

Vol IV Appendix I-13 Agency Meetings

Multi-agency Meetings





Southwestern Landfill Environmental Assessment

Date: March 7th, 2017
Time: 1:30 pm – 3:00 pm
Location: UTRCA Offices

Topic: Southwestern Landfill EA – Onsite Leachate Treatment Concepts

Invitees:

Darren Fry (WEG) Keith Lesarge (Golder) Linda Nicks (UTRCA)

Joe Tomaino (WEG) Tracy Annett (UTRCA) Mark Harris (MOECC)

John Levie (ASI) Karen Maaskant (UTRCA) Scott Abernethy (MOECC)

Kevin MacKenzie (Golder)

	Description	Lead
1	SWLF EA Overview & Status Update	DF
2	Facility Characteristics Assumptions Overview • Conceptual site plan	DF
	• http://www.walkerea.com/uploads/874/Doc_636190518718685457.pdf	
3	Onsite Leachate Treatment Concepts	DF
	 Treatment technology/concepts/characteristics Potential receivers 	
4	Updated Work Plans Review	DF
	TimingProcess	
_		
5	Other Business	All



Agenda

Southwestern Landfill Environmental Assessment

Date: March 29, 2017

Time: 10:00 – 11:00 am

Location: Conference Call

Invitees:

Joe Tomaino (Chair) Darren Fry Chris Haussmann

<u>#</u>	<u>Description</u>	<u>Time</u>	<u>Finish</u>
1	Agenda Review (Joe)	5 min	10:05
2	Overview of Project Schedule & Key Milestones (Darren)	10 min	10:15
4	JMCC Peer Review	40 min	10:45
	 a. Alternative Methods Comments b. Updated work Plans > Scope & Budgets > Timing of Review > Joint Meetings on Key Studies with GRT 		
5	Other Business	5 min	11:00



SWLF - Air Quality/Noise & Vibration **Final Work Plan Meeting Notes**

Southwestern Landfill Environmental Assessment

Date: Wednesday, September 20, 2017

Time: 10:00 am - 12:00pm

Ingersoll Office (160 Carnegie St, Ingersoll)/WebEx - Conference Line Location:

Attendees:

Darren Fry (WEG - Chair) Joe Tomaino (WEG)

Ashley Van Dinther (WEG – Notes)

Brad Bergeron (RWDI)

Peter Van Delden (RWDI)

Mallory Jutzi (MOECC) Chris Haussmann (JMCC) Thomas Shevlin (MOECC) Tony van der Vooren (JMCC) Emmila Kuisma (MOECC) John Coulter (JMCC)

Agni Papageorgiou (MOECC) Peter Klassen (Ingersoll)

Introduction and Agenda Review

- 1. Attendees introduced themselves.
 - a. It is noted that all attendees were in-person with the exception of A. Papageorgiou, T. Shelvin, and J. Coulter who attended via phone and WebEx.
- 2. DF reviewed the proposed agenda and time allocation for the meeting. No concerns were stated.
- 3. DF asked if any additional topics/discussion items should be added to the agenda.

Discussion on Agenda Items - Noise

Agenda Item - Sound emissions for mobile sources - highway trucks & landfill equipment

PV stated that mobile sources will be included in the assessment. Mobile sources on site will be included in the model of site sources. On-road mobile sources will be modelled separately.

TS confirmed that ORNAMENT is the current official model for MOECC.

PV stated that the model proposed in the work plan for mobile sources on roads will be used until a new model is approved by the MOECC.

JC stated that the work plan does not clearly state how the existing background traffic is treated.

ACTION

RWDI to review wording in the Work Plan regarding background noise sources along haul route.



SWLF – Air Quality/Noise & Vibration Final Work Plan Meeting Notes

Southwestern Landfill Environmental Assessment

Agenda Item - Regulatory (55 dBA) vs residual (45 dBA) noise limits.

PV stated that the limits for landfilling are different from ancillary sources. Each type of source is assessed against the limit that applies to it.

JC stated concerns about difficulty in conducting audits once the landfill is in place and suggested that an audit procedure be defined now.

PV stated that it is common practice to audit different sources at landfills against their respective limits. The details are defined by the sound environment and arrangement of sources at the time. An audit procedure is typically developed during the EPA approvals.

JC suggested 45dBA as the target during daytime.

TS confirmed that MOECC landfilling criteria is 55 dBA for daytime and 45 dBA for nighttime.

TS stated that Anthony Martella will be taking over the MOECC file on behalf of Thomas Shelvin.

ACTION

Walker to provide a plan in the EA on how to conduct the noise audit. The audit would separate
background noise sources (i.e. quarry operations) from the landfill facility.
RWDI to confirm that the development of an audit plan is in the noise workplan.

Walker stated that it would accept and consider comments after the Final Work Plan has been issued.

Discussion on Agenda Items - Air Quality

Agenda Item - Carmeuse as a receptor (or "joint operations"), and any leased/rented homes on Carmeuse property

BB stated that a 5 km radius is the proposed study area, but that it can be adjusted based on the maximum extent of effects. No residents live within the active quarry area. As part of the study, properties on the Carmeuse owned lands will be identified as leased/occupied.

BB stated that Carmeuse will be a receptor for emissions related to the proposed landfill operations. For the combined emission evaluation for the proposed landfill and Carmeuse operations, the Carmeuse site would not be included as a receptor. Walker would confirm with Carmeuse the status of any residences on the Carmeuse property. In the event that residential receptors are on the Carmeuse property, the receptors would be included in the evaluation for both the proposed landfill only and the proposed landfill with Carmeuse.



SWLF - Air Quality/Noise & Vibration Final Work Plan Meeting Notes

Southwestern Landfill Environmental Assessment

Agenda Item - Inclusion of non-permitted (non-subject) particulate sources (e.g., mobile & fugitive)

BB stated that all particulate sources will be assessed together.

Agenda Item - Forecasting of future Carmeuse operations

JT stated that forecasting of future Carmeuse operations will be included in the land use planning forecasts which in turn will provide a consistent set of assumptions on future conditions for all technical studies, including the Air and Noise studies. The JMCC Peer Review Team is reviewing and providing input on the Land Use Planning Forecast document.

Agenda Item - Non-particulate emissions along the haul routes

BB stated that non-particulate emissions along the haul routes will be assessed in the air modeling. This will include benzene, toluene and NOx.

Agenda Item - Potential new NO2 standards

BB stated that the existing standards will be used but if the new standards are implemented, they will be used when they become available.

Agenda Item - Odour thresholds - 3 to 5 O.U. and percentage of exceedances

BB stated that 1 O.U. will be used but 3 and 5 will be provided as reference. Frequencies of exceeding these levels will also be provided at key sensitive receptors.

Agenda Item - Meteorological data set

The MOECC maintains a nearby weather station.

BB stated that RWDI will use the approved data sets from MOECC. If additional data are required, there are other nearby weather stations that can be queried. MOECC will be asked to look at using the existing station they run near Carmeuse. The final decision on appropriate meteorological data will be made by MOECC.

Agenda Item - Use of historical data sets

BB stated that Carmeuse's historical dust monitoring data will not be used for this EA and that the MOECC has provided historical data for Particulate and metals for the study area that is preferable for use as a reference. The MOECC has historically measured Total Suspended Particulate at each station and PM10 at one station. In order to understand the dust levels for PM10 and PM2.5 at all of the stations, the Work Plan will include the provision to complete monitoring for PM10 and PM2.5 at the same MOECC stations for a 1-year period.



SWLF - Air Quality/Noise & Vibration Final Work Plan Meeting Notes

Southwestern Landfill Environmental Assessment

In addition, a discussion ensued regarding MOECC metals data. The MOECC agreed that the metals data collected to date demonstrated metals were very low. As a result, it was agreed that the MOECC historical metals data will be used as background and Walker will not do any additional metals monitoring.

Monitoring technology similar to that of the current MOECC monitoring equipment will be used to ensure data continuity (high-volume air samplers with the exception of the inclusion of proper inlet sampling heads for the PM10 and PM2.5 particulate size fractions)

MJ stated that the MOECC may cease all air monitoring in the area at the end of 2017. The MOECC has been extensively monitoring the area for several years and has a robust data set.

BB stated that additional field monitoring will be required for VOCs and Total Reduced Sulphurs. Monitoring will be required for a full year with specific focus on Spring, Summer and Fall seasons. It was discussed that completing the VOC sampling on a 6 day cycle for the entire year and maintaining the 6-day sampling schedule for Sulphurs during the June to October and reducing the sampling schedule for sulphurs to 12-day cycle from October to June. As requested by the MOECC, the VOCs and Sulphurs would be collected using canisters and all samples would be 24-hours in duration.

The list of VOCs has been expanded beyond the original MOECC landfill guidance. It was felt that all the new compounds could be measured using the canister method, but commercial labs may not be accredited to quantify specific compounds at levels that MOECC can achieve in their research lab. MOECC is suggesting that detection limits should be 10% of the standard. This may not be achievable. RWDI to review and discuss with MOECC

The final assessment will also consider and discuss future monitoring requirements. This will include options to separate SWLF impacts from Carmeuse and other operations. Current sampling locations would not differentiate SWLF from Carmeuse.

RWDI will not submit an ambient sampling program report (as per MOECC ambient sampling guidance) at this stage in the EA, but will provide sufficient detail in the Workplan for MOECC approval of the ambient program.

ACTION

Walker to incorporate the proposed air monitoring locations and approach in the Final Work Plan.
Walker to provide VOC detection limit list to all attendees.
Walker to provide PK with copy of publicly available Oxford County/MOECC Beachville Airshed Air
Monitoring Reports.
RWDI to provide reviewers with list of VOCs to be assessed.



SWLF – Air Quality/Noise & Vibration Final Work Plan Meeting Notes

Southwestern Landfill Environmental Assessment

Agenda Item - Dust deposition

Dust deposition was discussed as a suitable option for an EA evaluation. BB stated the work plan will continue to include the provision to include dust deposition in the evaluation. The inputs into the dust deposition parameters (particle size fractions, etc.) will be reviewed with the MOECC for confirmation of the parameters prior to use in the evaluation.

ACTION

☐ Walker to review dust deposition parameters with MOECC prior to use in the evaluation.

Agenda Item - Blowing litter - assessment methodology

BB stated that RWDI will use worst case scenario for blowing litter based on waste stream characteristics (e.g. Industrial, Commercial, and Institution – ICI) and Walker's experience at its Niagara operations. The blowing litter evaluation will include disposal areas at the highest elevations in addition to lower elevations as well as local meteorological information in order to determine wind speeds and directions for the evaluation. The evaluation is based on historical wind speed thresholds and the ability for the winds to carry litter from the site. The wind direction information will be used to correlate elevated wind speed conditions to direction in order to provide zones of potential litter impacts. These zones will be reviewed for frequency of these events to occur and include provisions of controls (litter fences as an example) to be strategically located in order to minimize the potential for litter to be released from the site.

List of potential contaminants - landfill gas/flaring

The group inquired if combustion engines were more efficient at destroying constituents of landfill gas than flares.

BB/DF discussed that depending on the specific appliances, fully enclosed landfill gas flares are typically slightly more efficient than combustion engines. DF stated that the preferred alternative is flaring since it is required but Walker will evaluate utilization options such as combustion engines to generate electricity or use of the landfill gas in the adjacent lime kiln in the EA.

Agenda Item - Exclusion of agricultural odours from baseline

BB stated that walker will not include agricultural odours in the baseline.



SWLF - Air Quality/Noise & Vibration Final Work Plan Meeting Notes

Southwestern Landfill Environmental Assessment

Agenda - Use of the LandGEM landfill gas emission model

BB stated that the LandGEM landfill gas emission model will be used. The LandGEM emission model will include MOECC inputs as available and supplemented with USEPA inputs as necessary.

Closing Remarks

All attendees were appreciative of the opportunity for a roundtable discussion regarding the Air Quality and Noise assessment work plans being proposed for this EA.

Meeting ended at 12:15 pm.

These meeting notes were captured to the best of our ability and were circulated to meeting participants for comments prior to finalization. If there are any errors or omissions please contact Walker Environmental at 1-855-392-5537 or info@walkerea.com.



SWLF - Air/Noise Final Work Plan Agenda

Southwestern Landfill Environmental Assessment

Date: Wednesday, September 20, 2017

Time: 10:00 am - 12:00pm

Location: Ingersoll Office (160 Carnegie St, Ingersoll)/WebEx – Conference Line

Invitees:

Darren Fry (Chair)Brad BergeronBill TigertJulie MalloryJoe TomainoChris HaussmannPeter KlaassenShevlin ThomasSteve HollingsheadAgni PapageorgiouFred BernardEmmila Kuisma

	Description	Time	Finish
1	Agenda Review	5 min	10:05
2	 Discussion on Issues Set: Carmeuse as a receptor (or "joint operations"), and any leased/rented homes on Carmeuse property Inclusion of non-permitted (non-subject) particulate sources (e.g., mobile & fugitive) Forecasting of future Carmeuse operations Non-particulate emissions along the haul routes Potential new NO2 standards Odour thresholds – 3 to 5 O.U. and percentage of exceedances Meteorological data set Use of historical data sets Dust deposition Blowing litter – assessment methodology Regulatory (55 dB) vs residual (45 dB) noise limits. Sound emissions for mobile sources – highway trucks & landfill equipment List of potential contaminants - landfill gas/flaring Use of the LandGEM landfill gas emission model 	1.5 hrs.	11:35
3	Additional Discussion & Other Business	25 min	12:00



SWLF - GW/SW Final Work Plan Agenda

Southwestern Landfill Environmental Assessment

Date: Tuesday, September 26, 2017

Time: 10:00 am – 12:00pm

Location: Ingersoll Office (160 Carnegie St, Ingersoll)/WebEx – Conference Line

Invitees:

Darren Fry (Chair) Kevin MacKenzie Bill Tigert Mark Harris Scott Abernethy

Joe Tomaino Keith Lesarge Peter Klaassen Emmila Kuisma Steve Hollingshead Agni Papageorgiou Fred Bernard Chris Haussmann

	Description	Time	Finish
1	Agenda Review	5 min	10:05
2	GW Work Program Update (Golder)	10 min	10:15
3	Discussion on Issues Set:	1.5 hr	11:45

PRT Discussion Items:

- 1. Shallow overburden wells re: straddling the water table.
- 2. Ongoing quarry dewatering as a future baseline condition.
- 3. Assessment of the feasibility of proposed contingency measures.
- 4. Revised borehole & monitor installation locations.
- 5. Proposed locations of the surface water monitoring stations.
- 6. Hydraulic interaction with the flooded Southwestern Quarry & Thames River.

<u>Ingersoll Review Team Discussion Items:</u>

- 1. Effects on regional groundwater flow and the Ingersoll municipal water wells.
- 2. Proposed stormwater management system and discharge points incl. concurrent quarry & landfill construction.
- 3. Accounting for climate change in stormwater management design.
- 4. Groundwater model details type, extent, groundwater/surface water interactions.
- 5. Stream flow gauging use of weirs?

4 Additional Discussion & Other Business 15 min 12:00



Southwestern Landfill Environmental Assessment

Date: Tuesday, September 26, 2017

Time: 10:00 am – 12:00pm

Location: Ingersoll Office (160 Carnegie St, Ingersoll)/WebEx – Conference Line

Attendees:

Darren Fry (WEG - Chair)
Joe Tomaino (WEG)
Becky Oehler (WEG – Notes)
Kevin MacKenzie (Golder)
Keith Lesarge (Golder)

Chris Haussmann (JMCC)
Jason Balsdon (JMCC)
Wayne Cooley (JMCC)
Peter Klaassen (Ingersoll)

Mark Harris (MOECC) Emmila Kuisma (MOECC) Agni Papageorgiou (MOECC)

Introduction and Agenda Review

- 1. DF provided general housekeeping (washrooms, water, emergency exits) instructions.
- 2. Attendees introduced themselves.
 - a. It is noted that all attendees were in-person with the exception of A. Papageorgiou who attended via phone and WebEx.
 - b. Scott Abernathy, MOECC Surface Water Evaluator could not attend the meeting and MH provided regrets on Scott's behalf.
- 3. DF reviewed the proposed agenda and time allocation for the meeting. No concerns were stated.
- 4. DF asked if any additional topics/discussion items should be added to the agenda.
 - O MH stated his comments were not provided to Walker until recently, and that many of the comments were consistent with the themes noted in the agenda. DF stated WEG has now received them, will be responding and in addition to today's conversation would be happy to have a discussion once responses were provided.

Update on Work Program & Field Studies (led by K. Lesarge from Golder)

- 5. The Work Program has been modified from the original that was distributed in April, due to background information review and comments received.
- 6. The purpose of the work program is not to establish a groundwater monitoring regime, but to instead to characterize and understand the hydrogeological regime of the area. There were some comments on the effectiveness of these wells for a monitoring program; but that is not the intent of this study and Golder would not recommend this set-up for ongoing monitoring, although some of the wells may be useful at that time.
- 7. There are 6 well locations, each monitoring at multiple depths. In the first hole which is currently being developed, four flow zones were identified:
 - Deep zone: contact between Amhurstburg (quarried formation) and the Lucas (underlying shale)
 - o Mid zone
 - o Shallow zone



Southwestern Landfill Environmental Assessment

- Upper at granular contact with overburden
- 8. When drilling the other holes, there is no rule to stick to only these four flow zones; any identified flow zones will be monitored.
- 9. The suite of parameters to be tested is consistent with O. Reg 232, but can be expanded if needed during the study. The study is flexible.

Discussion on Agenda Issues Set

Agenda Item - Shallow overburden wells re: straddling the water table.

JB inquired why screens are not straddling the water table, specifically in the overburden and stated the determination of the water table in the overburden is required for input to the conceptual hydrogeology, such as establishing vertical hydraulic gradients in the overburden, determining shallow groundwater flow directions, to understand the shallow groundwater contribution to surface water courses, and to consider seasonal variations in the water table.

KL stated that typically water table monitoring is done to characterize any floating materials/contaminants, but that's not the purpose of this study. A discussion ensued and it was agreed that Golder would ask if the modelers require this information.

ACTION

KL to speak with	modelers to	confirm if they	require any	groundwater	horizons to	he straddled
NE to speak with	i illoucició to		y icquire arry	groundwater	1101120113 10	be straudicu.

MH inquired that since there will be fill between the quarry floor and the landfill liner, these assumptions may impact groundwater flows and that these assumptions should be considered.

KL/DF stated those assumptions are in the Facility Characteristics Assumptions Report and will be taken into consideration when conducting the study.

WC suggested additional clarity be added to the work plan about the purpose of the work (including objectives of the monitoring program). DF stated that some of this language is in the Terms of Reference but that ensuring clarity about the objectives of the studies within the Work Plan is important.

ACTION

П	Walker to	review W	ork Pl	lans for	clarity	/ around	the	stated	οh	iectives
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PK inquired if there are existing wells (Carmeuse and adjacent neighbours) that provide info.

DF stated yes, there are both. We have consulted with Carmeuse, have access to their groundwater data and will review the data for inclusion into the data set. Walker will be seeking to collect data from private wells in the area (i.e. water levels).

JB stated that it is good to have access to existing wells to include into the study.



Southwestern Landfill Environmental Assessment

Agenda Item - Ongoing quarry dewatering as a future baseline condition.

MH inquired about what would happen if quarrying and/or dewatering suddenly stopped.

DF stated that Walker would need to maintain a dewatered scenario during the construction and operation phase of the proposed landfill. Walker could do so, if needed, by assuming control of the existing dewatering infrastructure.

KL confirmed that the area is required to be dewatered for the purpose of construction, but the performance of the liner is not dependent on there being a dewatered state. The generic double composite liner can be used in either scenario (dewatered or saturated)

JB indicated that the effects of the existing quarry on groundwater conditions provide an excellent case study to calibrate the computer model.

DF/JT stated that the land use planning forecast is incorporated into all studies. The forecast takes into account local municipal planning but also future conditions at the adjacent quarries.

PK indicated that the groundwater modelling exercise will need to take into account the sequencing proposed for construction/ development of the landfill during its operational phase (i.e., not just current, closure and post-closure phases).

Agenda Item - Assessment of the feasibility of proposed contingency measures.

CH inquired if contingency planning is part of an expanded Facility Characteristics document during EPA approvals.

DF stated yes, the EA will describe and assess the feasibility of potential contingency measures. If the facility is approved under the EAA, subsequent approvals under the EPA will require additional detail relating to contingency measures which is typically done in the Design and Operations Report.

Agenda Item - Hydraulic interaction with the flooded Southwestern Quarry & Thames River.

KL/KM confirmed that the interaction between groundwater and surface water will be assessed for both the Thames R. and the flooded southwestern quarry, and the computer models will be calibrated to account for this interaction. MH stated there is community interest about the flooded quarry, it is seen as a heritage feature.



Southwestern Landfill Environmental Assessment

When looking at a map, it is easy to understand concerns because it is a landfill right next to a lake. There has been interest expressed from the community in it becoming a public place.

DF stated that Walker has heard similar concerns and interest. The flooded quarry is on privately owned lands, is an integral part of the water management works at the site and is permitted under the MOECC industrial sewage works approvals. It is Walker's understanding that there is no current intention to convert or convey this area as a public space.

EK provided a background on the recent rehabilitation of the flooded quarry and surrounding area.

CH/WC recommended that in cases where clarification is provided in the comment disposition tables, that the clarification is also added to the work plan so it is all in one document to provide a centralized document rather than a Work Plan and several appended tables.

DF agreed. BO stated that she is compiling the comments and assisting in the finalization of the Work Plan which will include ensuring clarifications are added the Work Plans.

ACTION

	BO will ensure that clarification:	s stated in the disposition ta	ables are carried back into the Work Plans.
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Agenda Item - Proposed locations of the surface water monitoring stations.

WC stated that in the work plan there is no definition of where the SW monitoring locations will be.

KM stated that Golder needs to do some initial field work before defining those locations.

WC stated that these locations should be noted in the work plan.

DF agreed and stated that surface locations are noted in the text but that a map will also be prepared.

ACTION

Gold	der to	include	e surface	water	monitoring	locations	into	Work	Plan.

CH inquired if the locations will be circulated for comment.

DF stated that Walker will have to consider re-circulating the Work Plan with surface water monitoring locations.

ACTION

☐ Walker to consider and advise attendees if they will be recirculating the Work Plan or surface monitoring locations for comment.



Southwestern Landfill Environmental Assessment

Agenda Item - Stream flow gauging - use of weirs?

KM stated that weirs are used to provide good hydraulic control. Golder is hoping to use upstream of culverts instead because they are less impactful to the environment (i.e. they are a barrier to fish) and can provide sufficient control. However, weirs can be used if required.

Agenda Item - Potential effects on GW wells (Ingersoll municipal) will be defined in the models

KL stated that yes, effects to any local wells, including any municipal wells, will be assessed in this EA.

Agenda Item - Proposed stormwater management system and discharge points – incl. concurrent quarry & landfill construction.

PK inquired if water will be managed separately from Carmeuse and that given that two separate entities are operating separately, complications could be expected.

DF explained the different water types on site (contact water, leachate vs. non-contact water, storm water, quarry dewatering). Precipitation that falls in the constructed landfill will be managed as leachate. Both parties will want to keep their areas and non-contact water separate so as not to complicate respective approvals. Walker has similar experience operating a landfill in the vicinity of an existing quarry operation in Niagara although the landfill owner and quarry company are separate business units and operate independently, they are owned by the same parent company (Walker Industries Holdings Limitied).

PK inquired if the buffer is area wide enough for stormwater management?

DF/KM stated that although preliminary designs do not exist yet, it is anticipated that sufficient area exists for the appropriate stormwater management facilities.

PK inquired where any rain water (stormwater) discharge points would be?

DF stated that level of detail does not currently exist and that some general assumptions are provided in the Facility Characteristics Assumptions documents (located here). However, it is likely that the Thames River would be the ultimate discharge point for non-contact stormwater as it is the primary receiving body in the area. It is unlikely that stormwater would be discharged into the flooded quarry because that is already part of Carmeuse operations, but it remains premature to pre-determine any outcomes. This will be further assessed in the EA.

PK inquired if there a smaller creek to the west.

DF stated yes, there is an agricultural drain (the Patterson-Robbins drain) that turns into what is locally know as cemetery creek.

PK inquired of stormwater could be discharged into that creek.

DF stated that it is a possibility that will be further assessed in this EA.



Southwestern Landfill Environmental Assessment

Agenda Item - Accounting for climate change in stormwater management design.

DF stated that climate change will be incorporated into this EA. Climate change will be assessed in two ways. First, a changing climate and its effects on the project will be assessed. Second, any climate impacts (i.e. GHG emissions or reductions) associated with the projects will be assessed.

DF stated that climate change assumptions have been provided to all consultants so everyone is working from same set of data. The assumptions that are used are from the MNRF.

ACTION

□ Walker to send Climate Change Assumptions documents to group as reference.

Agenda Item - Groundwater model details - type, extent, groundwater/surface water interactions.

KL stated that there is a team of modelers who provided a detailed description to this comment in the comment table. KL provided an overview of the response.

ACTION

☐ Walker to check that this level of detail is reflected in the Work Plan.

KL stated that there is no contaminant transport modeling required due to use of generic double composite liner system.

KL stated that contingencies will be assessed as part of the study in terms of determining if they are feasible and if they would work.

KL stated the assessment of interaction between GW/SW is also described in disposition table. In general, the GW and SW is modeled separately and that the GW and SW modelers get together and confirm that the model outputs align (i.e. quantities).

ACTION

□ Walker to check comment on page 8 of 12 of Ingersoll disposition table and confirm that hydraulic trap is not the design, it's the situation.

Closing Remarks

JB stated he would like to visit the site particularly to see quarry and rock core.

CH stated there is interest among the JMCCPRT re: site visits and will provide more detail in response to Walker's Field Work Summary notice recently issued.

DF stated that Walker is open to facilitating site visits where reasonable and safe to do so.



Southwestern Landfill Environmental Assessment

MH stated the importance of communicating to interested parties about modern landfill design, specifically the use of the generic double composite liner system.

There was agreement with the value of engaging interested parties about the concepts of modern landfill design, contingencies, etc.

DF/BO agreed and stated Walker is committed to engaging stakeholders throughout this EA and has provided many tools to facilitate these discussions.

Meeting ended at 12:10 pm.

These meeting notes were captured to the best of our ability and were circulated to meeting participants for comments prior to finalization. If there are any errors or omissions please contact Walker Environmental at 1-855-392-5537 or info@walkerea.com.



Agenda

SWLF - HHRA Final Work Plan Roundtable Meeting

Southwestern Landfill Environmental Assessment

Date: Tuesday, November 28, 2017

Time: 10:00 am – 12:00pm

Location: Ingersoll Office (160 Carnegie St, Ingersoll)/WebEx – Conference Line

Invitees:

Darren Fry Agni Papageorgiou Dr. Faiza Waheed Peter Klassen Joe Tomaino Emmilia Kuisma Dr. Douglas Neal Dr. Jennifer Kirk

Becky Oehler Dr. Glenn Ferguson Chris Haussman

	Description	Time	Finish
1	Agenda Review	5 min	10:05
2	HHRA/SHR Work Program Update (Intrinsik)	10 min	10:15
3	 Discussion on Issues Set: How COPCs will be selected Normal operating conditions vs. upset conditions Supplementary Health Review Overview Determinants of health 	1.5 hr	11:45
4	Additional Discussion & Other Business	15 min	12:00



Southwestern Landfill Environmental Assessment

Date: Tuesday, November 28, 2017

Time: 10:00 am – 12:00 pm

Location: Ingersoll Office (160 Carnegie St, Ingersoll)/WebEx – Conference Line

Attendees:

Darren Fry – DF (WEG - Chair) Chris Haussmann – CH (JMCC) Dr. Jennifer Kirk – DJK

Joe Tomaino – JT (WEG) Mark Chappel – MC (Novatox) (Arcadis)

Becky Oehler – BO (WEG – Notes) Dave Hardy – DH (JMCC social) Sara Tavakoli – ST (MOECC)

Dr. Glenn Ferguson - DGF Dr. Douglas Neal – DDN (Oxford MOH) Dr. James Gilmore – DJG

(Intrinsik) Peter Heywood – PH (Oxford Public (MOECC)

Dr. Faiza Waheed - DFW(Intrinsik) Health) Emmila Kuisma – EM (MOECC)

Agni Papageorgiou – AP

(MOECC)

Terminology and Acronyms:

- COPC Contaminant of Potential Concern
- EA Environmental Assessment
- EPA Environmental Protection Act
- HDPE High Density Polyethylene (a type of plastic)
- HHRA Human Health Risk Assessment
- HIA Health Impact Assessment
- SHR Supplementary Health Review
- ToR Terms of Reference
- US EPA United States Environmental Protection Agency

Introduction and Agenda Review

- 1. DF provided general housekeeping (washrooms, water, emergency exits) instructions.
- 2. Attendees introduced themselves.
 - a. It is noted that attendees were in-person with the exception of A. Papageorgiou, E. Kuisma, S. Tavakoli, J. Gilmore and D. Hardy who attended via phone and WebEx.
- 3. DF reviewed the proposed agenda and time allocation for the meeting. No concerns were stated.
- 4. DF asked if any additional topics/discussion items should be added to the agenda.
 - Addition of topic: discussion regarding further clarification on timing of Design & Operations report.



Southwestern Landfill Environmental Assessment

HHRA/SHR Work Program Update (DGF and DFW from Intrinsik)

- HHRA was proposed during the ToR and is a traditional HHRA which uses data from other studies to evaluate potential risks to human health.
- The SHR was the outcome of consultation during the ToR regarding health effects related to social and economic factors.
- Both the HHRA and SHR require collaboration with other disciplines both during the development of work plans and throughout the studies to ensure the appropriate data is collected and relayed.
- The HHRA encompasses cumulative effects (existing conditions in addition to proposed landfill)
- The SHR is a screening-level health assessment. The determinants of health are based on feedback from Dr. Neal, Public Health Ontario and other reviewers.
- In addition to information and results from other studies within the EA, the SHR will also incorporate information from other sources, including peer-reviewed literature, past EAs, HIA studies, municipal studies, and public health data.

Discussion on Agenda Issues Set

Agenda Item - How COPCs are selected

FW reviewed how COPCs were selected for each pathway.

Air Quality

- The selected COPCs are related to dust, active landfill gas flaring, fugitive emissions, traffic
- List was developed collaboratively with RWDI during air quality work plan finalization
- COPC list may be expanded during the study

Groundwater & Surface Water

- Golder proposed the initial list of COPCs and Intrinsik requested additions that are important for the health study.
- The studies are being carried out to evaluate regular operating conditions of the landfill, not upset conditions. This means that it is assumed that there is no leakage from the landfill because of the liner design requirements.
- The conceptual site model for the health study will accommodate information from other studies on specific pathways (i.e. social study results regarding fishing and swimming in local water bodies)

DDN noted that the community is particularly sensitive to water-related topics. Noted that all manmade things can fail, including the liner.

DF: Walker is aware of the sensitivity to water issues as well as the local reliance on groundwater
resources for drinking water. This is an important discussion we have often with community members.
While the liner is designed to be fully protective, contingency plans are also required under the
Environmental Protection Act in the unlikely event of liner failure and other issues that could potentially
arise.



Southwestern Landfill Environmental Assessment

DDN asked how the hydrogeologist can model for contingencies in a quarry setting that is particularly vulnerable

 DF: We recognize the importance of contingency planning. Walker has operated landfills in quarries for over 30 years. We have found that quarries offer some advantages for contingency planning throughout the operating lifespan of the landfill and in the years after closure when the company continues to care for the site (contaminating lifespan). [Note: further discussion of potential contingencies deferred to end of meeting]

DDN noted the effects of a changing climate. <u>Question</u>: How does Walker propose to deal with a changing climate?

DF: Climate change is an important part of the EA from 2 different perspectives. 1) Greenhouse Gas
emissions or reductions associated with project (stated as climate effects) and 2) planning and
engineering of landfill infrastructure so that it will accommodate a changing climate (stated as climate
effects – i.e. more rainfall in shorter amounts of time, more variability in weather events).

ACTION

□ Walker to provide DDN the Ministry of Natural Resources & Forestry - Climate Change Projects for Ontario: An updated synthesis for policy makers and planners document that was used to project future climate conditions.

DH noted that at another landfill project dust and wind was an issue in 2015, then in 2016 it was a very wet year and the landfill had to bring in tanks to ensure sufficient capacity existed to collect leachate. This example stresses the importance of climate change adaptation planning as well as full and robust contingency measures.

• DF: We see impacts from a changing climate at our Niagara operations as well and we're currently in the process of creating climate adaptation plans at each of our operations across Walker Industries; it's an important risk that must be managed properly.

CH stated that climate change has brought not just more water, but greater variability in weather overall.

DN inquired how long the proposed liner system has been in use.

• DF: stated that the generic double composite liner system designed in accordance with O. Reg. 232/98 has been use for approximately 15 years.

DDN asked how Walker knows the liner is going to last and how it could be repaired if there was a tear.

DF: Since the liner has only been around for 15 years, we do not have a track record over the entire
contaminating lifespan of a landfill. We rely on the expertise of the engineers and materials scientists
who created the design. DF discussed that there are options that could be used to address a scenario if
a leak was detected, including the implementation of contingency plans.

DJK asked if the liner has been used in a similar geologic setting.

• DF: Yes, Walker's South landfill in Niagara has the same liner system (generic double composite liner) in a limestone quarry setting. Also, at the proposed Southwestern Landfill, there would be additional fill beneath the liner, averaging 15 m thick (minimum 5 m) between the bottom of the liner and the quarry floor.



Southwestern Landfill Environmental Assessment

DH noted that it is difficult to find studies on liner durability (including HDPE durability). The durability of clay liners has the most information available. Requested if additional studies or information on liner durability is available.

• DF: Clay has been used as a liner for a longer period of time than a full liner system with HDPE, so that may be why there is more information.

ACTION

□ Walker will attempt to seek out additional information on evaluations of durability of the proposed liner system to provide to the peer reviewers.

DJK inquired how parameters with no formal standards will be assessed.

• GF: Given the type of waste (solid, non-hazardous), we do not expect to see anything unusual. However, in this scenario we may use a qualitative assessment or use a surrogate (chemically similar).

DJK asked if this landfill [liner] design has been found to be effective for chemicals in fire-retardants, anti-odour and anti-bacterial (i.e. clothing treatments). These chemicals are highly water-mobile and bioaccumulative.

• DGF: These types of chemicals are a normal, albeit small portion, of the regular solid, non-hazardous waste stream that the liner is designed for.

DJK asked if leachate is tested to check what contaminants are in it (i.e. analysis of all potential chemicals, not only those on a specific list).

- DF: Landfills must regularly test their leachate; the suite of required analysis is set out in approvals. We can provide a list of parameters monitored at our South Landfill in Niagara.
- DGF: There are some emerging substances like personal care products. This may be something interesting to look at for monitoring.
- DFW: There are also new testing methods for emerging substances that can detect very small quantities, so that is something to keep in mind as we move forward.

ACTION

☐ Walker to provide list of monitored parameters in leachate at their South Landfill.

BO described Walker's waste acceptance procedure regarding acceptance of only solid, non-hazardous waste. This is an important part of the leachate process since leachate is generated from contact with the waste.

- DGF noted the above-and-beyond nature of Walker's waste acceptance procedures as another aspect of the health assessment – noting things that Walker does that go beyond minimum regulatory requirements.
- DF noted that the onsite leachate treatment plant will be designed specifically to treat leachate. Also,
 Walker is looking at how we can improve the existing quality of the surface water where the treated
 water will discharge. The discharge point is proposed to be an agricultural drain that is likely impacted
 with non-point source nutrients. There is the potential to include tertiary "polishing" treatment that
 could include water from the existing drain. We will be assessing this in the EA.

DH noted that old landfills (pre-dated EPA) are being excavated and arsenic has been noted as a specific concern (contaminated soil). Is arsenic a chemical of concern on this proposal?

• DGF: Yes, it is on the list.



Southwestern Landfill Environmental Assessment

Agenda Item – Normal Operating Conditions vs. Upset Conditions

The EA assesses normal operating conditions, but engineering and design must address contingencies.

DDN noted that the local section of highway 401 is regularly closed; this contingency should be assessed.

- DF: Walker appreciates and is aware of the closure frequency. We will be looking at what we can do in these scenarios, but not as part of the study of normal operating conditions.
- BO: Doing what we can to make sure drivers coming to our site are using emergency routes appropriately is very important, but we won't be looking at things like dust impacts on the emergency detour route because it's not part of day-to-day operations.

CH discussed how some upset conditions could have significant impacts and expressed concern that the EA will not address them to some extent. Noted that it would be helpful to have a clear description of what upset conditions are anticipated and what contingency plans would be in place to address those upset scenarios, even at an overview planning level (not detailed engineering).

- PH agreed and noted it's important to also include an assessment of likelihood, severity, frequency, etc. for each type of upset condition.
- DF: We understand and appreciate this and will consider how we can include this in the EA.

ACTION

□ Walker to consider how upset conditions and contingency plans could be qualitatively described in the EA to facilitate understanding and discussion.

DH noted there is an order of preference for guidance documents noted in the comment disposition table – is this the preferred order (provincial, federal, international)?

 DGF: Yes, generally. For example, we will likely be able to get assumptions from the MOECC, but something like risk assessment for landfills will likely be found at the federal level or from the US EPA.

CH asked if the most stringent standard will be used in cases where there are different standards/criteria from different authorities.

• DGF: Not always; we generally want to use the most up-to-date. Our toxicologists will work on this and provide rationale for each.

ST asked when the report will be submitted.

- DGF: The health report (HHRA and SHR) will be submitted to Walker sometime in winter 2018-2019.
- DF: The report will be submitted for review with the EA, likely spring 2019.



Southwestern Landfill Environmental Assessment

DJK inquired if anyone in the community relies on rainwater for irrigation or livestock.

- DF: We will look at the modelling of aerial deposition first via the Air Quality assessment (does the contaminant exist), then determine if there is a receptor (i.e. rain water used for irrigation/livestock).
- DGF: This pathway is difficult to assess because particulates settle as sludge when rainwater is collected (i.e. bottom of rain barrel), but we will assess as DF says.

Agenda Item - Supplemental Health Review

DFW noted there were questions from reviewers regarding what additional data sources would be considered (beyond data from other studies within the EA). In response to these inquiries, Intrinsik produced a table noting potential reports/data sources in each instance where "additional data sources" were noted in the work plan. (see attached document which was distributed at the meeting to all participants in draft form). These additional data sources include peer-reviewed literature, past EAs, HIA studies, municipal studies, and public health data.

DFW requested that if any reviewers/stakeholders know of additional data, to please share it with Intrinsik so it can be reviewed as part of the health study.

ACTION

☐ All meeting participants to provide any additional data/reports that they are aware of.

DFW noted the importance of the health study in pulling together all health-related information into one place. Often different studies intrinsically consider health because standards and criteria are set based on human health. However, it is important to pull this information into a single report so people can really understand if potential impacts to their health exist.

PH noted he was glad to see the SHR added and hopes it becomes a standard part of EAs. Public health understands the importance of considering the social and economic environment through a health lens (health concerns vs. health impacts).

PH asked what the next step is after the reporting of results.

- DFW: There are recommendations based on the results.
- CH stated that if issues/risks are identified, there should be recommendations for mitigation measures in consultation with stakeholders. Recommendations should relate to enhancing positive impacts and preventing/minimizing negative impacts.

PH asked what types of complaints are received at Walker's South Landfill in Niagara and how are they dealt with.

• DF: Odour is an issue that has caused complaints. DF noted that the Niagara campus includes several facilities (compost site, biosolids processing facility) in addition to the landfill. We have come a long way



Southwestern Landfill Environmental Assessment

- on that front and improvements have been made a result of discussions with our neighbours, whom we encourage to call us right away so we can identify the source of an odour and address it immediately. We have a dedicated community 24 hr. response line number and have done tours to help neighbors identify if odours are from our operations vs. other sources, and if so, what facility.
- DF: We have also received complaints about dust from traffic; we also have a quarry operation on site. We have a dedicated street sweeper to mitigate these impacts. There has also been litter offsite (i.e. plastic bags) on windy days, and we are very proactive on this front with litter fences and 4 dedicated employees who pick litter that blows beyond the litter fences. These employees also pick up any garbage that people dump illegally in ditches or other areas nearby and on adjacent municipal roads.

DF offered a tour of Walker's Niagara operations to anyone who is interested, noting that the Niagara landfill is very similar to the Southwestern Landfill proposal.

Agenda Item – Design & Operations reporting (during EA vs. during EPA approvals)

DH noted that on other projects, some design and operations details are part of EPA approvals (or other post-EA approvals) rather than part of the EA. However, sometimes this information would have been helpful during the EA to provide a better understanding of what was being proposed.

• DF: We've provided a preliminary set of assumptions about the site for the purpose of the technical studies (Facility Characteristics Assumptions). Once the studies are complete, these assumptions may change, and there will be a description of the facility in the EA, which will be similar to a Design & Operations Report but may not fulfill the full EPA requirements.

CH asked what level of detail will be included in the EA

DF noted it will be more than is in the Facility Characteristics Assumptions and will meet the
requirements of the ToR but is unsure at this point the exact level of detail that will be included. Open to
further discussion.

Closing Remarks

DF asked if there were any additional questions or comments.

No additional comments or questions.

DF thanked participants and remarked on the value of these meetings. Other participants agreed the roundtable meetings have been valuable.

Meeting ended at 12:00 pm.



Southwestern Landfill Environmental Assessment

<u>NOTE</u>: Following the meeting, the participants who attended in-person reviewed potential contingency scenarios for liner failure, including two key scenarios; 1) a dewatered state where local groundwater is drawn inward (e.g. as a result of quarry operations/dewatering) and 2) the water table has risen to its natural state (no dewatering) also called an inward gradient or hydraulic trap state. Both scenarios will have to be taken into account during description of contingency options in the EA and detailed contingency planning during EPA and other post-EA approvals if the EA is approved.

These meeting notes were captured to the best of our ability and were circulated to meeting participants for comments prior to finalization. If there are any errors or omissions please contact Walker Environmental at 1-855-392-5537 or info@walkerea.com.



Vol IV Appendix I-13 Agency Meetings

Ministry of the Environment, Conservation, and Parks (MECP)



MOECC Meeting Agenda

Southwestern Landfill Environmental Assessment

Date: Thursday, September 22, 2016

Time: 2:00 pm – 3:00 pm

Location: Conference Call

Attendees: Andrew Evers Dan Delaquis Pat Almost

Darren Fry Steve Hollingshead Joe Tomaino

Item	Discussion
1	INTRODUCTION AND PURPOSE
	- Discuss alternative methods evaluation and provide project update.
2	PROJECT UPDATE
	- Public Open House #1 held September 1/16 at Colombo Hall
	- Public Open House #2 scheduled for October 13, 2016
3	STAKEHOLDER CONSULTATION PROGRAM
	- Community Consulting Program
	Community Liaison Committee (CLC)
	- Aboriginal Consultation Program
	First Nations Workshop # 1 scheduled for November 2, 2016
	- Agency and Municipal Consultation
4	MOECC/WEG COMMUNICATION
	 MOECC Issues/Project Coordinator Pat Almost attended the first 6 CLC Meetings.
	- Dan Cromp, Acting London District Supervisor and Bob, Senior Environmental Officer to attend
	next CLC meeting on September 28, 2016.
5	MOECC UPDATE
	- Government and Technical Review Teams.
6	GENERAL DISCUSSION
	- Alternative Methods Evaluation
7	CLOSURE
	- Next meeting,

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MOECC EAB Meeting

Southwestern Landfill Environmental

Date: Thursday, March 30, 2017

Time: 2:00 pm – 3:30 pm

Location: Conference Call

Call-in Number: 1-866-428-1156 Code: 783971

Invitees: Darren Fry Steve Hollingshead Dan Delaquis

Joe Tomaino Nisha Shirali

#	DESCRIPTION	TIME
1	Introduction and Agenda Review	5 min
2	EA Status Update	
3	 Clarifications Annual Tonnage to be evaluated in the EA (per AAToR) Minister's Amendment #9 	
4	Alternative Methods Interim Report Review MOECC Comments JMCC Peer Review Comments	5 min
4	Finalization of the Work Plans • GRT Process • Anticipated Timing/Schedule • Cumulative Effects Work Plan • Comment Period	20 min
5	GRT Team Site Tour Interest Niagara and/or Proposed Site	5 min
6	 Consultation Update Approved Amended ToR Requirements Local Community and Municipalities First Nations 	10 min
7	Other Business	5 min



MOECC Meeting

Southwestern Landfill Environmental

Date: Tuesday, June 13, 2017

Time: 1:00 pm – 2:00 pm

Location: MOECC Office

733 Exeter Road, London, ON

Invitees: Brad Bergeron Amir Bahadori

Joe Tomaino

#	DESCRIPTION	TIME
1	Introduction and Agenda Review	5 min
2	EA Status Update	5 min
3	 Updated RWDI Air Assessment Work Plan MOEEC Comments Finalization of Work Plan 	40 min
5	MOECC Updates	5 min
4	Other Business	5 min

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MECP EAB Meeting

Southwestern Landfill Environmental

Date: Friday, August 24, 2018

Time: 10:00 am- 12:00 pm

Location: 135 St Clair West, Toronto ON

MECP-EAB

Invitees: Darren Fry Steve Hollingshead Andrew Evers

Joe Tomaino Agni Papageorgiou

#	DESCRIPTION	TIME
1	Introduction and Agenda Review	5 min
2	EA Status Update	
3	 Field Work/Data Collection Update Draft EA Report for Comment Submission of Final EA 	30 min
4	 GRT Site Tour Interest Niagara and/or Proposed Site 	5 min
5	 Consultation Update Consultation Plan Approved Amended ToR Requirements Indigenous Consultation Local Community and Municipalities 	30 min
6	Other Business	5 min

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Vol IV Appendix I-13 Agency Meetings

Joint Municipal Coordinating Committee (JMCC)



Agenda

Southwestern Landfill Environmental Assessment

Date: June 30, 2016

Time: 10:00 am – 12:00 pm

Location: WEG (Organic Resources) Offices, 220 Garyray Drive, Toronto

Invitees:

Joe Tomaino (Chair) Darren Fry Chris Haussmann

Steve Hollingshead David Walmsley

#	Description	o <u>n</u>	<u>Time</u>	<u>Finish</u>
1	Agenda Review (Joe)			10:05
2	Overview of Project Schedule (Darren)			10:15
3	Approved Amended ToR (dated May 10, 2016)		15 min	10:30
4	EA Process		45 min	11:15
	a.	Alternatives Methods Evaluation		
	a.	Cumulative Effects Methodology		
	b.	Baseline Forecasts –Land Use Planning		
	C.	Diversion Alternatives Assessment (Darren)		
5	Scope of P	eer Review	30 min	11:45
	a.	Alternative Methods Evaluation		
	b.	Work Plans		
	C.	Draft EA Report		
6	Other Busi	ness	15 min	12:00



Meeting Notes

Southwestern Landfill Environmental Assessment

Date: June 30, 2016

Time: 10:00 am – 12:00 pm

Location: 3700 Steeles Avenue, Suite 601, Toronto

Invitees:

Joe Tomaino (Chair) Darren Fry Chris Haussmann

Steve Hollingshead David Walmsley

Handouts Provided:

 CLC Meeting – June 22, 2016 Environmental Assessment and Estimated Time Line

 Appendix F – Haul Route Table 5 South Landfill, City of Niagara Falls, EA

- Work Plan Outline Cumulative Effects Assessment
- Memo Walmsely Environmental Consulting June 27, 2016

1. Agenda Review

a. Joe provided an overview of the Agenda, additional item added, discussion of memo dated June 27, 2017 to Chris Haussmann from David Walmsley. Purpose of meeting requirement of Amendment # xx, meeting with PRT's EA planning expert in advance of Alternatives Methods evaluation.

2. Overview of the Project Schedule

a. Darren provided an update on the project schedule

3. Approved Amended ToR (Dated May 10, 2016).

a. Darren provided an overview of letter of acknowledgment dated May 11, 2016 to the MOECC.

4. EA Process

- a. Alternatives Methods Evaluation
- b. Cumulative Effects methodology
- c. Baseline Forecasts Land Use Planning
- d. Diversion Alternatives Assessment

5. Scope of Peer Review

- a. Alternative Methods Evaluation
- b. Work Plans
- c. Draft EA Report
- Tasks-Amendment # 9-Further clarification on Diversion Alternatives. Provide further clarification to JMCC PRT.



Meeting Minutes

Township of Zorra and JMCC PRT Meeting

Date: October 26, 2016

Time: 10:00 a.m. – 12:30 p.m.

Location: 160 Carnegie Street, Ingersoll, ON

Attendees

Mary Lupton (Zorra Township)
Don McLeod (Zorra Township)
Chris Haussman (JMCC PRT Manager)
Darren Fry (Walker)
Mike Watt (Walker)

Meeting Agenda:

- 1. EA Process
 - a. Peer Review Process:
 - ✓ Overview
 - ✓ Consultation Events
 - ✓ Selection of Preferred Alternative Methods
 - ✓ Existing and Future Baseline Conditions Documentation
- 2. Government Relations
 - a. Concerns of elected representatives
 - b. Community concerns
 - c. Peer review benefit to community

Summary:

- Walker and representatives from the Township of Zorra and the JMCC PRT met to discuss and review the JMCC request for additional Peer Review.
- The group reviewed and discussed the existing peer review agreement as committed to in the Approved Amended Terms of Reference.
- Walker reviewed and clarified the peer review scope for the Alternative Methods and consistency of methodology with the Approved Amended Terms of Reference.
- Walker indicated that JMCC not working in good faith with OPA, Leachate ByLaw, etc.
- Zorra and JMCC PRT manager agreed to report back to the full JMCC on Walker's frustrations.
- The group discussed upcoming consultation opportunities for the community.

AGENDA

Meeting - WEG Southwest Landfill Proposal - EA Process

January 17, 2017

- 1. Discussion of Previous County Council Decisions:
 - a. Leachate Prohibition at Oxford WWTP (Mike and Darren, Peter)
 - b. County OPA 197(Mike and Darren and Peter)
- 2. Confirmation of Peer Review Reporting Milestone Events (all)
- 3. Legal Budget
 - a. Previous Invoices (all)
 - b. Go-forward approach to Legal Invoices (all)
- 4. Potential Amendments to Update Peer Review Memorandum of Understanding (all)
- 5. Other anticipated Issues if any (all)



Vol IV Appendix I-13 Agency Meetings & Presentations

Township of Zorra



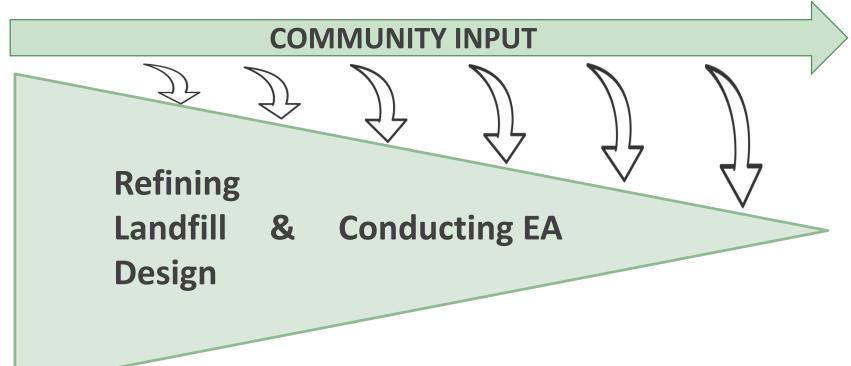
Township of Zorra Council Presentation August 9th, 2016

SOUTHWESTERN LANDFILL (SWLF) ENVIRONMENTAL ASSESSMENT (EA)

SWLF Timeline Update







What We've Been Doing



Southwestern Landfill EA

Preparing the EA

Reconnecting by talking to residents, businesses and organizations

Communicating via updated website, mail outs, newsletter, meetings

Engaging local community, First Nations and interested parties

Consulting local community, CLC, near neighbours, First Nations and organizations

What We're Hearing



Southwestern Landfill EA

Key Concerns

- Water protection
- Air quality
- Traffic
- Birds
- Odour
- Property value
- Process & Timing

Interests

- Impact prevention and mitigation in Niagara
- Job opportunities
- Local contracting opportunities
- Economic benefits
- Waste diversion

What's Next?



Southwestern Landfill EA

As we continue to prepare the EA, we're continuing to communicate & encourage public participation via:

- Bus Tours
- Discussions with Community Members, CLC, First Nations, Businesses and Organizations
- Monthly CLC Meetings
- Public Events
- Community Exchange & Mail-Outs
- Website Updates & Videos

We're Listening



Southwestern Landfill EA

Please feel free to contact us or stop by our Ingersoll Office:

160 Carnegie St., Ingersoll, ON (905) 680-3670 or (855) 392-5537

info@walkerea.com

Sign up on our website for regular updates

www.walkerea.com

Zorra Council Feedback?



Southwestern Landfill EA

Questions?

- Comments, concerns or suggestions on the SWLF proposal?
- How would you like to be engaged as the process moves forward?
- Suggestions on how to better engage your constituency?

 From:
 Darren Fry

 To:
 Info@walkerea.com

 Subject:
 Comms Report

Date: Friday, August 26, 2016 8:54:59 AM

Stakeholder: Zorra Council

Date: Aug. 9th Time: 11 am D. Fry

D. Fry provided a 7 slide presentation to Council pertiaing to timeline, what we've been doing, what we're hearing, what's next, we're listening.

D. Fry received several questions from Council:

- Are FNs being consulted, is this being made public, is it on the website. I responded with yes, yes via RoC, not on website. We are happy to communicate when and who we are consulting with and general themes of conversations.
- Peer Review WEG was asked if will be accepting recent request for expanded Peer Review. Responded that we have already expanded the scope of the review from its original scope in MOU and that we are considering the recent request by the JMCC.
- Will WEG be holding any public events in the future. I stated we infact are in the process of planning an Open House for Sept. 1st but have been unable to confirm the venue (Colombo Club). More details will follow.
- D. Fry received two questions for the public (there were \sim 7 people and all were the regular OPAL members).
 - M. Farlow requested when he would receive letter from MNR regarding WEGs Option
 1 footprint position. I stated that WEG never committed to contacting the MNR for a
 position.
 - M. Farlow stated that once again, WEG is dismissing agricultural concerns. It was a statement.
 - Beachville resident inquired why we call it the Beachville dump. I stated that WEG refers to this EA as the SWLF EA.

End.



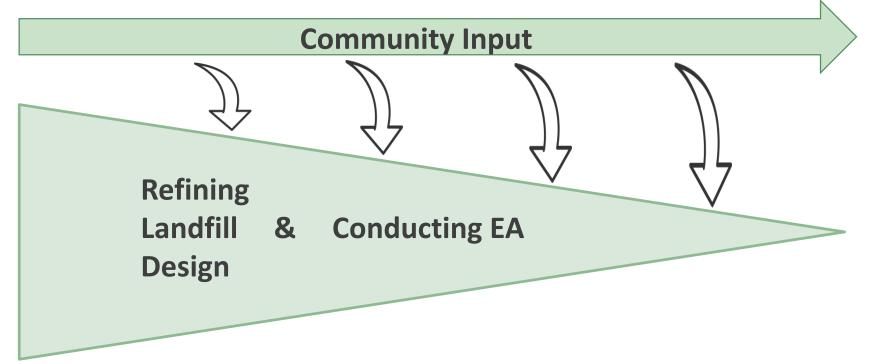
Township of Zorra Council Presentation October 17th, 2017

SOUTHWESTERN LANDFILL (SWLF) ENVIRONMENTAL ASSESSMENT (EA)

SWLF Timeline Update







Current EA Activities



Southwestern Landfill EA









Work Plans



Technical Studies



Field Studies

Final Work Plans



Southwestern Landfill EA

Community input incorporated:

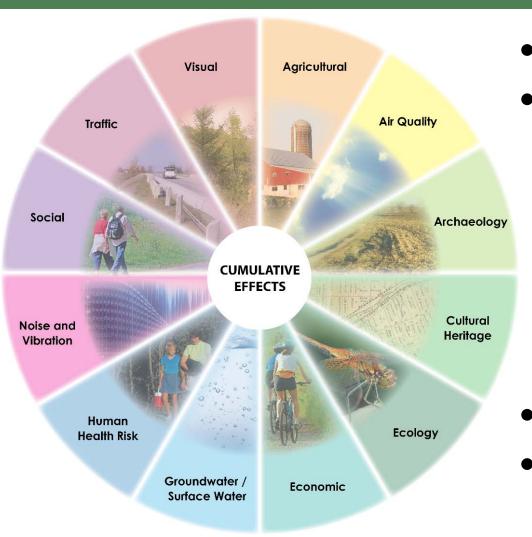
- Expanded Social & Economic study areas (e.g. Ingersoll)
- Additional air monitoring
- Additional Work Plan clarity and details
- Field work observation opportunities
- Expanded community consultation

Final Work Plans can be accessed on our SWLF EA website here.



Technical Studies & Field Work





- 13 Technical Studies
- Field work beginning:
 - Groundwater/Surface water
 - Air & Noise
 - Ecology
 - Social & Economic
 - Agricultural
- Community Engagement
- Site visits by appointment



- Continuing the Technical Studies
 - next 3 seasons (Summer 2018)
- Providing opportunities to observe field work
- Communicating status of technical studies
- Continuing with regular CLC meetings
- Engaging in dialogue with neighbouring community members and organizations

Thank You. Questions?



Southwestern Landfill EA



For more information:

www.walkerind.com

To sign up for project updates:

- Call our office 1-855-392-5537
- Subscribe on our website



Township of Zorra Council

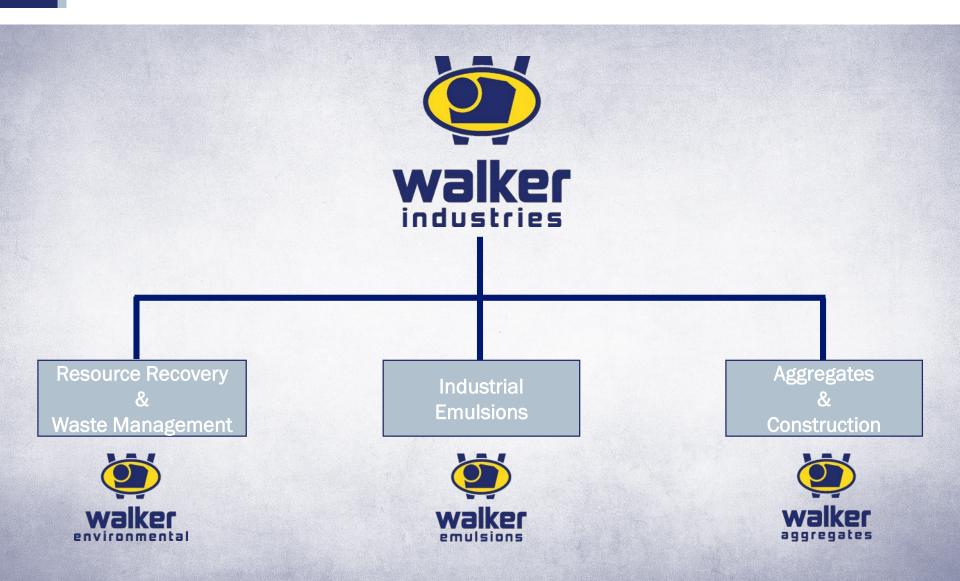
Southwestern Landfill EA Update



Walker Industries



Dynamic & Diversified Company



What we do...

Provide solutions to recover resources while safely managing what can't be reused or recycled.



Composting



Low Carbon Fuels & Mulches



Sustainable End-Products



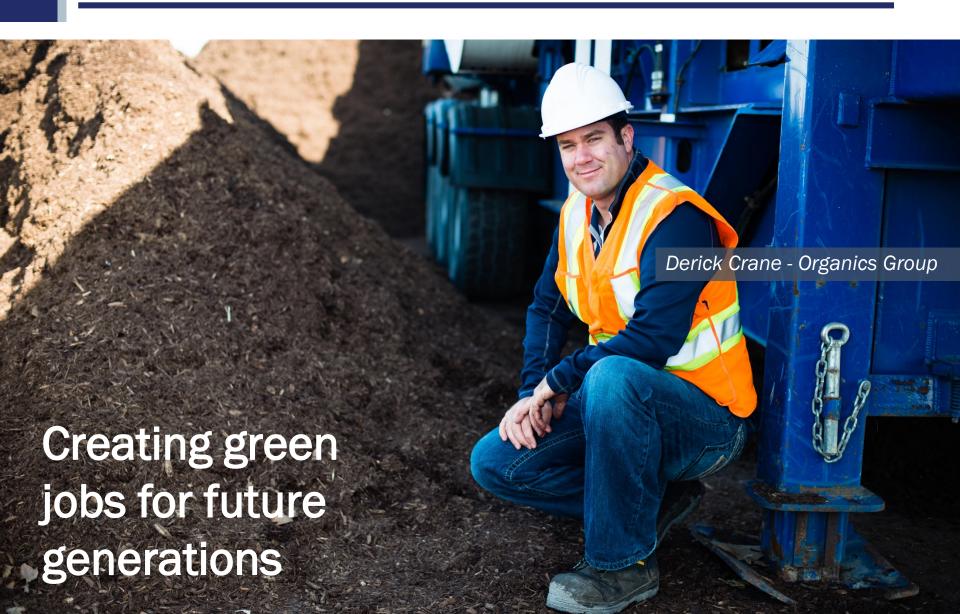
Grease & Used Cooking Oil Collection



Tackling Climate Change



Investing in our future

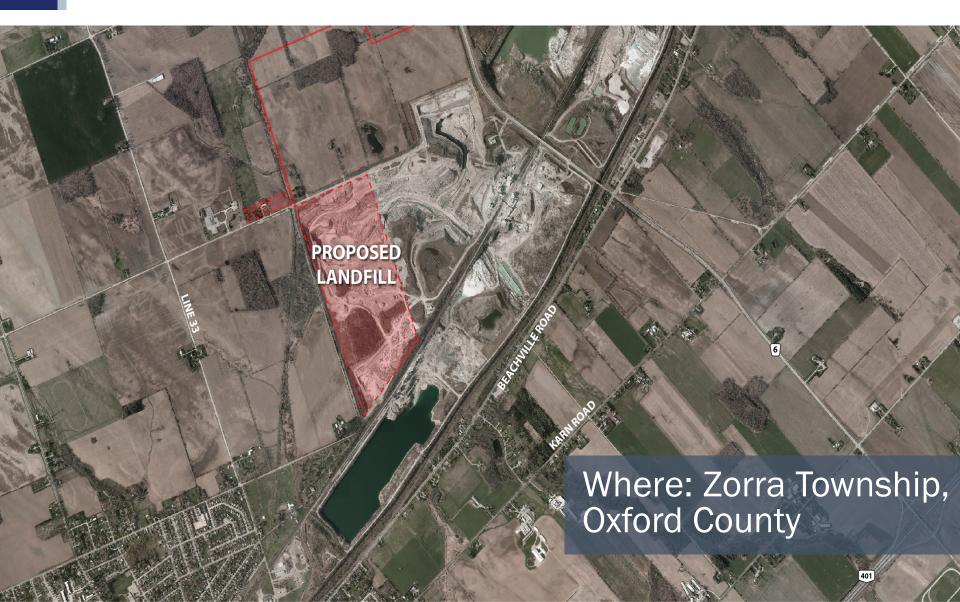


Residual Waste Disposal



- Walker is conducting an Environmental Assessment (EA) for a new solid, non-hazardous landfill site.
- The proposed landfill would provide disposal capacity primarily for waste generated by businesses in Southern & Southwestern Ontario.







- EA process started in 2012
- Terms of Reference approved in 2016
- Currently finishing the Technical Studies
- Draft EA release anticipated June 2019
- Final EA submission anticipated Fall 2019



EA Technical Studies

- 12 Technical Studies
- + Cumulative Effects
- + GHG Assessment
- 12+ months of field work/data collection



Next Steps

- Draft EA anticipated to be available June 2019
- Draft EA review/comment period includes:
 - o JMCC Peer Review of the Draft EA
 - Public Consultation Opportunities
 - Indigenous Consultation Opportunities
 - o All comments submitted to Walker
- Final EA anticipated to be submitted to Ministry of Environment, Conservation & Parks (MECP) in Fall 2019
 - o Comments submitted to the MECP



Questions or Comments

Darren Fry, A.Sc.T Project Director, Southwest Landfill Walker Environmental Group

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Toll Free 1.800.263.2526 dfry@walkerind.com www.walkerind.com





Thank you





Vol IV Appendix I-13 Agency Meetings

Town of Ingersoll



Agenda

Southwestern Landfill Environmental Assessment

Date: April 3, 2017

Time: 1:00 – 2:00 pm

Location: Walker Environmental Group, 2800 Thorold Townline Rd, Niagara Falls

Invitees:

Joe Tomaino Darren Fry (Chair) Michael Graves

Peter Klassen Fred Bernard

<u>#</u>	<u>Description</u>	<u>Time</u>	<u>Finish</u>
1	Agenda Review (Joe)	5 min	1:05
2	Overview of Project Schedule & Key Milestones (Darren)	10 min	1:15
4	Ingersoll Peer Review	40 min	1:55
	 a. Point of Contact b. Updated Work Plans > Timing of Review > Sharing of Information > Additional Meetings 		
5	Other Business	5 min	2:00



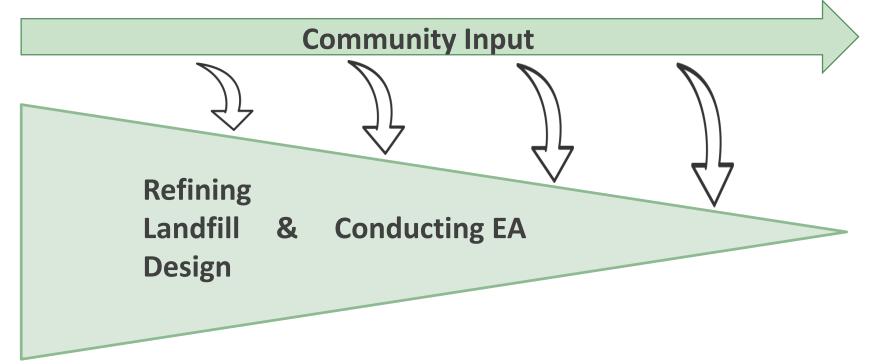
Town of Ingersoll - Council Presentation December 11, 2017

SOUTHWESTERN LANDFILL (SWLF) ENVIRONMENTAL ASSESSMENT (EA)

SWLF Timeline Update







Current EA Activities



Southwestern Landfill EA









Work Plans



Technical Studies



Field Studies

Technical Studies – Final Work Plans



Southwestern Landfill EA

Community input incorporated:

- Expanded Social & Economic studies area (e.g. Ingersoll)
- Additional air monitoring
- Additional clarity and details
- Field work observation opportunities
- Expanded community consultation

Final Work Plans can be accessed on our SWLF EA website here.



Technical Studies Underway





- 13 Technical Studies
- Field work underway:
 - Groundwater/Surface water
 - Air & Noise
 - Ecology
 - Social & Economic
 - Agricultural
 - Visual
 - Traffic

Ingersoll's Participation in the EA



- JMCC Independent Peer Review
- Ingersoll Independent Peer Review
- Individual & Roundtable meetings (peer reviewers, government reviewers, Walker consultants)
- CLC Membership
- Participation at Public Events
- EA Office 160 Carnegie St., Ingersoll
- Residents actively engaged in the process





Next Steps



- Continuing the Technical Studies
 - During next 3 seasons (Summer 2018)
- Providing opportunities to observe field work
- Communicating status of technical studies
- Continuing with regular CLC meetings
- Engaging in dialogue with neighbouring community members and organizations

Thank You. Questions?



Southwestern Landfill EA



For more information:

www.walkerea.com

To sign up for project updates:

- Call our office 1-855-392-5537
- Subscribe on our website



Vol IV Appendix I-13 Agency Meetings & Presentations

Township of Southwest Oxford (SWOX)



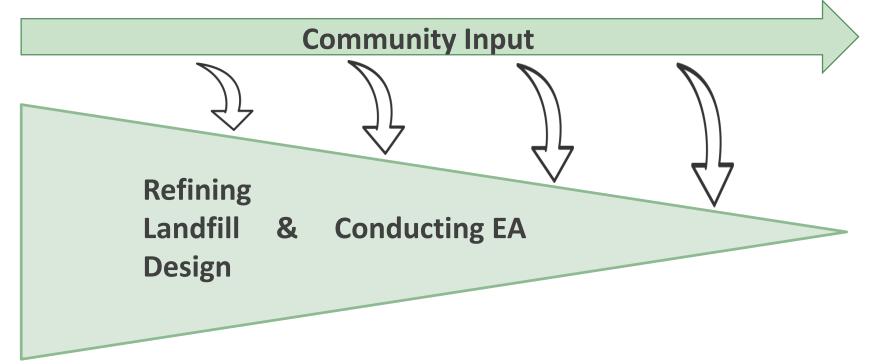
Township of South-West Oxford Council Presentation – November 7th, 2017

SOUTHWESTERN LANDFILL (SWLF) ENVIRONMENTAL ASSESSMENT (EA)

SWLF Timeline Update







Final Work Plans



Southwestern Landfill EA

Community input incorporated:

- Expanded Social & Economic studies area (e.g. Ingersoll)
- Additional air monitoring
- Additional clarity and details
- Field work observation opportunities
- Expanded community consultation

Final Work Plans can be accessed on our SWLF EA website here.



Current EA Activities



Southwestern Landfill EA









Work Plans



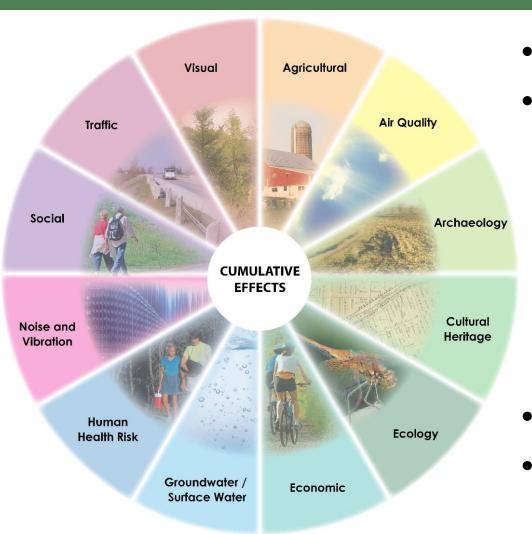
Technical Studies



Field Studies

Technical Studies & Field Work





- 13 Technical Studies
- Field work beginning:
 - Groundwater/Surface water
 - Air & Noise
 - Ecology
 - Social & Economic
 - Agricultural
- Community Engagement
- Site visits by appointment



- Continuing the Technical Studies
 - next 3 seasons (Summer 2018)
- Providing opportunities to observe field work
- Communicating status of technical studies
- Continuing with regular CLC meetings
- Engaging in dialogue with neighbouring community members and organizations

Thank You. Questions?



Southwestern Landfill EA



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Vol IV Appendix I-13 Agency Meetings

Oxford County



KITCHENER WOODBRIDGE LONDON KINGSTON BARRIE BURLINGTON

Walker Environmental Group – Proposed Southwestern Landfill Pre-Submission Consultation Meeting

MHBC FILE '9811 AE'

Meeting Notes

Date: June 11th, 2019

Time: 11:30 a.m.

Location: Oxford County Administration Building – 21 Reeve Street, Woodstock

Meeting attendees:

<u>Consultant team</u> Dan Currie, MHBC,

Nick Bogaert, MHBC Joe Tomaino, WEG

County staff Gord Hough, Director – Community Planning

Meghan House, Development Planner (Zorra & East Zorra-Tavistock)

1. Introduction and agenda items

- County staff welcomed everyone to the meeting, and the team reviewed the purpose of the meeting, which was to discuss the proposed *Planning Act* applications related to the project.

2. Review of proposal

- MHBC and WEG provided a high level overview of the proposal:
 - o There is an involved process to cover through both the *Environmental Assessment Act* and *Planning Act* processes, with the intent of the team to harmonize the two processes as much as possible. County staff agreed with this approach.
 - o Proposed waste fill area comprises part of the existing quarry operation, and will proceed in a phased manner.
 - o The haul route will be located within the area specified on the key maps, with detailed design of the alignment to occur so that it is optimal for truck movements. The rationale for the location of the haul route is tied to the phasing of the Carmeuse Quarry as well as acceptable sight lines for entrance / exit.
 - o The intent is for WEG to begin operations around 2023 if all approvals are granted.

3. Required applications and process

- Required *Planning Act* applications were discussed. It was noted that in addition to the required Zoning By-law / Official Plan amendments, a consent would be required in order to create the parcel that will house the landfill facility. It is likely that a second consent would be required for the leachate treatment facility. The team was advised to ensure matters such as PPS and Official Plan conformity are addressed for any lot creation that is proposed.
- It was proposed that the existing designations permitting aggregate extraction be amended to also permit a landfill operation, recognizing that quarrying activities will continue while landfill operations also progress. County staff was in general support of the concept, but advised that the mechanics would be addressed through the processing of the various applications.
- Potential site plan approvals process was discussed, and the team was advised to plan for requiring site plan approval as it relates to the separate industrial parcel (leachate treatment).
- It was agreed that the breadth of studies being completed in support of the EA (as long as it includes a Planning Justification Report) should suffice for the *Planning Act* applications. County staff would like the ability to request additional information should new issues come about during the application review process.
- It was confirmed that the EA peer review process would suffice for the *Planning Act* applications as well, unless there is new information required to address concerns with those applications.
- It was agreed that the *Planning Act* applications are relatively straightforward, although the overall process and operation is quite complex.

4. Application timing:

- The current timing is to have a draft EA submission (including Planning Justification Report) for the end of the summer. A 90-day consultation period is proposed, with the expectation to file the final EA by the end of 2019.
- Planning applications are to be filed concurrently with the final EA submission, although there is the option to submit earlier (possibly October).
- The team was advised that County staff can accept all application materials together, with processing being completed concurrently in accordance with statutory timelines as required.
- Generally, County staff outlined a process where the applications are brought before Township Council for a recommendation, before then proceeding to County Council and the Land Division Committee for approval. The severance application(s) would be the last step.

5. Next steps:

- The team agreed to keep in touch as the application materials are finalized, and discuss any questions or issues that arise while matters are being completed.

end of minutes



Vol IV Appendix I-13 Agency Meetings

Southwest Public Health



Southwestern Landfill Environmental Assessment

Date: Monday, October 29, 2018

Time: 10 am – 12 pm

Location: 160 Carnegie Street, Ingersoll (Upper Meeting Room)

- 1 Introductions
- 2 Overview of Southwestern Public Health
- 3 Overview of Walker Environmental
- 4 Southwestern Landfill EA
 - Project Overview
 - EA Process & Timeline
 - Consultation & Peer Review Program
 - Health Study
 - Next Steps
- 5 Ongoing consultation & engagement with Southwestern Public Health

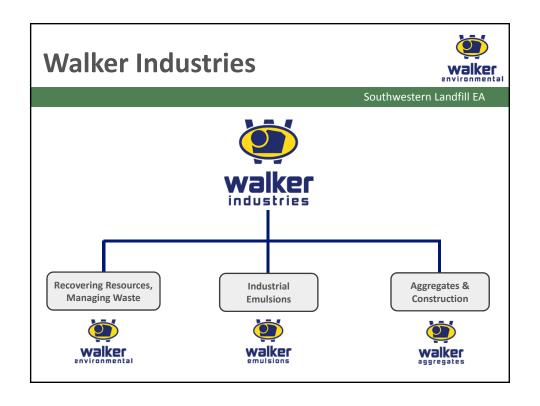
Walker Environmental Group www.walkerea.com



Southwestern Landfill Environmental Assessment

OVERVIEW & UPDATESOUTHWESTERN PUBLIC HEALTH

Date: October 29, 2018



Walker Environmental



Southwestern Landfill EA

Recovering Resources

Biosolids

Fats, Oils & Grease

Compost

Clean Wood

Painted/preserved wood

Railway Ties

Shingles

Landfill Gas (energy)

& Managing Waste

Residual Disposal (Landfill) (Niagara Falls, Welland)

Public Drop-Off

Transfer Station

Trucking

Southwestern Landfill EA



Southwestern Landfill EA

Walker Environmental is proposing to build a new landfill in the Township of Zorra in Oxford County.

If approved, the Southwestern Landfill (SWLF) would only accept solid, non-hazardous waste generated in Ontario.

Proposed annual tonnage: 1.1 million metric tonnes (includes waste and daily cover)



- The SWLF would be constructed in a mined-out portion of a limestone quarry currently owned by Carmeuse Lime & Stone
- Will primarily service businesses and institutions across Southern Ontario
- Walker Environmental has over 40 years of experience safely building and operating landfills in mined-out limestone quarries.



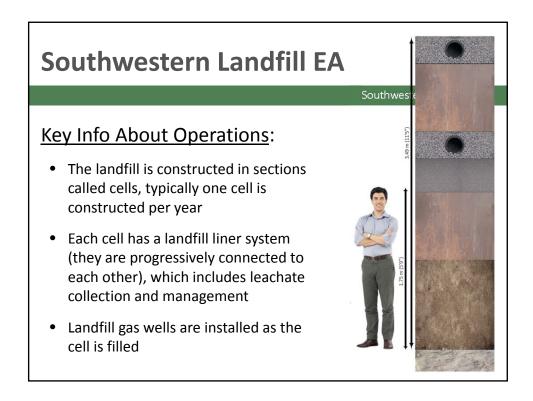


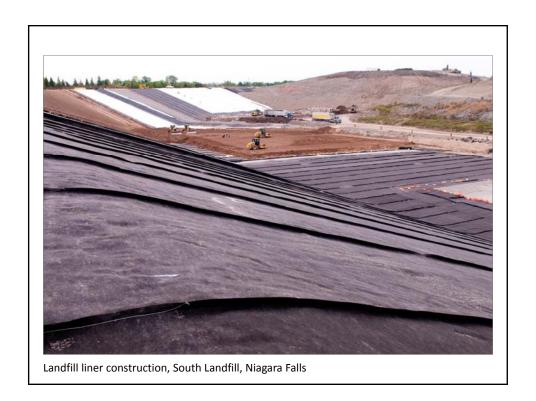


Southwestern Landfill EA

The landfill facility would include:

- Landfilling area
- Buffer lands
- Scales
- Leachate treatment plant (to treat water that comes into contact with waste)
- Landfill gas management infrastructure (flare(s) at minimum, with opportunity for use as energy)
- Stormwater management ponds







Southwestern Landfill EA

Key Info About Operations:

- Waste is approved <u>before</u> it arrives at the landfill (may require testing and/or site visit)
- A small area of the landfill is used each day (working face)
- The waste is compacted as it is deposited in the landfill
- Each day the waste is covered by a layer of "daily cover", typically contaminated soil (non-hazardous)



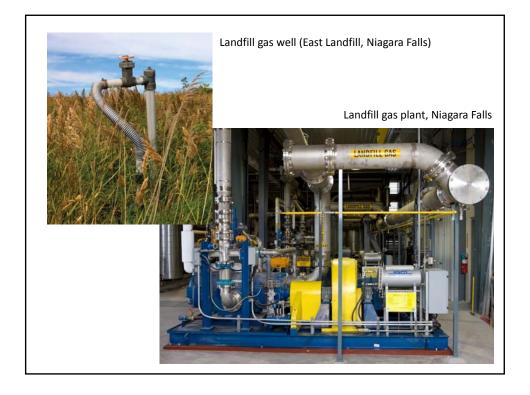
Entrance to South Landfill, Niagara Falls



Scale house at South Landfill, Niagara Falls



Daily cover placement, South Landfill, Niagara Falls

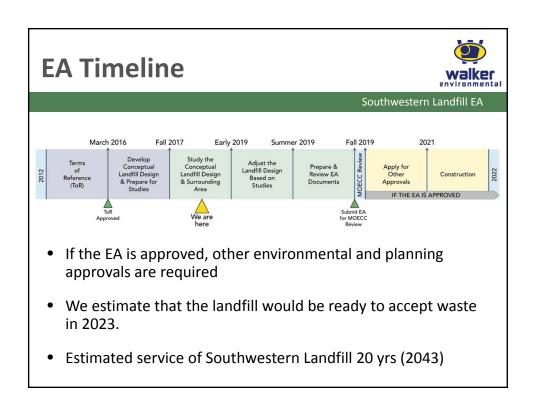


EA Process



- Ontario Environmental Assessment (EA) is required for new landfills or expansions (>100,000 m³ of capacity)
- SWLF EA started in 2012
- Two phases:
 - Terms of Reference (2012-2014, approved in 2016)
 - Environmental Assessment (2016-present)

EA Timeline Southwestern Landfill EA March 2016 Fall 2017 Early 2019 Summer 2019 Fall 2019 2021 Adjust the andfill Design Based on Apply for Other Approvals 2022 2012 IF THE EA IS APPROVED Studies will be complete in early 2019 Draft EA report will be available in Spring 2019 - Consultation with stakeholders, First Nations, peer review Final EA report submission to Ministry of Environment, Conservation and Parks in Fall 2019.



Stakeholder Groups



Southwestern Landfill EA

Indigenous Communities

Joint Municipal Coordinating Committee (JMCC)

- Oxford County, Zorra, Ingersoll,
 South West Oxford
- Proponent Funded

Ingersoll Peer Review

- Ingersoll Funded

Community Liaison Committee (CLC)

- 12 Community member seats
 - Resource: EA Advisor chosen by CLC members
- One seat for each municipality included in JMCC
- MOECC and UTRCA seats
- Third party facilitator leads meetings

Community Organizations (i.e. Chamber of Commerce, Farming associations)

Technical Studies (Current Phase)





- 12 studies
- Cumulative effects are integrated into the studies
- Many environmental standards (i.e. air, water) are based on health data
- Health study is not required by the Ontario EA process, but was added after consultation

Health Study



Southwestern Landfill EA

- Includes a Human Health Risk Assessment (HHRA) and a Supplementary Health Review (SHR)
- In the SHR the health expert will review the findings of the social and economic assessments to determine if there is any potential for related health effects.



HHRA



Southwestern Landfill EA



Data for **HHRA** primarily collected by the Air Quality, Groundwater and Surface Water studies.





HHRA



Southwestern Landfill EA

2. Data Analysis:

- HHRA calculations are done to predict individual exposure to specific chemicals, the potential risk to health exposure
- · Chemical mixtures are taken into account
- For all contaminants identified, a "worst case scenario" approach will be used for each receptor-type, considering different exposure pathways to ensure a conservative assessment.
 - Receptor-types: infant, toddler, child, adolescent, adult
 - Exposure pathways: inhalation, ingestion, dermal contact

HHRA



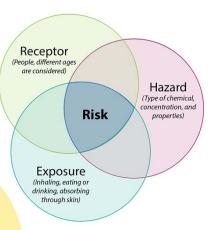
Southwestern Landfill EA

3. Report & Recommendations:

Potential risk to human health requires three things:

- a) Hazard
- b) Receptor
- c) Exposure Pathway

If there is a potential for negative impacts to human health, there will be recommendations for risk management and mitigation measures.



Supplementary Health Review



Southwestern Landfill FA

- Review of the social and economic assessments by the health expert to see if there is any potential for related health effects
- Recommendations to enhance positive effects and mitigate any negative effects on human health and well-being



Southwestern Landfill EA

Other Questions

Contact Us



Southwestern Landfill EA

Darren Fry, Project Director

160 Carnegie St., Ingersoll, ON 1-855-392-5537 / 905-680-3783 Cell: 905-329-4265 dfry@walkerind.com



Meeting Summary

Southwestern Public Health Meeting - Oct. 29, 2018

Southwestern Landfill Environmental Assessment

Date: Monday, October 29, 2018

Time: 10 am – 12 pm

Location: 160 Carnegie Street, Ingersoll (Upper Meeting Room)

Attendees:

- Southwestern Public Health Dr. Joyce Lock, Peter Heywood, Amy Pavletic
- Walker Environmental Darren Fry, Steve Hollingshead, Becky Oehler
- Intrinsik Glenn Ferguson

Summary:

Introductions

- All attendees introduced themselves and their roles
- Action Item: SW Public Health attendees requested that WEG send them an invite to the mailing list and some key website links (i.e. Health work plan)

Overview of Southwestern Public Health

- SW Public Health is a new entity that came into being on May 1, 2018
- Working with the revised Ontario Public Health Standards that came into effect January 1, 2018
- Currently in operational planning phase for 2019
- Probably another 18-24 months before the organization is fully integrated
- Interested in setting out how SW Public Health will be involved in the EA process and consultation activities

Overview of Walker Environmental

- Using the powerpoint slides prepared for the meeting:
 - Review of Walker Industries structure 3 divisions
 - o Review of Walker Environmental products and services in waste recovery and disposal

- Walker presented the powerpoint slides prepared for the meeting including:
 - Project Overview
 - o EA Process and timeline
 - Consultation and Peer Review program
 - o Health Study
 - Next steps



- Discussion and questions occurred throughout and after the presentation, including:
 - Key things WEG has learned from landfilling in Niagara that can be implemented at the Southwestern Landfill, including continually improving operational activities (ie.landfill gas capture, odour control)
 - Groundwater protection Landfill liner system & contingency systems in both a dewatered and natural water table state (Darren sketched scenarios on the whiteboard)
 - How landfills are constructed and operated, including:
 - How the sides of the landfill are sloped and has the same liner system as the base
 - How the primary and secondary leachate collection systems are reachable via manhole for testing and maintenance (i.e. flushing)
 - How the landfill is constructed in cells (every 1-2 years) and each day only a small area is used (working face) and covered each day
 - Discussion about Indigenous consultation, Indigenous rights, and traditional territory
 - O Where waste would come from if the landfill is approved (Southern Ontario, primarily industrial, commercial and institutional sector). The SWLF approval would include approval to receive municipal waste. It's likely the landfill would be approved to accept waste from anywhere in Ontario, but that's not practically feasible due to trucking costs (the affordable trucking range is there area Toronto and west).
- SW Public Health noted the importance of defining health in the holistic sense as defined by the World Health Organization (social impacts have impacts on health).
 - This is the reason for the Health Impact Assessment request during the Terms of Reference (ToR), as it incorporates social health factors.
 - The result of this request was Walker's commitment to include to a Supplementary Health Review in addition to the Human Health Risk Assessment.
 - o It was noted that this type of review hasn't be done before for a landfill in Ontario (though it has appeared in a couple of projects including an incinerator and an airport)

Ongoing consultation & engagement with Southwestern Public Health

- SW Public Health noted their interest in participating in the Community Liaison Committee, as community collaboration and partnership is a pillar of Public Health.
 - Action Item: Walker agreed that the CLC is a great opportunity for information sharing, and asked that a SW Public Health representative attend the next CLC meeting as an observer, where Walker will table the idea of adding a seat to the CLC with the committee for discussion. Walker anticipates the committee will be open to adding a seat for SW Public Health but note that the decision must be put to the group as a whole.
 - SW Public Health agrees and notes they can also participate through the JMCC by providing support to the municipal members during the Peer Review. SW Public Health noted they will reach out to the JMCC.

End of notes



Vol IV Appendix I-13 Agency Meetings

Ministry of Transportation (MTO)



MTO Meeting

Southwestern Landfill Environmental Assessment

Date: Friday, May 19, 2017

Time: 10:00 am – 11:00 am

Location: Ministry of Transportation

659 Exeter Road, London, ON

Invitees: Carl Wong (HDR) John Morrisey (MTO)

Joe Tomaino

#	DESCRIPTION	TIME
1	Introduction and Agenda Review	5 min
2	EA Status Update	5 min
3	Updated HDR Work Plan	20 min
4	MTO Updates County Road #6 Interchange / Service Centre	15 min
5	EDR Routes	10 min
7	Other Business	5 min

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