WASTE & RECYCLING UTILITY

2022 Annual Report





TERRITORY ACKNOWLEDGEMENT

The City of Lethbridge acknowledges that the place we now call Lethbridge has for many generations had another name given to it by the Siksikaitsitapi, the Blackfoot Peoples. The name is Sikóóhkotok, a reference to the black rocks found in the area.

The City of Lethbridge is located in the traditional territory of the Blackfoot Peoples and within Treaty 7 lands. The City of Lethbridge is also home to the Métis Nation of Alberta, Region III.

We pay respect to all Indigenous Peoples past, present and future, by recognizing and respecting their cultural heritage, beliefs, inherent rights, and relationship to the land.



Table of Contents:

- 3 2022 Year in Review
- 4 Waste & Recycling Utility Information
- **5** Service Levels
- **7** Waste Facts
- 8 Utility Rates
- 10 Waste Collection
- 17 Waste Processing
- **26** Capital Projects
- 28 Education & Outreach
- 31 Business Waste Diversion
- **35** Sustainability
- 38 Waste & Recycling Roadmap
- 39 Lethbridge Waste Generation
- **40** Acknowledgements

lethbridge311



2022 YEAR IN REVIEW

During 2022, the Waste and Recycling Utility (WRU) advanced numerous projects and initiatives moving the community closer to our waste management and sustainability goals. Some notable achievements include:

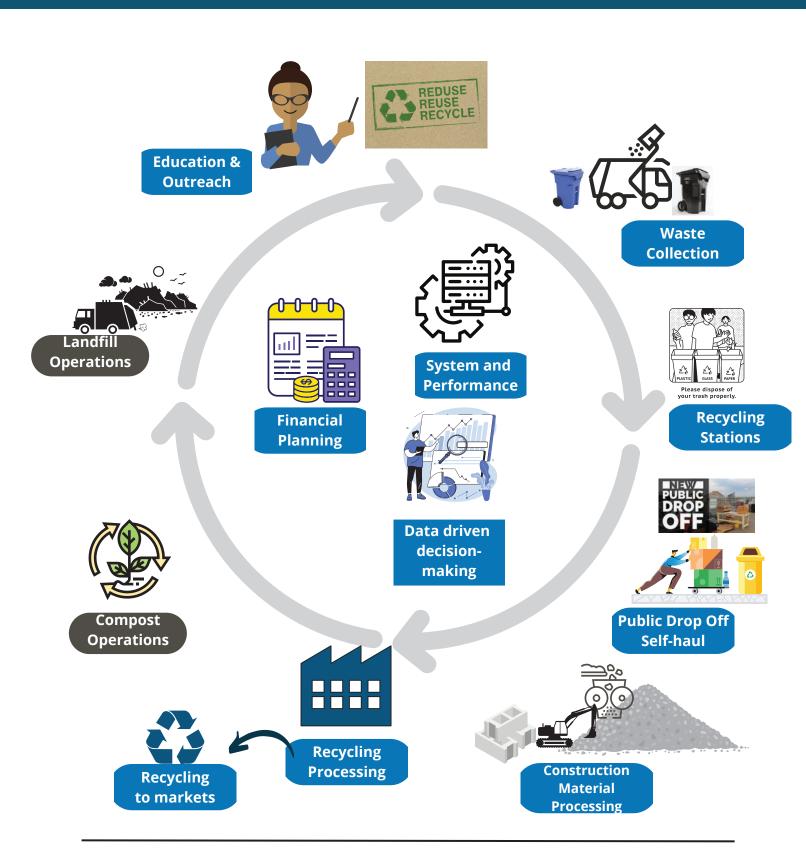
- The launch of phase 1 of the curbside organics program
- Construction of an organics processing facility, in preparation of Phase 2 roll-out in spring 2023
- The launch of the mandatory organics and mandatory recycling program for businesses
- Delivery of the the Love Food Hate Waste education campaign

All of this work will help to reduce waste in the community and reach the waste diversion targets set out in the City Council Waste Diversion Policy.

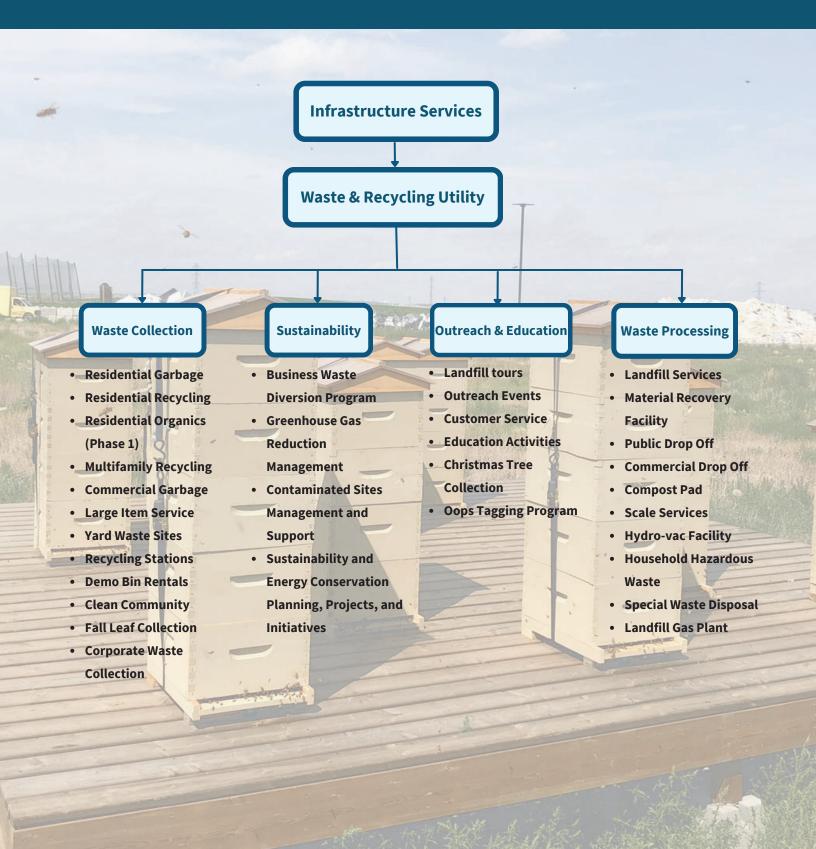
Commencement of operations of the landfill gas control facility is reducing greenhouse gas emissions (GHG) from the landfill site. This system is capable of removing methane from landfill gas emissions and improves environmental performance moving towards the City towards our GHG reduction goals. Other improvements include the optimization and expansion of services provided by the hydrovac waste facility, resulting in a 225% increase in customer use.

This work would not have been possible without the hard work and dedication of both our Waste and Recycling administration and operations team and the staff and contractors who operate the Waste and Recycling Centre.

WASTE & RECYCLING UTILITY



SERVICE LEVEL AREAS



OUR SERVICE LEVELS



Garbage (Black Cart):

- Bi-weekly garbage collection
- Two cart size choices:
 - o 240 liter cart \$10.23/month
 - o 360 liter cart \$11.94/month
- Fee includes up to two large item service pick ups per year
- Fee includes up to 250 Kg per load as a free saturday subsidy to encourage use of the landfill and reduce illegal dumping
- Extra cart fee is \$8.63/month
- Multi-family serviced through common collection



Recycling (Blue Cart):

- Bi-weekly recycling collection
- Two cart size choices:
 - o 240 liter cart \$9.00/month
 - o 360 liter cart \$9.00/month
- Multi-family serviced through common collection

Organics (Green Cart):

- Program approved by City Council in June 2021
- Phase 1 started in May 2022
- Weekly (Summer), bi-weekly (Winter) cart pickup
- Phase 2 citywide implementation Spring 2023
- One cart size:
 - 240 liter \$5.00/month
- Multi-family serviced through common collection implementation to begin in fall 2023



Recycling Stations & Yard Waste Sites:

- Three recycling stations North, South, and West locations for City Residents only
- Waste reduction fee covers for this service, \$3.60/month
- Includes yard waste sites drop-off available from April until November
- Fall leaf collection is included in the program fee
- Christmas tree collection is included in the program fee

Waste & Recycling Centre (Regional Landfill):

- The City owns the Waste & Recycling Centre
 - Landfill
 - Material Recovery Facility (MRF)
 - Composting site
 - Hydro-vac waste facility
- Garbage tipping fee is \$115/tonne other rates are available here: Tipping Rates
- Public drop-off area for residents includes household hazardous waste, battery recycling, tire recycling, garbage disposal, and more
- · Commercial drop-off site to recycle, wood, concrete, shingles, drywall, and more



Business Recycling:

- Industrial, commercial and institutional and construction and demolition waste diversion support
- Mandatory recycling and organics program for businesses



Sustainability:

- Land
- Air
- Water
- Energy
- Waste

WASTE FACTS 2022



Waste Operations picked up over

1.5 MILLION

recycling, organics, and garbage carts



20%

of waste delivered to the Waste & Recycling Centre was diverted from the landfill



1,138
Christmas Tree
Pick-ups



The Waste & Recycling Centre

138,210

tonnes of waste



The MRF has shipped over

25,055

Tonnes of recyclables to market since opening

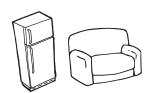


Corporate Greenhouse Gas emissions were reduced

12% from 2018 baseline levels



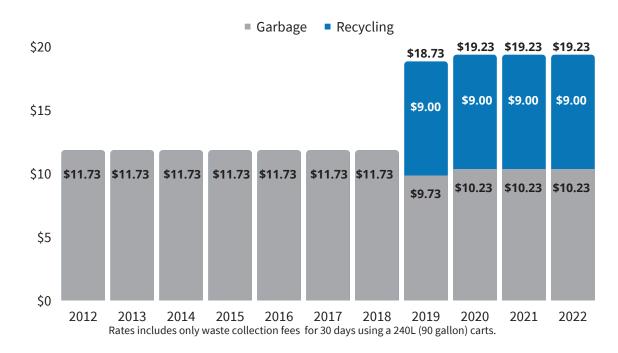
26,396
WASTE WIZARD



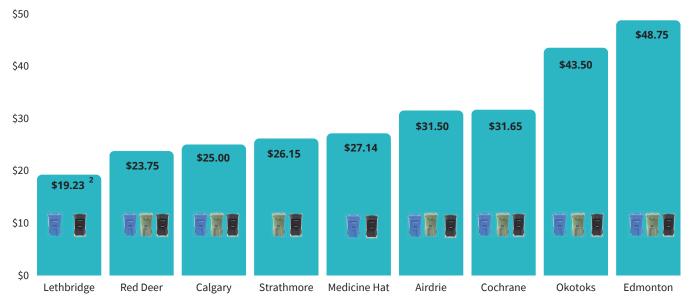
3,332
Large Item Service pick-ups

UTILITY RATES

Utility Rates History in Lethbridge



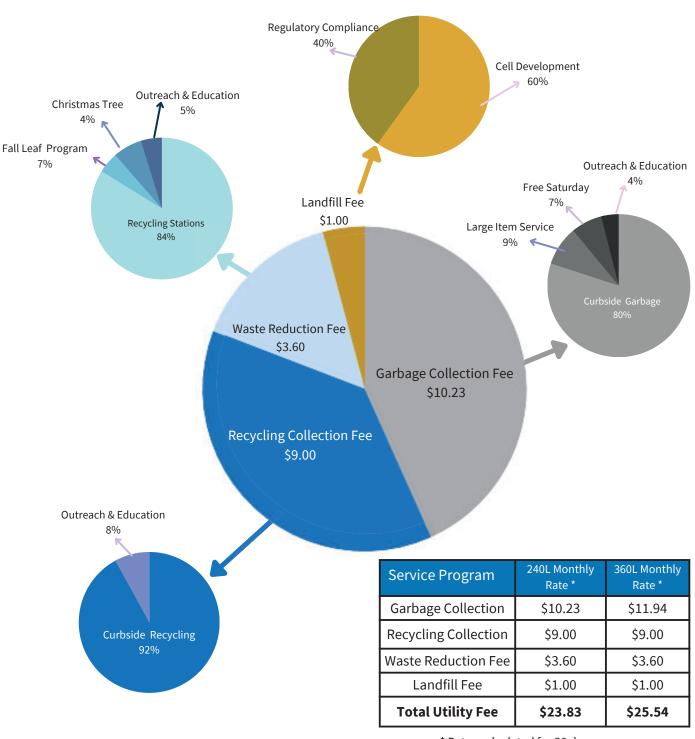
Utility Collection Rates Comparison in Alberta



- 1- Rates comparison includes only waste collection fees for 30 days using a 240L (90 gallon) carts.
- 2- Lethbridge rates include Large Item Service and Free Saturday
- 3- All rates are as January 2023

UTILITY RATES BREAKDOWN

Monthly Residential Rate for all Services



^{*} Rates calculated for 30 days

WASTE COLLECTION

2022



3,555

Curbside Recycling collected



20,577

tonnes of

Curbside Garbage collected



258

tonnes of

Phase 1 Curbside Organics collected



619

Fall Leaf service requests



467

Demolition bins service requests

1,058

Tonnes of recycling hauled to the Recycling Stations







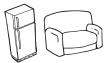
1.5 MILLION

recycling, organics, and garbage carts collected from Lethbridge households



618

new carts delivered



3,332

Large Item Service pick-ups



9,602

Service Requests



71,469

of Yard Waste Visits

2,011

Tonnes of yard waste hauled to the Yard Waste Sites

WASTE COLLECTION

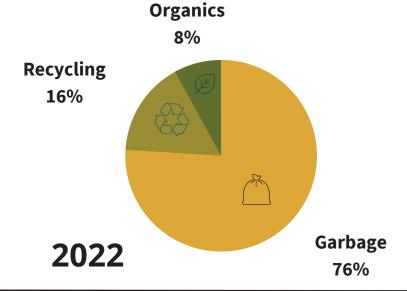
Services & Programs

- Residential bi-weekly garbage collection
- Residential bi-weekly recycling collection
- Residential organics collection
- Multi-family recycling collection
- Corporate waste diversion program
- Commercial garbage collection
- Recycling Stations

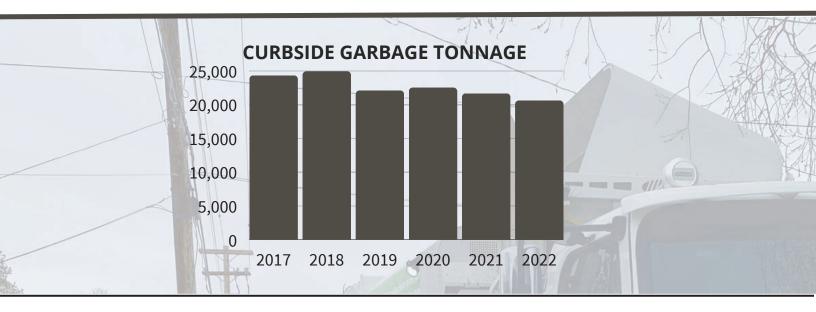
- Seasonal fall leaf collection
- Seasonal yard waste sites
- · Large item service
- Clean community program
- · Christmas tree recycling
- Assisted collection program



Waste Collection Breakdown

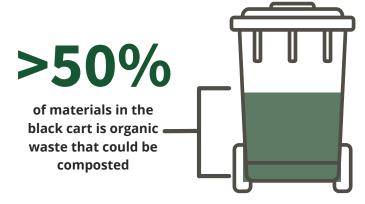


Residential Bi-Weekly Garbage Collection Trend



Black cart waste audit results (2019-2022)

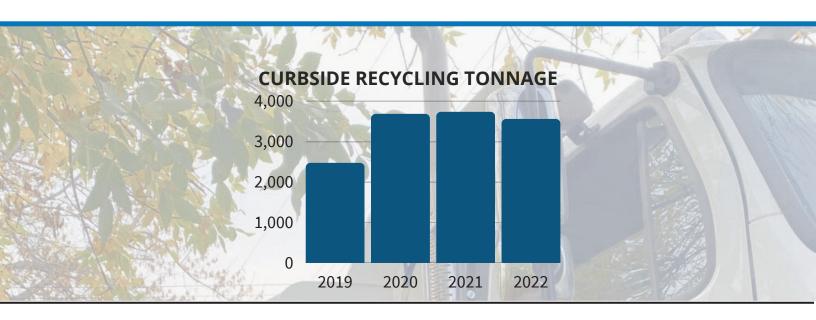
Organics	51%
Garbage	36%
Recycling	11%
Product Stewardship	2%



It is estimated that 11,000 tonnes of organic material could be diverted from the landfill



Residential Bi-Weekly Recycling Collection Trend



Blue cart waste audit results (2019-2022)

Recycling	85%
Garbage	9%
Organics	5%
Product Stewardship	1%

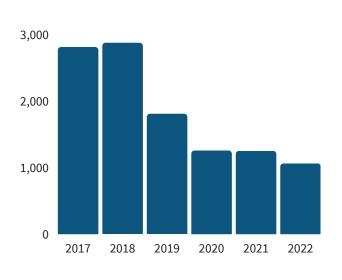
85% of materials in the blue carts is recyclable material

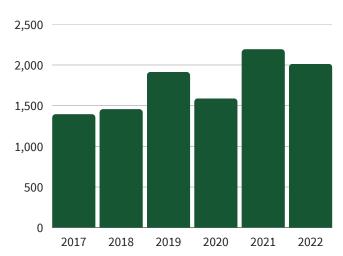


Recycling Station & Yard Waste Drop-Off



YARD WASTE SITES TONNAGE









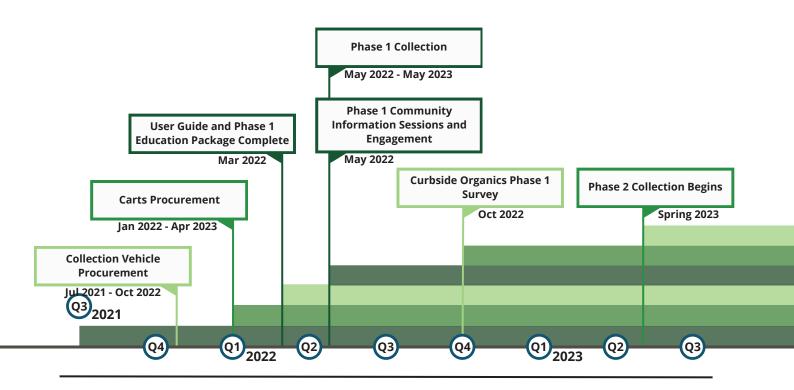
Residential Curbside Organics Collection

Lethbridge City Council approved the implementation of the curbside organics collection program (green cart) on June 1, 2021, fulfilling the last major step in the 2015 Waste Diversion Strategy.

Once fully implemented, the service will provide organics collection to 34,500 single-family residences, as well as 7,500 multifamily residences. This collection will supplement the existing three community yard waste sites, as well as the seasonal Fall Leaf and Christmas tree collection programs.

All existing curbside collection residences will have curbside organics collection by Spring 2023, with multi-unit dwelling residences set to begin receiving organics collection in Fall 2023 (rolling-out using a phased approach based on property size).





Waste Collection 2023 Projects

Activity	Description
Wind Mitigation Pilot	Focusing on areas with known wind issues, utilizing intruck systems and resident feedback the number of households with wind mitigation solutions installed on their blue carts will be expanded.

Route Optimization

Collection data was used to complete an assessment of existing collection routes. In conjunction with the City's Asset Management team routes were adjusted to maximize the number of households per route based on specific material being collected.

The newly-optimized routes will be implemented for black and blue cart curbside collection in the spring of 2023.

Toxic and Electronic Waste Round Up Pilot

The first toxic and electronic waste round up event was held on November 19, 2022 at the City Hall parking lot. The event's goal was to provide an accessible collection point for residents to safely prevent household hazardous waste and electronic waste from ending up in the landfill.

Approximately 800 vehicles used the event and a total of 2,980 kg of e-waste, 25 totes of paint, 3 drums of paint aerosols, and 2,740 litres of oil were collected.

Two additional round-ups are planned for 2023.



WASTE PROCESSING

2022



Waste & Recycling Centre received



ratings on Google



The Waste & Recycling Centre processed

138,210



110,698

total tonnes of garbage



18,423

total tonnes of recycling



9,090

total tonnes of organics



The Materials Recovery Facility processed

10,990 tonnes of recyclables

2,225,792







30,463

Free Saturday hauls



20%

of waste delivered to the Waste & Recycling Centre was diverted from the landfill



45

wind closures (>70km/h)

WASTE PROCESSING

Services & Programs

Waste Processing

- Mixed solid waste landfill disposal
- Industrial soil landfill disposal
- Hydro-vac waste disposal
- Composting
- Materials Recovery Facility recycling
- · Construction material recycling
- · Landfill gas plant

Hazardous & Special Product Recycling

- · Electronic waste
- Tires
- Used & cooking oil
- Household hazardous waste
- Paint

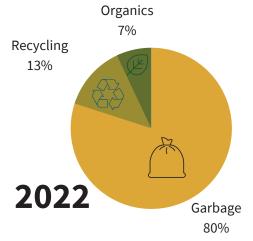
Special Disposal Programs

- Free Saturday Subsidy Program
- Coaldale Landfill Subsidy Program
- Lethbridge County Neighbours Disposal Program

Waste Processing Breakdown



total hauls to the Waste & Recycling Centre in 2022





Waste & Recycling Centre Landfill

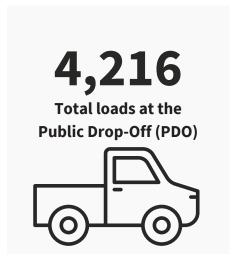


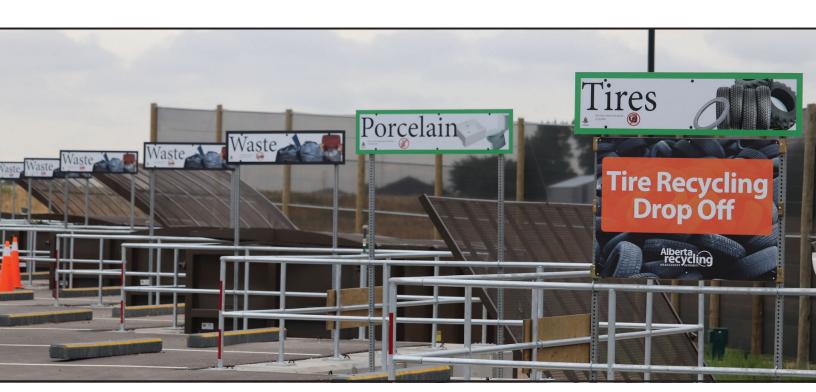


Waste & Recycling Centre Diversion

PUBLIC DROP-OFF - 2022

Material	Tonnes
Metal	307
Glass	125
Electronic waste	89
Tires	100
Mixed recyclables	55
Used oil	54
Household hazardous waste	34
Paint	29





Waste & Recycling Centre Diversion

CONSTRUCTION DROP-OFF - 2022

Material	Tonnes
Daguslahla shinglas	2.004
Recyclable shingles	2,994
Lumber & pallets	2,959
Concrete	2,577
Drywall	707
Asphalt pavement	91
Brick & block	101
Sand & gravel	190
Porcelain & stone	34

11,824
Total loads at the
Construction Drop-Off (CDO)

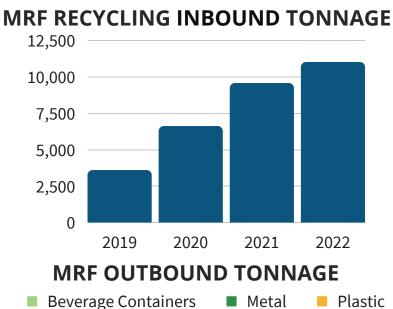


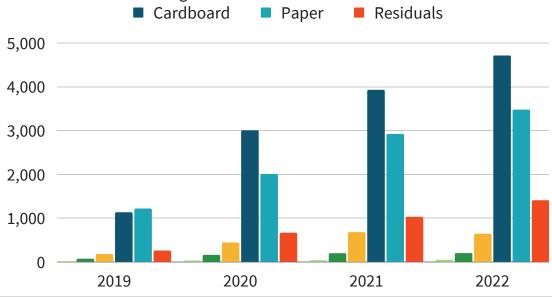
450

Tonnes of pallets processed and shipped out in the last four years



Materials Recovery Facility Processing

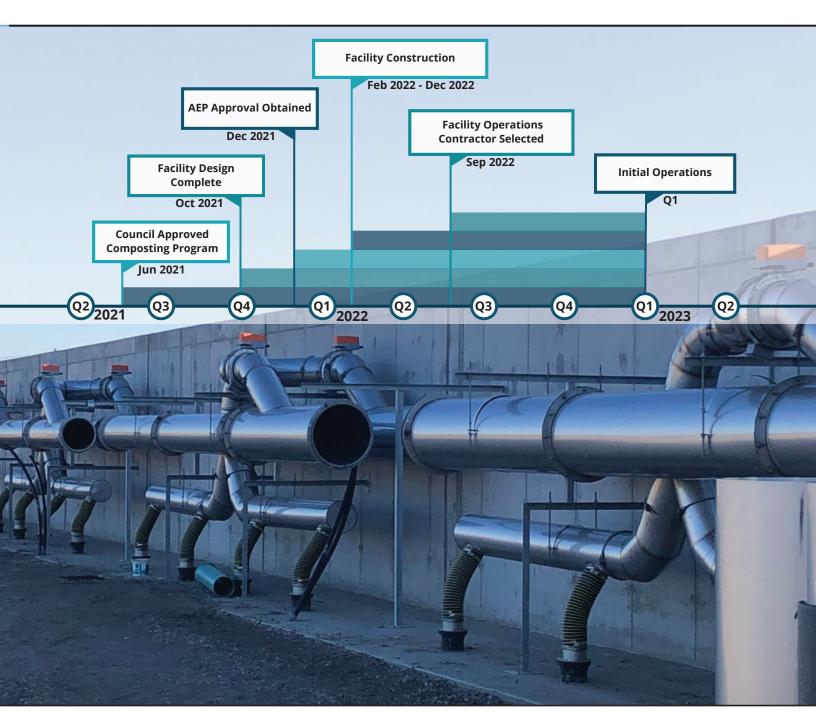






Organics Processing Facility

The WRU has been working towards achieving a key objective of having a suitable processing facility for organics in the community. Sited at the WRC, a receiving building and covered aerated static pile (CASP) composting facility is being constructed to process organic material from the citywide green cart program in 2023. This composting facility will be able to process 20,000 tonnes per year of source separated organics from the green cart program and businesses as well as select packaged organics.



Landfill Gas Collection & Control System

The WRC has commenced operation of the landfill gas collection and control system. The landfill gas system will help to improve safety and environmental performance as well as reduce greenhouse gas emissions from the landfill site. The utility is working towards registering the site with the government to be eligible to collect carbon credits for the City of Lethbridge.

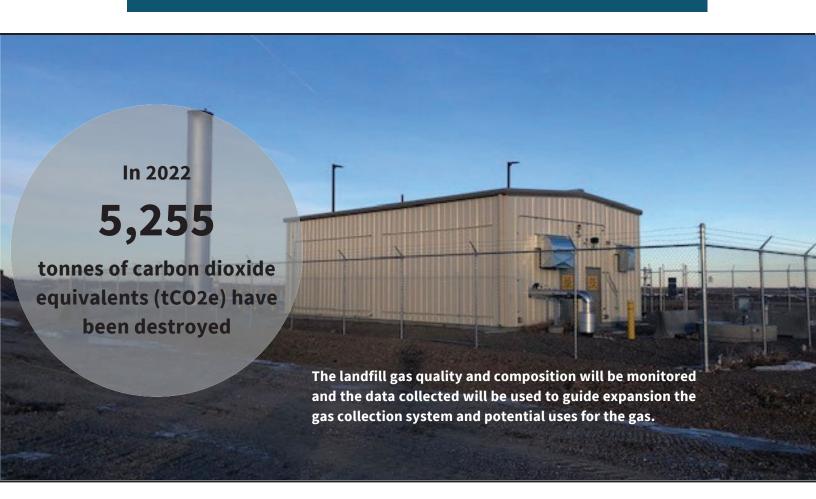
The landfill gas collection and control system is comprised of a control building and a wellfield

The control building houses:

- Two blowers
- An enclosed flare
- All associated electrical and instrumentation

The wellfield includes:

- 16 wells
- A header system that connects the wellfield to the control plant
- A sub header system that ties the wells into the header system



Hydro-vac Waste Facility



The hydro-vac waste disposal facility was constructed to support industry in the region with safe disposal of hydro-vac slurry waste.

The facility has received more than 11,250 tonnes of material from 1,894 hauls. The number of customers using the facility increased by over 225% from 6 customers in 2021 to 20 in 2022. The material is dewatered at the facility and tested to confirm it falls within acceptable limits. To date 6,400 tonnes of dry solids have been used in the landfill. The WRC continues to optimize the facility to expand services and accepted material to increase usage from local and regional commercial customers.

WRC Frequently Asked Questions:

Q: What do I do with ___?

A: Check out the Waste Wizard or call 311

Q: Can I come get a ?

A: No, the WRC does not permit scavenging. The items received from customers are collected for safe disposal and recycling only. Please visit one of several non-for-profit organizations located throughout the community.

Q: Can I have a tour of ___?

A: Yes, the WRC has <u>recorded tours</u> and can provide both virtual and in-person tours for most groups. Please contact 311 and they will put you in contact with our Waste & Recycling Education team.

CAPITAL PROJECTS

Completed in 2022

Organics Processing Facility (OPF):



Waste Transfer Station Expansion (Phase 1):



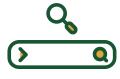
Capital Projects 2023 Plans

Activity	Description
Waste Transfer Station Expansion (Phase 2 – Bale Storage)	This expansion will increase the interior square footage for bale storage and enhance reliability and safety for staff in adverse weather.
Industrial Contaminated Soils (ICS) Waste Cell	The construction of an ICS waste cell will allow the WRC to continue to receive contaminated soils from the industrial and commercial sectors of the community and region.
Scale Replacement and Traffic Management Improvements	Design and construction of a new scale house with quad scales and traffic control measures. The amount of traffic from residents and customers at the WRC has increased contributing to long lineups at the facility entrance and traffic congestion on-site. This project will reduce wait times and improve safety.
WRU Sanitation Vehicle Storage Expansion	Design and construction of a 4 bay expansion to the existing sanitation vehicle storage facility at Public Operations. This expansion will provide indoor storage for heavy-duty trucks, extending asset useful life and mitigating excess maintenance costs.



EDUCATION & OUTREACH

2022



26,396

STE VVIZ&RD



619

Fall leaf service requests



212,810

Total website visits



186

Calls responded to



4,053

Survey responses



170,476

Collection schedule reminders



1,138

Christmas tree pick-ups



1,035

Participants in school tours, engagements, etc

Services & Programs:

- Waste prevention programs
- Diversion education activities
- Waste Wizard
- Landfill tours
- Community surveys
- What We Heard reports

- · Outreach events
- Christmas tree diversion program
- Fall leaf collection communication
- Oops tagging
- Customer service

Education & Outreach Updates

Activity

Description

Curbside Organics Education & Outreach



The education & outreach team is using the important feedback the phase 1 curbside organics residents provided to develop the education material and outreach for the city-wide single-family roll-out planned for spring 2023.

Phase 1 outreach included:

- <u>Development of a website</u>
- Updates to the Waste Wizard sorting tool
- Ins & Outs brochure and Erase Waste guide
- Information sessions with more than 100 participants
- Newsletters that included information on the green cart program as well as helpful tips and reminders
- Survey for phase 1 collecting feedback on education & outreach material, schedule frequency for winter, pest issues, and information session topics

Plans for phase 2 include:

- Feedback from phase 1 information sessions,
 311, and survey results will be incorporated
- Information sessions, community, and school outreach
- Curbside organics launch program promotion



Don't want to miss another collection?

Sign up for collection reminders with <u>Lethbridge Loop</u>.

Education & Outreach Updates

Activity

Description

Blue Sky Centre

Too Good to Waste School Tours

The Blue Sky Centre had updates in 2022 starting with installation of Indigenous displays. The Too Good to Waste School Tours also resumed in the fall of 2022 for grade 4 students with 324 students from 8 different schools. Both students and teachers enjoyed the opportunity to learn more about waste prevention and reduction by interacting with the new Blue Sky Centre displays.



Love Food Hate Waste

City of Lethbridge along with the Recycling Council of Alberta formed a partnership with the Love Food Hate Waste global initiative, to promote awareness in preventing household food waste. The outreach team was busy this summer and fall promoting the initiative and educating residents on meal planning, food storage and recipes to reduce and prevent food waste.





BUSINESS WASTE DIVERSION

2022



2,997

loads inspected at the Waste & Recycling Centre



42

1:1 waste diversion interactions with stakeholders



5,638

tonnes of

construction and demolition material diverted from the landfill



1,914

tonnes of drywall repurposed for animal bedding & fertilizer



decrease of ICI kilograms per capita from the 2013 baseline level



45%

decrease of C&D kilograms per capita from the 2013 baseline level

Services & Programs:

- Industrial, commercial and institutional (ICI) and construction & demolition (C&D) diversion programs focused on diverting waste from the landfill
- Provide education and outreach to support the business community
- Mandatory recycling and organics programs
- Designated material and inspection program design and monitoring

BUSINESS WASTE DIVERSION

2022 Highlights

In the business waste diversion area the focus in 2022 was to prepare for the launch of mandatory recycling (paused in 2020 due to COVID-19) and mandatory organics programs. One-on-one interactions with businesses and institutions increased, with more than 40 meetings completed during 2022. A session with local haulers was held in September to inform them about the Waste Bylaw requirements and help them prepare to offer expanded recycling and organic collection services in 2023.

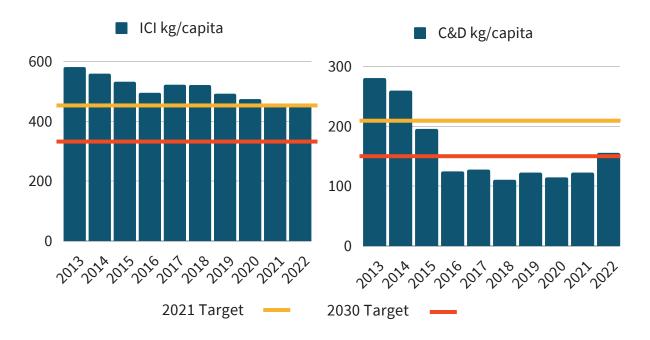
In 2022, the WRU developed tools like a waste bin sign maker tool to reduce barriers for businesses and organizations to implement their recycling and organics collections program. This tool allows businesses to create custom waste diversion signs. In addition a <u>training video</u> was produced and is hosted on the city website so businesses and organizations can use it for free. In early 2023, a guide was mailed out to all businesses and institutions with information on mandatory recycling and organics.

The WRU partnered with the University of Alberta to start research for alternative recycling options for asphalt shingles. More work is required in this area but initial laboratory results indicate it may be possible to use processed shingles in the base layer of roads.

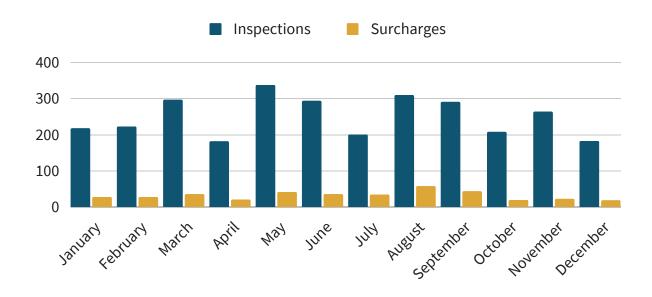


Business Sector Waste Generation

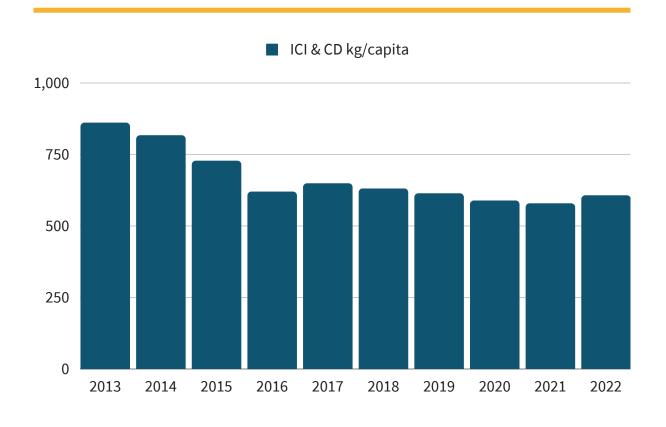
Overall, 49,013 tonnes and 16,846 tonnes of garbage was received at the landfill during 2022 from Lethbridge ICI and C&D sources, respectively. In 2022, ICI Waste was 451 kg/capita, while C&D was 155 kg/capita. Waste shingles tonnage in 2022 decreased 17% from 2021 levels and 97% from 2013 baseline levels.



A total of 2,997 loads were inspected for designated materials at the WRC in 2022 for an average of 250 inspections per month. The number of loads over the acceptable tolerance (25% designated materials present in the load) was 390 for a rate of just under 33 surcharges per month.



Business Waste Generation

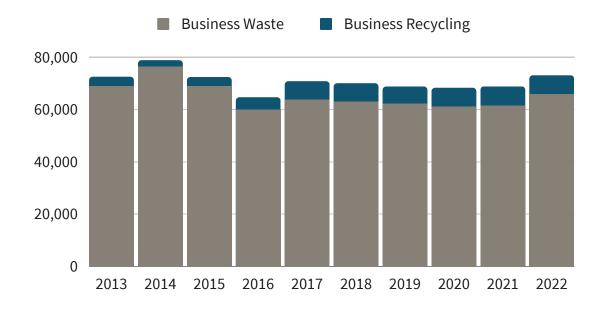




Business Waste Generation

Waste from the C&D and ICI sectors combined is 30% below the 2013 baseline, non-residential waste still increased in 2022.

More than 7,000 tonnes of recyclables were received in 2022, which is similar to business diversion in previous years. This demonstrates an endurance of the businesses' behaviour change throughout the last years. The recent updates in the Waste Bylaw requiring all businesses to provide access for their staff and visitors to recycling and organics containers should contribute to further reduction of garbage and increased diversion from businesses in the coming years.



Mandatory Recycling & Organics



SUSTAINABILITY

2022



total corporate greenhouse gas emissions (tCO2e)



Corporate Greenhouse Gas emissions were reduced

12%

from 2018 baseline levels



search requests

26Environmental Property



45

City Facilities participating in recycling & organics programs



3

ECO Plans submitted on 15 construction projects



67

new pollinator gardens planted



Services & Programs:

- Environment reports database
- Environmental property searches
- Corporate organics & recycling launch
- Partners for Climate Protection
- Compliance/due diligence monitoring
- Energy acquisition
- Policy implementation support
- Energy Conservation Masterplan & Strategy implementation
- Environmental program corporate support

Sustainability Projects & Plans

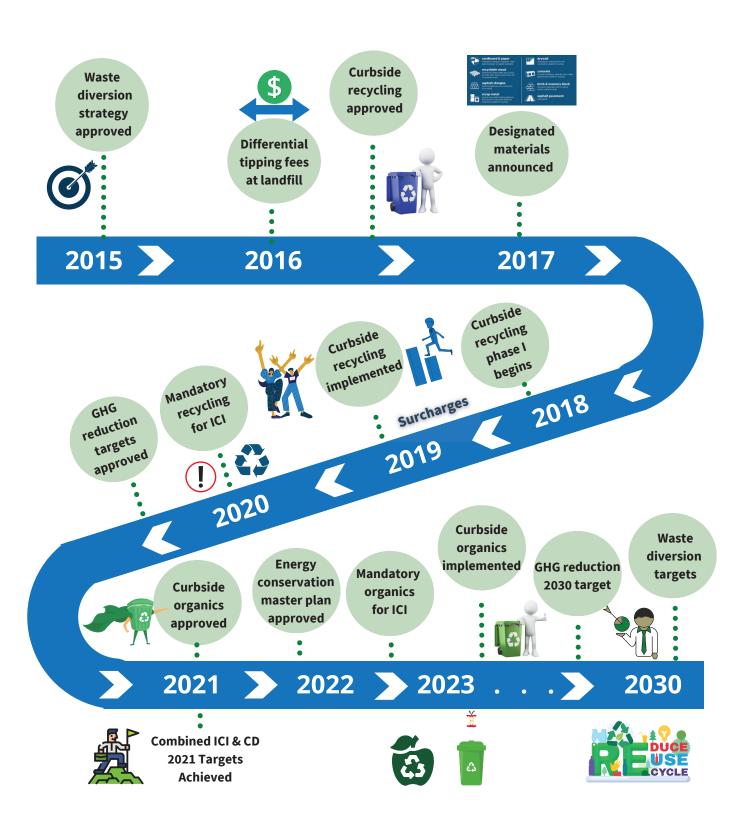
Activity	Description
2022 Projects	 Sustainability Enhancement projects including MRF energy audit completed City facility recycling and organics centralized collection expansion
2023 Plans & Projects	 Electric vehicles and charging stations Solar carport project Energy Conservation Masterplan & Strategy implementation Partners for Climate Protection Milestone 3 – implementation plan Climate Adaptation Plan / Climate Action Plan



Find out more!

Visit the <u>Sustainability website</u> to learn more about sustainability projects and environmental impact reduction efforts.

WASTE & RECYCLING ROADMAP



LETHBRIDGE WASTE GENERATION

Waste Disposal Targets												
	2013 Policy	2014	2015	2016	2017	2018	2019	2020	2021	2021 Target	2022	2030 Target
Residential	330	337	319	312	301	304	271	280	265	180	247	140
Waste Diversion %	20%	15%	16%	18%	17%	18%	24%	25%	28%	50%	28%	65%
Industrial Commercial Institutional	580	558	531	494	521	520	491	473	456	430	451	320
Construction & Demolition	280	259	195	124	127	110	122	114	122	210	155	150
Waste Reduction %	0%	5%	15%	28%	25%	27%	29%	32%	33%	25%	30%	45%
Total	1190	1153	1,045	931	949	934	884	868	843	820	853	610
Waste Reduction %	0%	3%	12%	22%	20%	21%	26%	27%	29%	30%	28%	50%
	2013 Baseline Year									2021 Target		2030 Target

2030 Waste Disposal and Waste Reduction % targets based on Waste Diversion Policy CC54





ACKNOWLEDGEMENTS

Report Authors:

Allyson Racz, Waste & Recycling Technologist

Steve Rozee, Waste & Recycling Utility General Manager

The following individuals contributed in the preparation of this report:

James Nicholls, Waste & Recycling Utility Operations Manager

Lisa Nast, Waste & Recycling Technologist

Jeff Gunderson, Waste & Recycling Systems Technician

Tom Kinnell, Waste & Recycling Centre Manager

Eric Furgason, WRC & MRF Centre Coordinator

Lisa Sutherland, WRC & MRF Centre Coordinator

Paul Hrynczuk, Waste & Recycling Centre Load Technician

Kyle McKenna, Gas & Controls Technician

Mark Molesky, Waste & Recycling Utility Engineer

Leslie Burke, Education & Outreach Specialist

Andrew Cameron, Waste & Recycling Communication & Outreach Technician

Meghan Grills, Waste & Recycling Communication & Outreach Technician

Mandi Parker, Sustainability Manager

Brandon Nguyen, Sustainability Engineer

Raene Barber, Sustainability Engineer

Felipe Pereira de Albuquerque, Jr. Waste Diversion Engineer

David Foder, Utility Analyst

Meagan Williams, Corporate Communications Team Lead

Sara Peters, Communications Strategist

Waste & Recycling collection operations team

Waste & Recycling Centre contractors & staff



THANK YOU **TO OUR PARTNERS**



























311

Asset Management Cart & Bin Suppliers Condominium Boards Corporate Communications Financial Services Fleet Services Executive Leadership Team Information Technology Integrated Risk Management Lethbridge City Council M&B Scaling Parks

Procurement Property Managers Regional WRC Customers Regulatory Services Transportation Utilities Waste & Wastewater WRC Neighbours

WRC Facility Staff YQL Neighbourhoods



UNIVERSITY
OF ALBERTA



































FOR MORE INFORMATION

Waste & Recycling Utility:

- Please visit our website
- Read our Waste Bylaw
- Waste & Recycling Centre website
- <u>Designated Material List</u>
- Sustainability website
- Blue Cart Recycling Sorting It Out
- Blue & Green Cart Curbside website

Curbside Collection:

- Please visit our Curbside website
- Ask the Waste Wizard what's In and Out
- Sign up for collection reminders
- Report a problem like missed collection or mess in lane

Phone: 311 or **403-320-3111** (if outside Lethbridge)

Policies:

- Environment Policy CC51
- Waste Diversion Policy CC54
- Green Fleet Policy E2

Plans & Reports:

- <u>City of Lethbridge Comprehensive Waste Diversion/Waste Master</u>
 <u>Plan</u>
- Stack'd Consulting 2019 Organics Residential Collection Review
- <u>City of Lethbridge 2019 Food and Yard Waste Survey</u>



