

# Department Business Plan Update Utilities

Priorities Committee Meeting  
May 11, 2021

# Department overview

- Utilities has an integrated team of dedicated and skilled professionals that is focused on the management and operations of municipal utility infrastructure that supports and contributes to public health, environmental stewardship and economic prosperity.
- Utilities provides a resilient and agile operation striving for seamless service while committing to quick action in response to emergent issues.
- Utilities is financially self-sufficient and does not use municipal property taxes to support operational or capital requirements except for recycling and Enviroservice stations.

# Core business functions

- 1 Waste Management Services
- 2 Community Energy Services
- 3 Water
- 4 Wastewater
- 5 Stormwater
- 6 Utility Engineering

# Core function highlights

## 1 Waste Management Services

Waste collection services (Green Routine) include a curb-side recycling program, organics collection and roll-out collection carts.

Recycling programs are also available to all residents to help divert the amount of waste sent to the landfills through community recycle stations.

- Developing a waste management roadmap to create a high-level strategy that will identify the community's philosophies, priorities and approach to waste management in Strathcona County.
- Engaging stakeholders in the community on waste diversion best practices, including the non-residential sector to increase diversion.
- Improving diversion from landfill by targeting specific materials, such as textiles, food waste and single-use items. Focus on reduction and reuse, which should create collection and processing efficiencies.
- Explore using a variable cart size program in the residential collection program to incentivize waste minimization for our residents with a lower cost option for less waste collected.
- Compliance on all waste streams (garbage, recycling and organics) to maximize diversion efforts in both the residential curbside collection and the Broadview Enviroservice station.

# Core function highlights

## 2 Community Energy Services

Community energy is a system that delivers heat to a number of buildings from a central source. Strathcona County's system uses hot water heated by boilers, delivered through underground insulated pipes to heat individual buildings.

- The focus for this core function is to optimize and efficiently run the heating system for the Centre in the Park development in order to reduce greenhouse gas emissions in the community.
- This function will also take advantage of opportunities to utilize alternative fuel sources through the biomass boiler to reduce environmental impacts and improve financial performance.

# Core function highlights

## 3 Water

Strathcona County Utilities supplies water to many customers in the County including Sherwood Park, rural hamlets and country residential.

Utilities operates three types of distribution systems: high pressure underground pipe system, bulk truck fill and a trickle system.

The department also works with regional partners to ensure safe water distribution in the region.

- This function provides safe, cost effective potable water delivery that complies with municipal, provincial and federal standards and regulations.
- The cost of potable water from our supplier and addressing aging infrastructure (both vertical and underground) will drive the department to look for efficiencies in service delivery to minimize financial impacts.
- More robust risk mitigation plans for essential infrastructure is critical for the success of ensuring continuity of service for the community.
- Development of an asset management plan will ensure resources are invested efficiently to maintain infrastructure and service levels that protect public health.

# Core function highlights

## 4 Wastewater

Strathcona County Utilities operates and maintains all underground sewer systems for Sherwood Park, Ardrossan, Josephburg, Collingwood Cove, Half Moon Lake, Antler Lake and South Cooking Lake.

This includes gravity and low-pressure sewer systems from the property up to and including the lift station and lagoons.

- This function provides wastewater conveyance that is delivered safely, efficiently and in compliance with municipal, provincial and federal standards and regulations.
- More robust risk mitigation plans for essential infrastructure is critical for the success of ensuring continuity of service for the community.
- Cost of treating wastewater from our supplier and addressing aging infrastructure (both vertical and underground) will drive the department to look for efficiencies to minimize the cost to the resident.
- Development of an asset management plan will ensure resources are invested efficiently to maintain infrastructure and service levels that protect public health and the environment.

# Core function highlights

## 5 Stormwater

The stormwater management system gathers rainfall and surface water runoff and helps reduce the possibility of flooding and property damage in Sherwood Park and Ardrossan.

- This function provides safe stormwater services that are efficient, effective solutions to mitigate flood risks; and is in compliance with municipal, provincial and federal standards and regulations.
- More robust risk mitigation plans for essential infrastructure is critical for the success of ensuring continuity of service for the community.
- Changes in the rainfall patterns and the cost of addressing aging infrastructure have potential to increase the cost to maintain flood protection for residents.
- Development of an asset management plan will ensure resources are invested efficiently to maintain infrastructure and service levels that protect property and the environment.



# Core function highlights

## 6 Utility Engineering

Utilities Engineering effectively plans, designs and manages the construction of safe and sustainable water, wastewater and stormwater infrastructure that promotes public health and safety.

- Update and maintain utility master plans and Design and Construction Standards for department infrastructure that promote public health, support infrastructure planning for servicing future development and guide department capital investments.
- Develop an asset management plan for the department that balances health and safety implications; acceptable levels of risk; sustainable lifecycle costs; quality of service; protection of the environment; preservation of the assets and efficient performance.
- Provide comprehensive and innovative technical solutions that are completed safely, are delivered on time, on budget and are in compliance with municipal, provincial and federal standards and regulations for major department infrastructure projects.

# Successes and challenges

## Successes

- Continuing to maintain Enviroservice programs in Sherwood Park through a temporary site while the Enviroservice building was used as Alberta Health Services COVID testing site in 2020.
- Continue to provide utility services to residents during a pandemic while protecting both staff and resident health through new safety protocols and procedures.

## Challenges

- Ensuring staff stay connected as staff work on and off site.
- Helping residents facing financial difficulties through creating payment plan options on County utility services.

# COVID impacts

## **Staff impacts**

- Staff remain at full capacity.
- Staff are working a mix of onsite and remote to ensure operational requirements are met while minimizing risk of exposure to COVID.

## **Service impacts**

- Enviroservice services in Sherwood Park were moved to a temporary site so the Enviroservice building could be a COVID testing site for Alberta Health Services.
- Discontinued disconnection of County utility services to meet public health requirements for residents.

## **Financial impacts**

- Working with residents facing financial difficulties through setting up payment plan options for County utility services.
- Increased cleaning and supply costs to ensure proper protocols are met to protect staff from COVID 19.

# Employee engagement

Engagement survey theme	Engagement initiative	People Plan focus area
Communication	Improved sharing of department and corporate information: <ul style="list-style-type: none"><li>• Development of comprehensive internal communications plan</li><li>• Gathering staff feedback</li></ul>	Trust and Team
Alignment of Values	Focus on sharing values, leading by example: <ul style="list-style-type: none"><li>• Increasing cleaning and safety protocols to protect staff working onsite</li><li>• Having staff work remotely (when operationally feasible) to minimize risk of COVID transmission among staff</li></ul>	Clear Purpose

# Improvement Initiatives

- Asset Management Program for Utility Infrastructure
- Northern Bear Booster Station Upgrades

# Asset Management Program for Utility Infrastructure - Status

Overall initiative status



Initiative status	Current status	Previous status
Time	Y	Y
Scope	G	G
Budget	G	G

Alignment to strategic goals
<ul style="list-style-type: none"><li>Goal 9: Continuously improving the way we work, as one organization, in an agile and sustainable manner.</li><li>Result:<ul style="list-style-type: none"><li>Supports infrastructure management</li><li>Supports long term financial stability</li><li>Collaborates with departments</li><li>Support insight-driven / evidence-based decision making</li><li>Supports integrated planning</li></ul></li></ul>

Key deliverables
<ul style="list-style-type: none"><li>Utilities Level of Service Framework</li><li>Utilities Risk Framework</li><li>Utilities Maintenance Plan</li><li>Utilities Financial Strategy</li><li>Department overall Asset Management Plan</li></ul>

Opportunities/Challenges
<p>Opportunities:</p> <ul style="list-style-type: none"><li>To enhance ability to meet the required level of service customers in the most cost efficient manner through operations, maintenance, renewals and financial forecasting</li></ul> <p>Challenges:</p> <ul style="list-style-type: none"><li>Identify a department asset management (AM) champion, develop a change management plan and create engagement opportunities to ensure successful implementation with department staff</li></ul>

Risks	Mitigation
Utilities’ intent is to work on a department level in parallel with the Corporate Asset Management (CAM) initiative. A service definitions scope has been strategically added to the front-end of the CAM initiative which has pushed timelines slightly.	Remain actively involved in the CAM and service definition initiatives. Use Utilities as a department pilot for upcoming corporate asset management initiatives.

# Northern Bear Booster Station Upgrade- Status

## Overall initiative status



Initiative status	Current status	Previous status
Time	G	G
Scope	G	G
Budget	G	G

## Alignment to strategic goals

- Goal 2: Manage, invest and plan for sustainable municipal infrastructure
- Result: Safe, reliable utility infrastructure

## Key deliverables

- Repairing and upgrading the Northern Bear Booster Station will ensure adequate pressures are provided to downstream users including South Cooking Lake Truckfill and Northern Bear customers

## Opportunities/Challenges

- Opportunities:
- Ensure water system meets Alberta Environment and Parks requirements for positive water pressure
  - This upgrades will reduce the risk of future repairs required at this site in order to provide water services

## Risks

COVID 19 may impact the ability to get contractors on site to complete the repair and upgrade

## Mitigation

Will work with successful proponent to ensure all health and safety protocols are met to protect staff and resident health during the repair

# Strategic Initiatives

- Utilities business operations and service excellence
- Broadview Enviroservice operational enhancements
- Waste Management Roadmap
- Green Routine – pay as you throw
- Rural water service (new connection / marketing)
- Collingwood Cove Lift Station design and construction
- South Cooking Lake Water Fill Station
- HyrdoVac waste plan
- Wet weather flow management plan



# Utilities business operations and service excellence - Status

## Overall initiative status



Initiative status	Current status	Previous status
Time	Y	G
Scope	G	G
Budget	G	G

## Alignment to strategic goals

- Goal 9: Continuously improving the way we work, as one organization, in an agile and sustainable manner.
- Result:
  - Supports continuous improvement
  - Support insight-driven / evidence-based decision making
  - Supports integrated planning

## Key deliverables

- Establish clear objectives for the utility department for each line of business focused on effective management, continuous improvement and strategic alignment.
- Develop performance indicators to be able to quantitatively measure financial, customer and infrastructure performance to help guide decision making in the department

## Opportunities/Challenges

- Challenges
- COVID priorities around operations have delayed the ability to start work on this initiative

## Risks

Ensure objectives and measures improve performance of department

## Mitigation

Bring in a consultant to ensure industry best practices are incorporated in any objectives and measures created for the department

# Broadview Enviroservice operational enhancements - Status

## Overall initiative status



Initiative status	Current status	Previous status
Time	Y	Y
Scope	G	G
Budget	G	G

## Alignment to strategic goals

- Goal 2: Manage, invest and plan for sustainable municipal infrastructure
- Result: Safe, reliable utility infrastructure
- Goal 4: Ensure effective stewardship of water, land, air and energy resources
- Result: County uses best practice approach to waste management

## Key deliverables

- Retrofit of existing ventilation system in the Enviroservice building to ensure air quality meets standards for both staff working with hazardous materials, but also for residents utilizing the service
- Installation of an asphalt pad for grinding operations for brush and yard waste services
- Installation of a gatehouse and expansion of reduction program with supporting staffing resources

## Opportunities/Challenges

### Challenges:

- Balancing retrofit and installation projects with weather and contractors while limiting the impact on users of the site has and continues to be a challenge
- Continuous communication both internal and external assist with better preparing for the work and potential service impact

## Risks

Both ventilation system and asphalt pad were completed end of 2019. Installation of gatehouse and expansion of onsite reduction program is delayed due to current COVID-19 impacts.

## Mitigation

Planning continues for gatehouse and reduction program, however completion may be delayed until 2022.

# Waste Management Roadmap - Status

## Overall initiative status



Initiative status	Current status	Previous status
Time	G	G
Scope	G	G
Budget	G	G

## Alignment to strategic goals

- Goal 4: Ensure effective stewardship of water, land, air and energy resources
- Result: County uses best practice approach to waste management
- Goal 7: Provide opportunities for the public engagement and communication
- Result: Community is informed about County decisions

## Key deliverables

- Endorsing waste management principles
- Setting targets and goals for waste minimization practices in the community
- Developing a roadmap that will outline steps to improve the Green Routine program

## Opportunities/Challenges

- Opportunities:
- Modernize the Green Routine program to increase diversion in residential waste
  - Engage with the industrial, commercial and institutional sectors to look for opportunities increase waste diversion or reduce waste generation

## Risks

Ensure resident engagement and feedback is incorporated in the implementation of the roadmap

## Mitigation

Use multiple tools and methods to reach out residents to ensure their feedback is collected and incorporated into the implementation of the roadmap

# Green Routine - pay as you Throw - Status

## Overall initiative status



Initiative status	Current status	Previous status
Time	Y	G
Scope	G	G
Budget	G	G

## Alignment to strategic goals

- Goal 4: Ensure effective stewardship of water, land, air and energy resources
- Result: County uses best practice approach to waste management
- Goal 7: Provide opportunities for the public engagement and communication
- Result: Community is informed about County decisions

## Key deliverables

- Conducting specific engagement on this topic with Green Routine users
- Complete an environmental scan and research best practices
- Develop a plan to introduce pay as you throw into the Green Routine program

## Opportunities/Challenges

- Opportunities
- Determine whether a system that distributes waste collection costs more fairly among the population, and in proportion to the amount of waste each household produces, would be a viable solution
  - Pay as you throw would also help incentivize less waste being produced drive high diversion of waste from landfills
- Challenges
- COVID has made it more difficult to ensure residents are able to provide feedback on the concept and give the department enough time to integrate that feedback in the implementation of pay as your throw

## Risks

Ensure resident engagement and feedback is incorporated in the implementation of pay as you throw

## Mitigation

Use multiple tools and methods to reach out residents to ensure their feedback is collected and incorporated into the implementation of this initiative

# Rural water service (new connection / marketing) - Status

Overall initiative status



Initiative status	Current status	Previous status
Time	G	G
Scope	G	G
Budget	G	G

Alignment to strategic goals
<ul style="list-style-type: none"> <li>Goal 8: Foster an environment for safe communities</li> <li>Result: Utility infrastructure provides safe clean water; manages wastewater treatment and provides effective storm water management</li> </ul>

Key deliverables
<ul style="list-style-type: none"> <li>Customer connection to rural transmission and distribution water network</li> <li>Water service meets environmental safety requirements from Alberta Environment</li> </ul>

Opportunities/Challenges
<p>Opportunities:</p> <ul style="list-style-type: none"> <li>Customers utilize underground water infrastructure to provide safe water to their residence</li> <li>Utilizing rural transmission and distribution water network reducing trucking water on rural road infrastructure reducing possible degradation of the roads</li> </ul> <p>Challenges:</p> <ul style="list-style-type: none"> <li>Cost of connecting residents can be challenging depending on location of property</li> </ul>

Risks	Mitigation
Safe water quality is provided through the rural water network	County does water sampling on rural water network to ensure safe water for all rural residents

# HydroVac waste plan - Status

Overall initiative status



Initiative status	Current status	Previous status
Time	G	G
Scope	G	G
Budget	G	G

Alignment to strategic goals
<ul style="list-style-type: none"> <li>Goal 2: Manage, invest and plan for sustainable municipal infrastructure</li> <li>Result: Safe, reliable utility infrastructure</li> <li>Goal 4: Ensure effective stewardship of water, land, air and energy resources</li> <li>Result: Natural areas and resources balance value for current and future generations</li> <li>Goal 8: Foster an environment for safe communities</li> <li>Result: Utility infrastructure provides safe clean water; manages wastewater treatment and provides effective storm water management</li> </ul>

Key deliverables
<ul style="list-style-type: none"> <li>Determine the needs of County operations in regards to the types and requirements around facilities for hydro-vac waste disposal while meeting new provincial requirements for disposal of hydro-vac waste</li> </ul>

Opportunities/Challenges
<p>Opportunities:</p> <ul style="list-style-type: none"> <li>Provide hydro-vac waste disposal services for County operations while minimizing impact to the environment</li> </ul> <p>Challenges:</p> <ul style="list-style-type: none"> <li>Using facilities outside of the County to address the issue is more expensive</li> </ul>

Risks	Mitigation
The County not being in compliance with new provincial standards on hydro-vac waste disposal	Emergency operational plans have been developed using regional facilities until the County meets any new provincial requirements

# Collingwood Cove Lift Station design and construction - Status

Overall initiative status



Initiative status	Current status	Previous status
Time	G	G
Scope	G	G
Budget	G	G

Alignment to strategic goals
<ul style="list-style-type: none"><li>Goal 2: Manage, invest and plan for sustainable municipal infrastructure</li><li>Result: Safe, reliable utility infrastructure</li><li>Goal 8: Foster an environment for safe communities</li><li>Result: Utility infrastructure provides safe clean water; manages wastewater treatment and provides effective stormwater management</li></ul>

Key deliverables
<ul style="list-style-type: none"><li>Complete preliminary and detailed design for the lift station renewal</li><li>Construct the required lift station renewal</li></ul>

Opportunities/Challenges
<p>Opportunities:</p> <ul style="list-style-type: none"><li>Rectify existing facility safety concerns, obsolete infrastructure and operational performance failures</li></ul> <p>Challenges:</p> <ul style="list-style-type: none"><li>Maintain wastewater service to the community during construction</li><li>Minimize construction impact on adjacent home owners</li></ul>

Risks	Mitigation
Infrastructure failure prior or during construction.	Emergency operational plans have been developed.
Environmentally sensitive area within which construction activity may not be conducted from April 1 to August 31 without Alberta Environment and Parks (AEP) approval.	Avoid the non-construction window. Work with AEP, Canadian Wildlife services (CWS) and biologists to establish a method of approach (if required).

# South Cooking Lake Water Fill Station - Status

Overall initiative status



Initiative status	Current status	Previous status
Time	G	G
Scope	G	G
Budget	G	G

Alignment to strategic goals
<ul style="list-style-type: none"> <li>Goal 2: Manage, invest and plan for sustainable municipal infrastructure</li> <li>Result: Safe, reliable utility infrastructure</li> <li>Goal 8: Foster an environment for safe communities</li> <li>Result: Utility infrastructure provides safe clean water; manages wastewater treatment and provides effective storm water management</li> </ul>

Key deliverables
<ul style="list-style-type: none"> <li>Complete preliminary and detailed design for the residential water fill station</li> <li>Construct the new residential water fill station</li> </ul>

Opportunities/Challenges
<p>Opportunities:</p> <ul style="list-style-type: none"> <li>Provide increased water service level to Hamlet of South Cooking Lake and rural area customers.</li> <li>Increased operational efficiency of the existing water system.</li> <li>Potential synergies with Emergency Services for water at the South Cooking Lake Fire Hall.</li> </ul> <p>Challenges:</p> <ul style="list-style-type: none"> <li>Minimize construction impact on adjacent stakeholders</li> </ul>

Risks	Mitigation
Strathcona County received Alberta government cost-shared grant funding (provided under the Water for Life Strategy as part of the Alberta Municipal Water/Wastewater Partnership)	Administration has received confirmation from the Alberta government that the grant is still open; however the current availability to use the grant for this project needs to be confirmed.



# Wet weather flow management plan - Status

Overall initiative status



Initiative status	Current status	Previous status
Time	G	G
Scope	G	G
Budget	G	G

Alignment to strategic goals
<ul style="list-style-type: none"> <li>Goal 2: Manage, invest and plan for sustainable municipal infrastructure</li> <li>Result: Safe, reliable utility infrastructure</li> <li>Goal 8: Foster an environment for safe communities</li> <li>Result: Utility infrastructure provides safe clean water; manages wastewater treatment and provides effective stormwater management</li> </ul>

Key deliverables
<ul style="list-style-type: none"> <li>Complete an Inflow / Infiltration Assessment Report</li> <li>Complete a Wet Weather Flow Management Plan</li> <li>Develop a potential implementation strategy</li> <li>Develop annual Alberta Capital Region Wastewater Commission (ACRWC) compliance and verification report</li> <li>Incorporate new inflow and infiltration management and testing criteria into the County’s Design and Construction Standards</li> </ul>

Opportunities/Challenges
<p>Opportunities:</p> <ul style="list-style-type: none"> <li>Work cooperatively with the ACRWC to reduce wet weather flow impacts on the regional system</li> <li>Characterize wet weather flow sources and identify priorities for wet weather flow management</li> </ul> <p>Challenges:</p> <ul style="list-style-type: none"> <li>Increased wastewater infrastructure inspection and compliance reporting</li> </ul>

Risks	Mitigation
The Wet Weather Flow Management Plan may lead to various capital projects of operational programs to remain in compliance with the ACRWC Wet Weather Discharge Permit.	Continue to work cooperatively with the ACRWC and the regional member municipalities.
The development community does not accept the new Design and Construction Standard wastewater inspection and testing requirements.	Ensure consistency with other municipalities in the region. Work cooperatively with the development community and the ACRWC to adopt standards.

# Questions?

