

Wastewater Overstrength Background Report April 2024

The County pays ARROW Utilities (formerly ACRWC) for wastewater disposed at the Villeneuve and Stony Plain wastewater transfer stations. Private truck haulers collect residential wastewater from septic tanks and holding tanks and dispose of it at these stations. ARROW Utilities charges the County \$1.85/m³ for wastewater disposal and an average additional \$15/m³ for overstrength wastewater charges. The overstrength charges have progressively increased over the years due to more unsuitable material and higher overstrength concentrations of the wastewater being discharged and higher charges per cubic meter from ARROW. The current estimated annual costs for overstrength at the transfer stations is approximately \$520,000.

To address the operating deficit, the disposal fee was increased from \$7.77/m³ to \$10/m³ in 2023. This increase has helped reduce the annual deficit to approximately \$233,000. However, some holding tank owners, who require frequent hauling, have raised concerns about the price increases. It is important to note that holding tanks that are emptied regularly typically have minimal overstrength wastewater. Nevertheless, ARROW Utilities charges all wastewater, regardless of its source, based on 24 hour composite sampling at the transfer stations.

ARROW Utilities has a requirement for us to gather and submit a manifest that includes the time, date, and location information of wastewater sources being discharged into their system. Currently, the County uses a paper manifest system to track wastewater collection and disposal, but much of the information is illegible, inaccurate, and missing. To address this, the County proposes implementing a GPS system for all wastewater haulers using the transfer stations. This system would replace the paper system and provide accurate and real-time data on wastewater collection and disposal. It would also allow for the restriction of certain geographic areas and different rates based on pickup locations. A pilot GPS project conducted with the largest user of the facilities, who holds a neutral stance towards the GPS system, has shown promising results.

By implementing the GPS system, the County aims to establish a more equitable fee structure in the future, which could reduce complaints from holding tank owners, eliminate improper commercial and industrial wastewater disposal, and ultimately reduce overstrength charges. If the County introduces a new fee structure, holding tank owners may see reduced disposal rates, while septic tank owners may experience slightly higher rates to cover overstrength charges. However, since septic tank owners typically wait several years before disposal, the overall impact on them will be much lower compared to holding tank owners.

The County hired MPE Engineering in 2023 to conduct a comprehensive report on potential solutions to mitigate the existing overstrength charges. Various options were explored, ranging from the closure of both wastewater transfer stations and re-directing wastewater to an Edmonton facility, to establishment of a complete wastewater treatment facility at one of the wastewater transfer stations, with estimated capital costs of approximately \$2 million, in addition to ongoing annual operating expenses.

Administration believes that closing the wastewater transfer stations would lead to increased costs for residents, and therefore, it is not recommended. Instead of investing significant capital into the

wastewater treatment business, which would also entail high annual operating costs, Administration suggests exploring options such as minimizing or eliminating over strength charges for holding tank owners, raising the future disposal rates for septic tank owners, and preventing any commercial and industrial wastewater from entering the wastewater transfer stations.

Administration is proposing a mandatory implementation of a County-funded GPS system for all wastewater haulers utilizing the wastewater transfer stations. The County would bear the cost and responsibility for installing the GPS system. By replacing the current cumbersome and unreliable paper system, the GPS system would introduce an accurate electronic manifest system. A key advantage of the electronic manifest system is its accuracy and timeliness, as well as allowing for easy establishment of historic data. Wastewater haulers would no longer be required to complete paperwork, as all relevant information would be accessible electronically and in real time.

In addition to providing accurate and real time records of wastewater pickup and disposal, the implemented GPS system offers the capability to restrict specific geographic locations, including commercial and industrial locations. Furthermore, the system may allow the County to implement different pricing based on pick up locations. By gathering data on holding tanks, septic tanks, and the quantities collected, haulers may be charged varying rates even if they collect a combination of holding tanks and multiple septic tanks in a single load. Once the electronic manifest (GPS System) is implemented, administration could establish a more equitable fee structure, which is expected to reduce complaints from holding tank owners, minimize improper disposal of wastewater at transfer stations, and subsequently decrease overstrength charges. While septic tank owners may experience higher rates for wastewater disposal compared to the current situation, it is important to note that septic tank owners typically have a much longer interval between disposals.

In the fall of 2023, a pilot program using the GPS system was conducted with the County's largest private contractor, and the results demonstrated the system has the capability to meet the County's requirements. Administration also asked for feedback from the other private contractors regarding the County's potential implementation of the GPS system on all haulers. While the preference of those haulers was to avoid this requirement, the largest user of the transfer stations, who also served as our pilot project hauler, expressed acceptance of this proposed requirement.

The GPS system is designed to control and regulate what material is coming into the transfer stations. The County can ensure compliance through access to the wastewater transfer stations. Alternatively, haulers can still choose to transport their wastewater to the City of Edmonton's Poundmaker wastewater disposal site that does not currently have overstrength charges for haulers and other private companies in the region.

Administration feels that despite some wastewater haulers wanting to avoid a GPS system, it is the best way to ensure the County can regulate and understand where disposed wastewater is coming from and as a result, to set prices equitably for all users.