Regional Municipality of Waterloo

Waterloo Region Landfill Liaison Committee (WRLLC)
Meeting Summary

DATE: Tuesday May 4, 2021
TIME: 7:00 P.M.
LOCATION: Virtual meeting

Attendees

Trudy Haffner
David Hollinger
Lillian Bass
Harald Drewitz
Peggy Boettger
Steve Voisin
Wilf Ruland – Hydrogeology Consultant
Frank Barone – Golder
Rachel Vaillancourt -- RMOW
Tracy Annett – RMOW
Mike Greenhill – RMOW
Linda Churchhill – RMOW
Morgan Merriman – RMOW
Jonathan Petsch - Comcor
Brendan McKenzie - Golder
John Strong

Distribution

All Attendees – via email

Elaine Mortensen
Kim Hulm
John Strong
Trevor Mahoney
Eric Boyd
Ernst Alge
Rob Parent
Judy Rys
Rick Wallace
Robert Milligan
Jessica Alessio
Garry Bezruki
Mark Burns
Judith Lodi
H. Kayser
Fred Veller
Jivco Velimironii
Christine Sabourin
Nesib & Lijilana Omerasevic
Aliya Malik
Mark Christensen
Jeremy Hetherington
Chris Spraakman
Dante Trigiani
Ajoy Opal

Pam Kaur
Greg Voisin
Dale Ross
Anne Childs & Gary Hale
Henrik Noesgaard
Zahra Chughtai
Tony Lea
Celia Valente & John Tracey
Cheryl Madill
Gerry Wettlauffer
Holly Corrigan
Gert Hardman & Angus McCleod
James Jackson – Waterloo Chronicle
Jennifer Yessis
Dana Mohammed - MOE, Guelph
Elizabeth Clarke – RMOW Councillor
Westvale Comm. Assoc. – c/o Eric Boyd
Sean Strickland – RMOW Councillor
Thomas Schmidt - RMOW
Dave Hardy – Hardy Stevenson & Associates
Bil Ioannidis – City of Kitchener Councillor
Albert Hovingh – RMOW
Kaoru Yajima – RMOW, Water Services
Tim Ware – RMOW
Brenna MacKinnon - RMOW
The meeting began with introductions to the group. Staff from Golder and Comcor attended to present on the Waterloo Landfill Development Optimization and Landfill Gas Action Plan Update. For this project, Golder worked with Comcor Environmental, both companies have over 20 years experience in the waste management and landfill gas industry.

**Presentation Summary:**

**Landfill Background and Project Overview (Tracy Annett)**
- Tracy provided background on the Waterloo Landfill and an overview of existing conditions.
- The Region’s goal has always been to maximize the life of the landfill and continuously improve the operation of environmental controls (protect the groundwater and maximize leachate/gas collection). Due to a number of factors including steady downward trend of annual tonnages it was time to revisit the development plan. The project objective is determining how to optimize the build-out of the South Expansion Area. The project deliverables are a 5-year detailed landfill development plan (2020-2025), landfill cell sequencing plan (2025-onward), update the landfill gas action plan, and update the preliminary design report.
- In the full development of the future landfill cells, over 1 million cubic metres of soil. During previous cell constructions, the Region has stored the excess soil on future cell footprints but this is no longer an option. Golder completed a secondary assignment and assessed on-site and off-site soil management options to create a plan for the soils.

**Refined Site Life Calculations (Brendan McKenzie, Golder Associates)**

**Background:** The Region updates the site life estimates annually. The 2019 Annual Report presented 17-20 years remaining. Mr. Ruland has previously commented on the validity of the Region’s estimates due to the conservative assumptions made. Golder evaluated and refined the estimates to reflect the updated landfill development plan.

**Key Inputs to Calculating Site Life Remaining:** Available air space remaining, forecast for future incoming waste tonnage, and waste density. Annual waste tonnages have been trending downward over the last 10 years.

**Factors Affecting Waste Density:** Compaction and GPS tracking, and alternative covers have improved density and save air space. Waste composition and residents have also diverted a lot of waste through recycling.

**Refined Site Life:** Current projected site life remaining of 25-30 years. This estimate is based on actual waste density of 850 kg/m³ versus design density of 593 kg/m³, remaining air space of ~5.9 M m³ at the start of 2020, and current Region incoming waste forecast.

**Landfill Development Optimization (Frank Barone, Golder Associates)**

**Objectives:** Optimize landfill gas collection (odour control), reduce leachate generation, and improve flexibility with respect to fill area access.

**Process:** Developed options in consultation with Region’s Waste Management team, presented and ranked options at Workshops, and prepared reports to implement preferred options. Frank presented two videos – one for the short-term development plan (2020-2025) for existing cells 1-4, and a second video for long-term development plan (2025-onward). These videos presented proposed access roads, filling sequences, LFG installations, interim cover and final cover.
David H asked if we are able to bring in revenue from the excess soil. Tracy said there will be some offset of the cost however they will not pay the Region the full amount as hauling costs will be more than the material value.

Harald asked if it was a coincidence that The Record did an article in the newspaper on April 23rd. Linda & Mike G said that there was a waste management update report that was presented to Council which was then followed up by in the media. Linda emailed the council report out to the residents with the agenda but it was after the article in the paper. The residents requested that they have the council reports the same time they become public. Linda said this will be done and the intention was to have the report out to the residents at the same time the report went public.

Harald asked if the ministry has requirements for soil used for landfill cover. Brendan said yes the ministry sets these.

Lillian asked for clarification around the density of 850 kg/m3 given the density of water is 1,000 kg/m3. Brenden said that 850 kg/m3 is the actual 10-year average density for the site so it is a realistic estimate of the density being achieved at the site.

David asked what is contributing to reduced tonnage/are people really throwing out less stuff. Is there anything we can do to encourage this trend? The waste is now going to different streams – green bin and recycling. In 2016, the Region increased green bin, which contributed to the decrease. To encourage this trend, we are continuing public education programs and the collections and programs group continues to investigate other diversion programs (e.g. textiles). Additionally, the switch to producer-responsibility recycling may bring further change to how recyclables are collected and processed.

David said there is a noise issue with the site, generally early in the morning. Has the Region looked at doing alternatives to backup beepers, such as white noise backup alarms for regional equipment? Linda said this was brought up a number of years ago, and the beepers were required by regulations. The Region will check with operations staff to see if there are alternatives.

Steve asked what is the long-term plan for the Glasgow St landfill shop after 25-30 years. Linda said that after the landfill closes, site maintenance and monitoring will continue for many years – particularly for the leachate and gas collection systems. It also may be re-purposed for something else (e.g. closed landfill management, storage, paramedics).

Harald said that the landfill site has now been there for a very long time. What are the provincial and federal rules for landfill sites timespan? Are there limits on how long a landfill can be somewhere? Jonathan said there is a significant issue in getting new landfills approved, and there is a huge expense to do so. Thus, an approach has been to expand current landfills. There was an alternative-to-landfill study done a few years ago, and thermal treatment options are a very expensive option. At some point in the next year or so, the Region will re-visit future options to landfill for the Region. Linda said that the Waterloo Landfill will be a long-term landfill. The property was large and the Region has made use of the entire property.

David asked if the Region would look at putting a co-generation plant at the south shop once the landfill closes. Linda said that this will be evaluated as the Region moves forward with potential waste management options.
Lillian asked if burning the landfill gas might become less desirable with climate change. Jonathon said the industry does not foresee this being an issue because landfill gas needs to be managed and current landfill gas to energy plants, like the Toromont plant, are considered green energy plants.

Steve asked if site life projection is 25 years, is that assuming that the population will increase in the future. Brendan said yes a population forecast was used that takes an annual increase into account for population growth.

Wilf said that the Region of Waterloo is seen as the leader in the province for waste management, and others are trying to follow the lead of the Region. This is due to a combination of a good engineering, very good education programs and uptake of diversion programs in that our residents understand the importance in recycling.

David asked if frost affects our infrastructure for gas collection. Jonathan said it is important to get a good thick layer of clay for the final cover, make sure to put on proper topsoil, and vegetate to help insulate the clay cap which leads to less cracking. Linda said freeze/thaw does affect our systems because there is moisture in landfill gas. We have to drain buried pipes properly so that liquid doesn’t freeze and we have to bury pipes deep enough. In general, the site is moving towards eliminating surface piping. As well, landfills settle and the infrastructure needs to be flexible, strong and robust to accommodate for settlement.

Steve asked if there is leachate in the horizontal gas collection trenches, how is the leachate not pulled into the landfill gas system. The horizontal gas trenches are located high enough in the waste so there should be little leachate. In addition, the system is also graded so it drains into the leachate system.

1. **Review of Previous Minutes & Business Arising**

There were no comments on the previous minutes from Feb. 2, 2021.

An overview of the April 13th Waterloo Landfill Council Report was provided by Rachel Vaillancourt.

- Ten groundwater extraction wells have been installed, and have been successful at containing the impacted groundwater. There is also further expansion of the extraction system.
- Through 2021 and 2022 there will be a new extraction well installed on the east side to contain impacted groundwater on that side.
- A connection was made to the City of Kitchener sewer system to increase sewer system capacity.
- We made upgrades on site to pumping stations.
- Air Quality improvements: In 2020, there was an existing fence line upgraded to a vaporizing system to enhance odour control.
- There are upcoming Gate 2 and 3 upgrades to increase vehicle processing capacity. Preferred alternatives have been developed, and it is going forward to design with a projected start to construction in 2022-2023.

At the last meeting, Green Bin Information was requested by Harald. The Region will provide this information at the next meeting.
2. **Complaints**

There have been no complaints from January 2021 – April 2021.

3. **Submittals from Local Residents**

Bridget was sent 2020 reports and submitted comments to Linda Churchill. The Region will provide a response. The comments are attached to the minutes.

4. **MECP Submittals**

The Region has submitted the following documents to the MECP: Insitu Enhanced Bioremediation Post Monitoring Update and Action Plan (March 23rd), Annual Operations Report (March 23rd), Stormwater Report (April 22nd), and Waste Management Master Plan Update (April 30th). Linda can provide copies of these, as requested.

In addition, the MECP was notified that there were perimeter probe exceedances on the west side of the landfill. This could be due to the construction going on the west side. The Region has enhanced the monitoring in the area.


5. **Landfill Operations**

- Landfill Gas/Leachate System Update – Average flow 1100cfm (typical), leachate had an increase in March (due to thawing), and less again in April. The table is attached to the minutes. David asked with the number of new cells, would there be an increase in gas to Toromont and will they need to increase their operations. Linda said that there is currently a spare engine at Toromont, and they would continue to increase their engine capacity in the future, as required.
- Groundwater Extraction Systems Operations – Maintaining the rate across the 10 wells within permitted discharge limits.
- Construction Starts: West Header mid-April, Gate 1 construction mid-May, off-Site soil haulage mid-June, and south access road early June.

6. **Well Water Sample Results**

Samples were taken in April. Results were received within the last day, and were within normal ranges. The results will be distributed with the minutes.

7. **Landfill Studies**

Landfill studies covered in presentation.
8. Other Business


Harald said that he has been participating in the WRLLC meetings for seven years and Wilf continues to provide a good annual report to the committee. There continues to be an ongoing issue about the Sanico Landfill. This item has not been resolved and Harold would like to discuss how this issue can be addressed to get closure. Mike G said that staff respect the concerns of the committee although the Sanico Landfill is outside the scope of the WRLLC which is meant to discuss issues related to the Waterloo landfill operations. Linda said there have been preliminary discussions with our Water Services group who will be joining us in September specifically about the Erb St. Well field water quality. Wilf added that he is most concerned about the impacts of the former Sanico landfill on the ESWF. Wilf said the Federal drinking water guideline has been set at 50ppb and will likely be adopted by Ontario. This standard is higher than anticipated. The levels at the Sanico Landfill are 50-100ppb. Therefore, it may no longer be considered an issue at the Erb St Well Field (which is 1-2 ppb). David Hollinger added that he spoke to MPP Katherine Fife, prior to the COVID-19 pandemic, who advised that the issue should be raised on the floor of the legislature to generate a response by the MECP.

Linda then asked Wilf to discuss his proposal to continue to provide services to the WRLLC. Wilf then discussed the details of his proposal:

• The budget sets out an envelope of maximum possible hours – in the past, we have budgeted for 75 hours/year, so for the two-year budget being presented, it is budgeted for 150 hours. Wilf only bills the hours that he works, which in the past, was roughly 45-60 hours/year. The budget allocation is set higher in case extra time is needed. Budget proposed is $25,425.

The committee then took a vote to retain Wilf for a two-year period. There was unanimous vote to retain Wilf Ruland for consulting services for 2021-2022.

If any of the residents have any ideas on upcoming meetings and topics, please let Linda know.

Next Meeting: Tuesday, September 7, 2021 at 7:00 pm

Morgan Merriman prepared this meeting summary.