

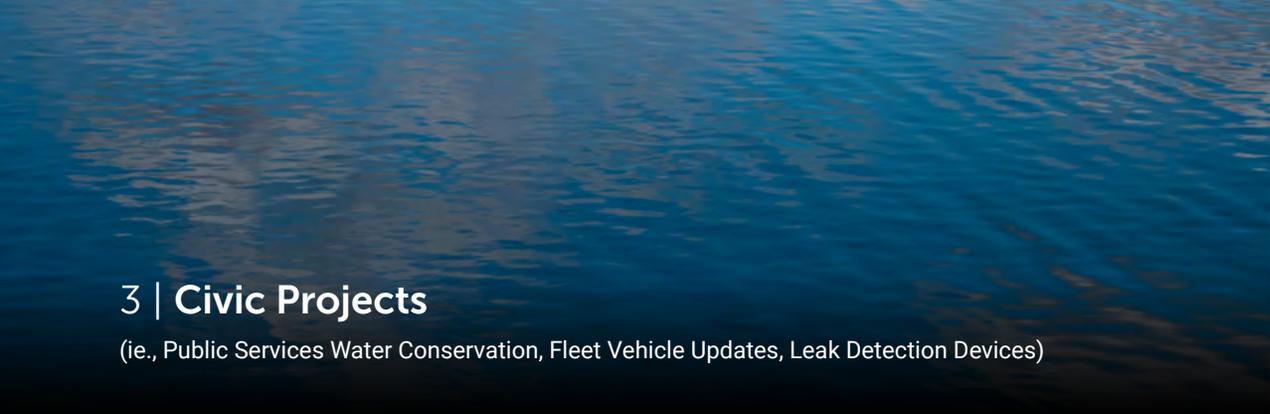
2023

# ENVIRONMENTAL PROGRESS REPORT

*Growing a clean, green and healthy Leduc*

PARTNERING with *nature* 

CITY OF  
**Leduc** 



### 3 | Civic Projects

(ie., Public Services Water Conservation, Fleet Vehicle Updates, Leak Detection Devices)



### 3 | Regional Initiatives

(ie., Regional Area Representation and Collaboration)



### 4-5 | Natural Area Enhancement

(ie., Urban Canopy Expansion, Backyard Hens & Bees Pilot Program, Pollinator Garden Challenge, Seasonal Bird Count)



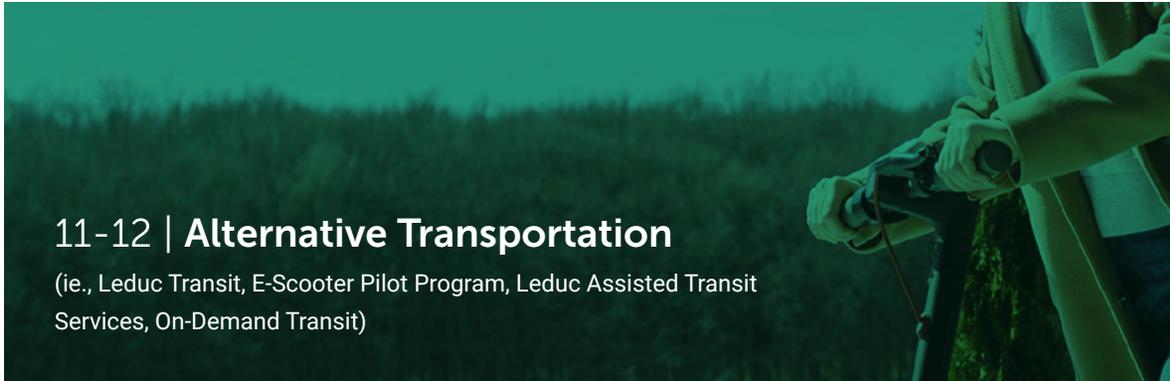
### 6-7 | Air Quality Monitoring and Greenhouse Gas Reduction Actions

(ie., AQHI Pilot Program; Air Quality Monitoring Statistics, Wildfire Smoke Graph)



### 8-10 | Energy Conservation

(ie., Solar Initiatives, Clean Energy Improvement Program, Home Energy Efficiency, EV Charging Infrastructure, EV Road Trip)



### 11-12 | Alternative Transportation

(ie., Leduc Transit, E-Scooter Pilot Program, Leduc Assisted Transit Services, On-Demand Transit)



### 13-17 | Waste Diversion Initiatives

(ie., Recycle Coach, Curbside Collection, EPR Registration, Organics Inspection Pilot Program, Styrofoam and Expanded Electronics Pilot Projects, New Multi-Stream Waste Bins, Recycle Roundup)

# CIVIC *projects*

## Public Services

An innovative strategy was introduced to address the issues of street cleanliness and water conservation by harnessing dormant water mains as a water source for municipal operations. Street sweepers and water trucks will draw water from these mains, eliminating the need for periodic flushing to prevent stagnation and maintain water quality.

## Fleet Procurement

- A new Ford Escape plug-in hybrid electric vehicle (PHEV) was added to the City's fleet.
- Prioritization of right sizing principles in procurement was exemplified through the acquisition of three mid-sized, fuel efficient trucks and the retirement of six full-sized trucks.

## Leak Detection

45 leak detection devices were installed in areas with older infrastructure or suspected leaks. These devices will help the City monitor the structural integrity of our water supply infrastructure and aid in water loss prevention.



## REGIONAL INITIATIVES

Engineering and Environmental staff continued to represent Leduc on the **Alberta Capital Airshed, Capital Region Municipal Sustainability Group, Edmonton Energy Transition Learning Network, Stormwater Collaborative, and Edmonton Region Waste Advisory Committee.** These organizations foster productive collaboration across the Capital Region and ensure alignment with current regional initiatives.

# NATURAL AREA *enhancement*

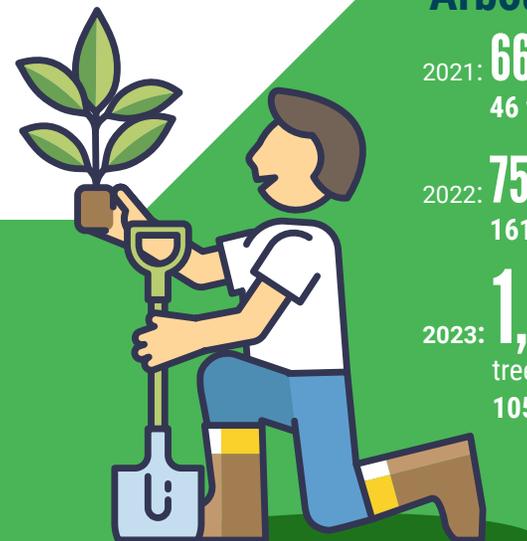
## Natural Resources Canada's 2 Billion Trees Program (2BT)

### Urban Canopy Expansion Project

2023 kicked off the first year of Leduc's Urban Canopy Expansion Project. Supported by funding through **Natural Resources Canada's 2 Billion Trees Program**, the project will see 20,000 trees planted in urban parks, along boulevards, and around restored wetland areas over a two year period.

**In 2023, a total of 10,785 trees were planted. 1,005 seedlings were planted across 0.7 hectares by City staff and volunteers at the North Telford Memorial Forest as part of the City's annual Arbour Day event.** In addition to providing a variety of ecological benefits, these trees will contribute to the creation of a commemorative forest where plaques will be available for purchase to honour lost loved ones. Plaques will be displayed at the entrance of the forest, providing visitors with a place to pause in reflection before entering a beautiful, naturalized space where they can connect with nature, themselves, and the memories they carry.

The remaining 9,780 trees were planted across 0.8 hectares of upland areas surrounding wetlands recently restored through Alberta Environment and Parks Wetland Replacement Program. The variety of species planted will improve aquatic and terrestrial habitat, enhancing biodiversity within these vibrant ecosystems. The presence of trees will also help to stabilize slopes and limit the growth of noxious weeds and other invasive species, reducing maintenance costs for the City.



### Arbour Day

2021: **661** trees planted;  
**46** volunteers

2022: **752** trees planted;  
**161** volunteers

2023: **1,005**  
trees planted;  
**105** volunteers

### Tree Replacement Program

The City planted an additional 404 large caliper trees around Telford Lake to replace those lost to disease and pests with funding through the Investing in Canada's Infrastructure Program.

## Backyard Hens & Bees Pilot Program

- As an extension to backyard gardening, the City's Backyard Hens and Bees Pilot Program offers participants a rewarding experience centered around enhanced personal food production and a strengthened connection to nature. Applications opened in 2021 with the two-year pilot program concluding in 2023.
- The Leduc Environmental Advisory Board (LEAB) reviewed the City's Hens and Bees Pilot Program against evaluation criteria laid out at the onset of the pilot. While participation levels remained low throughout the duration of the pilot, a review of the City's engagement statistics revealed impressive public reach, interest, and engagement for a campaign of this size and showed overwhelmingly positive feedback from participants, neighbours, and the general public. **The program was permanently adopted at the end of 2023.**

## Pollinator Garden Challenge

Creating gardens and landscapes that provide food, water, and safe shelter for pollinators can help boost pollinator populations and enhance natural plant biodiversity. Leduc joined this North American-wide initiative in 2018 and saw 13 participants plant their own pollinator gardens last year.

2021: Registrations: 4

2022: Registrations: 28

2023: Registrations: **13**

## Spring Bird Count

2021: 1,353 birds; 96 species

2022: 809 birds; 78 species

2023:



**1,991 birds**

**100 species**

## Winter Bird Count

2021: 606 birds; 30 species

2022: 213 birds; 21 species

2023:

**251 birds**

**27 species**



*natural area enhancement*

# AIR QUALITY

## *monitoring*

### Air Quality Health Index (AQHI) Pilot Program

In 2023, data from the City's AQHI pilot with the Alberta Capital Airshed (ACA) and Alberta Environment and Protected Areas (AEPA) went live to the public on the province's AQHI map (<https://airquality.alberta.ca/map/>). The City of Leduc is excited to be a part of the AQHI map that will provide real-time insight into our community's air quality. Having easily accessible data allows the City to make informed decisions to support the health and well being of residents.

#### AIR QUALITY HEALTH INDEX

Learn what the **air quality** around you means to your **health**.



## Air Quality

Air quality meets provincial objectives according to Leduc's passive air monitoring program at the dog park.

**The City's annual average nitrogen dioxide (NO<sub>2</sub>) reading in 2023 was 2.9 parts per billion (ppb).**

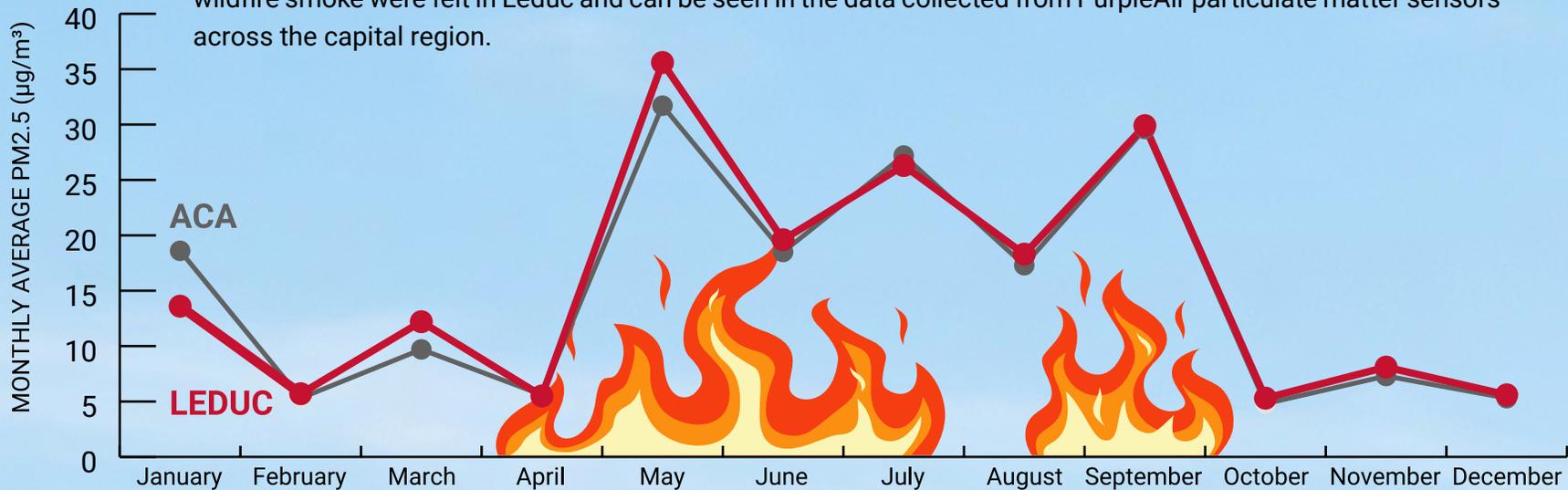
This was well below the annual Alberta Ambient Air Quality Monitoring Objective (AAAQO) of 24.0 ppb and below the ACA regional monitoring passive network average of 4.5 ppb.

**The City's annual average sulphur dioxide (SO<sub>2</sub>) reading in 2022 was 0.6 parts per billion (ppb).**

This was well below the annual Alberta Ambient Air Quality Monitoring Objective (AAAQO) of 8.0 ppb and aligned with the ACA regional monitoring passive network average of 0.6 ppb.

## Wildfire Smoke

2023 saw a record number of wildfires sweep across western Canada. The profound air quality impacts of wildfire smoke were felt in Leduc and can be seen in the data collected from PurpleAir particulate matter sensors across the capital region.



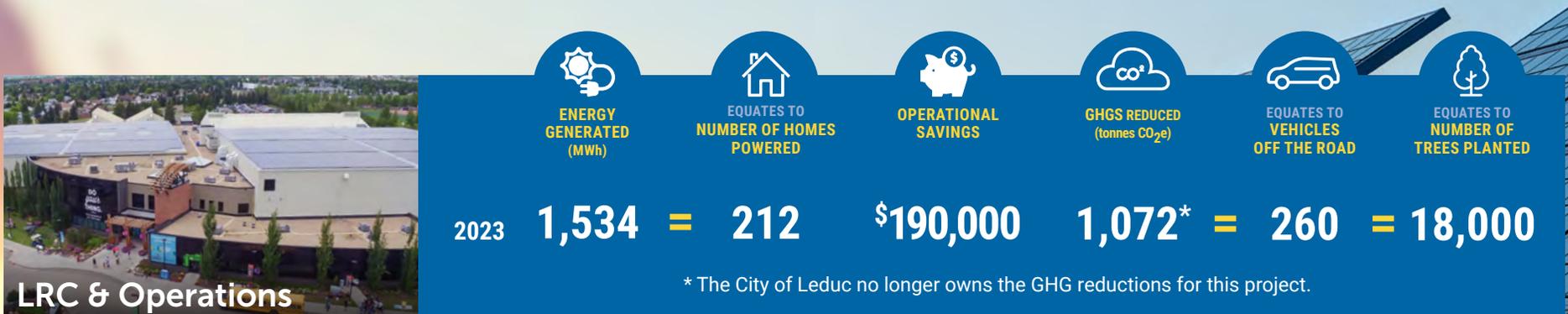
Please note: Leduc's data is an average of 3 sensors and ACA's data is an average of 75 sensors.

# ENERGY

## conservation

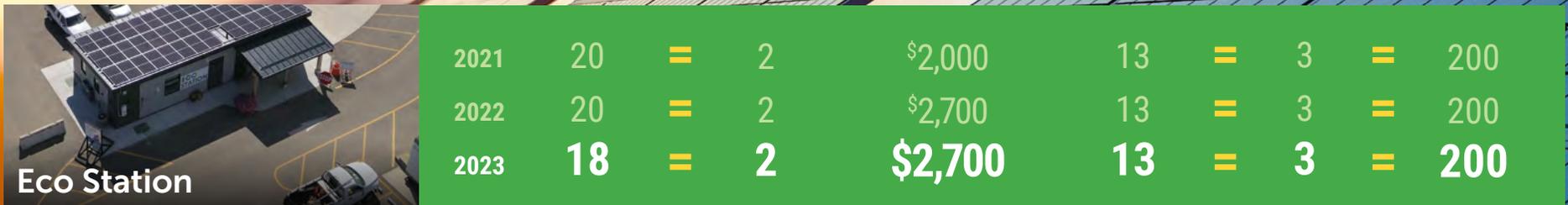
### Solar Initiatives

Solar arrays can be found on the Leduc Recreation Centre as well as the City's Operations Building, Protective Services Building, and local Eco Station. These solar panels form part of a foundational energy conservation program in Leduc, reducing greenhouse gas emissions, enhancing the environment, and contributing to operational savings for the City.

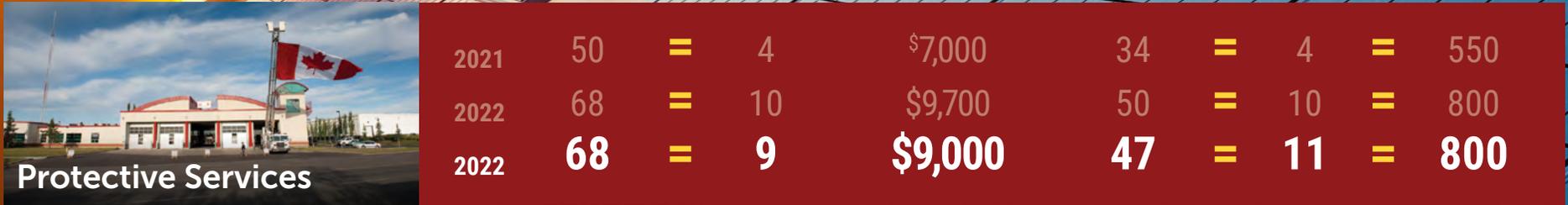


LRC & Operations

Credits have been sold to generate revenue for future environmental initiatives and is estimated to generate over \$37,000.00.



Eco Station



Protective Services

# Improving Our Energy Efficiency

As part of the Municipal Energy Manager (MEM) Program, the City of Leduc hired a Municipal Energy Project Manager in 2021 to benchmark municipal facilities, identify energy savings opportunities, and implement greenhouse gas emission reducing projects. A number of exciting projects rolled out in 2022.

## Clean Energy Improvement Program (CEIP)

With competitive interest rates and convenient repayment through property taxes, CEIP provides property owners with a flexible way to pay for energy efficiency and renewable energy projects. 2023, marked the second year of a four-year pilot program and saw many upgrade projects completed, including solar panel installations, energy efficient window/door upgrades, insulation upgrades, and water heater/furnace replacements.

Number of Projects Completed:

2023  
**17**

Visit [myCEIP.ca/Leduc](https://myCEIP.ca/Leduc) for more information.

## Sustainability Series

The Sustainability Series teaches city staff about different energy sector topics that can be incorporated in city programs and projects.

## Home Energy Efficiency Kits

Leduc's home energy efficiency kits remain available at the Leduc Library for anyone interested in determining the energy efficiency of their homes. The kits include the following items and were signed out 18 times over the course of 2023:

- ✓ THERMAL SCANNER
- ✓ THERMOMETER /HYGROMETER
- ✓ AIR QUALITY MONITOR
- ✓ RADON DETECTOR
- ✓ WATTMETER
- ✓ FRIDGE/FREEZER THERMOMETER



## EV Charging Infrastructure

In 2023, Leduc received the Minister's Award for Environmental Innovation in celebration of the solar carport and electric vehicle (EV) charging stations installed in the City's downtown core. Soon after, the City installed two, level-two EV charging stations and two, level-three EV charging stations at the Leduc Recreation Centre (LRC), funded entirely through the Municipal Climate Change Action Centre. These additions bring the total number of City-owned EV charging stations to ten. Similar to the downtown EV charging stations, the new EV charging stations will draw power from the LRC rooftop solar panels.

## EV Road Trip

In collaboration with the Municipal Climate Change Action Centre and Canada's Zero Emission Vehicle Awareness Initiative, the City of Leduc hosted an "EV Road Trip" event which offered the community an opportunity to speak with subject matter experts and test drive EV models from local dealerships. Participants included Tesla, Denham Ford, Award Evolution, Fortis Alberta, EV Association of Alberta (EVAA), Alberta Motor Association (AMA), and the City of Edmonton.

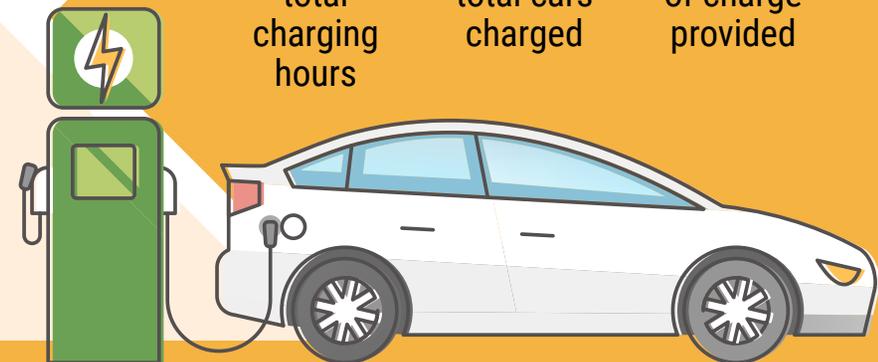


### EV Charging Statistics:

**7,184**  
total  
charging  
hours

**7,654**  
total cars  
charged

**169** MWh  
of charge  
provided



# alternative TRANSPORTATION

## Leduc Transit

Leduc Transit is an inter-municipal transit partnership between the City of Leduc and Leduc County. Leduc residents continue to use and value transit services as a viable option over the use of private vehicles.

	2021	2022	2023
<b>RIDERSHIP*</b>	44,941	84,146	<b>112,770</b>
<b>BOARDINGS<sup>+</sup></b>	46,738	85,508	<b>113,223</b>

**34%**  
Increase in  
**Ridership**

**32%**  
Increase in  
**Boardings**

\* A passenger is counted once - even if they transfer multiple times.

+ A passenger is counted each time they board a bus.





## E-scooter Pilot Program

Pilot Program Year	Total Rides	Number of Active Users	Length of Average Ride
1 (2022)	18,330	1,000	20 minutes
2 (2023)	20,080	1,000	20 minutes

## Leduc Assisted Transportation Services (LATS)

LATS is a door-to-door, driver-assisted transportation service for seniors (65+) and for persons with cognitive and/or physical disabilities within the City of Leduc.

2021	2022	2023	This equates to a <b>12%</b> Increase in Ridership
13,398	21,155	<b>23,779</b>	

## On-Demand Transit

On-demand transit became available in Leduc for the first time in 2021 and expanded in 2022, with scheduled service remaining for Routes 1 and 10.

2021	2022	2023	This equates to a <b>15%</b> Increase in Ridership
6,794	24,841	<b>28,578</b>	



# WASTE DIVERSION

## initiatives



**In 2023: 446,354** interactions occurred with the Recycle Coach app. We saw **3,625 mobile users** and **8,612 website users**.

**5,892 material searches** were completed, and the top search items included:

- Plastic Bottles, Jars and Jugs
- Pizza Boxes
- Glass Bottles and Jars
- Plastic Tubs
- Clear Plastic Food Containers

**Recycle Coach** the City's free waste sorting and collection calendar app, offers residents a simple and convenient way to sort smarter. Recycle Coach is a customized app that works on most mobile platforms. You can scan the QR code with your phone to download the app.

A web browser option is available at [www.leduc.ca/waste-recycling/recycle-coach](http://www.leduc.ca/waste-recycling/recycle-coach).





## Curbside collection

### Organics\*

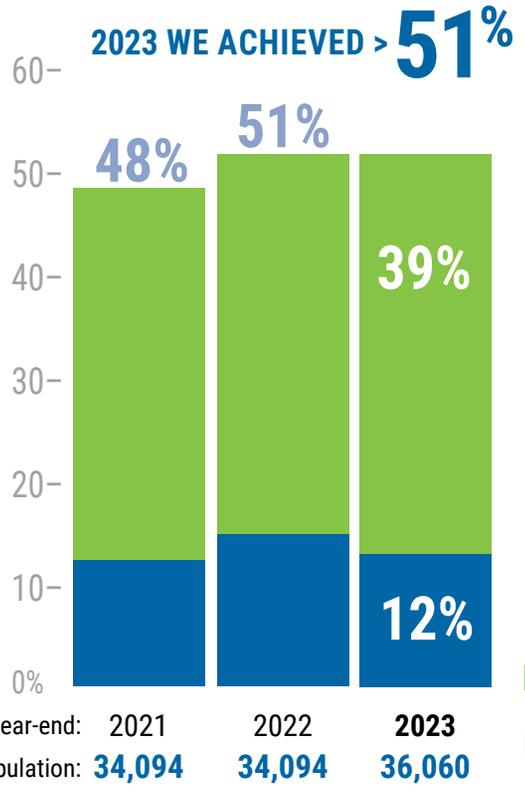
	2021	2022	2023
MATERIAL COLLECTED (TONNES)	2,933	3,172	<b>3,345</b>
PER HOUSEHOLD (KG)	268	318	<b>332</b>

### Blue Bag Recyclables

	2021	2022	2023
MATERIAL COLLECTED (TONNES)	1,063	1,185	<b>1,019</b>
PER HOUSEHOLD (KG)	97	119	<b>101</b>

\* Includes special Christmas tree pick-up collection

## % Residential curbside diversion



### Waste

	2021	2022	2023
MATERIAL COLLECTED (TONNES)	4,416	4,285	<b>4,195</b>
PER HOUSEHOLD (KG)	412	429	<b>417</b>

### Yard Waste: Transfer Station

	2021	2022	2023
TONNES >	<b>842</b>	<b>769</b>	<b>752</b>



## EPR Registration

Leduc registered to participate in the Extended Producer Responsibility (EPR) program through the Alberta Recycling Management Authority (ARMA). EPR will shift the physical and financial burden of collecting, sorting, processing, and recycling waste to the producer and away from local governments and taxpayers.

## Organics Inspection Pilot Program

AI technology was added to the City's green cart inspection program to improve contamination detection in green carts. The goal is to reduce organics contamination through the timely provision of customized information and education for affected households. When green cart waste is successfully diverted from landfills, it prolongs the life of our landfills, decreases environmental pollution, and reduces operational costs.

How it works:

- As waste is tipped into the collection truck, the AI system scans the items for contaminants.
- If the system detects a contaminant, a photo is taken of the item and associated with a specific household using GPS data.
- A postcard with the image is sent to the household with information about what can go in the green cart.
- For privacy, everything except for the detected contaminant items is blurred out in the image.

**870 postcards were sent out in 2023.**

We saw a **50%** reduction  
in organics contamination  
over the pilot program.





**LEDUC RESIDENTS**  
**45,031 visits**  
(77%)

**LEDUC COUNTY**  
**12,426 visits**  
(21%)

**BEAUMONT**  
**1,077 visits**  
(2%)

**CALMAR**  
**359 visits**  
(1%)

**Total Eco Station Visits in 2023: 58,893**

**Tour the Eco Station virtually at [leduc.ca/ecostation](http://leduc.ca/ecostation)**



## Styrofoam Pilot Project

In 2021, the Eco Station began a one-year pilot program to recycle white block Styrofoam. A mobile, Styro-Go recycling truck processed the material by heating and pressing the squished Styrofoam into compact plastic bricks that could then be made into other plastic products. The pilot program expanded in 2022 to include the processing of Expanded Polyethylene (EPE) foam.



**17.3 TONNES OF STYROFOAM**  
(346 CUBIC METRES)

## Expanded Electronics Pilot Project

The Eco Station participated in an Alberta Recycling Management Authority pilot program in 2021-2023, accepting an expanded list of electronics including small appliances, audio visual equipment, telecom devices, power tools, games, toys, musical instruments, and lawn/garden equipment.

**49.5 TONNES OF EXPANDED ELECTRONICS**



## New Multi-Stream Waste Bins

17 new multi-stream waste bins were ordered for City facilities (both indoor and outdoor) to encourage waste diversion within the community.



# Recycle Roundup

In 2023, the City held another successful Recycle Roundup:

**The event attracted 327 vehicles:**

- 87% from the City of Leduc
- 11% from Leduc County
- 2% from Beaumont
- <1% from Calmar

**Materials received:**

- Paint Products: 731 Kg
- Paint Aerosols: 128
- Flammable Aerosols (non-paint): 63
- Flammable Liquids: 111 Kg



	VISITS	BLUE BAG RECYCLABLES TONNES	ELECTRONIC WASTE		HOUSEHOLD HAZARDOUS WASTE* LITRES	USED OIL ** LITRES	TIRES	GLASS (KG)
2021	54,472	122	4,144	55	23,400	3,947	1,650	1,938
2022	53,373	147.26	4,174	34.65	80,400	29,460	1,055	1,950
<b>2023</b>	<b>58,893</b>	<b>122.7</b>	<b>4,202</b>	<b>45.3</b>	<b>73,045</b>	<b>34,200</b>	<b>3,739</b>	<b>7,083</b>

\* Paint – 54,445 Litres  
Flammable Liquids – 18,600 Litres



FOR MORE INFORMATION:

City of Leduc, Civic Centre  
#1 Alexandra Park, Leduc AB T9E 4C4  
Eco-smart Hotline: 780.980.7107  
E-mail: [ecosmart@Leduc.ca](mailto:ecosmart@Leduc.ca)

