, reused, recycled in your neighborhood

Grass cycling

Best for your lawn, saves money and reduces waste

Grass cycling means leaving your grass clippings on your lawn so that valuable nutrients are returned to the soil.

When grass cycling, allow grass to grow at least 3 inches then cut off 1 inch. This simple action accomplishes a very important reaction; the longer the grass, the deeper the root system and a deep root system will help your lawn withstand drought, and develop an increased resistance to weeds and insects.

Grass cycling is a great natural fertilizer. Because grass clippings are 85% - 90% water, they decay quickly returning valuable nutrients back into the soil. This naturally fertilizes and strengthens your lawn making the turf more resistant to disease, resulting in a healthier lawn.

One bag of clippings equal 100 gms. of fertilizer rich in phosphorous, nitrogen and potassium. Leaving your clippings on your lawn allows all those nutrients to return back to the turf where they will do the most good.

Grass cycling does NOT cause thatch. As a matter of fact, grass clippings contain sugars that stimulate microbes which facilitate the decomposition of thatch. Thatch is a thick layer of stems and other dried material that accumulates just above the soils surface. This layer of material prevents water and nutrients from soaking into the soil, which prevents deep root growth, which is necessary for a healthy lawn. Keep clippings short, leave them on your lawn, and water your lawn properly, and you shouldn't have a problem with thatch.

Always aerate your lawn in spring and fall. This allows oxygen to penetrate the soil, and will restore proper drainage. Compacted soil stresses and kills the roots of your lawn grasses, allowing weeds to move in. In fact, most weed infestations can be attributed to soil compaction, improper mowing, and low nutrient levels in your soil.

Just Laid Sod?

Try to build up the topsoil under laid sod by aerating three times a year and then top dress with a thin layer of screened compost.

Planting Seed?

Always use fresh seed. Store your seed in a cool, dry place and always use it within nine months. Check with your greenhouses or stores for grass types good for our area. Scott's brand has several kinds that are available.

Mulching Made Easy

You don't have to have a mulching mower to grass cycle; you can take off the bag or buy a mulching blade. In the fall run over leaves with your mower to shred them into fine particles. Chopped leaves provide an excellent source of carbon for your lawn.

Make sure you have a sharp mower blade. A dull blade can shred the tops of your grass, causing it to turn brown. By keeping your blade sharp you should get a "clean" cut and greener grass.

Morning Watering

Experts recommend watering in the morning. Evening watering can expose your grass to fungus or disease. Water long enough to allow a deep soaking to the roots (wet the soil to a depth of 6"). Avoid daily, light watering – this can do more harm than good.

Plant the right type of grass

Check the local landscape places, markets, greenhouses for the correct grass seed. Spread seed every year, over-seeding will result in a turf that can choke out weeds. The best times to over-seed are between May 15 – June 15 and between Aug 15 – Sept 30.

Use an organic fertilizer such as bone meal or blood meal that are low-release and won't burn your lawn. Fertilize in the fall, never in the spring. Spring fertilizing leads to top growth – at a time when root growth is most important.

Compost...Spread it around; Grass utilizes the nutrients found in the soil as its food supply, but after a few years, the grass may have 'used up' many of the most valuable nutrients. Applying compost to your lawn in the spring helps to supply the soil with new **organic matters** for your lawn to feed on.

compost

Composting

Compost: is decomposed plant matter that looks like soft brown soil. Its primary purpose is to improve the structure of your soil so it can absorb water faster and right at the roots where plants need it. It also adds some nutrients, particularly nitrogen to the soil, but should not be considered fertilizer. Adding compost saves you water, which saves money and improves the productivity of your plants.

Back Yard Composting

Composting is a great way to turn kitchen waste and yard waste into a rich soil conditioner. Compost can improve the soil in your lawn and add nutrients to your garden and plants.

Composting is Easy! You don't need any special knowledge or equipment, and it takes only a little extra time to collect your kitchen & yard wastes and establish a compost pile. Composting is nature's way of recycling. Not only does it provide a beneficial soil enhancer, but it helps the environment by recycling household food and yard waste going to the landfills.

Composting Made Easy

- Compost is formed through the work of thousands of microscopic organisms which breakdown organic matter.
- Remember to keep a balance between "brown" (i.e. leaves, sawdust) and nitrogen "green" (i.e. fruit, vegetable peelings) materials.
- Oxygen is very important to composting. You can stir, poke & turn your compost pile to increase oxygen flow.
- Remember that water is a vital ingredient in the decomposition process. Make sure your compost is always moist, like the consistency of a wrung out sponge.
- Try to put your composter/compost pile in a sunny location. The sunlight will help **heat** up your compost, making it decompose faster.

Trouble Shooting

Bad Odor: Too much moisture, could be over compacted, food may remain on top of the compost pile

Too Many Insects, Bugs, and Rodents: Dig kitchen scraps in after adding on then cover with shredded leaves, dried grass clippings or soil. Turn often to increase temperature and kill larvae

Compost pile is dry: Too much brown material, not enough water. Turn and moisten, add fresh green materials and cover

Pile is Damp, Sweet smelling-not heating up: Insufficient aeration, not enough moisture, lack of green materials. Mix in some fresh grass clippings or kitchen scraps. Try moving the composter to a sunnier location

Nothing happening: Too much moisture or too dry, pile too small, not enough green material. Stir, poke or turn the pile and, if possible, add some brown material like shredded leaves, straw, sawdust or peat moss

Ammonia Odor: An overbalance of green materials (too much nitrogen). Mix in brown material (carbon) to balance the nitrogen

What to Compost

Fruits & Vegetables

Apples & Asparagus	Bananas & peels	Beans
Berries	Bread	Broccoli Stalks
Cabbage	Carrot tops	Celery tops
Citrus rinds	Coffee Grounds	Cucumber
Egg Shells	Coffee Filters	Lettuce
Lemon	Melon	Oats
Pineapple	Potato Skins	Pumpkin
Squash	Tea Bags	Tomato
Wheat	Zucchini	Grapes

Other Materials

Algae	Blood Meal	Bone Meal
Cornstalks	Feathers	Flowers
Garden waste	Grass	Hair
Hay	Hops	Leaf Mold
Leaves	Peanut hulls	Peat moss
Pine needles	Rope	Sawdust
Soil	Straw	String
Weed (before seeding stage)	Wood Ash	

Don't Compost

Salad Dressing	Vegetable Oil	Butter
Bones	Cheese	Chicken
Fish	Mayo	Meat or Milk

Compiled by Millet in Bloom from Millet in Bloom information and Wikipedia and Windsor websites