

# OPPORTUNITIES

A Newsletter From **Transition Medicine Hat**

We hope that everyone is dealing with the pandemic restrictions in a healthy and positive way. Changing rules on gatherings have prevented us from scheduling more events, but we look forward to seeing you again in the New Year.

I have been placing photos of sustainable activities in the Gallery section of our website. I include a small note on why I think the activity deserves to be expanded. Please send your own suggestions.



This photo was taken at the Medicine Hat Interpretive Program's night photography workshop.



The open gate on Dale Lintott's land allows pronghorn to move to where food can be found. Thanks, Dale, for letting the pronghorn share your land.

## **Agroecology Program at College**

On October 7, 2020, Medicine Hat College announced that an Agroecology Technician program will be available in September 2021.

This program will allow students to gain valuable skills that can increase the sustainability of agricultural operations in our region.

Courses provide information needed for accreditation with the Alberta Institute of Agrologists. In addition to the farming skills, students will gain valuable entrepreneurial knowledge.

Brent Smith has put in a lot of work to ensure the courses are both relevant to modern farms and eligible for transfer credit to Alberta Universities.

## **Innovative Solar Greenhouse**

“Aren’t all greenhouses solar?” you are asking. Yes, to some extent, but this one doesn’t have any other form of heat.

The secret is called a giant solar battery, although it looks like a dirt wall. In fact, it IS a berm of soil piled up to make the north side of his plastic greenhouse. Add a roll-up layer of plastic insulation, and you have growing space that can be active all winter.

When the oil patch started turning down, geologist Dong Jianyi made a dramatic pivot, and took up farming. Modelling this greenhouse on the thousands already in use in his native China, he now grows vegetables year round near Red Deer.

Watch this webinar to see how it works in more detail:

<https://www.youtube.com/watch?v=pXPakvPzgpE&t=1598s>





## Autumn Events

During the fall, Transition Medicine Hat presented several outdoor events that were well attended. Please check the website for more complete descriptions.

### Wildflower Planting Party      September 19

Our pollinator farm got a boost when several dozen supporters planted seed from half a dozen local wildflowers. Each species has showy flowers that brighten the prairie while providing tasty nectar for bees and other pollinating insects.

### Garlic Planting      October 2

John, Grant and Rob planted about 200 cloves of garlic in the demonstration farm. Space was left for a companion planting of squash to fill in the bed when the garlic are harvested. Several dozen rhubarb roots were also planted.

These beds demonstrate the European technique of hugelculture, which uses buried wood to provide long-term moisture retention, nutrition, and acting as a substrate for positive fungi. We buried about 15 cm of wood chips under the loosened soil and compost.

### Horseradish Foraging      October 3

More than 25 people joined in removing the invasive Horseradish plant from a site near the Visitor Information Centre. Weeds can taste very good!

### 2040      October 20

Drawdown Alberta arranged an on-line viewing of the video [2040](#). This full-length show expanded on some of the climate solutions included in the Drawdown book and website.



## COMPOSTING PROGRAM CITY OF MEDICINE HAT

Profile by Rob Gardner  
October 20, 2020

Riley Klaiber knows his compost. No wonder! He makes hundreds of tonnes of it every year. As Supervisor of the City of Medicine Hat's landfill, he manages the yard waste program as well as the composting of biosolids (the solid part of treated sewage).

Both types of compost work the same way, but are kept strictly separate. The biosolid compost looks like other compost, and regular testing ensures no residual health concerns. A higher level of metals means it is labelled Class B, and cannot be used in yards or farms.

As for the actual composting process, both the biosolids and the yard waste (mainly grass clippings) contain an excess of nitrogen and water. To reach a balance, they are mixed with carbon-rich waste such as wood chips, or dead leaves from the autumn collection period. To create the chips, trees, pallets and construction waste, are stockpiled and then shredded periodically. The shredder includes a magnet to remove the nails and other ferrous bits.







**Riley taking the temperature of a steaming windrow.**

The composting process takes considerable work, with the windrows ideally being turned when the pile reaches 55 C, or about five times in 15 days. The shape of the blades on the machine move more material to the centre, creating a peaked pile, while breaking up some big pieces at the same time.

When the compost is finished, it is screened to remove larger pieces, which are put back into the new piles. The compost matures in a stockpile until it is needed.

Individuals can buy finished compost for \$28/tonne, or about \$15 for a truck load (self-load). Any compost remaining at the end of the year is sold to Landscape Depot which mixes it into several different soil blends.

This year, the Parks Department was a major customer, using 130 truckloads, or 900 tonnes, of compost to build the new disk golf course in Gilwell Park.

Inappropriate materials, including plastic bags and large pieces of wood, are a constant headache. They interfere with the overall process and need to be removed at the end. Please restrict your woody material to less than two inches in diameter.

The City Composting Program achieves excellent quality of compost for several reasons:

- large quantities of raw material enable optimal size piles to be used. i.e. 2 m tall) so the temperature reaches 60 C or 140 F;
- the site has enough space to allow the compost to fully age for a year; and
- large equipment allows frequent and thorough turning of the material.



The City's Green Bin yard waste collection program has diverted 67,000 kg of waste from the landfill this year alone. This program turns a potentially methane-generating waste into a valuable conditioner for gardens and parks.

As each type of waste is removed from the total waste stream, the remaining materials become easier to deal with. If you haven't been to the landfill for a few years, you will be impressed with the various diversion efforts. Electronic waste, vehicle tires, and metal are just some of the products that are separated for re-use.

The City of Medicine Hat has made substantial progress in moving many materials from waste to valuable product.

As in any field, improvements are possible. For example, the staff continue to seek more productive uses of the compost, particularly that made from biosolids. And food waste, especially from institutions, remains an untapped but labour-intensive opportunity.

Thanks to Riley and his staff, our city is moving forward on waste reduction.



The operator checks the machine used to mix and pile the composting materials.

