Hauled Sewage Rate: Post-Consultation Update

PW 38-2024

Terry Ricketts, Commissioner of Public Works

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Why is Change Needed?

- Public Works Committee questioned the current rate and how it compares to the true cost of hauled sewage treatment
- Staff proposed a fee to reflect full cost recovery (Sept 10 PWC)
- Recommended 2-Tier approach
  - Current fee - $46/1000 gal
  - Proposed fees are $71/1000 gal for low concentration sources and $165/1000 gal for high concentration sources
- Stakeholder consultation Sept, Oct and Nov
- Reporting back on key consultation trends

Who Pays the Fee?

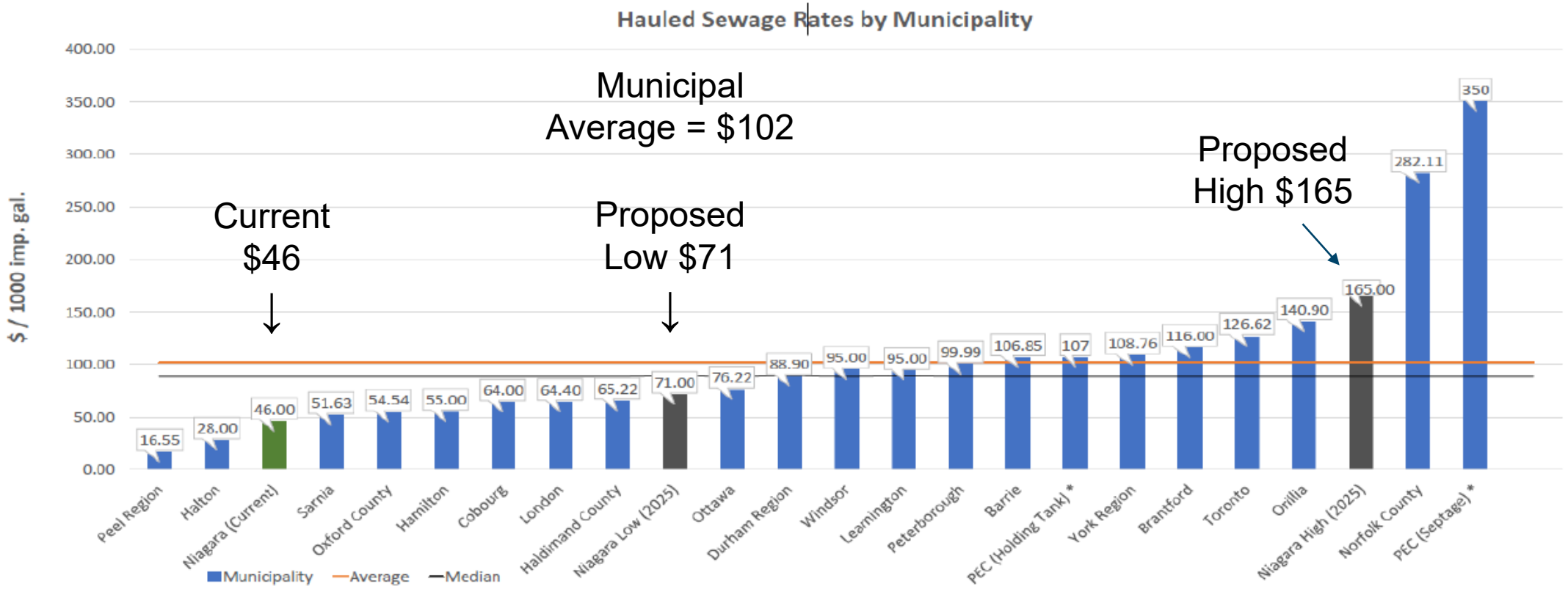
- The Region charges the hauler fee of $46/1000 gal
- Haulers incorporate the fee into the price they charge their customer (the sewage generator)
- Generators include approx. 900 businesses and 21,000 residential properties in Niagara

Other Wine Region Rates

- Okanagan Region (BC) $214/1000 gallons
- Willamette Valley (Oregon) $168 USD/1000 gallons
- Napa County (California) $300 USD/1000 gallons
- Prince Edward County $350/1000 gallons (septage only)

Niagara's current fee - $46/1000 gal
Proposed fees are $71/1000 gal for low concentration sources and $165/1000 gal for high concentration sources

Municipality Comparison



* Prince Edward county does not accept winery waste as it is too pollutant dense and would negatively impact their treatment process

(1) Niagara is unique in its source demographic compared to neighboring municipalities with over 120 wineries

(2) Based on 2022 data (Peel, Hamilton , Prince Edward County based on 2024 data)

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Regional Impact to Generators

Home septic - Current cost per 5 yrs: $46, future cost $71 (septic tank)

Average annual sewage - 10,000 gallons (34 wineries >)

- Current annual cost: $460
- Future annual cost for low concentration: $710
- Future annual cost for high concentration: $1,650

Average annual sewage - 50,000 gallons (15 wineries >)

- Current annual cost: $2,300
- Future annual cost for low concentration: $3,550
- Future annual cost for high concentration: $8,250

Pollutant Concentration Comparison

Average 3-Year Pollutant Concentrations

Pollutant	Regular Wastewater	LOW Strength		HIGH Strength	
Biochemical Oxygen Demand (BOD)	189	4,125	22x	18,761	99x
Total Suspended Solids (TSS)	252	9,003	36x	14,258	57x
Total Phosphorus (TP)	29	64	2x	80	3x
Total Kjeldahl Nitrogen (TKN)	17	491	28x	30	2x
TOTAL	**487 mg/L**	**13,683 mg/L**	**28x**	**33,128 mg/L**	**68x**

- Hauled Sewage has significantly higher pollutant concentrations
- More costly to treat compared to regular wastewater

Fee Chart	Strength	O&M	Capital Sustainment	Capital Growth	Proposed Cost Recovery Fee
	Low	$47.81	$19.39	$3.45	$71
	High	$111.54	$45.26	$8.03	$165

How were O&M fees established?

O&M Cost to Remove 1 kilo of Pollution in Wastewater	
Total cost to operate the plants that receive hauled sewage	$57 million/yr total cost
Total wastewater flows to the plants	70,000 ML/yr total flow
How much pollution is in our WW?	487 mg/L x 70,000 ML = 34 million kg of pollution/yr
What is O&M cost to treat sewage?	$57 million/yr ÷ 34 million kg/yr pollution **= $1.67/kg**

Fee Chart	Strength	O&M	Capital Sustainment	Capital Growth	Proposed Cost Recovery Fee
	Low	$47.81	$19.39	$3.45	$71
	High	$111.54	$45.26	$8.03	$165

Low Strength - O&M Fee

Pollution	Pollution mg/L LOW	Covert to kg/1000 gal	Pollution Kg/1000 gal	$/kg for O&M	O&M Cost ($/1000 gal)
BOD	4,125	x 0.00455	= 18.77	x $0.65/kg	= $12.16
TSS	9,003	x 0.00455	= 40.96	x $0.87/kg	= $35.49
TP	64	x 0.00455	= 0.29	x $0.10/kg	= $0.03
TKN	491	x 0.00455	= 2.23	x $0.06/kg	= $0.13
				$1.67/kg	**$47.81**

Fee Chart	Strength	O&M	Capital Sustainment	Capital Growth	Total Cost Recovery Fee
	Low	$47.81	$19.39	$3.45	= $71
	High	$111.54	$45.26	$8.03	= $165

Low Strength - Capital Fee

Capital Cost per 1 kilo of Pollution in Wastewater	
Total cost of capital sustainment /yr	$43 million/yr
What portion of WW assets are involved in treating hauled sewage?	53%
What portion of sustainment costs are for assets that treat hauled sewage?	53% x $43 million/yr = $23 million/yr
How much pollution is in our WW?	487 mg/L x 70,000 ML = 34 million kg of pollution/yr
What is Capital cost related to treating sewage? **$0.68/kg**	$23 million/yr ÷ 34 million kg/yr pollution = $0.68/kg

Pollution Kg/1000 gal	$/kg for Capital	Capital Cost ($/1000 gal)
BOD 18.77 x	$0.26/kg	= $4.93
TSS 40.96 x	$0.35/kg	= $14.40
TP 0.29 x	$0.04/kg	= $0.01
TKN 2.23 x	$0.02/kg	= $0.05
	$0.68/kg	**$19.39**

Fee Chart	Strength	O&M	Capital Sustainment	Capital Growth	Total Cost Recovery Fee
	Low	$47.81	$19.39	$3.45	= $71
	High	$111.54	$45.26	$8.03	= $165

Low Strength - Growth fee

Growth Cost per 1 kilo of Pollution in Wastewater	
Total cost of growth per year (annual allocation for assets)	$4 million/yr
How much pollution is in our WW?	487 mg/L x 70,000 ML = 34 million kg of pollution/yr
What is Growth cost related to treating sewage? **$0.12/kg**	$4 million/yr ÷ 34 million kg/yr pollution = $0.12/kg

Pollution Kg/1000 gal	$/kg for Capital	Capital Cost ($/1000 gal)
BOD 18.77 x	x $0.05/kg	= $0.88
TSS 40.96 x	x $0.06/kg	= $2.56
TP 0.29 x	x $0.01/kg	= $0.00
TKN 2.23 x	x $0.00/kg	= $0.01
	$0.12/kg	**$3.45**

Principles of the Proposed Method

- Financially responsible - Full cost recovery to acknowledge existing infrastructure burden on rate payers
- Accurate – Distribute costs in the most accurate/fair manner, while still being feasible to administer
- Fair – Ensure generators (wineries, septic tank owners) pay the same fee per kg to remove pollution as rate payers do – this is not the case today
- Environment Benefit – Acknowledge the investment many wineries have made in pre-treatment which improves environmental outcomes and reduces municipal costs.

Consultation

- Mid-September to end of November 2024
- Direct email communication to over 100 interested parties, including LAMs, large-volume sewage generators, all registered sewage haulers, and many local wineries.
- Emails, project webpage, meetings, online survey, social media, and signage at sewage disposal locations.
- Virtual meetings with wineries on October 9, 11, and November 28
- In-person meeting with sewage haulers on November 28.
  - 14 total hauler representatives from eight (8) hauling companies in attendance.
- Provided updates with notification to all interested parties based on inquiries, requests for clarification, and new information.
- Consultation period extended twice, with the final extension until November 30.
- Chronology of consultation in Appendix 1 of PW 38-2024

What did we hear?

- Large Wineries (14 participants)
  - Understand principles and methodology – do not dispute
  - Feel strongly that lack of Provincial and Federal financial support results in heightened need for local government support
  - Stipulate that the economic contribution of wineries to Niagara Region warrants rate subsidy to ensure continued viability
  - Rates too high all at once, phased approach, or status quo
- Grape Growers and Craft Wineries (30+ participants)
  - Wineries provide substantial economic benefit to Niagara Region
  - Wineries heavily taxed at municipal, provincial, and federal
  - Blended rate preferred with phasing in or status quo

What did we hear?

- Haulers
  - Single rate instead of low and high – easier administration
  - Too much to implement all at once – concerned customers won't pay
  - Prefer to keep existing rate or increase in small amounts
  - Some do not support calculation method/consider other methods
  - Some do not agree fee is reflective of municipal costs and are unsatisfied with amount of information provided

Alternatives for Consideration

- Proceed with proposed dual rate of $71/1000 gal for low strength and $165/1000 gal for high strength
  - Pro: achieves cost recovery, Con: abrupt change for businesses without pre-treatment (high strength generators)
- Single blended rate of $89/1000 gal
  - Pro: achieves cost recovery, Con: septic tank owners subsidize wineries
- Maintain Status Quo or Increase by Inflation (draw shortfall from rate or reserves)
  - Pro – supports wine industry, Con –WW rate payers subsidize cost of winery waste, slowing recovery from infrastructure gap

Alternatives for Consideration

- Phase in dual rate or single blended rate over three years
  - Pro: smooths transition for businesses
  - Con: interim subsidy would be drawn from reserves
- Implement low-strength rate now, phase in high strength rate
  - Pro: smooths transition for businesses and shares burden of cost increase broadly
  - Con: takes time to reach full cost recovery

Thank You

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