

Subject: **Kneehill County Solid Waste Services**
 Meeting Date: Tuesday, August 20, 2024
 Prepared By: John McKiernan, Manager of Utilities
 Presented By: John McKiernan, Manager of Utilities

STRATEGIC PLAN ALIGNMENT: (Check all that apply)

	<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>
High Quality Infrastructure		Economic Resilience		Quality of Life		Effective Leadership		Level of Service	

RELEVANT LEGISLATION:

Provincial (cite)- N/A

Council Bylaw/Policy (cite)- N/A

BACKGROUND/PROPOSAL:

Kneehill County provides its residents with many options for waste disposal and recycling, from the transfer sites, Class 3 landfill, curbside collection within the Hamlets, annual household hazardous waste round-up, and amenities within neighbouring municipalities.

Four transfer sites are owned and operated by Kneehill County, and one Class 3 landfill is owned and operated by Kneehill County.

All of the County’s solid waste is brought to a Class 2 landfill located in Drumheller and owned and operated by Drumheller and District Solid Waste Association. Kneehill County residents are permitted to access the services at the Drumheller and District landfill at the rates set out. The Class 2 landfill accepts organic and inert materials. There are also recycling options for HHW and PPP materials.

In 2018, Kneehill County engaged with WSP to complete an evaluation on the existing Class 3 landfill and assess the remaining air space. Based off waste density and cell size, the remaining air space was anticipated to be available for 9.7 years which is estimated to be the year 2027 when the landfill cell may run out of available space to offer the current service.

It should be noted that without a scale present at the location, all weights and volumes of waste entering the landfill cell are estimated.

DISCUSSION/OPTIONS/BENEFITS/DISADVANTAGES/OTHER CONSIDERATIONS:

Residential household waste is collected through the curbside collection program provided to Hamlet residents and rural residents can drop off their waste at any of the County’s transfer sites. This waste is contained in large transfer bins which are then offloaded and transported to the Drumheller and District Landfill.

Residents with inert solid wastes (such as couches, mattresses, and demolition material) are able to dispose of this material at the Torrington Class 3 landfill at no charge. Non-residents are charged a fee based off the size of the vehicle or trailer being used.



To extend the life of the landfill cell, site attendants have diligently sorted the loads into the recycling options available and away from general offloading into the landfill. This has resulted in some instances where people have been turned away from the site but has also helped maintain and extend the remaining airspace.

As the landfill nears its end of life, a discussion of the next steps is required.

Options may include:

- A new Class 3 landfill cell will be constructed.
- The landfill can finish its lifecycle and close, and no new cells are constructed.
- Redefine the County's focus on recycling and away from providing a landfill.

New Landfill Cells

The existing cell at the landfill site is the last cell approved through Alberta Environment. Any new construction or expansion would require Kneehill County to undergo the regulatory process for a new approval. This process could take at least 6 – 9 months, including the site investigation, engineering design, and the registration application review by AEP.

The existing site does offer some room for the construction of a new cell but is restricted by a gas service line that runs west to east through the site. This gas line services the grader shed at the site.

In the 2018 evaluation, the construction of two new cells was investigated. The two new cells would offer approximately 27 years of life expectancy to the current site at a cost of roughly \$313,432 per cell. However, the location of the gas service line could limit the size of these cells, reducing the available air space and life expectancy. An investigation could be undertaken to determine the costs of relocating the gas service line.

Additional costs to be considered with the construction of a new cell include the purchase and installation of a scale and scale house to enable users' accurate charging, as well as the replacement costs of the landfill compactor, estimated at \$950,000.

No Landfill

Another option is to no longer offer a landfill service operated/owned by Kneehill County after the available airspace in the current cell is used up. Kneehill County would have to begin the reclamation process for the cells as well as continue monitoring the groundwater for at least 25 years.

In the surrounding areas, there are landfill options that residents could potentially use:

Drumheller and District Landfill
Town of Three Hills Landfill
Big Valley Waste Management Facility
City of Red Deer
City of Calgary – Shepard Landfill
City of Calgary – Spyhill



Another option for consideration if the landfill was to close, would be to contract waste bins throughout the year at different locations within the County for residents to use to offload such items that the landfill once accepted.

Alternate Waste Disposal Methods

There are numerous alternate waste disposal methods that have been gaining interest in Alberta over the years. Systems such as the Waste to Energy (WTE) proposal in Newell County and clean technology solutions such as Sustane Technologies' processing facility proposed in the County if Wetaskiwin are options currently being investigated. These technologies are currently in the design/approval stages and have not begun construction.

The WTE proposal is being led by the Southern Alberta Energy from Waste Association (SAEWA), of which Kneehill County is a current member. The design of this facility began in 2013. Over the last ten years, a large portion of the governance, engineering, and siting has been completed. Currently, the proposal is awaiting a Memorandum of Understanding (MOU) to be finalized between SAEWA and the WTE technology company HZI before the association moves forward. The next steps include obtaining confirmation from each member municipality, Kneehill included, on waste stream volumes and participation in the plan, which would come through individual MOU's with each municipality.

Recycling Focus

Kneehill County could focus on recycling efforts as an alternative to operating a landfill. A central location could be chosen or expand the offerings at current locations. In addition to the current recycling offered, the County could expand our acceptable recycling. Some of the recycling options could include:

- Mattresses
- Scrap metal
- White metal
- Electronic waste
- Paint
- Asphalt shingles
- Tires
- Oil and oil filters
- HHW (household hazardous materials)
- Fluorescent light bulbs

And many more options.

Kneehill County could also investigate developing a program in conjunction with local charities where items that are reusable are collected, such as: furniture, bikes, clothes, toys, books, etc.

FINANCIAL & STAFFING IMPLICATIONS:

Financial and staffing implications would be dependent on the future of the landfill cell, the focus of future waste disposal, if the hours of the operation were to change.

RECOMMENDED ENGAGEMENT:

Directive Decision (Information Sharing, One-Way Communication)



Tools:	Public Notification	Other:	Any chances to the services provided would be publicly communicated
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ATTACHMENTS:

2018 Landfill Evaluation Study
Landfill site overview
Landfill options presentation
Kneehill County Transfer Site brochure

COUNCIL OPTIONS:

1. Phase out operations of the current Class 3 landfill and provide an increased focus on recycling options.
2. Investigate the application process for a new landfill cell within the same area, increasing the life expectancy to approximately 20 years.
3. Further investigate other solid waste disposal options.

RECOMMENDED MOTION:

That Council direct administration to develop a solid waste management program that includes the phasing out of the current Class 3 landfill and provides a higher focus on recycling options within the County.

FOLLOW-UP ACTIONS:

Develop a solid waste management program to be presented to Council at a later date.

APPROVAL(S):

Mike Haugen, Chief Administrative Officer

Approved-

