



## PUBLIC WORKS – WASTEWATER TRANSFER STATIONS

ARROW OVERSTRENGTH CHARGES

# WHAT IS OVER-STRENGTH AND OVER-STRENGTH SURCHARGE



Definition under Bylaw 2020-08:



“Over-Strength” means wastewater released into the wastewater system that is higher in concentration for one or more constituent concentrations set out in schedule “D” of this bylaw.



For example, Biochemical Oxygen Demand, Total Suspended Solids, Oil, Grease, Hydrocarbons, etc.



“Over-Strength Surcharge” means a rate, fee or charge imposed upon a person who releases wastewater to the wastewater system that exceeds one or more constituent concentration set out in Column A of Schedule B.

# CURRENT SITUATION



Current Deficit of \$233,000 per year for Arrow wastewater charges for both the Stony Plain and Villeneuve Wastewater Transfer Stations



Stony Plain Station deficit of \$89,000 per year which is the difference between what we charge \$10/m<sup>3</sup> vs costs from Arrow of \$13.15/m<sup>3</sup>



Villeneuve Station deficit of \$144,000 per year which is the difference between what we charge \$10/m<sup>3</sup> vs costs from Arrow of \$30.67/m<sup>3</sup>



County costs to operate and maintain the two stations not included in the above costs



These stations are receiving wastewater from commercial, industrial and residential areas.

# FUTURE SITUATION DESIRED

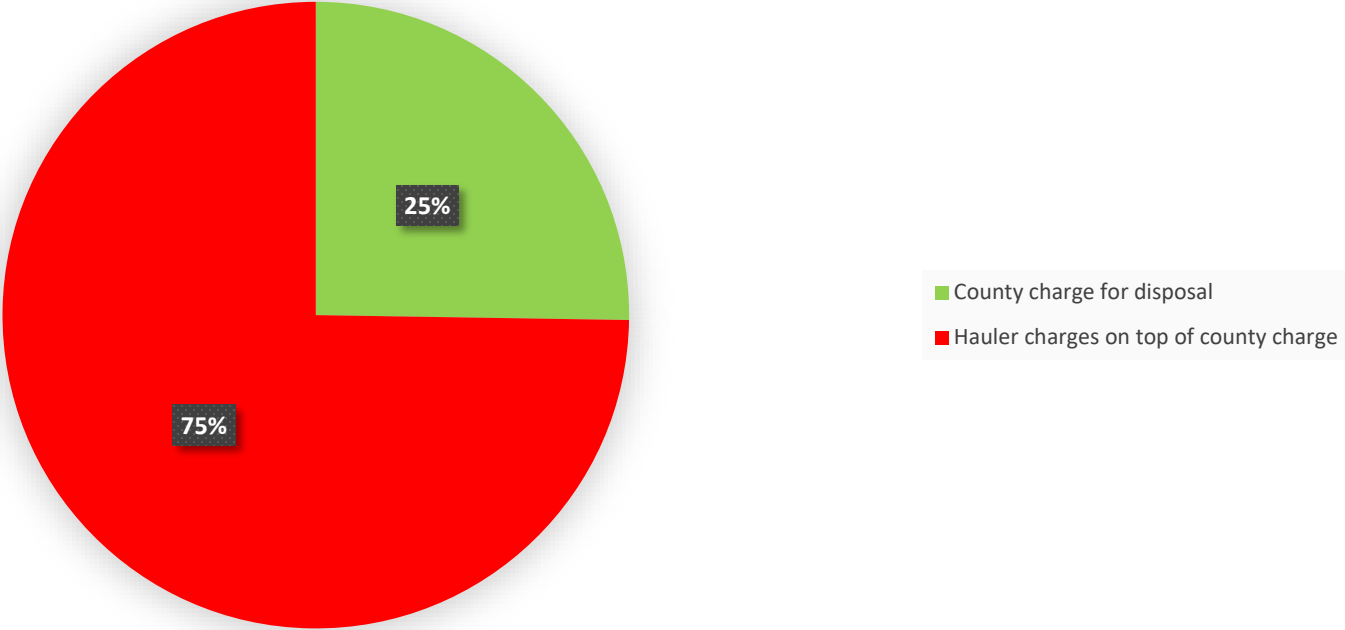
Revenues = Costs or \$0 annual deficit

Only residential waste from holding tanks or septic tanks

No commercial or industrial waste

Affordable rates for users through lower overstrength charges

# COUNTY CHARGES VS HAULER CHARGES



# MPE ENGINEERING REPORT

MPE Engineering completed a review of options to reduce overstrength charges for the County early in 2024


Options ranged from closing the stations to installing primary sewage treatment at the Stony Plain Transfer Station.

Final recommendation assuming rates were unacceptable, is to close the Villeneuve Transfer Station, open the existing Wabamun lagoons to Waste haulers and construct primary sewage treatment at the Stony Plain Wastewater Station


Total estimated costs to implement final recommendation is approximately \$2 million in capital plus annual operating costs including an additional operator to run the primary treatment plant.

# HOW CAN WE GET THERE?

GPS managed customer base supported by electronic manifests.



Adjusted disposal rates in the future, supported by a two-tiered system and/or rebate program.



Primary Wastewater Disposal Treatment (Treating Stony Plain TS Only – Closing Villeneuve TS).



Open up Wabamun Lagoon to take pressure off the Stony Plain TS.

# GPS Background summary

- **BACKGROUND**

- GPS System funding was approved in the 2024 Budget.
- Legal Opinion – Municipal Wastewater GPS System Supported by RMRF.
- County would only pick up information currently required for Paper Manifest. The Pump On/Off locations would be managed under this program.
- A virtual meeting was held with all wastewater haulers, who expressed a preference against the GPS system if given the option. However, the largest user did not object to its implementation if mandated by the County.
- A successful Pilot Study was conducted last Fall 2023.



# GPS ADVANTAGES

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Accurate and timely electronic manifest which will reduce staff requirements to go through paper manifests and following up due to inaccurate/insufficient information from haulers.

County can easily remove commercial/industrial wastewater areas and even wastewater from outside of the County which will reduce overstrength charges for all.

By eliminating commercial/industrial waste, overall wastewater overstrength will be reduced with less charges from Arrow Utilities.

Information on quantities and locations of wastewater could help improve potential future programs including fees/rebates to be more equitable.

Potential to charge haulers different rates based on location for mixed loads (i.e. Septic plus holding tanks in a single load)

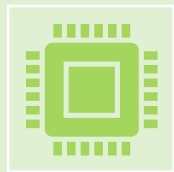
Haulers may have access to a full GPS system and information on their own trucks that is not accessible to the County.

Haulers no longer have to fill out paper manifests or get fined/banned for not filling out properly.

# GPS DISADVANTAGES



May take some time for haulers to get used to it given their privacy concerns and we expect some negative feedback initially.



A new system may have a few electronic bugs to work out, but the pilot study was used to eliminate any issues that came up.



Annual costs associated with life cycle replacement as well as software support.

## WHY DO WE NEED A REBATE PROGRAM OR A TWO-TIERED DISPOSAL RATE SYSTEM?

BECAUSE WASTEWATER HOLDING TANK HOMEOWNERS ARE BEING TREATED UNFAIRLY.



Generally, there are two types of residential wastewater systems.

1) Wastewater holding tanks.      2) Wastewater septic field tanks



Wastewater holding tanks typically haul wastewater to the transfer stations 50 times more often than septic field tank homeowners. (every 3 weeks compared to once every 3 years)



Wastewater holding tanks typically have very little over-strength effluent, if any at all.



Currently, the cost for disposing wastewater at the transfer stations is the same price regardless of whether your disposing over-strength material or not.



Currently, the \$10/m<sup>3</sup> price is made up of \$1.85/m<sup>3</sup> (base price with no over-strength) and \$8.15/m<sup>3</sup> (additional cost for over-strength material)



Therefore, the holding tank homeowners currently pay for over-strength which they typically do not have, and they pay the additional over-strength premium 50 times more often than Septic field tank homeowners.

# COST ANALYSIS

With GPS		
Expense Type	Expenses	Comments
One-time capital costs	\$100,000.00	Costs required for GPS procurement, programming, installation and set-up. If GPS is not acquired, funding will be used to upgrade the existing Flow Point software
Ongoing licensing costs	\$20,000.00	Annual License cost for GPS system
Annual Staffing costs	\$15,000.00	For summer student to verify sources and help develop rebate program
Without GPS		
Expense Type	Expenses	Comments
Annual Staffing	\$75,000.00	1.0 FTE for tracking paper based manifest system
Annual staffing	\$30,000	0.5 FTE If we go with the rebate program
<b>Total annual Expense</b>	<b>\$105,000.00</b>	Annual ongoing expense
Total Annual savings with GPS System	\$105,000 - \$ 35,000	\$70,000

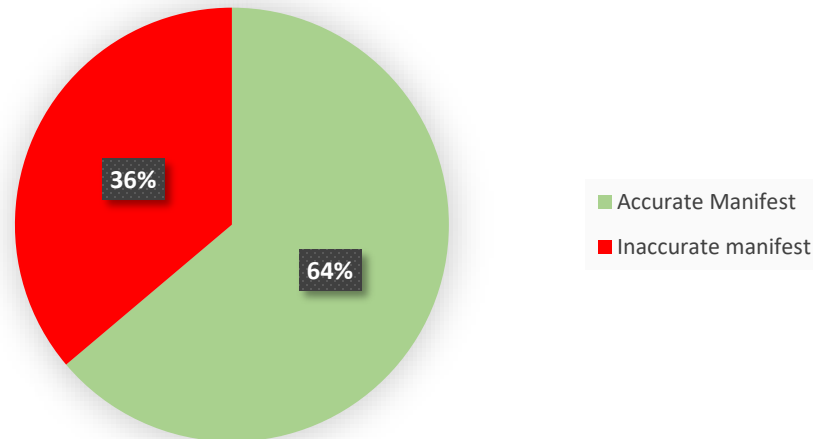
# RECOMMENDATIONS

- Maintain the existing Transfer Station Wastewater Rates (\$10/m<sup>3</sup>)
- Ban non-residential wastewater
- Implement a GPS System that records the effluent pick-up locations and manages the effluent disposal locations as well as supports the wastewater hauler manifest requirements.
- Amend the existing Bylaw to include the GPS System requirements and have the Transfer Stations restricted to residential customers only unless a special permit authorizing disposal is in place
- Review the future ARROW over-strength test results and subsequent charges from ARROW.
  - Present a report to Council with recommendations going forward.
  - Adjust the wastewater transfer station disposal rates to full cost recovery.

# FACTS OF CURRENT MANIFEST SYSTEM

- Between Jan 2023 – May 2023 the usable information in the paper manifest system was 64%

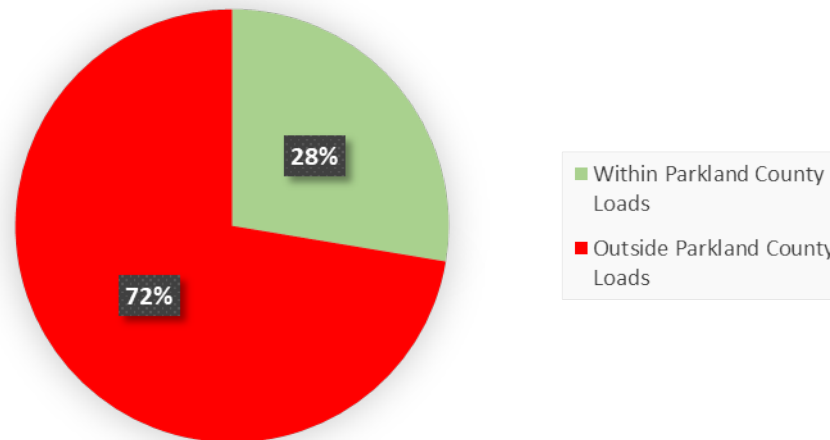
Paper Base Manifest system



# FACTS OF CURRENT MANIFEST SYSTEM

- Between Jan 2023 – May 2023
- Major user of Villeneuve station are Rukus, Rene's Vac and Handi Can

Villeneuve Transfer Station



# WASTEWATER TRANSFER STATION SIGNAGE

## Villeneuve (HWY 44) Transfer Station

- This site **only** accepts **Residential Sewage**. **NO Commercial Sumps are allowed, dispose sump sewage at an approved AEP facility.**
- In accordance with the Parkland County Wastewater Bylaw No. 2020-08, any unauthorized wastewater disposed at this facility may be subject to fines and potential access removal.
- **NO Garbage** is to be disposed of at this facility.
- If an uncontained spill occurs, it is the responsibility of the hauler to clean the spill and report it to Parkland County. Failure to do so may result in fines and potential access removal.



County Office: 780-968-8888

Emergency (After Hours): 780-968-8401



# QUESTIONS