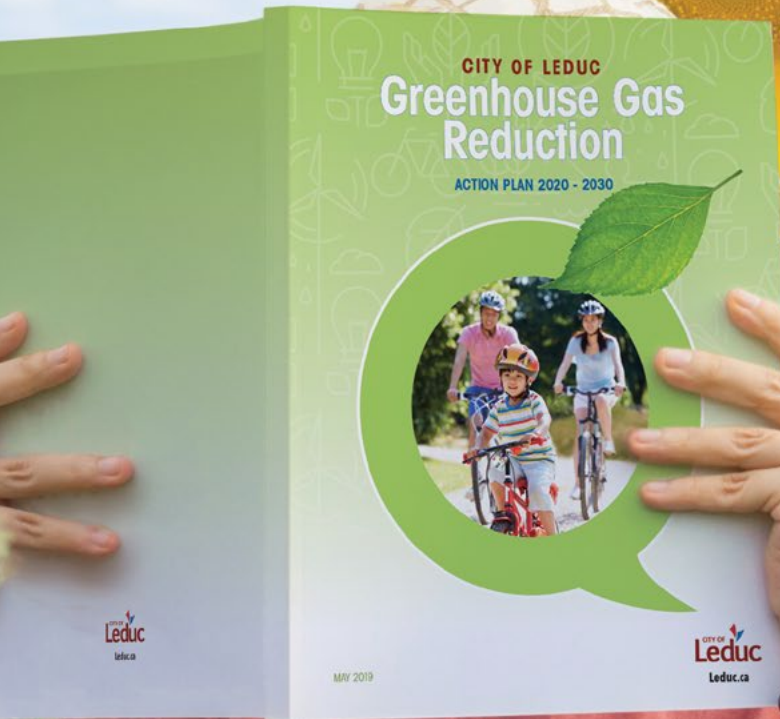


Growing a clean, green and healthy Leduc

2019 ENVIRONMENTAL PROGRESS REPORT



PARTNERING with *nature* 

PRINTED APRIL 2020

CITY OF
Leduc 

CITY STEWARDSHIP

Environmental priorities continued to command attention and resources in 2019. Council's approval of Leduc's Greenhouse Gas (GHG) Reduction Action Plan forged a milestone in our community's commitment to mitigating the effects of our changing climate.

'WHAT WE HEARD': MDP Engagement

...affirming community support for the environment

To garner community-wide input on many subjects before updating the Leduc Municipal Development Plan (MDP), the city engaged stakeholder groups and individuals in 2019.

Following are selected environmental recommendations received through the process:

- Restore and enhance tree stands, water bodies and other natural assets such as Telford Lake.
- Preserve a wildlife corridor between Telford Lake and Saunders Lake.
- Preserve existing trees and plant more.
- Build more parks.
- Make recycling more accessible.
- Start recycling for businesses.
- Youth want to walk, bike or bus rather than drive.

2019 CIVIC PROJECTS

The city purchased a 2019 Chevrolet Volt Plug-in Hybrid vehicle, partially financed by a Municipal Climate Change Action Centre (MCCAC) grant. The vehicle is charged at a solar-powered station at the Operations Building.

Public Services:

- purchased a second mini-truck with an efficient 0.6 litre engine,
- purchased a self-propelled road patcher that requires two engines instead of the previous three,
- undertook an environmentally friendly ice control and road maintenance pilot project on Black Gold Drive to test the use of beet juice instead of the standard sand/salt mixture, and
- switched to an environmentally friendly rust-preventing product that replaces used diesel fuel and waste oil.

City Fleet Services continues to use a mobile fire pump testing unit that allows all fire trucks to use re-circulated water.

The (second) greatest area of focus for Survey respondents was the environment. They valued the maintenance and enhancement of Leduc's natural areas.

2019 Regional initiatives

Environmental services staff again represented Leduc on the **Alberta Capital Airshed** and the **Capital Region Municipal Sustainability Group**. Councillor Glen Finstad continues as Chair of the **Edmonton Region Waste Advisory Committee**. This committee is advocating for extended producer responsibility (EPR) legislation, requiring producers to take responsibility for their goods to be recycled or disposed of in a more environmentally responsible manner.

The City partnered with the Climate Resilience Exchange and eight other Capital Region municipalities to investigate the major challenges that climate change poses to the region. The highest priority areas included water security, invasive species and pests, urban forests and climate resilient homes.



Community outreach & communication *highlights*

Business Expo – About 300 people visited the Environmental Services booth to discuss initiatives including waste diversion and the Pollinator Garden Challenge.

Large Item Pickup – Following a 2018 pilot project to pick up mattresses, residents disposed of 167 mattresses and 261 tonnes of large items in 2019.

Fall Community Information Registration Day – Reinforcing ways to sort smarter.

Pitch-In Week – Six clean-up events including École Leduc Estates, Black Knights Air Cadets, East Elementary School, École Notre Dame, Caledonia Park School and Leduc Wildlife Conservation Society took place in April.

Festival of Trees – The Leduc Environmental Advisory Board (LEAB) again led the decoration of two trees, one for the Christmas bird count and the other profiling dark skies benefits.

Earth Hour – The city again participated in this one-hour event on March 30 to highlight the need to take action on our changing climate. Leduc turned off all non-essential lights in the Civic Centre, library, Operations Building and some outdoor signage at the Leduc Recreation Centre.

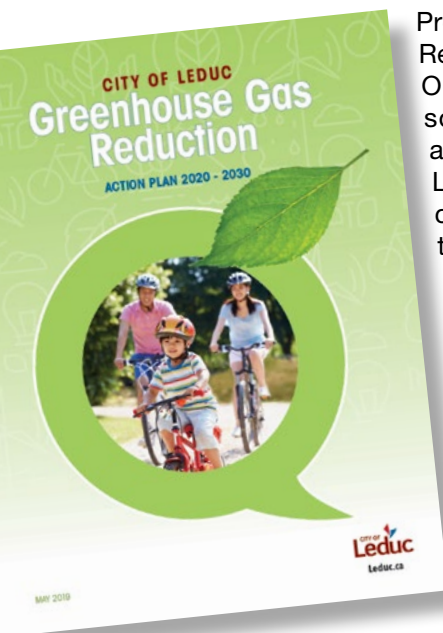
Communities in Bloom – Leduc was a 2019 National Finalist and was named one of the Communities in Bloom Circle of Excellence Canadian municipalities.

GREENHOUSE GAS (GHG) REDUCTION ACTION PLAN

...roadmap for a greener,
cleaner Leduc

Leduc City Council took an historic step in May 2019 when it approved Leduc's first-ever Greenhouse Gas (GHG) Reduction Action Plan.

The plan, a practical, made-in-Leduc solution to curb GHG emissions, builds on many other Leduc initiatives making our community more sustainable.



Projects including the Leduc Recreation Centre (LRC) and Operations Building rooftop solar panels, converting all Leduc streetlights to LED bulbs, retrofitting civic facilities, developing the Weather and Climate Readiness Plan and diverting organics from the landfill offered a base of knowledge and a continuum of experience on which the GHG plan was developed.

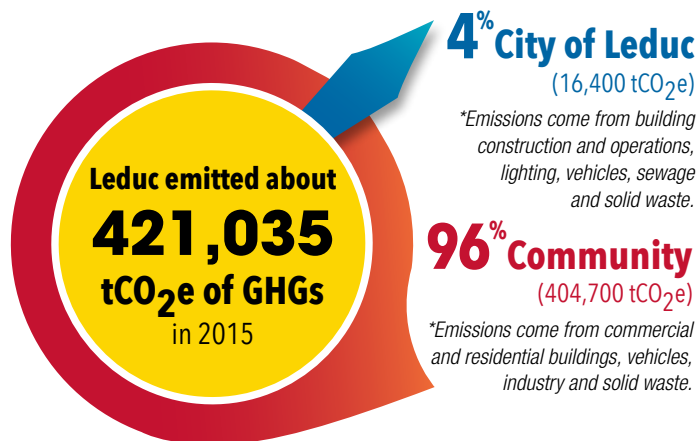
The GHG reduction plan offers a roadmap for future actions and a baseline to measure annually the effectiveness of actions undertaken.

The plan provides a

sophisticated benchmark to evaluate future initiatives as they are identified through the regular budget process.

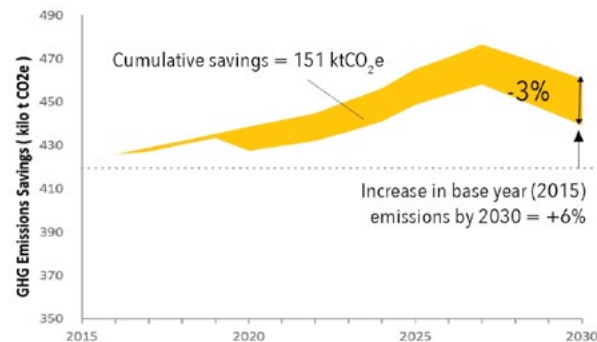
Plan development was supported by a grant from the Federation of Canadian Municipalities and the Government of Canada.

Understanding Leduc's current GHG emissions



Approved emissions reduction targets

Council approved a GHG emissions reduction target of **3% BELOW** business-as-usual by 2030. As the base year for benchmarking was 2015, several GHG reduction initiatives have already been undertaken.



There are no new incremental costs associated with the approved 3% reduction target.

Corporate target: 8% reduction from 2015 by 2030 (equivalent to 20% reduction below business-as-usual forecast).

Community target: 6% above 2015 by 2030 (equivalent to 3% reduction below business-as-usual forecast).

Engaging the community

As a part of developing the reduction plan, the city mapped out a comprehensive outreach program to discuss GHG issues and potential solutions with stakeholders and the community at large.

A parallel process, Engage Leduc, was seeking community input regarding Leduc's community vision and four-year strategic plan. Residents identified very similar environmentally friendly themes during this process.

Approved actions to reduce GHG emissions

Energy sector actions



Install solar on the LRC and the Operations Building. **DONE.**

The roofs of the two buildings share 5,622 photovoltaic solar panels with total installed capacity of 1.77 megawatts (MW).

Buildings actions



Replace all streetlights with LED bulbs. **DONE.**

The 2017 replacement of all streetlights in Leduc with LED bulbs reduces GHG emissions and results in better, safer lighting while reducing replacement and maintenance costs.

Establish a plan for energy-efficient retrofits of existing city-owned buildings.

The city's building renewal and energy performance program started in 2019 with an energy audit and preparation of a 10-year plan to outline the retrofits and projected payback.

Land use actions

Encourage infill and high-density housing downtown, in commercial zones and along transit routes.

Efforts may include working with developers, streamlining infill permit processes, continuing downtown streetscape improvements and focusing on greenfield density targets.

Encourage mixed-use development in downtown and other appropriate areas.

Downtown streetscape improvements will continue. The city will also review land use districts and walking distances to services.

Increase budgets for tree replacements and planting.

At least 600 trees are planted each year. The city approved new budgets in 2019 for tree replacement and additional tree planting.

Waste actions

Install a biocover at the Leduc and District Regional Waste Management Facility (LDRWMF).

The LRDWMF is installing a biocover, an organic cover made of compost and soils. The organic material destroys the methane passing through the cover.

Process waste using garbage baling technology.

Garbage baling compresses municipal solid waste into air-tight bales and wraps them in plastic, halting the production of methane emissions.

Waste diversion... we **Sort Smarter**

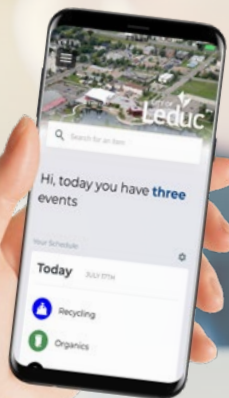
The completion of the relocated, improved and expanded Eco Station was a major focus for sorting smarter in 2019. Despite some inconvenience caused by the relocation and upgrade process, the Eco Station recorded the highest-ever number of visits and disposed of a record number of new materials.

As well, small but important changes to Leduc's blue bag recycling program took effect. The changes were required because worldwide markets changed the types of recycling materials they accept. Leduc collects only those items that can be sold and remade into new products.

The city received funding from the Alberta Beverage Container Management Board for 20 new four-stream sorting stations in city facilities.

Communication and community outreach

- Environment Week initiatives included the Green Gold event, plantings in the Pollinator Garden and the Peter Puffin school presentations to 395 Grade 4 students. Clean Air Day and the spring bird count were also held around Environment Week.
- The city undertook a communications campaign in summer and fall 2019 to inform residents about the changes to the blue bag recycling program.
 - The city started work on a new app to replace the Sort Smarter app. The new app, Recycle Coach, was launched early in 2020.



WHAT WE **ACHIEVED**



Residential curbside diversion has increased back to the 2015 level of 52%. This indicates that families new to Leduc are learning about the waste management programs and participating in them. Challenges remain in keeping organic cart contents free of contamination from improperly sorted materials.

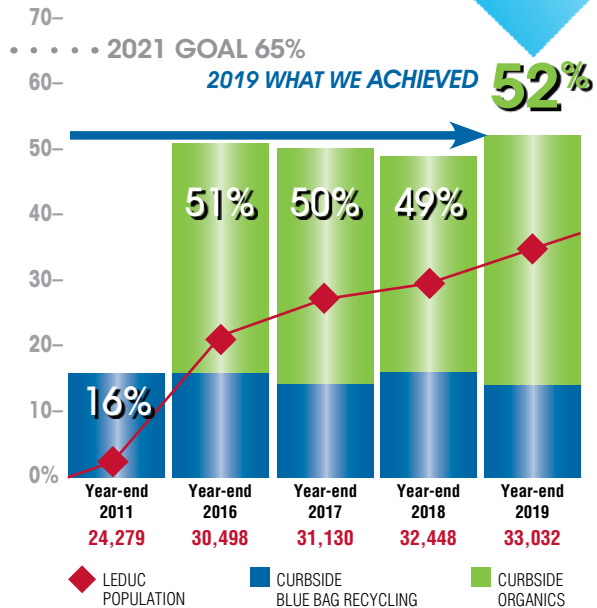
Leduc had record numbers of visitors to the 2019 Roundup thanks to good weather and strong promotion.

Beaumont became an official cost-sharing partner of the Eco Station operation in 2019. Residents from the three funding partners – the City of Leduc, Leduc County and Beaumont – share the convenient service throughout the year. The city is in discussion to potentially add Calmar as a fourth funding partner.



RESULTS:

% RESIDENTIAL CURBSIDE DIVERSION



Curbside ORGANICS*

* INCLUDES CHRISTMAS TREES PICKED UP BY SPECIAL COLLECTION

* CURBSIDE SERVICE STARTED IN SEPTEMBER 2012



	2015	2016	2017	2018	2019
MATERIAL COLLECTED (TONNES)	2,375	2,675	2,802	2,564	3,165
PER HOUSEHOLD (KG)	294	319	323	291	343

Curbside BLUE BAG RECYCLABLES



	2015	2016	2017	2018	2019
MATERIAL COLLECTED (TONNES)	1,328	1,197	1,126	1,250	1,211
PER HOUSEHOLD (KG)	165	143	130	142	131

Curbside WASTE COLLECTION



	2015	2016	2017	2018	2019
MATERIAL COLLECTED (TONNES)	3,395	3,683	4,005	3,926	4,088
PER HOUSEHOLD (KG)	421	440	462	445	443

Composting

- The Yard Waste Transfer Station continues to accept yard waste that won't fit in organics carts.
- About 300 residents attended the sixth annual 'Green Gold' event, held May 25 at RONA. They bought 66 rain barrels and 17 discounted composters, and shoveled up about 20 yards of free compost.

YARD WASTE TRANSFER STATION TONNES

2015	437
2016	614
2017	533
2018	703
2019	903





ECO STATION



Welcome neighbours!

The Eco Station set a new record of more than **40,000 visits in 2019**, the same year the facility expanded its cost-sharing with Leduc County to include Beaumont. This increase of more than 10,000 visits equates to an impressive **32% increase over 2018**.

Leduc city residents accounted for **75% of visits**, Leduc County residents 24% and Beaumont residents 1%.

VISITS	BLUE BAG	CARDBOARD	ELECTRONIC WASTE [‡]		HOUSEHOLD HAZARDOUS WASTE [‡]	USED OIL	TIRES	GLASS
	RECYCLABLES		UNITS	TONNES	LITRES	LITRES		(KG)
	TONNES	TONNES						
2015	25,786	271	29.65**	3,944	68.6	92,865		
2016	27,995	302	28.93**	3,447	59.3	90,645		
2017	27,666	133	N/A	3,499	63.8	99,354		
2018	30,512	147	N/A	3,300	62.7	101,272		
2019	40,592	138	N/A	3,715	69.2	112,813	31,745	862 444

[‡] INCLUDING MATERIALS COLLECTED AT THE OCTOBER 2019 TOXIC & E-WASTE ROUNDUP
 ** COMPACTED CARDBOARD ONLY



Toxic & E-Waste Roundup

- The October 19 Roundup attracted 498 vehicles, with 81% from the City of Leduc, 14% from Leduc County and 5% from Beaumont.
- About 190 people visited the information tent.
- Residents dropped off nine bins of paint products, half a bin of aerosol cans, three bins of household hazardous wastes, six bags of empty oil containers and half a 45-gallon drum of oil filters.

	ELECTRONIC WASTE		HOUSEHOLD HAZARDOUS WASTE
	UNITS	TONNES	LITRES
2015	240	4.4	11,410
2016	125	2.0	9,597
2017	144	2.5	9,562
2018	86	1.82	5,352
2019	65	1.42	7,134



NOTICE
IF GLASS IS CONTAMINATED THE WHOLE BIN WILL HAVE TO BE TAKEN TO LAND FILL

CLEAN GLASS ONLY



ECO STATION

Larger, greener, more services, even more convenient

Leduc's expanded, updated Eco Station – offering residents, schools and businesses a staffed drop-off location to recycle or safely dispose of small loads of material – opened the fall of 2019.

The Eco Station now occupies a larger site, allowing the city to introduce new services as markets for recyclable materials become available. The site is integrated with an RV station so residents can visit the Eco Station and clean out their RV on the same trip.

NEW Services

Clean, clear glass container recycling

Jars for pickles, pasta sauce, baby food, etc. are now accepted. Recyclable glass drink bottles should be taken to the **bottle depot**.

Coloured glass, Pyrex, mirrors and other glass objects go in the **waste cart**.

A 'clear as glass' success story

The clear, clean glass collected at the Eco Station is sold to Vitreous Glass Inc. in Airdrie. Vitreous removes the impurities, crushes the glass to sand and then sells it to fiberglass insulation manufacturers.

Scrap metal recycling

(Large items and construction waste **not accepted**.)

- Auto parts
- Barbecues
- Lawn mowers (with oil drained)
- Metal siding
- Old utensils
- Small metal appliances, (toasters, etc.)
- Rebar

Cooking oil disposal

Cooled cooking oil and cooking oil containers **are accepted**.

Did you know?

The cooking oil collected will be used in the production of dog food.

Tire recycling

Tires 8-39 inches are accepted. Bicycle tires and rims from any vehicle are **not accepted**.

Propane tank disposal

Propane tanks less than 20 pounds **are accepted**.

Clothing donation bins

More clothing bins are available for gently used clothing donations to the Canadian Mental Health Association and Diabetes Canada.

Free Mulch

In addition to offering free compost, the Eco Station now offers free mulch to residents to prevent pests and weeds in their gardens.

Walking the talk of going greener

The almost-complete new administration building, scheduled to open mid-2020, will showcase a sustainable approach in construction, energy sources and even furniture.



Enhancing our NATURAL AREAS

Program development & implementation



Pollinator garden. The Leduc Rotary Club continues to donate trees and shrubs. Tree Canada and the Pembina Pipeline Corporation also provided support through the Tree Canada Edible Trees Program.

Pollinator Garden Challenge. This initiative attracted 40 participants who planted their own pollinator gardens. Leduc joined this North American-wide initiative in 2018.

REGISTRATIONS: 2018 **73** 2019 **40**

Backyard bees and hens pilot program. City council has approved this pilot program, to be launched in spring 2020. Up to five Leduc residents will have an opportunity to keep bees and up to another five to keep hens in their backyards.

Telford Lake multiway loop completion. The finished loop makes up 8.2 km of scenic multiway that connects trail users with Leduc's many recreational and natural areas. Its official opening was held Oct. 3 at Leduc Lions Park.



Healthy air quality exceeds provincial objectives according to the air monitoring program at the dog park. Leduc's average annual nitrogen dioxide (NO₂) reading in 2019 was 3.5 parts per billion (ppb), well below the annual Alberta Ambient Air Quality Monitoring Objective (AAQMO) of 24 ppb. The average monthly sulphur dioxide (SO₂) reading in Leduc is 0.9 ppb, well below the monthly AAQMO of 11 ppb.



WHAT WE ACHIEVED:

TREE PLANTING

	# Volunteers	# Planted
2016:	200	600
2017:	180	1,050
2018:	250	800
2019:	180	800

SPRING BIRD COUNT

	Birds	Bird Species
2016:	1,253	98
2017:	1,489	94
2018:	2,368	108
2019:	1,281	103

CHRISTMAS BIRD COUNT

	Birds	Bird Species
2016:	744	28
2017:	473	26
2018:	678	25
2019:	1,071	25






ENERGY CONSERVATION



-reducing our carbon footprint

The Leduc LRC & Operations Building solar project, started in mid-2016 in preparation for the 2016 Alberta Summer Games, remains a foundational energy conservation program, contributing to GHG emissions reduction, saving operational funds and enhancing Leduc's environment.



LRC & Operations Building solar energy benefits

	 ENERGY GENERATED (MWh)	=	 EQUATES TO NUMBER OF HOMES POWERED	 OPERATIONAL SAVINGS
2017	1,604	=	223	\$101,000
2018	1,677	=	233	\$166,831
2019	1,515	=	210	\$160,000

	 GREENHOUSE GASES (GHG) REDUCED (tonnes CO₂e)*	=	 EQUATES TO VEHICLES OFF THE ROAD
2017	1,025	=	217
2018	1,072	=	227
2019	968	=	205

* carbon dioxide equivalent



Managing our Water Resources

Program development & implementation

The regional Blackmud/Whitemud Creek Surface Water Study group, including the city, identified a maximum allowable stormwater release rate to reduce potential negative downstream effects. The group applied for approval authorizing a master drainage plan for the watershed.



Improving our Energy Efficiency

The city completed several energy efficiency upgrades using an MCCAC grant. The upgrades included replacement of over 10,000 lights with LEDs and work on several mechanical and power systems.

The upgrades are expected to save about \$200,000 annually with payback in six years. Work done in 2018 on the twin arenas saved about \$21,000 in 2019.

PUBLIC TRANSIT

good for the environment

Leduc residents continue to use and value transit services as a viable option to using private vehicles.

Leduc Transit's Route 10, introduced in May 2018, connects Leduc Common with Leduc County, Edmonton International Airport, Nisku Costco and the Premium Outlet Collection. Ridership on the route increased significantly in 2019, its first full year of operation.

ROUTE 10 BOARDINGS

2018	2019
8,521	20,083
136% INCREASE	

Leduc Transit is an inter-municipal transit partnership between the City of Leduc and Leduc County, funded in part by the Government of Alberta's Green Transit Incentives Program (Green TRIP).

CLEAN AIR DAY BOOSTS RIDERSHIP

Leduc residents again enjoyed free transit service June 5, Clean Air Day. City employees again participated in the initiative.

	Average # Passengers June 2019*	2019 Clean Air Day # Passengers	% Increase Over Average Ridership
Leduc Transit	318	389	22%
LATS	101	116	15%



WHAT WE ACHIEVED:



% Difference from start of service in 2011 (ridership & boardings: 33,106)

	2015	2016	2017	2018	2019
RIDERSHIP*	69,031	68,641	81,654	94,956	107,051
BOARDINGS+	76,775	77,664	90,504	101,723	113,036

*A PASSENGER IS COUNTED ONCE EVEN IF HE OR SHE TRANSFERS MULTIPLE TIMES.

+A PASSENGER IS COUNTED EACH TIME HE OR SHE BOARDS A BUS.



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