



Strategic Waste Management Plan

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1. Introduction

Leduc County (the County, County) undertook the task of developing a Strategic Waste Management Plan (plan) to provide the County with a clear direction for working towards environmental sustainability* and providing future waste management program enhancements. The intent was to review current waste management services with the end goal being able to develop a long-term plan that will ensure the County's waste management utility is sustainable and appropriate service levels are identified and maintained. The plan is a living document that will undergo review and updating at opportune occasions, such as times when service level changes occur, strategic direction change, or when upgrades are required. The primary outcomes of the plan are to provide both strategic direction and service levels. The plan will be utilized to inform annual operational and work plans for the next 10 years.

**Sustainability and sustainable are often used interchangeably; however, are subtly different.*

***Sustainability** is a broad term that describes managing resources without depleting them for future generations. For example, recycling programs allow recycled material to be used again, decreasing the demand for new material. **Sustainable** describes the processes for improving long-term economic well-being and quality of life without compromising future generations' ability to meet their needs. This could be the proper materials management of a landfill to ensure that capacity remains available for future generations.*

1.1. Overview of current waste management services

County waste management services are residential-based programs providing services to both higher density urban-style developments and lower density rural residents. The majority of County waste management programs are not meant to service other sectors, but some agricultural and commercial sectors make use of the services because they are residents and business operators.

County solid waste programs

The status of the County programs at the start of the workshop series on Nov. 26, 2019 were as follows:

- ▶ Transfer stations
 - ▶ Basic service level accepts the following solid waste streams:
 - Residential household waste (wet waste)
 - Household furniture and wood (dry waste)
 - Blue bag recyclables
 - Compost and yard waste (seasonal)
 - Ashes
 - ▶ Expanded service level accepts the following solid waste streams:
 - Residential household waste (wet waste)
 - Household furniture and wood (dry waste)
 - Blue bag recyclables

- Compost and yard waste (seasonal)
- Ashes
- Household hazardous waste (cleaners, bleach, hair products)
- Metal (white goods, wire, mixed metal, propane tanks)
- Oil waste (oil, filters, containers)
- Antifreeze
- Paint (aerosols, cans, buckets)
- Tires (off the rim)
- Electronics (computers, printers, monitors, TVs)
- ▶ Eco Station cost-share with the City of Leduc accepts the following solid waste streams:
 - Eco Station cost-share with the City of Leduc has a similar level of service compared to the expanded service level, and accepts the same solid waste streams as well as a few additional streams, such as Styrofoam, fluorescent tubes, and clothing.
- ▶ Summer village transfer station access program - access card allows a one-time access at the Sunnybrook or Mission Beach transfer stations.
- ▶ Agricultural chemical containers - drop off locations at the Thorsby shop and Nisku wastewater transfer station.
- ▶ Curbside pickup
 - ▶ East Vistas - weekly year-round waste and recycling service
 - ▶ New Sarepta
 - Summer months - weekly waste and recycling
 - Winter months - alternates weekly between waste and recycling
- ▶ Resident drop-off at regional landfill
 - ▶ Residents have free access and unlimited disposal at the regional landfill
- ▶ Community bins
 - ▶ Nisku hamlet community is provided with two bins for residents' solid waste disposal

1.2 Public survey

In order to attain public feedback regarding current waste management service levels and community environmental targets, Council requested that staff consult with the public. A public survey was conducted in 2020 from mid-July to mid-September to collect feedback from County residents regarding County solid waste programs. An excellent response was received with a total of 608 residents filling out the survey. Refer to Appendix A for a summary of the survey results.

2. Program review

Administration conducted eleven workshops with Council to review County waste management priorities and programs. Individual program reviews included an analysis of current programs, potential program improvements and options for program alignment with public survey results, and waste management strategic directives.

Each program reviewed in this report has a background section and outcome section. For clarity purposes, the outcome section breaks out decision points that are related to strategic direction and to service levels. A summary of strategic direction and service levels for each program is listed in Appendix C. Appendix D provides the annual action plan for the strategic direction and service levels.

2.1 Waste management directives

Provincial and regional municipal solid waste directives and initiatives were reviewed during workshops two and three, which took place on Jan. 14 and Oct. 27 of 2020. Refer to Appendix B for a summary of the provincial and regional solid waste planning documents and initiatives.

In regards to the options that were discussed with Council when considering the development of the overarching strategy and direction of the solid waste management strategic plan, the following options were discussed:

1. Diversion target – sets a hard and measurable target for the County to work towards. This strategy is a common environmental initiative that is normally socially acceptable. Two options were presented for the configuration of a diversion target:
 - a. Setting a hard diversion target, such as 50 per cent diversion by 2030.
 - b. Setting a percentage reduction diversion target, such as increase diversion rate by 20 per cent by 2030.
2. Zero waste* – Zero Waste International Alliance defines it as “a goal that is ethical, economical, efficient and visionary, to guide people in changing their lifestyles and practices to emulate sustainable natural cycles, where all discarded materials are designed to become resources for others to use.” Under this option, a municipality would commit to attaining a zero waste society by a certain date, such as zero waste by 2050.

* The Zero Waste approach is similar in many aspects to the Circular Economy approach, but differs slightly on how the goals are achieved. Circular Economy approach is defined by the Ellen MacArthur Foundation as “restorative and regenerative by design, and aims to keep products, components, and materials at their highest utility and value at all times...It is a continuous positive development cycle that preserves and enhances natural capital, optimizes resource yields, and minimizes system risks by managing finite stocks and renewable flows.” If the County wishes to move towards the Zero Waste approach, the Circular Economy should be considered at the same time.
3. Waste management guiding principles – a set of waste management guiding principles that provide administration with clear direction in the development of programs and service levels.

4. Status quo – accept the operational function as they currently are (with minor improvements when opportunities arise) and maintain service levels.

Based on the results of the strategic waste management public survey, environmental sustainability for County waste management is a priority. The public survey supported increasing waste diversion and setting a diversion target. Administration also supports setting a diversion target, assuming it is practical and attainable; however, the financial and program implications of a diversion target need to be better understood. Therefore, administration recommended the development of guiding principles rather than committing the County to an objective of which the implications are not fully understood. Guiding principles will provide administration with a framework to work within, and provides the foundation for setting a future diversion target.

The implementation of a Zero Waste approach was not supported as the following waste management items would need to be completely reworked and/or expanded: County programs, County infrastructure, regional infrastructure, regional and local policies and regulations and public relations/communication programs.

Based on the guiding principles that were supported at workshop #2, which took place in the October 2020 workshop, administration developed objectives for the waste management strategic plan. A ranking exercise was established for the committee to prioritise these objectives, which then provided guidance for administration in analyzing the programs and providing recommendations to the committee for the remainder of the workshops. Based on the pairwise exercise that was conducted with the committee, the guiding principles were prioritized. The objectives and applicable definitions are listed in priority order below: **Exhibit 1: Guiding Principles**

1. User convenience - programs that consider and improve user convenience.
2. Performance - program outcomes must be measurable and transparent; continually analyzes program performance and identifies areas for improvement.
3. Innovation - investigate and implement innovative initiatives and technology that are determined to be feasible.
4. Cost driven - prioritization of program costs; ensure efficient and cost effective programs.
5. Environmental footprint - maximize waste diversion and minimize environmental impact; programs designed to reward user behaviour that reduces environmental impact.
6. User pay methodology - financial structure that continually moves towards a cost-based system, whereby the user of the service pays for the service; financially self-sustaining programs.

2.2 Curbside pickup program

2.2.1 Background

The County provides year-round door-to-door solid waste and recycling pickup for residents in New Sarepta and East Vistas (Diamond Estates, Lukas Estates and the Royal Oaks subdivisions). This is a mandatory service for residents of these communities. Curbside collection is not provided to rural areas.

Some rural residents choose to subscribe to private curbside collection services, which the County is not involved in.

The following services for the curbside pickup program were reviewed in the workshops:

- ▶ Dissimilar service levels – the consolidation of the different pickup frequencies to a single service level.
- ▶ Service level pricing – a user-pay rate analysis for the different service levels.
- ▶ Service level expansion – the introduction of the organics stream to the program.
- ▶ Service area expansion – the expansion of the curbside pickup program to county hamlets, higher density country residential, lakeshore communities, and rural areas.
- ▶ Service level enhancement – the addition of an annual large item pickup event to the curbside pickup program.

2.2.2 Outcome

The following decision points were made regarding service levels and strategic directions:

- ▶ **STRATEGIC DIRECTION: Implement a uniform level of service for curbside pickup** – to simplify the curbside pickup level of service, a consolidated service level was approved for East Vistas and New Sarepta, where all customers receive weekly waste and recycling pickup year around. This simplifies administrative burdens (interactions with the public and billing) and provides a predictable service level for all curbside pickup customers.
- ▶ **STRATEGIC DIRECTION: Implement a uniform pricing model** – a user-pay rate model was approved for implementation whereby the cost of service for the program is recoverable. Additionally, the funding of a rate stabilization reserve to offset significant rate fluctuations was approved.
- ▶ **LEVEL OF SERVICE: No organic curbside collections** – introducing organics collection to the program was not approved mainly due to current contamination and processing issues that other municipalities in the area are experiencing with organics programs. Other methods for organics management/diversion will be examined every five years.
- ▶ **LEVEL OF SERVICE: No further curbside pickup service area expansion** – the Hamlet of Nisku was added to the curbside pickup program, but it was determined that expansion of curbside pickup into other areas is not desirable at this time. The results of the public survey played a significant role in this decision. There was strong opposition to expanding curbside pickup to rural areas. In country residential, hamlets, localities and lake communities, there was equal support and opposition to expanding curbside pickup to these areas; therefore, the need for service area expansion to country residential, hamlets, localities and lakeshore communities should be monitored and assessed every five years.
- ▶ **LEVEL OF SERVICE: No large item pickup program** – being that there are other avenues for bulk item/large item disposal, such as transfer stations, an annual large item pickup was not approved.

2.3 Community bin program

2.3.1 Background

The community bin program includes two open-top bins that are available for residents in the Hamlet of Nisku to dispose of solid waste. No recycling services are provided in the program, but residents still have access to County transfer stations and the City of Leduc Eco Station. Administration considers this program as an enhanced level of service, as residents have a disposal service within their community and do not have to transport their waste and recycling to a transfer station. This program is not funded through utility rates, but through general funds. The other enhanced service level program – curbside pickup - is a user-pay approach (funded through utility rates).

2.3.2 Outcome

Council supported transitioning the Nisku Hamlet from a community bin program funded by general funds to a curbside pickup program funded by utility rates. This program change was implemented in spring 2021. The committee supported this change as the community bin program was an enhanced level of service similar to the curbside pickup program, but was being funded out of general funds, whereas the curbside program was user-pay. Other advantages for transitioning the hamlet to curbside pickup was it provides for better waste diversion and mitigates illegal dumping from adjacent businesses.

2.4 Regional landfill drop-off program

2.4.1 Background

Leduc County is a member of the Leduc and District Regional Waste Management Authority (LDRWMA), which provides governance and management of the Leduc and District Regional Waste Management Facility (LDRWMF). The County regional landfill resident drop-off program provides residents with free access to the facility, covering the costs of solid waste disposal. These costs are invoiced directly to the County by LDRWMF. Residents can gain access to the facility by applying to the LDRWMF for a regional landfill card. This resident drop-off program is funded by general funds and there is no cap on disposal amounts.

Historically, the County has funded the disposal costs (LDRWMF generated) for a private hauler who provides collection services for the residential base. This arrangement has been in place for at least the last 10 years.

2.4.2 Outcome

The funding of the regional landfill residential drop-off program was discussed, providing the pros and cons of user-pay (fee for service) versus funding through general funds. Council supported the funding of the program through general funds as the implementation of a user-pay system would increase County transfer station costs and traffic, and potentially increase illegal dumping.

- ▶ **STRATEGIC DIRECTION: Tax supported regional landfill drop-off program** – continue to fund the program through taxes.
- ▶ **LEVEL OF SERVICE: Implement a three metric tonnes cap per resident per year at the Leduc and District Regional Waste Management Facility** – multiple strategies were reviewed with Council to determine the best balance of maintaining free resident waste disposal at LDRWMF and having an equitable disposal amount per resident. To maintain resident access while mitigating misuse of the regional landfill access program, Council supported the implementation of a cap of three tonnes per resident per year.
- ▶ **LEVEL OF SERVICE: Suspend the funding of access at the Leduc and District Regional Waste Management Facility for private haulers and commercial businesses from taxes** – due to equity reasons for other private haulers, Council supported administration’s recommendation to suspend funding of the private hauler from future budgets.

2.5 Transfer station program

2.5.1 Background

Leduc County’s principal waste management program is the transfer station program, which provides resident drop-off at the County transfer stations. The County provides residents with access to eight transfer stations located throughout the County near Warburg, Sunnybrook, Wizard Lake, Mission Beach, Thorsby, Rolly View, New Sarepta and Looma. These sites provide convenient drop locations where the majority of items are consolidated into large roll off bins for transport to the processing or disposal facilities.

Service levels that were discussed with Council included:

- ▶ Eligible users – Administration presented three options for managing user access to the transfer stations.
- ▶ Service areas – Administration presented three options for transfer station closure and alternative transfer station site locations.
- ▶ Operating hours – two options were provided that would enhance service levels in regards to operating times/days and staffing.
- ▶ Expanding waste streams and services – numerous service expansion options were presented for Council consideration (metal management options, salvage centre and additional recycling streams).
- ▶ Site maintenance – two options were discussed to improve transfer station site maintenance.
- ▶ Customer service and user convenience – one option was presented in regards to increasing user convenience.

2.5.2 Outcome

The following decision points were provided by Council:

- ▶ **LEVEL OF SERVICE: Distribute transfer station access cards to eligible users every two years** – Council supported administration’s recommendation that the transfer station cards be

distributed every second year instead of every year. This approach reduces operating costs while maintaining a reasonable level of control for managing eligible user access. The feasibility of a scan card system, or similar electronic/online system, is an item that Council directed administration to investigate further to determine if efficiencies can be attained.

- ▶ **LEVEL OF SERVICE: Retain existing number and locations of the transfer stations** – two options were presented for transfer station closure and transfer station site relocations. Council's waste management prioritization results and the public survey results did not support the closure of existing transfer stations. User convenience ranked number one in waste management priorities, whereas the cost-driven priority was ranked number four (out of six). The first option presented was the closure of an east and a west transfer station. Closing an east and west transfer station provides minimal savings and would create capacity issues with the other transfer stations, especially for the east transfer stations. The second option was the closure of all existing transfer stations and the construction of an east and west transfer station. This would require significant capital investment and a study(s) would need to be completed to assess the environmental, social and economic impacts. Council directed administration keep all transfer stations open.
- ▶ **STRATEGIC DIRECTION: Engage neighbouring municipalities to determine potential for joint facilities** – the engagement with other municipalities within the County borders should be done to determine the feasibility of regional transfer stations.
- ▶ **LEVEL OF SERVICE: Retain existing operating days and hours** – two options for expanding operating hours and days were presented. Council chose not to proceed with amending any operating days or hours for the main reason that the public survey showed that the residents were satisfied with the current hours of operation; however, Council did request targeted public communication be conducted to educate users on non-peak operating hours and sorting of materials.
- ▶ **LEVEL OF SERVICE: Implement metals bins for waste metals at Sunnybrook, New Sarepta, Rolly View, and Wizard Lake transfer stations** – Council supported the implementation of metal bins for the Sunnybrook, New Sarepta, Rolly View and Wizard Lake transfer stations. The improvement to the metal recycling program was supported due to safety concerns, public access issues and aesthetics.
- ▶ **LEVEL OF SERVICE: No increase to programs offered at the transfer stations at this time** – there was not support to make other changes to the transfer station program services mainly due to the survey showing the public being satisfied or very satisfied with the current transfer station services.
- ▶ **LEVEL OF SERVICE: Develop site maintenance plans** – Council supported administration's recommendation to develop and implement a maintenance management plan for the transfer station program and to develop an inter-departmental procedure for maintenance requests and inter-department service levels.
- ▶ **LEVEL OF SERVICE: Develop site improvement plans** – Council directed staff to consider transfer station ramp and site improvements when required (due to increased use, condition of ramp, etc.).

2.6 Eco Station program

2.6.1 Background

The City of Leduc (COL) owns and operates an Eco Station and allows access to County and Beaumont residents under an inter-municipal user agreement. The Eco Station provides a convenient drop off location for COL, County and Beaumont residents. It is located in the COL limits and provides a convenient alternative to County transfer stations. The primary function of the Eco Station is to divert waste from the landfill; therefore, the large majority of municipal solid waste streams collected at the site are recyclable. This is different from the County transfer stations as they are intended to temporarily store, and then transport, both waste and recycling. Administration discussed with Council the pros and cons of this arrangement.

2.6.2 Outcome

- ▶ **STRATEGIC DIRECTION: Continue existing agreements for joint facilities** – the Eco Station partnership aligns with the service levels and strategic direction discussed in Waste Management Strategic Plan workshops. The Eco Station provides a cost effective recycling drop off location for County residents. Council supported administration's recommendation that the County continues to collaborate with the City of Leduc through the cost-share agreement, but monitors the effectiveness of this program every five years.

2.7 Agricultural plastics program

2.7.1 Background

Currently, agricultural producers in Alberta can drop off agricultural waste materials, free of charge, at participating collection sites across the province.

Survey results showed strong support for increasing agricultural plastic recycling opportunities for agricultural producers; however, there were numerous constraints identified for expanding the County agricultural plastic recycling program, which include the following:

- ▶ Transfer station site sizes do not necessarily have room to accommodate these initiatives.
- ▶ Additional resources needed, such as additional manpower and funding of equipment for labour-intensive programs, and managing contaminated plastics.
- ▶ Development of provincial funding programs - some of the provincial agricultural plastic funding programs are in the pilot phase and additional funding and/or incentives may become available down the road.

Administration discussed with Council the potential paths forward for agricultural plastic recycling.

2.7.2 Outcome

- ▶ **STRATEGIC DIRECTION: Continue to advocate and partner to develop an agricultural plastics recycling program** – Due to the numerous constraints that were discussed, Council supported the following regarding agricultural plastics recycling:

- ▶ maintain the current service level (fertilizer, herbicide and pesticide container drop-off)
- ▶ monitor program funding initiatives from the province
- ▶ continue to look for sustainable agricultural recycling initiatives
- ▶ advocate for a regional solution
- ▶ better understand the need and environmental impact of agricultural plastics
- ▶ advocate for extended producer responsibilities

3 Conclusion

This plan provides administration with a clear and strategic path in regards to planning waste management program improvements for the current and future residents. The plan will inform future decision points to help ensure that County waste management programs meet public expectations in regards to social, fiscal and environmental sustainability.

4 Revision History

Version	Revisions	Revised By	Date	Reviewed By	Date

Appendix A – Solid Waste Strategic Plan Survey: What we heard report

WHAT WE HEARD REPORT

Solid Waste Strategic Plan survey



Created: Oct. 5, 2020

Last updated: Oct. 7, 2020

Prepared by: Katherine Degaust

Executive summary

As Leduc County grows and changes, the way we manage solid waste and recycling may need to change as well. Leduc County recently gathered input from residents on the solid waste and recycling services Leduc County currently provides via a survey. More than 600 residents provided feedback on solid waste management in Leduc County. They shared their thoughts on areas that are working well, areas that could be improved and suggestions for future services, including waste diversion targets.

ONLINE SURVEY FEEDBACK

The online survey received responses from **608 residents** across Leduc County. Respondents provided feedback on the following themes:

- Amount of garbage and recycling generated each week
- Primary method for disposing of household waste and recyclables
- Frequency of waste and recycling disposal
- Most-used waste and recycling disposal facility
- Agricultural waste and recycling
- Transfer station usage, hours of operation and locations
- Curbside recycling and waste pick up
- Private haulers
- Waste diversion and reduction

Project background

Leduc County is completing a solid waste strategic plan to identify service levels and waste management priorities.

In early 2020, council directed administration to learn more about what residents thought of Leduc County's current programs and services and what their priorities were regarding waste reduction and waste diversion.

To learn more and gather resident feedback, a survey was launched in summer 2020. It ran from July 17 to Sept. 15.

The main goal of the survey was to gather input directly from Leduc County residents in areas across the county on how Leduc County's solid waste programs and services were running.

Who filled out the survey

13,172 people live in Leduc County, and live in a variety of areas, including country residential, rural, urban and agricultural. Residents vary in age, backgrounds and in their access to technology. Keeping these demographics in mind, the communications tactics used to promote the survey included a wide variety to reach many audiences, including:

- Directly mailed letter to every residence. The letter was sent out with Leduc County's Transfer Station Access Cards in early July.
- Frequent social media postings from Leduc County's Facebook and Twitter accounts.
- Four-week paid social media campaign, targeting social media account holders within the Leduc County region.
- Signage at each transfer station.
- Website notice on www.leduc-county.com.
- Newspaper advertisements in the Leduc REP, Devon Dispatch, Beaumont News, Thorsby Target and Warburg Bugle.
- Article in Ag Matters electronic newsletter.

Solid waste and recycling disposal affects everyone, and it was important to give Leduc County residents the opportunity to share their thoughts on current services. Due to COVID-19, in-person activities for information sharing were not considered at the time of the survey, but may be considered in the future if further public engagement is required.

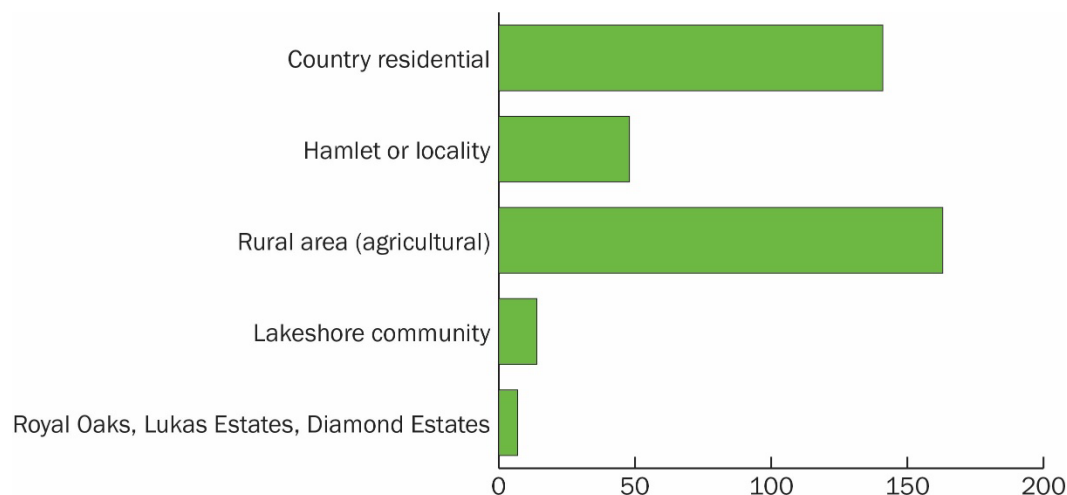
To be statistically relevant, we needed to hear from a minimum of 374 residents. We received 608 responses, which will help guide our future actions.

Survey results and findings

The online survey included both demographic questions to gather some information on who was providing input and service-based questions to gather input on areas related to solid waste management in Leduc County.

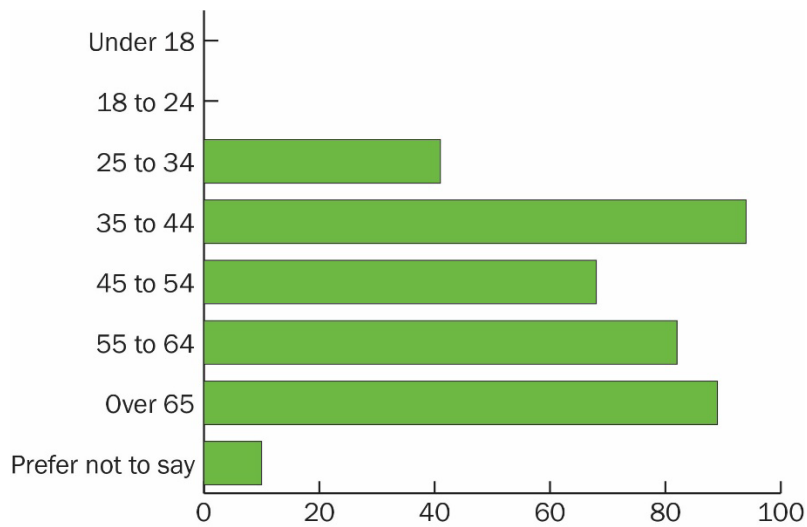
DEMOGRAPHICS

Where respondents live



The majority of respondents live in an agricultural area (163) or a country residential area (141). Other numbers included 48 from a hamlet or locality, 14 from a lakeshore community and 7 from Royal Oaks, Lukas Estates and Diamond Estates.

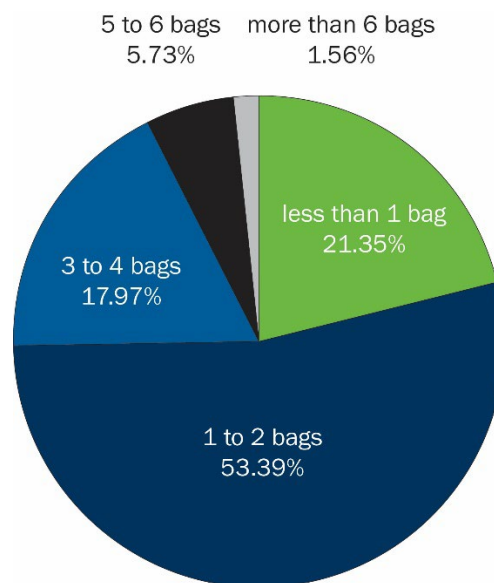
Age category of respondents



Other demographic questions included family size – the average household size of respondents was 2 people at **39.12 per cent** and 3 to 4 people at **38.08 per cent**.

WASTE AND RECYCLING DISPOSAL

Waste generated each week



Primary method of waste and recycling

Waste disposal

- The primary method for waste disposal are Leduc County transfer stations at **48.03 per cent**, followed by curbside pick-up at **21.26 per cent**.
 - **23.70 per cent** of respondents said they dispose of waste *once a week*,
 - **20.57 per cent** of respondents dispose of waste *once a month*.

Recycling disposal

- **42.41 per cent** of respondents said they recycle *everything*
- **39.27 per cent** said they recycle *most things*
 - **49.09 per cent** said they generate 1 to 2 bags of recyclables each week.

Curbside pick up

We asked respondents how many were part of the county's curbside pick-up program.

- **23.10 per cent** were part of the program
- **76.90 per cent** were not

We also asked if others would be interested in an expanded curbside pick-up program. Responses were more even for this question:

- **37.76 per cent** said yes
- **51.71 per cent** said no

Private haulers

When it comes to private haulers, the majority of respondents do not use them.

- **83.59 per cent** of respondents do not use a hauler.
- Those that do use a private hauler were split almost evenly between the services their private hauler provides:
 - curbside pick-up services at **7.90 per cent**
 - dumpster at **8.51 per cent**

AGRICULTURAL WASTE

We asked people if they were agricultural producers, and if so, if they utilized our agricultural container recycling program. We also wanted to measure interest levels in an expanded agricultural recycling program.

64 respondents identified themselves as agricultural producers, or **16.93 per cent**.

- **45.45 per cent** utilize our current agricultural chemical container recycling program
- **15.15 per cent** did not know about the program

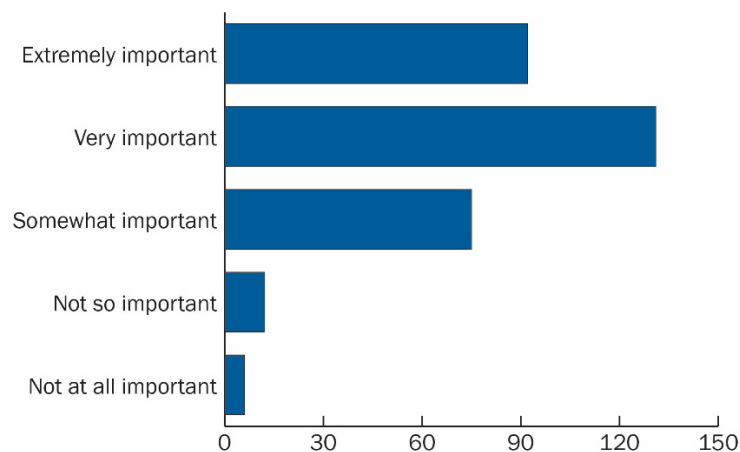
- **7.58 per cent** did not know about the program, but will now begin to access it
- **27.27 per cent** do not use chemical containers in their operations

When we asked about different agricultural recycling opportunities, the interest was very high, as follows:

- Recycling opportunity for *silage bags*: **78.69 per cent** interested
- Recycling opportunity for *grain bags*: **77.97 per cent** interested
- Recycling opportunity for *bale wraps*: **80.33 per cent** interested
- Recycling opportunity for *twine*: **80.00 per cent** interested

WASTE DIVERSION

Many respondents indicated a high interest in waste diversion and reduction, as follows:

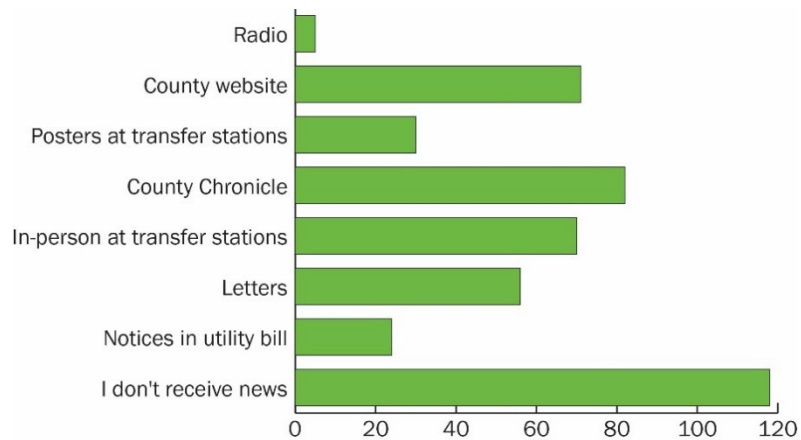


We also asked if Leduc County should set a waste diversion target closer to the provincial target.

- **21.79 per cent** strongly support
- **41.03 per cent** support
- **29.81 per cent** neither support nor oppose
- **4.81 per cent** oppose
- **2.56 per cent** strongly oppose

INFORMATION SHARING

Most Leduc County residents indicated they learn about county solid waste news from the Leduc County Chronicle external newsletter and in-person at transfer stations.



ADDITIONAL COMMENTS

The survey received 343 additional comments about programs and services, including:

- **144** comments about changes in services offered at transfer stations
- **49** comments about an expanded curbside pick-up program
- **43** comments about yard waste disposal
- **66** comments about things we missed in the survey

WHAT'S NEXT

The survey results will be shared with the Leduc County council at the Oct. 27 workshop. Based on feedback received, Leduc County administration will make a recommendation to council on the next best steps forward in the development of a Solid Waste Strategic Plan.

Appendix B – Provincial and Regional Solid Waste Planning

The following are highlights from provincial and regional solid waste planning initiatives.

1. Province of Alberta waste management highlights

Alberta's waste management strategy is called *Too Good to Waste*. It identifies five broad waste sectors:

1. Municipal solid waste
2. Hazardous waste
3. Oilfield waste
4. Forestry residuals
5. Agricultural residuals

Alberta has adopted the Waste Management Hierarchy and is working towards moving waste management practices up the hierarchy to a more sustainable position. Currently, the majority of waste management practices lie within the least desirable profile - disposal. Alberta is wanting to reverse the current waste profile and ultimately work towards a zero waste society.

Waste Management Hierarchy

1. Waste Reduction - reduction in the generation of waste through pollution prevention and the more effective use of natural resources is often the most cost effective waste management option in the long term.
2. Reuse- involves items being used again for the same or different purposes with the objective of long-term cost savings.
3. Recycling- value should be recovered through recycling, composting, refining, or other processes, where appropriate. Energy recovery should be considered for materials with high heat value and no recycling options.
4. Disposal- landfilling, deep well injection and incineration without energy recovery are examples of alternatives when other options are not feasible.

The desired outcomes and strategies in *Too Good to Waste* support the Waste Management Hierarchy.

1.1 Summary

- Alberta's 2007 diversion target was 80% by 2020.
- Alberta's *Too Good to Waste* strategy states that they are working towards a Zero Waste society.
- Alberta's *Too Good to Waste* strategy identifies principles for waste management and resource utilization.

2. Capital Region Waste Minimization Advisory Committee

The Capital Region Waste Minimization Advisory Committee (CRWMAC) developed the Alberta Capital Region Integrated Waste Management Plan in 2013. The report assessed the current state of waste management in the capital region and provided recommendations.

Key recommendations of the report include:

1. General Residential Recycling Programs - investigate standardized collection programs and processing.
2. Organics Waste Reduction Strategy - develop comprehensive organics diversion strategy and standardize services in a regional approach.
3. Industrial, Commercial and Institutional sector (ICI) - develop a comprehensive ICI waste management strategy.
4. Construction and Demolition (C&D) Waste Reduction - develop a comprehensive C&D waste management strategy.
5. Infrastructure - periodic review of disposal, recycling and organics system capacity.
6. Waste Management Policy - encourage review of waste management policies.

2.1 Summary

- Alberta Capital Region Integrated Waste Management Plan set a target reduction of ~500,000 tonnes from 2013 to 2032 equating to ~36% diversion target.
- Alberta Capital Region Integrated Waste Management Plan does not appear to comment on a zero waste concept adoption, but recommends a waste minimization plan.
- Alberta Capital Region Integrated Waste Management Plan identifies best approaches for waste diversion, but does not provide guiding principles.

3. Edmonton Metropolitan Region Board

The Edmonton Metropolitan Region Board (EMRB) included solid waste management as part of their regional planning exercise. They produced two documents that are applicable to the solid waste strategic planning exercise - the 2019 Metropolitan Region Servicing Plan Environmental Scan, and the 2019 Metropolitan Region Servicing Plan.

3.1 Metropolitan Region Servicing Plan Environmental Scan

An environmental scan was completed of the Edmonton Metropolitan Region to research and inventory current regional and municipal plans, services and agreements. This includes a comparison of municipal solid waste programs, for example, services, level of service, and cost of service.

3.2 Metropolitan Region Servicing Plan

Subsequent to the completion of the environmental scan, the task force for the Metropolitan Region Servicing Plan (MRSP) identified solid waste as a prioritized service area for the region to be further evaluated, and having potential for regional coordination of planning and service delivery, as well as the greatest opportunity to support the implementation of the growth plan. The servicing plan will include solid waste services that will meet the needs of future growth in the region.

Highlights of the growth pressure identified as part of the planning work:

- Landfilling of organic material generates greenhouse gases.
- Solid waste is currently managed at a local level with costs and efforts duplicated.
- Trends toward densification in urban centres will require updates and improvements to solid waste service delivery
- Major solid waste infrastructure development is planned by member municipalities in the near future providing the ideal time to address regional solid waste processing and consider regional collaboration opportunities.
- Changes to overseas recycling markets have left Canada with a very limited market for its current stream of recyclable materials, resulting in opportunities for an expanded recycling industry in the region.
- More effective waste management, including waste reduction and diversion, can reduce the energy and raw material required to manufacture goods.

Action plan for regional collaborative:

- Develop a common set of solid waste terminology, measures, indicators, and criteria for prioritization of investments.
- Discuss regional efforts with ERWAC and determine best strategy for the future of ERWAC.
- Develop a foundation for a regional data base for solid waste management.
- Advance regional discussion and advocacy of Extended Producer Responsibility focused on enacting legislation.
- Consider disaster debris management.
- Identify and assess opportunities for innovation in solid waste management.
- Review success of landfill bans on successful waste diversion.
- Develop policy recommendations on single use items.
- Identify and assess opportunities for regionally scaled investments (e.g. organics processing, material recovery facilities, waste processing).
- Develop a common full cost accounting and life cost analysis.
- Conduct a detailed service delivery analysis and best practices review for service delivery models, and make recommendations.

EMRB vision for solid waste is “Leading the way to a zero waste Edmonton Metropolitan Region.” The MRSP believes there is opportunity to provide solid waste services on a regional scale to all generators of

waste within the region. The plan is for EMRB member municipalities to establish a regional collaborative to advance regional collaboration for solid waste.

3.3 Summary

- The EMRB has not set a diversion rate.
- EMRB vision for solid waste is “Leading the way to a zero waste Edmonton Metropolitan Region”.
- EMRB identifies guiding principles for the planning, investment and coordination of the delivery of services.

4. Leduc and District Regional Waste Management Authority

Key highlights of Leduc and District Regional Waste Management Facility (LDRWMF) initiatives and programs include:

1. **Baling Strategy** - with the pending closure of the east municipal solid waste landfill cell, which accepts bird attracting wet waste, LDRWMF is implementing a baling operation where wet waste is baled, wrapped in plastic and stored on site in the remaining landfill space. Going forward, sorting of wet and dry waste is a key priority of LDRWMF. They are also planning on investigating opportunities for the baled product being used as feed stock for waste to energy technology.
2. **New Public Drop-Off (PDO) Area** - a new PDO area for residential traffic is constructed which will improve separation of dry and wet waste, and improve public safety.
3. Life expectancy of the remaining landfill dry cell(s) is 20 to 30 years.

Based on the current programs and initiatives that are in place, there is little risk in the County not having a disposal facility for our waste.

4.1 Summary

- LDRWMA has not set a diversion rate.
- LDRWMA has not committed to a zero waste directive.

5. Survey of other solid waste utilities

Administration contacted ~30 other solid waste utilities, requesting information regarding setting of a diversion rate. Two utilities replied, of which one had set a diversion rate of 30%.

Based on additional web-based research, some of the larger urban centres in Alberta have diversion target rates, including St Albert and the City of Leduc.

Reference Documents

1. Too Good to Waste - Making Conservation a Priority (Government of Alberta) 2007
2. Waste Facts (Government of Alberta) 2007
3. Saving the World Begins at Home (Government of Alberta)
4. Alberta Capital Region Integrated Waste Management Plan (Capital Region Waste Minimization Advisory Committee) 2013
5. Metropolitan Region Servicing Plan Environmental Scan (Edmonton Metropolitan Region Board) 2019
6. 2019 Metropolitan Region Servicing Plan Report (Edmonton Metropolitan Region Board) 2019

Appendix C – Strategic Directions and Service Levels

1. Curbside pickup

Strategic direction	Service level outcome
Simplified level of service	<ul style="list-style-type: none">Consolidated service levels - same pickup frequency for all service areas.Simplified administrative process for both customers and staff.
Simplified and financial sustainability	<ul style="list-style-type: none">Simplified user-pay rate structure with rate stabilization reserves.

2. Regional landfill drop-off

Strategic direction	Service level outcome
Continue to provide resident access to the regional landfill while mitigating resident misuse	<ul style="list-style-type: none">Implementation of a tonnage cap of three tonnes per resident per year.
Suspension of funding for private haulers	<ul style="list-style-type: none">Future budget for private haulers no longer required.

3. Transfer stations

Strategic direction	Service level outcome
Identify processes and technologies that provide efficiencies for managing eligible users.	<ul style="list-style-type: none">Frequency of resident access card distribution will change from annually to every second year.Implementation of technologies for resident access to transfer stations, for example, a scan card system.
Investigate expansion of services where needed.	<ul style="list-style-type: none">Implementation of metal bins for select transfer stations.

Improve site maintenance through development of site maintenance plans.	<ul style="list-style-type: none"> Implementation of a maintenance management plan for the transfer stations program, and development of an inter-departmental procedure for maintenance requests and inter-departmental service levels.
Development of site improvement plan to increase user safety and customer convenience.	<ul style="list-style-type: none"> Completion of site improvements, based on condition of sites and levels of customer demand.

4. Eco Station

Strategic direction	Service level outcome
Continue with Eco Station partnership for foreseeable future, with regular monitoring of service to measure effectiveness of the program.	<ul style="list-style-type: none"> Continuation of cost-effective recycling drop-off for County residents.

5. Agricultural plastics program

Strategic direction	Service level outcome
Maintain the current service level for fertilizer, herbicide and pesticide container drop-off.	<ul style="list-style-type: none"> Continuation of current service for County residents.
Investigate demand for expanded agricultural plastics services along with other joint working opportunities within the region.	<ul style="list-style-type: none"> Understanding of service provision at local and regional level, to enable informed decisions for future service enhancements.

Appendix D – Action Plan

Program	Strategic direction	Action	Due by
Management	Adoption of common set of solid waste terminology, measures, indicators, and criteria	Review EMRB outcomes for solid waste terminology, measures, indicators and criteria and adopt standards for county.	Q3 2024
	Determine feasibility of adopting diversion rate	Assess feasibility and appetite for adopting a diversion rate	Q3 2028
Curbside pickup	Simplified level of service	Work with curbside pickup provider to secure same pickup frequency in all current service areas	COMPLETE
		Notify residents of schedule changes where applicable.	COMPLETE
		Review the effectiveness of the program every five years.	Q3 2026 or if requested
	Organic curbside collections	Investigate alternative methods for organics management/diversion every five years	Q3 2026 or if requested
	Expansion of curbside pickup service into other areas	Implement curbside pickup in the Hamlet of Nisku.	COMPLETE
		Continue to monitor the need and feasibility for expansion of curbside pickup in to other County areas, to be assessed every five years.	Q3 2026 or if requested
	Simplified rate structure and financial sustainability	Devise user-pay rate structure in line with current budgets, and reassess on annual basis.	COMPLETE, reassess annually
Regional landfill drop-off	Continued access to regional landfill for County residents, but with introduction of new tonnage cap	Identify County residents that have exceeded three tonnes of solid waste, and notify them of three tonnes cap and charges effective from January 2022 at regional landfill	COMPLETE

		Revisit usage of regional landfill to see impact of tonnage cap	Q2 2023
	Discontinue funding of private hauler disposal at the end of 2021	Inform current private hauler about cessation of funding for curbside pickup disposal, effective January 2022.	COMPLETE
Transfer stations	Distribute transfer station access cards to eligible users every two years	Notify residents about change in frequency for distribution of transfer station access cards	Q2 2022
	Identification of processes and technologies to improve efficiencies for managing eligible users	Investigate costs and feasibility of implementing scan card system or other technologies for access cards.	Q2 2023
		Mapping of neighbouring municipalities' facilities to determine feasibility of regional transfer stations	Q1 2022
	Engagement of neighbouring municipalities to determine potential joint facilities	Discussions with neighbouring municipalities to obtain feedback on possible joint working initiatives for transfer stations.	Q4 2022
	Service level enhancement	Implement metals bins at Sunnybrook, New Sarepta, Rolly View, and Wizard Lake transfer stations	Q3 2022
	Expansion of service where needed	Risk assessment of existing and proposed expanded/re-designed sites in terms of access and user safety.	Q3 2023
		Create working group to identify common maintenance requests at transfer stations, and develop inter-departmental policy/procedure for maintenance/service level requests.	Q2 2022
		Development of functional engineering plans for basic and enhanced transfer station design.	Q4 2022

	Development of site maintenance plans	Create/update checklist of minimal expectations/standards at transfer stations, and carry out assessment of all sites to identify gaps and determine future improvements for access/safety etc.	Q3 2024
	Development of site improvement plan to increase user safety and customer convenience	Involve transfer station attendants in discussions for safety/improvements etc from operational day to day perspective. What works/doesn't work etc.	Q2 2023
Eco Station	Continue Eco Station partnership with regular monitoring of program.	Continue to monitor usage of Eco Station (quantities, cost, usage, diversion) with further review of effectiveness of program in five years.	Q3 2026
Agricultural plastics program	Investigate demand for expanded agricultural plastics services	Involve local agricultural community in working groups/consultations to identify gaps and current wants/needs.	Q4 2022
		Investigate cost/resource implications of expanded services where applicable, impact on environment etc.	Q3 2023
	Investigate joint working opportunities within the region	Monitor and advocate for program funding initiatives from the province	Annually
		Continue existing partnership working with other localities and investigate the possibility of expanding these partnerships into other areas, and develop joint working agreements.	Q4 2022



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