

“We are trashing our land to grow food that no one eats.”

Tristram Stuart

November 2016

wasteless.ca

SAGE Meeting Wednesday, November 30th at Lethbridge Public Library, upstairs.

Review of **Environmental Assessment Processes** seeking public input. Government of Canada.
www.canada.ca/

AEN Fall Meetings. Nov. 19 & 20th, Calgary. Sunday workshop: Reforming Federal Environmental Assessment: Issues and Opportunities. [Register Online.](#)

SAGE Memberships gratefully accepted (anytime). \$25 by mail or online at sage.environment.org

Lethbridge has a trashy secret.

If you are interested in knowing more about where our waste comes from and what we do with it, look for the wasteless.ca interactive website being launched in November at wasteless.ca

The website reveals Lethbridge as one of the most wasteful cities on the planet, sending 110,000 tonnes of waste to the landfill each year. Much of the waste is easily compostable, and a sizable portion can be diverted as recyclable materials. There are also opportunities for reuse and reduction which

not only keeps things from going to waste, but conserves valuable resources for future generations.

Landfills are one of the largest sources of greenhouse gas emissions, with high rates of methane and carbon dioxide production from decomposing organics. The toxic slurry called leachate collects at the bottom of the landfill and is potentially harmful to groundwater systems if not properly contained. These harmful emissions can be largely avoided by diverting organics and

toxic materials from the landfill or, better, not producing the waste in the first place.

The wasteless.ca project was created under the guidance of Environment Lethbridge and will become an important source for context as Lethbridge advances its sustainability initiatives.

The website will be launched at the Environment Lethbridge AGM on November 3rd. Give it a try, share it with your friends, and provide some feedback.



Fast Fashion

There is a growing movement to better recycle textiles to keep them out of the waste stream.

One of the problems is ‘fast fashion’ or planned obsolescence, where the latest fashion makes older (but usable) clothing less desirable. This leads to the problem of massive waste: [“Anguelov says](#) Millennials are consuming five times the number of apparel products as the generation before them and then

discarding much of it.”

A study done by the [Secondary Materials and Recycled Textiles Association](#) (SMART) showed that North Americans throw away almost 37 kilograms of textiles every year.

A [recent study](#) in Ontario concluded 85 per cent of discarded textiles end up in a landfill site, meaning just 15 per cent are recycled or reused. In the landfill, the natural textiles decompose and contribute to greenhouse gas emissions.

Clothing that cannot be reused may still be diverted from the landfill. The textiles are compacted into bales and sold to companies to be converted into other products such as special types of paper, insulation, diapers, or as fibres in composite materials.

Some manufacturers are beginning to focus more on cradle-to-cradle reuse of their textiles, which means the companies will

collect their discarded products and reuse the fibres in new products.

And some retailers are supporting the sale of higher quality apparel that can be better recycled at the end of the fashion cycle.

One could also standardize fashion so your clothes will be stylish in perpetuity (see winter offerings in photo, above).

Lethbridge's *Sustainable Events Guide*

Environment Lethbridge in partnership with the City of Lethbridge has produced a *Sustainable Events Guide* that offers tips and procedures to make your next community event a green one.

For example, choosing the location of an event can be crucial to the success of making it more sustainable. The Guide suggests that one consider if the event has waste and recycling receptacles on site that you can use; if it has potable water and water-conserving fixtures; or if it provides access to alternative energy sources. One might also consider if the event is accessible by foot, bike and transit; if it is in a central location close to accommodations or restaurants; if it has shaded areas outside or open windows for inside venues for natural cooling.

In promoting the event, emphasize the efforts to make it green. Choose more sustainable means of communication. Encourage participants to arrive by means other than the single occupancy vehicle (by carpooling, taking transit, biking or walking) and to bring reusable water and food containers. If meals are provided, bringing your own cutlery and dishes can have a profound impact on the amount of waste generated at an event.

The *Sustainable Events Guide* is a comprehensive guide to assist planners in greening community events. It also includes a handy Sustainability Checklist and evaluation tools to measure successes and identify areas for improvement.

The Guide can be accessed at <http://environmentlethbridge.ca/wp-content/uploads/2016/08/Sustainable-Guide-2.pdf>

Interesting Links:

- WasteLess (The Story of Lethbridge's Waste Stream) wasteless.ca
- Secondary Materials and Recycled Textiles www.smartasn.org/
- Lethbridge Sustainable Events Guide environmentlethbridge.ca/



London Drugs in Lethbridge

The new London Drugs location opened this month in Lethbridge. What many people do not know about the chain store is its commitment to waste diversion.

The Lethbridge store recently celebrated a 94.5% waste diversion, diverting thousands of pounds of waste from Lethbridge landfills. The program includes in-store recycling, a drop-off for customers, and sustainability awareness programs and events for the public. At a recycling roundup event last summer, the Lethbridge store encouraged the responsible recycling of electronic devices, batteries, printer cartridges, and plastic and packaging from their products.

Environment Lethbridge AGM

Environment Lethbridge will be celebrating Lethbridge's Green Superheros at the AGM on November 3rd. In addition, Kris Hodgson will be presenting "Opportunities for Renewable Energy in Southern Alberta" Everyone is welcome to attend, RSVP immediately if you are interested in attending: <http://environmentlethbridge.ca/join-us-november-3-agm-green-superhero-celebration/>

Pumpkin Composting - City of Lethbridge

That Halloween jack-o-lantern is simply *too good to waste!* Don't let your hard work carving that scary squash go into the landfill - clean pumpkins can be taken to Yard Waste Sites for composting instead!

<http://www.lethbridge.ca/living-here/Waste-Recycling/Pages/Pumpkin-Composting.aspx>

Southern Alberta Group for the Environment (SAGE)

A Leading Voice for a Healthy and Environmentally Sustainable Community.

Visit us at: <http://sage-environment.org/>

If you are interesting in getting involved, contact us at:

sage-communications@sage-environment.org

Sushi: The Global Catch

Documentary 2012
Mark Hall, Director
1hr 15 min Netflix

An amusing aspect of eating sushi on the prairies is the row of cowboy boots often seen outside the entrance to a traditional Tatami room, footwear shucked to respect the "no outdoor shoes" rule of many Asian restaurants. From humble Japanese street food (where wasabi was introduced to kill E.coli) to world wide availability, sushi is now a global food and the global catch of course, affects ocean ecosystems.

The most prized fish for sushi/sashimi is Tuna. The largest fish market in Tsukiji handles 2000 tonnes of tuna at \$50/pound and nets over \$18 million dollars a day. As one chef observes, we will run out of tuna before we run out of oil. But are fish just another commodity to be harvested at will? An emerging Australian industry traps young wild tuna, cages and feeds them for 3-5 months and then kills them: "Value added ranching" of tuna is how one entrepreneur explains the process.

Tuna are massive, long lived and social fish. Some scientists estimate 90% of such top predators as tuna and sharks are gone from our oceans. A significant issue is bycatch – species like dolphins, albatross

and sea turtles caught in nets or on longlines which are treated as waste and discarded, although not usually before they have died as a result of unintended capture.

This is a "good enough" documentary film but far from comprehensive. There is little mention of reducing demand. The Sea Sheppard society gets short shrift after opining that there really is no such thing as *sustainable* fishing. The money involved and the ubiquity of sushi perhaps does explain why Canada joined many other UN member nations in refusing to put Tuna on the endangered species list.

Seafood sushi may be the penultimate example of food waste – a food we *love* to eat but don't really *need* to eat. Fortunately there are other foods on offer in restaurants and in the hands of a skilled chef, tofu, (stay with me here) can be one of the tastiest exotic items to sample when eating out.



UN rejects Atlantic bluefin tuna ban
<http://www.cbc.ca/news/technology/un-rejects-atlantic-bluefin-tuna-ban-1.881660>

More Interesting Links:

Think. Eat. Save. Reduce Your Foodprint. <http://www.thinkeatsave.org/index.php/partners/our-partners>

How to solve the food waste problem.

Billions of dollars worth of good food is thrown away each year. Now some businesses and cities are saying no.
<http://www.macleans.ca/society/life/how-to-solve-the-food-waste-problem/>

National Geographic Climate Change Series (will likely repeat and/or be on YouTube)
A Race Against Time

<http://channel.nationalgeographic.com/years-of-living-dangerously/episodes/a-race-against-time/>

Green Roofs Take Root Around the World

The eco-friendly design just got a big lift in San Francisco, and it is spreading globally.
<http://news.nationalgeographic.com/2016/10/san-francisco-green-roof-law/>

The Hidden Life of Trees:

What they Feel, How They Communicate



Who knew? Trees have a hidden life! They smell, they taste, they care for each other, and they communicate.

The Hidden Life of Trees is a delightful book, written by an ecologist and forestry manager, Peter Wohlleben, who has spent his career as a forestry manager in Germany, and now operates an environmentally friendly woodland near the Eifel Mountains.

The book has some similarities with Suzuki's book *Tree: A Life Story*, in that it describes in a clear and almost poetic style the life of trees and the ecology of an old growth forest.

Wohlleben describes the astonishing behaviour of acacia trees that emit a warning gas (ethylene) when being attacked by insects. The scent messages are recognized by downwind species which begin to produce chemicals that would repel the insects (or attract other insects that would feed on the invading species).

These trees can apparently recognize the differences in saliva between insects to determine whether or not the insect is dangerous.

Using scent is limited in effectiveness, as it relies on air movement. Other trees send electric impulses when distressed. These impulses are transmitted through the root systems to connected trees (apparently at 220 Hz and a speed of 1 cm/s). And some trees send chemical signals through the roots to fungal networks surrounding the tree which pass the signal on to other trees.

Wohlleben suggests that the symbiotic community of the forest, which may include all plant species, exchanges information through scent, chemical transmission, or electrical signals. The complex ecology of an old growth forest makes this possible, which suggests that our impoverished tree farms and urban forests are both deaf and dumb in comparison.

The Hidden Life of Trees describes the life cycle of trees and the forest, the competition between species and the cooperation of families of trees to control access to sunlight and distribute water and nutrients. Wohlleben marvels at the ways trees reproduce, their timing, and their strategies for reproductive success. Once established, he describes how the trees prepare for opportunities to grow into the canopy once an older tree falls, and how they conserve energy and resources for drought conditions or rainy seasons.

The author describes the beech tree (common in European forests) as becoming sexually mature at about 80 to 150 years of age. Assuming the tree grows for 400 years, "it can fruit at least sixty times and produce about 1.8 million beech-nuts. From these, exactly one will develop into a full-grown tree" (p.29). He goes on to calculate the odds of other species of trees, using different strategies, like relying on animals to transport seeds or, like the poplar, producing up to 54 million seeds each year to blow away in their fluffy packaging.

Not only can they talk, trees can count, and they can learn. They learn to store energy; they learn to conserve water, even during periods of ample rainfall; and they learn to maintain stability by growing more in areas that are weak. Micro fractures develop in these weak areas, which the tree recognizes and reinforces with tree growth.

A stable old growth forest includes many hundreds of thousands of micro organisms and fungi that connect roots of trees for communication and symbiotically share resources. Forest trees can detect sick or distressed trees and send nutrients to help heal them. They also nurse their young who do not have access to enough sunlight to produce their own nutrients. In a healthy forest, trees can live a very long time - for example, a spruce in Dalarna Sweden has been carbon dated to be an absolutely unbelievable 9,550 years old.

The Hidden Life of Trees is a very interesting book with interesting digressions about current research on how ecosystems function. By the end of the book, the reader may find themselves looking at trees a little differently - as a sentient species that deserves the opportunity to grow undisturbed in old growth forests. One might even feel a little sorry for their lonely urban 'street kid' cousins.

