BIG MOVE 5

ZERO-WASTE/ CIRCULAR ECONOMY

BIG MOVE 5:

ZERO-WASTE/ CIRCULAR ECONOMY

Landfills take up valuable land and emit methane, a potent GHG, while the process of collecting and disposing of waste and recyclables also emits GHGs. The consumption of new products has environmental impacts from extraction, manufacturing, and transportation, and plastic waste, including microplastics, is harming ecosystems and human health.

To minimize these impacts, a circular economy aims to prevent waste by designing products to be durable and repairable and to repurpose end-of-life materials through enhanced upcycling and resource recovery processes.

Emissions related to waste make up 5% of baseline community emissions in Kamloops, mainly from methane produced when organic materials break down in the anaerobic landfill environment. This Big Move would see reduced waste entering the landfill, enhanced diversion, and, importantly, the beneficial end use of organic materials such as compost or biofuels. Strategies also seek to spur research and innovation and create opportunities for local enterprises that contribute towards the growth of a circular economy. Repurposing materials and upcycling can keep more value in the local economy, while waste reduction and diversion measures reduce the need for landfill expansion.

CO-BENEFITS

- Ecosystem Preservation
- Green Economy and Innovation
- Improved Public Health

TARGET

To reduce waste sent to the landfill by 50% by 2028 and by 90% by 2050.

5A - Local Organics Collection and Processing

GOAL:

To reduce and capture all kitchen and yard waste for beneficial end use.

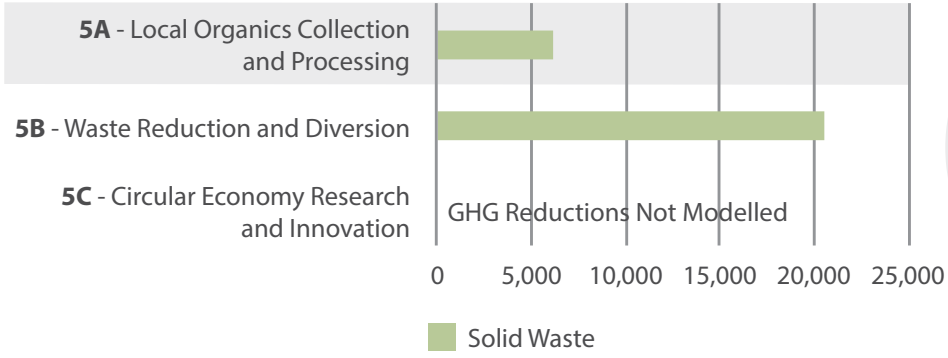
ECONOMIC CONSIDERATIONS:

- The City is establishing organics collection processes, including applying for grant funding to reduce set-up costs. The diversion of organics will free up landfill space estimated to be worth $1 million per year.
- It is estimated that edible food waste costs the average Canadian household $1,100 per year.[i] Campaigns that educate on meal planning, food processing, and proper food storage save residents money.
- The Kamloops Food Bank has diverted 18 million pounds of perishable food from the landfill since 2007.[ii] While long-term solutions to poverty are needed, food recovery programs provide immediate food needs for people.

ACTIONS:

- ❑ Implement a residential organics collection program, establishing a curbside service before expanding to include multi-family buildings.
- ❑ Support the Thompson-Nicola Regional District's implementation of an organics disposal ban (e.g. by requiring collection of commercial organics).
- ❑ Deliver food waste reduction campaigns and support food recovery programs that redistribute food to people in need.
- ❑ Evaluate landfill gas capture rates and potential uses post implementation of organics collection.

PROJECTED ANNUAL GHG REDUCTIONS BY 2050:



6,100 tCO_2e (Moderate)

5B - Waste Reduction and Diversion

GOAL:

To reduce waste and prioritize the diversion of methane-generating materials (i.e. cardboard and paper, yard, wood waste) from entering the landfill.

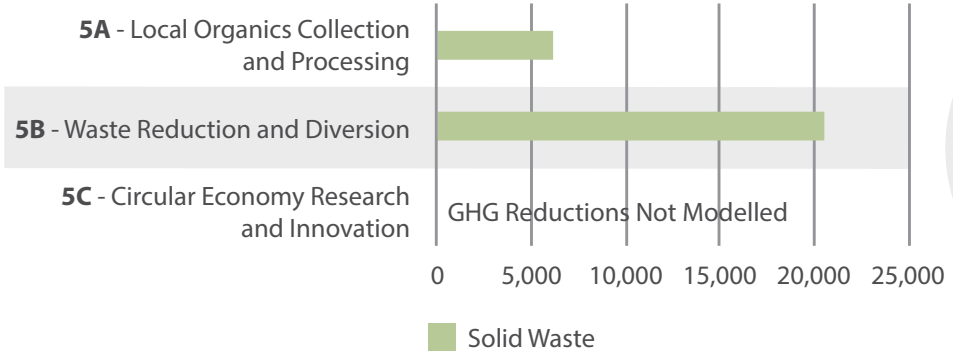
ECONOMIC CONSIDERATIONS:

- Potential City investments will be identified through the development of a Waste Reduction Strategy.
- Fee structures can be adjusted to incentivize diversion, with savings realized through extending the service life of the landfill.
- Residents and businesses can save money through waste reduction and reuse.

ACTIONS:

- ❑ Develop a City Waste Reduction Strategy with measurable targets for each waste stream (e.g. construction and demolition, yard waste, plastics, paper/cardboard, and metals).
- ❑ Support the Thompson-Nicola Regional District's implementation of a landfill disposal ban on recyclable materials, (e.g. require all cardboard to be recycled).

PROJECTED ANNUAL GHG REDUCTIONS BY 2050:



20,500 tCO_2e
(Very High)

5C - Circular Economy Research and Innovation

GOAL:

To reduce the use of non-renewable resources, promote materials reuse, and support regenerative business models.

ECONOMIC CONSIDERATIONS:

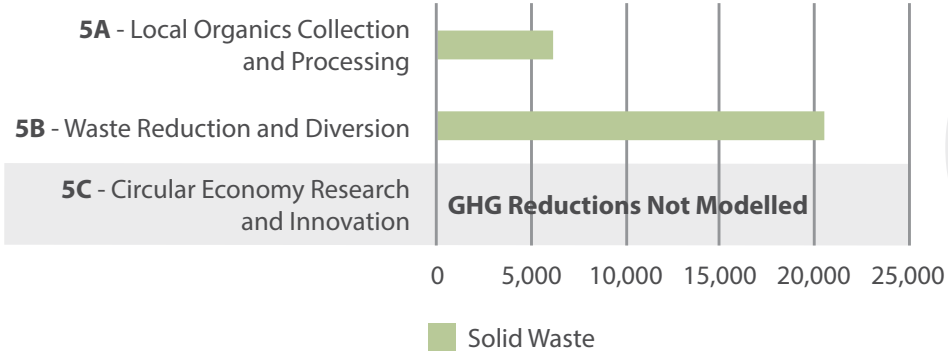
- Developing circular economy initiatives such as local repair, reuse, and upcycling business opportunities can help support the local economy and create green jobs for people with a variety of skills and abilities.
- Repurposing materials and upcycling keeps more value in the local economy.
- Turning a waste product into a resource can save companies money through reduced disposal fees and improved efficiency.

ACTIONS:

- ❑ Support circular economy initiatives that keep products and materials in use, such as repair hubs, and upcycling and resource recovery social enterprises that generate added value out of salvaged materials.
- ❑ Facilitate discussions with local industries and stakeholders to determine whether waste or by-products of one industry can be productively utilized by another industry.

PROJECTED ANNUAL GHG REDUCTIONS BY 2050:

*While not modelled for this strategy, advancing research and facilitating collaboration that result in waste reduction, diversion, and reuse solutions enables emissions reductions in the waste sector.



Enabling*

TOTAL BIG MOVE 5

PROJECTED ANNUAL EMISSIONS REDUCTIONS

(tCO_2e) BY 2050, BY SECTOR

Strategies to collect and process organics, plus reduce and divert waste, will lower emissions by significantly reducing the amount of methane-producing materials in the landfill. Circular economy research and innovation may enable further waste reduction and beneficial end use opportunities that support emissions reductions, both locally and throughout supply chains.

[i] "Food Waste in Canadian Homes in 2020," Love Food Hate Waste Canada, accessed February 22, 2021, https://lovefoodhatewaste.ca/get-inspired/food-waste-in-2020/.

[ii] "2020 By the Numbers", Kamloops Food Bank, accessed March 17, 2021, https://www.kamloopsfoodbank.org/about-us/.