

Sewage Commission Delegation

Request for Sewage Commission action on
Bioreactor Odours and EQ Basin Issues

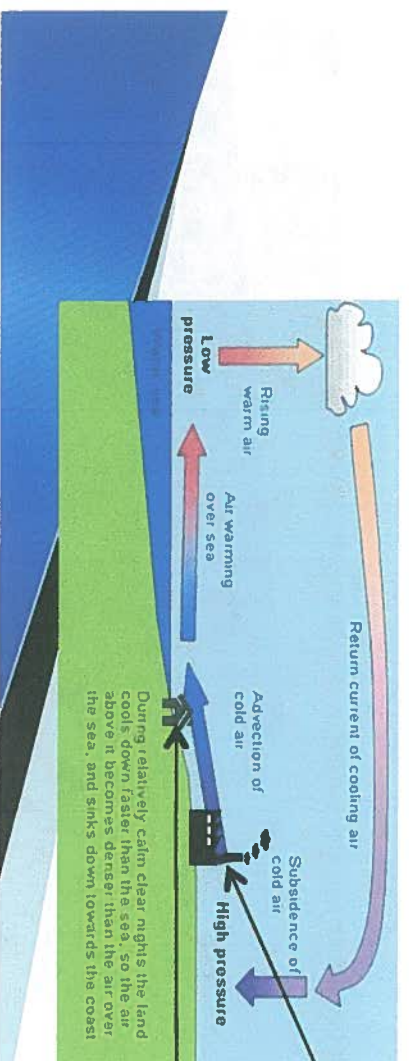
Curtis Road Residents Association, April 16 2019

This presentation is an overview of the report delivered to the Sewage Commission on April 9, 2019

Background

Curtis Road and the CVWPCC

- ❑ Curtis Road is a quiet beachfront community of 49 properties in Area B established in the 1930's.
- ❑ The CVWPCC site was chosen in the late 70's because of its:
 - Proximity to deep water at Cape Lazo
 - A buffer zone of heavy woods and a ridge to screen the plant from Curtis Rd.
- ❑ But the site has a big meteorological challenge -- offshore breezes



Odours generated here

Get sucked down here
in the evening

Background

Odour History

- ❑ Promised no odours and no visual stigma
- ❑ 1984-1992 Took eight years and a lawsuit to move the extremely odorous composting experiment off-site
- ❑ 1991-1999 Following the 1991 out-of-court settlement, it took eight years to put in mandated controls on seven plant processes -- but the controls did not meet the settlement terms and so did not solve the chronic odour problems and complaints continued
- ❑ 2006-2012 CVRD's Odour Control Policy, while acknowledging that odours were still a problem, gave it cover to ignore complaints for nine more years -- meanwhile, odour intensity and frequency increased.
- ❑ 2013-2016 After community and media pressure it took over three years for staff to complete studies of the odour problem. A plan was delivered to the Sewage Commission in January 2017

**History demonstrates CVRD's callous indifference
to the odour impacts on our community**

Problem 1 Bioreactor Odours

Odour Study Findings

- ❑ Scrubber -- only 42% efficient at removing odour and there were leaks in the foul air collection ducts RWDI Report October 2015
- ❑ “The [Ontario] odour standard was exceeded at all 12 sensitive receptors and the CVWPCC was predicted to generate odour above the standard as far as two kilometers away” RWDI Report November 2016

Table No. 1: Maximum predicted odour concentrations at sensitive receptors

Sensitive Receptor	Odour Concentration (OU)	Frequency of Exceedance (%)
SR1	5.45	4.1
SR2	6.8	13.7
SR3	5.9	10.8
SR4	8.5	16.3
SR5	11.1	18.4
SR6	10.6	17.3
SR7	10.0	15.9
SR8	9.7	11.7
SR9	4.57	0.8
SR10	5.22	3.6
SR11	6.54	11.4
SR12	7.7	15.6

Sensitive Receptor Points on Lower Curtis Road (medians)

9.7 OU's vs. 1 OU Std.

15.9% frequency vs. 0.5% frequency Std.

1400 hours per year vs. 44 hours Std.

Problem 1 – Bioreactor Odours

Odour Study Mitigation Scenarios

Sensitive Receptor	Scenario 1 Filter Only		Scenario 2 Filter and Primary Clarifier Covers		Scenario 3 Filter + Primary Clarifier Covers + Bioreactor Covers	
	Mitigation Scenario 1 OU	Mitigation Scenario 1 %	Mitigation Scenario 2 OU	Mitigation Scenario 2 %	Mitigation Scenario 3 OU	Mitigation Scenario 3 %
SR1	1.4	0.2%	0.6	0.0%	0.6	0.0%
SR2	5.0	3.4%	2.3	0.0%	0.6	0.0%
SR3	3.7	1.3%	1.7	0.1%	0.6	0.0%
SR4	5.1	6.5%	2.7	1.3%	0.6	0.0%
SR5	5.1	8.7%	2.6	4.3%	0.7	0.0%
SR6	4.5	7.8%	2.6	4.1%	0.8	0.0%
SR7	4.2	6.6%	2.4	3.5%	0.9	0.0%
SR8	2.9	3.2%	1.8	0.6%	0.99	0.0%
SR9	3.5	0.5%	1.6	0.1%	0.5	0.0%
SR10	3.6	0.5%	1.6	0.2%	0.5	0.0%
SR11	2.3	2.7%	1.2	0.1%	0.7	0.0%
SR12	6.3	6.4%	3.0	3.9%	0.8	0.0%

NOTES: Values in **bold** indicate frequency of exceedances greater than 0.5%



Only this scenario meets the 1 OU standard

Problem 1 – Bioreactor Odours

Issue

- ❑ But approval and funding were sought for Scenario 2 -- for an additional filter and primary clarifier covers. The need for bioreactor covers was not mentioned at all in the January 2017 Staff Report -- which falsely claimed that the \$2.1m investment would bring CVWPCC into compliance with the Ontario standard.
- ❑ RWDI's November 2016 Recommendation: *"Even with additional controls on the stack, the site would still have significant odour impacts associated with the primary clarifiers and the bioreactors. We would recommend that those tanks be covered and also be vented through the scrubber stack.."*
- ❑ ISL's 2016 engineering report did not dispute the need for bioreactor covers and left it up to the CVRD to either include the work in the immediate 2017 construction plans or delay it for future construction (based on funding availability).
- ❑ With only two of three fixes put in place in late summer 2018, Curtis Road still experiences chronic odour problems. Problems have been reported through last fall and winter months

Problem 1 Bioreactor Odours

Cost estimates

\$3m estimate appears reasonable compared to:

- ❑ \$7.6m spent to expand the bio-solids facility by 35%
- ❑ \$9m to the Village of Cumberland over 20 years to “host” the solids treatment centre
- ❑ Tens of millions estimated to move the force-main from the Balmoral Beach foreshore
- ❑ \$7.16m for an Equalization Basin which will be used only infrequently and is a stop-gap measure

**Represents a capital Investment of less than
\$3 per user per annum**

Problem 1 – Bioreactor Odours

Remedy Sought

1. Install bioreactor odour controls as a 2019 priority
 - The odour needs to be controlled at the source. There is no evidence that berm building across two gullies would do anything other than cause the heavy foul air to move down other depressions and gullies.
2. No more studies -- studies and history show bioreactors are the remaining cause of odours (almost as much as the primary clarifiers) and the solution is known
 - Staff now apparently plan another modelling study in summer
3. Host Community Compensation should be given until a remedy is in place
4. Be proactive not reactive - revise 2024 and 2031 expansion cost estimates to include odour controls up front

Problem 2 – EQ Basin

Background

- ❑ Originally approved in 2016 as a \$5.4m covered and odour controlled concrete tank to:
 - Prevent the effluent basin overflowing – twice per year
 - Prevent washing out of solids and micro-organisms to the strait in very wet weather
 - Project was considered urgently required for the 2016/2017 rainy season
- ❑ Morphed into an open half-acre membrane-lined basin apparently because of excessive cost – the current estimate for the basin is \$7.16m
- ❑ Basin was to be located far from Curtis Road but then was moved to encroach into the buffer zone about 3-5 months ago because of cost.
- ❑ Apparently will no longer be required after 2024/2031 expansions.

Problem 2 – EQ Basin

Issues

- ❑ Lack of project visibility and consultation
- ❑ Odour potential – 68 meters behind property lines
- ❑ Visual barrier has been destroyed
- ❑ Property values diminished
- ❑ Well water security and pollution concerns
- ❑ Environmental impact
- ❑ Trust undermined





Problem 2 – EQ Basin

Remedy

1. Find another location. The CVW/PCC property is 35 acres:
 - The fenced CVW/PCC is approximately 8 acres
 - The Curtis Road Buffer zone is approximately 7.35 acres
 - This leaves nearly 20 acres – surely another site can be found for a half-acre basin
2. Retire the tall stack to soften the visual stigma
3. Plant fast growing trees along the fence line
4. Host Community compensation until the visual screen restored

Conclusion/Next Steps

- ❑ The burden for lack of odour solutions has been placed on Curtis Road residents through:
 - Decreased quality of life
 - Reduced property values
 - Reduced rents
- ❑ It's long past due for CVRD and the users of sewer services to step up to the plate and fix the problem they've caused in our community. Just ask some of the folks here for the impact that the plant has on their lives
- ❑ The Sewage Commission is asked to provide a plan to address these issues to CRRRA by 16 May 2019.
 - "The CVWPPCC constitutes and has at all material times constituted a nuisance to the affected lands"

Spending braggadocio unmasked

CVRD on their web-site, in press releases and in person are always quick to point out how much has been spent on odour controls – as if that should somehow reduce the air pollution we experience. In fact they've spent very little:

- ❑ 1984 Minimum odour controls – pre-chlorination and filters on sludge dewatering building and zero on the composting process
- ❑ 1997 \$2m was spent on the court-ordered Odour Control Project– but 3 of 10 work items in the contract were unrelated to odour
- ❑ 2003 \$5m investment at Pidgeon Lake and cited as an odour control cost is unrelated to resolving Curtis Road odour issues – composting had been moved there eleven years earlier.
- ❑ 2003 Sewage Commission refused to invest \$1.4m for primary clarifiers and bioreactor covers -- they knew fifteen years ago that these were needed.
- ❑ 2018 \$2.1m spent for primary clarifier covers and an additional filter - work that should have been part of the court-ordered 1997 Odour Control Project

**Less than \$4.1 million over 35 years - \$3 per user per year
Less than a can of Febreze!**