walker environmental

Southwestern Landfill Environmental Assessment

Workshop Report

November 2, 2016 First Nations Workshop

Quality Inn, Woodstock, Ontario

Key Topics of the Workshop:

- Reconnect, introduce the project to new workshop participants and provide a status update
- Discussion on the Alternative Methods Assessment & Preferred Alternatives for five key components of the proposed landfill
- Next Steps in the Environmental Assessment (Technical Work Plans and Impact Assessment)

Resource Material: *Reference Materials booklet*

Next workshop scheduled for Wednesday, March 8, 2017 at Chippewas of the Thames First Nation offices (specific address to be sent out later)

EXECUTIVE SUMMARY

Project Overview

Walker Environmental is proposing a landfill in the Township of Zorra, Ontario (Oxford County). If approved, it would accept only solid non-hazardous waste that is created in Ontario. The landfill proposal is undergoing a provincial Environmental Assessment (EA). The provincial EA ensures that potential environmental effects are considered and addressed before a project is allowed to begin. Once the EA is complete, the Minister of the Environment and Climate Change will decide if the landfill is approved.

Previous Consultation & Engagement

Walker Environmental has been consulting and engaging with First Nations about the Southwestern Landfill EA since the inception of the project in 2012. This consultation has included several workshops, presentations and meetings with Chiefs and Councils, staff, committees, and community members, and tours of Walker's facilities and operations. Walker recognizes that First Nations have unique rights and perspectives, and are committed to engaging, consulting, and collaborating with First Nations to create opportunities for meaningful dialogue and consultation. This workshop was scheduled in response to positive feedback about previous workshops.

Workshop Overview

The objectives and outcomes of the workshop are outlined below.

Objective 1: Reconnect, introduce the project to new participants, and provide an update on what has occurred since the Terms of Reference approval in March, 2016.	**Key Discussion & Outcomes:** • Walker provided a project overview, as well as an update on project status & timeline. • Discussion about how the landfill could potentially operate, including construction and environmental monitoring.
Objective 2: Discuss the Preferred Alternatives (selected options) for five key landfill components and the process used to develop them: a. Landfill Footprint b. Landfill Design c. Haul Route & Site Entrance d. Leachate Management e. Landfill Gas Management	**Key Discussion & Outcomes:** • Walker presented the Preferred Alternative for each key landfill component and illustrated how each Preferred Alternative was developed. • Discussion about the Preferred Alternatives and how they will be studied. • Generally, participants found the evaluation and selection process for Preferred Alternatives clear, logical and rational.
Objective 3: Next steps in the EA as the Work Plans are finalized (drafted during the Terms of Reference phase) and Impact Assessment begins. a. Continued workshops b. Following Nation-specific consultation protocols c. Meetings/presentations with Chief and Council, staff, and community members.	**Key Discussion & Outcomes:** • Walker asked for input on how best to engage/consult with the Nations moving forward, noting that Walker will be responsive to each First Nation's individual process and protocols. • The group expressed interest in workshops, in addition to other activities that follow consultation protocols (Nation-specific), and meetings/presentations to Chief and Council, staff, committees and community members. • The group expressed interest in having trained people (monitors) present during field work to provide real-time input.

Key Comments and Points of Discussion

- The information presented today was clear, as were answers to questions. Starting with a high-level overview with clear reference materials and then diving deeper in response to questions is a good format.
- There are opportunities to partner with and support First Nations businesses, including:
    - Incorporating criteria related to using indigenous-run businesses into project service contracting processes, as well as purchasing policies
    - Using First Nations' banks
    - Purchasing native species from First Nations nurseries/greenhouses for biodiversity offsetting, particularly if trees are cut down to create a new road
    - Being open to opportunities related to brokerage of waste
    - Opportunities that could arise through discussion with Shared Value Solutions
- There is interest in forging a connection between the workshop participants and the local non-Indigenous community, including the Community Liaison Committee (CLC) and local municipal representatives. Past experiences have shown these connections to be beneficial, particularly in sharing results of peer reviews, as well as sharing areas of concern and input.
- Regarding the Technical Work Plans; summaries should be available that are accessible to everyone (in format and language) in addition to the full text and peer-review reports.
- There is a preference for holding regularly-scheduled workshops/meetings for this group that include time for representatives to meet without Walker to discuss this and other subjects. These meetings can be held at First Nations' meeting facilities.

Action Items

	Action Item	Follow-Up Plan
1	Set up tours of Walker Niagara operations and Carmeuse site where new landfill is proposed (Township of Zorra, Ontario).	Walker will set up potential dates and send them to all workshop participants and other contacts. (Expected for early 2017)
2	Review Walker's Indigenous Relations Policy with consideration for the Truth & Reconciliation Report Calls to Action for Business.	Walker will review their current policy and look for areas of improvement.
3	Research the history of local place names that could give information about local history and natural systems (Indian Hill and Beachville).	Walker will research these names and report back.
4	Create connections between citizens local to the proposed landfill (Community Liaison Committee, Municipal representatives) and representatives from First Nations.	Walker will seek opportunities to create connections that enhance constructive dialogue and sharing of information. Recommendations are appreciated.
5	Arrange the next workshop, coordinating with Chippewas of the Thames First Nation to hold the event at their offices. Date: March 8, 2017	Walker will arrange the workshop. A draft agenda will be distributed in advance.

DETAILED WORKSHOP REPORT

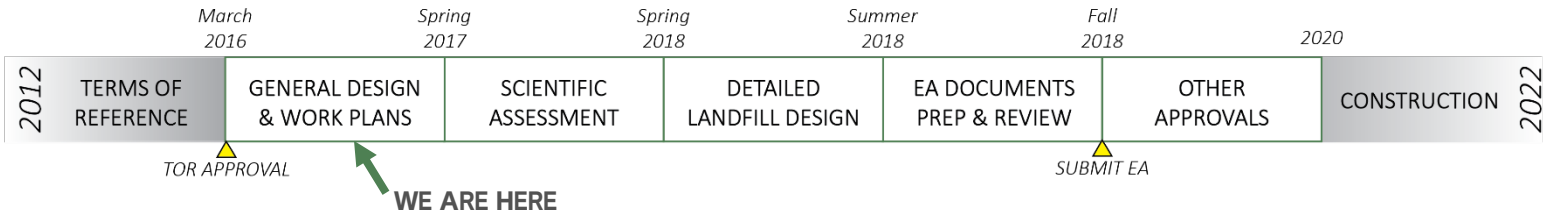
Opening Prayer

Participant opened the workshop with a prayer.

PROJECT OVERIVEW & UPDATE

Introduction

- Project Director Darren Fry introduced Walker Environmental as a company, then reviewed the agenda and reference materials.
- All participants introduced themselves (round table).
- Darren noted the representatives from Walker are here to discuss the items on the agenda, but also any other questions about the Southwestern Landfill EA and managing any potential impacts associated with landfills, including protecting water.
- The reason Walker is proposing to build a new landfill is that there is a lack of disposal capacity in Ontario. The Province ships about 40% of its waste to the United States (New York and Michigan); about 3.5 million tonnes each year. A priority is to reduce how much waste is created in Ontario and to increase diversion (recycling, composting), but new disposal capacity is still needed. Walker has many recycling and resource recovery businesses in addition to facilities that manage materials that cannot be reused or recycling (i.e. landfills).
- Walker launched the Environmental Assessment (EA) in 2012 and engaged First Nations early and often in the process. The first part of the EA process, the Terms of Reference, was submitted in 2014, and the Ministry of the Environment and Climate Change (MOECC) approved it in March of 2016.
- Walker estimates that the final Environmental Assessment will be submitted in the Fall of 2018.
- **Proposed Timeline:**



- Currently, Walker is developing some of the details for the proposed landfill. Details include: how the landfill would sit within the site, how trucks would access the site, and how landfill gas and leachate would be managed. Once these and other details are finalized, Walker can prepare for detailed studies to begin by finalizing the Technical Work Plans. Those Plans will then be reviewed by the MOECC, and peer-reviewed. Walker will provide the draft Work Plans to all participating First Nations for review and comment before finalization. Walker plans to start the Impact Assessment in the spring of 2017, once the work plans have been reviewed and finalized.

Question & Answer

Question	Walker Response
Site Tour/Thames River Will the group be able to visit the site before the landfill is built? (Particular interest in distance from the Thames River.)	Yes, workshop participants should let Walker know if they have an interest in a tour. Sign-up sheets for a tour of the proposed site, as well as a tour of the Walker Niagara landfill site were distributed during the workshop. Several people signed up for one or both of the tours. The date for both tours needs to be determined.

Waste Type What type of waste would the landfill receive?	Solid, non-hazardous waste generated within Ontario. This could include household waste that is collected at the curb, or similar waste collected in offices or other businesses. This could also include non-hazardous industrial or construction and demolition waste. Non-hazardous soil could also be accepted as material used to cover the waste each day.
Waste Type/Waste Export 40% of waste shipped to US refers to what type of material? Has anything changed in the jurisdictions of New York and Michigan?	The value refers to solid, non-hazardous waste that is not diverted to recycling programs (i.e. it refers to garbage). The municipalities of Toronto, Peel, York, and Mississauga signed an agreement to stop sending "curbside" or residential waste to the United States, but waste generated by businesses is not included.
Waste Export If the economy improves in Ontario, does that mean there will be more waste?	Waste generation is more closely tied to population, just under 1 tonne per person per year. As population grows, it is expected that the total amount of waste requiring disposal will increase.
First Nations Comments Were there any First Nations comments on the Terms of Reference?	There were many comments. Walker held workshops and consulted individually with First Nations. Walker made a number of changes to their process and commitments. For example, participation of First Nations representatives in ecological inventories and field studies.
First Nations Comments Is the record of those comments on the website? Can the navigation of the website be shown during the workshop?	Yes, the comments are available on the website. (Please see the August 29, 2013 Terms of Reference Record of Consultation and Appendices.) Walker will set time aside to introduce the website later in the agenda. If anyone is looking for a specific document, please let Walker know and a direct link can be sent.
Walker Businesses Is this the only new site Walker is working on?	This is the only landfill Walker is currently evaluating. Walker has been expanding their waste diversion businesses, which most recently have been through acquisition of companies working in that sector (grease trap/used cooking oil, biosolids stabilization, and compost). Walker is also actively looking to build new waste diversion facilities.
Walker Businesses Is Walker exporting biogas to the US?	No. Currently, Walker generates electricity and/or pipes gas to a nearby industrial user (paper plant). The TransCanada pipeline runs through Walker's Niagara property; there are discussions going on about feeding gas into that pipeline, which could go to the US.
Financial Assurance The Walker business is growing, so is Financial Assurance growing?	All landfills in Ontario must have Financial Assurance. In the event that Walker went bankrupt or had to walk away from a landfill, this is money set aside held by the MOECC to be used to maintain the site and address issues if they arise. The amount of Financial Assurance increases each year that the landfill operates. Walker also puts money aside for the long-term care of their landfills.
Accommodation Looking ahead to accommodation, Walker may want to consider using First Nations banking as an option for holding funds for future landfill care.	Thank you for the recommendation, Walker will keep this in mind and are open to discussions.
Aboriginal Relations Policy Does Walker have an aboriginal relations policy? Is it on the website? Does it reflect the Calls to Action from the Truth and Reconciliation report?	Walker has an Indigenous Relations Statement of Principles on their website. We are working on incorporating the Calls to action for business from the Truth and Reconciliation Report into how we operate. (Click here to see the Walker Indigenous Relations Statement of Principles) Walker is looking for opportunities to put the policy into action and has engaged a number of First Nations, including in Alberta, to develop projects together.

PREFERRED ALTERNATIVES FOR 5 LANDFILL COMPONENTS

Landfill Components 1 and 2: Landfill Footprint & Landfill Design

Refer to Reference Materials booklet pages 6-9.

- The property being studied for the landfill is owned by Carmeuse Lime Canada Ltd.
- Walker evaluated the entire property owned by Carmeuse for potential landfill footprints (where the landfill would be situated on the property)
- One area of the property was found to be feasible for the landfill footprint. Other areas of the property were screened out for a variety of reasons:
    - Areas intended for future mineral extraction (designated high-purity limestone resource)
    - Areas with existing water bodies (prohibited by the *Adam's Mine Lake Act*)
    - Current infrastructure used by Carmeuse (offices, stone plant, etc.)
    - Not enough area to accommodate the proposed landfill volume
- The area outlined as the preferred landfill footprint (in purple) on page 7 of the reference materials booklet could accommodate the landfill as well as ancillary facilities such as a scalehouse, storm water ponds, landfill gas management infrastructure, and leachate management infrastructure.
- The placement of the landfill waste area and ancillary facilities has not yet been finalized. It will be mapped and described in a document called Facility Characteristics prior to the start of Technical Studies. In preliminary work, Walker is looking at a waste area that is close to rectangular, with the southern boundary moved somewhat north away from the Thames River.
- Walker has identified the deep design as the preferred landfill design. In the deep design, the landfill would sit low in the old quarry with a minimal hill above ground. Once a landfill is filled, a lower hill means there are more ways it can be rehabilitated to a new use. A higher mound limits future potential for the site.
- The other aspect of landfill design is the landfill liner, which acts as a barrier between the waste and the surrounding environment, particularly groundwater. Walker has identified the Generic Double Composite Liner as the preferred design, which was designed by the Ministry of Environment and Climate Change and is currently in use at the Walker landfill in Niagara, as well as other landfills in Ontario.
- The landfill liner collects leachate so it can be managed and treated. Leachate is precipitation that falls on the landfill and filters through the waste or any other water that comes into contact with waste.

Question & Answer

Question	Walker Response
Thames River How much farther does the Thames River go North?	A map was brought out to show the full Thames River watershed. Please contact Walker for a copy of this map if you would like one.
Area History How did Beachville get its name? Related to watershed?	Walker will look into the history of the name of Beachville.
Landfill Liner Would pumps be able to keep up with the rainfall when there are downpours?	The landfill would be designed to accommodate storm events. Climate change predictions are incorporated into the studies and designs to take into account the potential for more intense downpours and other impacts of climate change.
Leachate Treatment Does the treated leachate go to a separate pool?	Leachate is removed from the landfill and treated. Then, treated water is released to the environment. For this landfill, Walker would be using an on-site leachate treatment facility.

Leachate Treatment Does the treated leachate go back into the ground?	The treated water is typically discharged to surface water. The details about discharge location have not been determined yet, but it would be within the Thames River system. Walker is also looking at how the treated water could be used on-site for things like dust control to minimize the need to use surface or groundwater for these purposes.
Leachate Treatment How clean is the treated water? Drinking water? Will Walker be putting fluoride into the Thames?	The treated water would have to meet Ontario standards and there may be standards specific to the Thames River that Walker would need to meet. There may also be other requirements that are specific to water treatment set out by the Ministry of Environment and Climate Change. Walker would not be putting fluoride into the system. Walker recognizes the importance of the Thames River in terms of its ecology, history, and cultural significance.
Landfill Liner What would Walker do if the liner leaked and leachate escaped into the environment?	There is a second leachate collection liner system below the primary liner. This secondary liner can manage leachate as effectively as the primary liner. In addition, groundwater would be monitored around the site so that any changes in water quality would be quickly identified. If there was an unexpected change in groundwater chemistry, even if it meets the provincial water quality guidelines, Walker would be able to address the issue immediately, including starting a conversation with the MOECC. Landfills are required to have backup systems in the unlikely event the liner fails. Walker has not designed the backup system for this landfill yet. In Niagara, there is a groundwater pipe channel that runs beneath the landfill. Groundwater around and beneath the landfill flows into this pipe and creates an inward groundwater gradient *(Walker used sketches to illustrate this concept)*. In the unlikely event of a leak, any impacted groundwater would flow into the pipe, which could then be pumped and treated before being returned to the environment. Lastly, since landfills require long-term care, there is contingency in case the company is no longer able to care for the site (ie. bankruptcy) called Financial Assurance (FA). FA is money set aside with the MOECC that would be used to care for the site and operate any treatment facilities into the future if Walker was unable in the future. Eventually, a landfill is stabilized and is no longer able to contaminate the surrounding environment. The landfill liner is designed to work well beyond this "contaminating lifespan" of the landfill, but backup systems must be in place for contingency.
Landfill Liner Have you detected any contamination in the channel beneath the landfill in Niagara?	No, nothing has been detected in the channel beneath the landfill, in the surrounding groundwater, or even in the second leachate collection system.
Groundwater Monitoring Is the groundwater monitoring carried out by Walker or the MOECC?	Walker is required to carry out monitoring. Walker hires consultants (professional scientists) do to this work, and they prepare annual reports on the monitoring program that are submitted to the MOECC. If there was indication of changes in groundwater chemistry that could indicate contamination, the MOECC would be notified and Walker would begin an investigation and subsequent contingency efforts if needed.
Inspections Are there MOECC inspectors on site at your existing landfills? Are inspections random?	No not full time, but the MOECC visits and carries out inspections of the Walker landfill in Niagara regularly, particularly since there are multiple operations on site. Yes, the MOECC inspections are random. They can show up at any time and have full access to inspect the site and any records.

Landfill Component 3: Haul Route

Refer to Reference Materials booklet pages 10-11.

- Trucks travelling between Highway 401 and the landfill would have to use the designated haul route.
- The haul route that has been selected for study is north on County Road 6 from Highway 401, then left onto a private road on the Carmeuse property and into the landfill.
- Key input from First Nations at previous workshops regarding haul routes was the need for archaeological study, particularly where new roads are proposed to be built or roads may be widened.

Question & Answer

Question	Walker Response
Carmeuse Expansion Plans Does Carmeuse have any plans to expand their operations?	Yes, Carmeuse owns lands that are intended for quarrying north of where they are currently quarrying. The land is currently used as farmland. Some of it is licensed and some is not, but it is all designated as high-purity calcium limestone resource. Studies for the landfill proposal will take future quarrying plans into consideration as it relates to cumulative impacts.
Local Municipalities Who are the local municipalities Walker is consulting with?	The Township of Zorra is the host municipality. It is also within Oxford County. Walker is consulting with Zorra and Oxford County, as well as two other neighboring municipalities – Ingersoll and South West Oxford. The mayors and CAO's from each of these four municipal institutions make up the Joint Municipal Coordinating Committee (JMCC) that consults on the Southwestern Landfill proposal. The CAO's also participate as observers at the Community Liaison Committee, which currently meets monthly. Walker has committed to funding a full and comprehensive peer review of the EA for the local municipalities. The results of the peer review will be publicly available. Click here for more information about the JMCC
Local Municipalities What is the date of the Oxford County Official Plan? Are they reviewing it?	Oxford County is currently in the process of reviewing and updating their Official Plan. They have made some changes recently; particularly about waste management. Walker is generally supportive of the changes, but feel that some do not align with Provincial Policy Statement. Walker has challenged the changes that appear to contravene the Provincial Policy Statement.
Trucking Does Walker have a hauling division?	Yes, it is a small division. The majority of trucks that would be arriving at the landfill site would not be Walker vehicles, which is the case at the current Walker landfill operation in Niagara.
Procurement Policy Is the Walker procurement policy on the website?	Yes. The Walker purchasing policy focuses on sustainability and supporting the local economy by purchasing locally and hiring local contractors. It includes language that encourages purchasing from indigenous-owned businesses. Click here to view the Walker Sustainable Purchasing Policy
Aboriginal Procurement Program Are you familiar with the Ontario Aboriginal Procurement Program? (pilot projects 3 years ago)	Walker is not familiar with it, but will look into it to see if there are opportunities to learn from it and improve Walker's existing policy.
Aboriginal Procurement Program RFQs and RFPs can use scoring criteria that elevate opportunities for aboriginal businesses.	Walker will look into this idea more. Walker would be interested to know more about the experience of First Nations in using this approach and how well it works in practice.

Landfill Component 4: Leachate Management

Refer to Reference Materials booklet pages 12-13

- Leachate is water that comes into contact with waste, usually rainwater or snow falling on the landfill and filtering through the waste. Leachate is collected in the landfill liner and it must be treated before the clean water is released back into the environment.
- Walker looked at 4 different options. Three of the options were screened out due to:
    - Local by-laws (unable to pipe or truck leachate to local wastewater treatment plants)
    - Lack of proven technology (evaporation-style treatment)
- Walker has identified the preferred method of leachate management as on-site treatment. (Walker would build and operate an on-site water treatment plant.)

Question & Answer

Question	Walker Response
Rainfall/Landfill Cap What is the average rainfall in the area? How much of that evaporates?	Walker does not have a number offhand, but that will be key information for the technical studies that will be carried out. In terms of evaporation, that depends on a number of factors like the weather that day. When a landfill cell is filled (completed) it is covered with a semi-permeable cap of clean soil. This type of covering allows some water to infiltrate through. This water will continue to be treated as leachate even though the landfill is closed. Some water will evaporate or run-off the top to local surface water systems.
Landfill Cap What is the timing of the landfill cap?	If the landfill is approved, the earliest it could start operating is approximately 2023, and it would be 5-8 years after that before any part of the landfill would be capped. (The landfill is built in stages, so capping is done in stages as well.)
Landfill Cap Does the detailed design of the landfill include the cap?	Yes, it includes all aspects of how the landfill will be built and then how it will be closed.
Landfill Cap What is the cap made of? Companies advertise they use clean fill but there have been issues.	The cap needs to be engineered to specific requirements to meet the semi-permeable infiltration requirements. It also has to be clean from an environmental perspective, which requires chemical testing by an accredited laboratory. The material for the cap is different than the material used for daily cover. Daily cover is used to cover the waste at the end of each day to control potential issues like odour, blowing litter, and birds. That material can be contaminated but must be non-hazardous. The cap material cannot be contaminated – it must meet standards set out for use as landfill cap. Misuse and improper disposal of contaminated soil is an issue Ontario is facing. It's important to Walker that the material that goes into our landfill is appropriate under the approvals they hold. Walker has a rigorous process for reviewing soil and other waste before it arrives.
Landfill Clients If the landfill is approved, where would the clients be? Where would the waste come from?	If approved, the landfill would be able to take solid, non-hazardous waste that's generated in Ontario. However, Ontario is a big place and trucking from far away is usually too expensive, so in reality the waste would likely be coming from Southern Ontario anywhere between Windsor and the east end of Toronto, perhaps north to Barrie.
Brokerage Do you work with partners for brokerage? FN opportunity?	Yes, we work with numerous trucking companies and trucking brokers. We are open to discussing business opportunities with First Nations.

Landfill Component 5: Landfill Gas Management

Refer to Reference Materials booklet pages 14-15

- Landfill gas is generated in landfills when organic material breaks down, like food waste, paper, or wood. It is about 50% methane, which is also known as natural gas.
- The preferred landfill gas management method for the landfill has two aspects:
    1. Gas Utilization – using the gas for energy. Walker has experience in using the gas to create electricity that goes out to the grid, as well as piping the gas to local industries for energy. Another option is to clean up and compress the gas to the level where it can be injected into a nearby natural gas pipeline.
    2. Flaring – Even when landfill gas is used for energy, flaring is required. Methane is a strong greenhouse gas and is burned to turn it into carbon dioxide (less impact on climate change). While burning the gas in a way that creates energy is ideal, sometimes there is gas that cannot be used for energy that has to be managed through flaring. This includes at the beginning and end of the landfill lifespan when the amount of gas is very low, or when there is a shut-down or maintenance on utilization infrastructure.

Question & Answer

Question	Walker Response
Electricity to the Grid We don't know what the green energy laws will look like as far as funding for renewables. How can you plan for this?	Walker wants to use the landfill gas for renewable energy in some way. Legislation, Ontario's energy policy, and incentives around renewable energy are always changing, so any renewable energy efforts will be developed once landfill gas is being generated. This will include new studies and approvals.
Shared Value Solutions What is the connection between Walker and Shared Value Solutions? Are you working together to look for opportunities to work with First Nations?	Shared Value Solutions is a consultant hired by Walker to support them on consultation and engagement with First Nations for the Southwestern Landfill proposal. Walker and Shared Value Solutions also discuss economic development opportunities with First Nations and are actively looking at some new opportunities other than the Southwestern Landfill.
Landfill Fires What if a fire started in the landfill? How does it affect the surrounding community?	There are precautions in place to prevent landfill fires but there is potential for them to occur. Landfill fires can occur when there is a heat source in the landfill. Usually it's not a fire with flames and smoke, but rather a smoldering fire under the surface, so there aren't typically issues that affect the surrounding community like smoke or fumes. At Walker's Niagara landfill, they monitor for carbon monoxide, which would indicate if there is a fire in the landfill that can't be seen visually. If a fire is detected, Walker can take action stop it, which can involve digging in the affected area and dousing with water.
Landfill Fires What happens to the geotextile in the liner when there is a fire?	Landfill fires don't usually occur close to the liner, so it's not affected. Also, the top layer of the liner is gravel, not the geotextile or geomembrane. If there is a possibility that a landfill fire could have impacted the liner, then Walker would have to address it. It would really be dependent on the details of that situation. The MOECC would also be involved on an issue like that.
Landfill Gas Pricing How much are you getting for your gas now? Do you have any plant nurseries as clients?	Walker typically sells landfill gas at an equal or lower rate than natural gas. In Niagara, the landfill gas is piped to a nearby recycled paper mill. The fixed, long-term low energy cost is one reason the plant has been successful when other plants have closed. Walker does not have any nurseries or greenhouses as landfill gas users. Walker looks for partners that need the gas all the time (24 hours a day, all seasons) because the landfill is always producing gas. Greenhouses don't typically require much energy in the summer.

Final Thoughts on Project Update & 5 Landfill Components

- Making the trip to Niagara to see the operating landfill is beneficial for anyone who hasn't been yet.
- The information presented today during the workshop was clear. Walker appears to go above and beyond the regulations and was straightforward in answering questions.
- There is interest in forging a connection between the workshop attendees and the non-indigenous local community, including the Community Liaison Committee (CLC) and local municipalities. In the past, these connections have been beneficial (sharing results of peer reviews, as well as concerns and input).
- Continuity in the people that attend workshops is helpful to build a more technical dialogue.
- Impacts to wildlife, particularly species at risk, should be avoided. Haul routes will be of particular interest in this area, since new roads are proposed.
- There was a recommendation to offset any lost biodiversity, including the potential for tree removal when constructing the new road. An example of a positive policy is planting 10 trees for every removed tree. First Nations greenhouses can provide native tree species for planting.
- Request for additional discussion about leachate management as more details are developed.
- Request for more information about participation in field studies when available (ie. environmental monitoring).

Question & Answer

Question	Walker Response
Property Value Will the homes within a certain proximity to the site be purchased by Walker, similar to Green Lane?	Walker is not yet at the stage where they know how they would protect neighbours' investment in their homes, if such protection is needed. In Niagara, Walker has a Property Value Protection program. This will be something that will be talked about with neighbours and broader community later in the EA process.
Local History Did you ever find out how Indian Hill got its name?	No, this hasn't been figured out but Walker will look into it further during the EA.
Tree Removal/Offsetting Is there a wooded lot where the new road would be (haul route)? Will there be studies on species at risk? If trees are removed will they be replanted in another area?	There are some trees in that area. Species at risk are included in the studies that will be carried out. Replanting removed trees in another location is something that is being considered in the EA, as well as working to rescue any native species that can be used for seeds or replanted elsewhere.
Community Benefits/Accommodation What will the benefit be to local municipalities? Have you entered into a benefit agreement? In regards to First Nations, what avenues are in play for benefits?	In addition to tax revenue, jobs, and using local contractors and services, landfills typically have a benefit agreement with the local municipalities which could be an amount of money per tonne of waste. Walker hasn't entered into these discussions yet because it is still quite early in the EA process. Accommodation discussions have not started with First Nations, but Walker is open to discussing opportunities.
Consultation Is this workshop being viewed as consultation?	Walker sees this workshop as one aspect of consultation with First Nations. Consultation also includes meetings and presentations with each Nation, with Chief and Council, staff members, and community members if appropriate. Walker also wants to make sure we are working through the Nation-specific consultation processes and protocols. The goal is to build constructive dialogue that makes for a better Environmental Assessment and proposed landfill. Walker is open to input about how different Nations would like to be consulted.

NEXT STEPS

Ideas and Preferences for Upcoming Consultation

- The group expressed interest in regularly scheduled workshops/meetings that keep everyone up to date and sharing concerns and information. Meetings could be held at First Nations offices (rotating). *[NOTE: next meeting scheduled as a result of this discussion – March 8, 2017 at Chippewas of the Thames First Nation offices]*
- There is interest in a tour of the Walker Niagara operations as well as the Carmeuse site. Potential tour dates will be determined.
- Review Nation-specific consultation protocols and processes.
- Some Technical Work Plans are of more interest to the group for review than others – specifically Ground and Surface Water, Air Quality, Archaeology, Ecology, Noise and Vibration, Agriculture.
- It would be helpful to have presentations to Chiefs and Councils at key milestones.
- To help with consultation-fatigue in the community, it may be a good idea for communities to consider something like an "open house" where different proponents can have tables/areas for community members to visit and ask questions.
- It might be valuable to make more copies of information sheets available to each community.

Upcoming Consultation on Updated Technical Work Plans

- For work plans, there is interest in an overview of what the studies are, who will be conducting them and what will be produced. Following the overview, the group can dive into more technical details as questions come up.
- There is a preference for reference materials that are accessible to anyone who is interested, similar to the level of detail and design of the reference materials handed out for this workshop.
- The full work plans and peer review(s) should be made available for anyone who wants to review them.

Workshop Attendance

There were 15 people in attendance at this workshop, including First Nations (11), Walker Environmental (3) and Shared Value Solutions (1) representatives.

Representatives from the following First Nations were in attendance:

- Aamjiwnaang First Nation
- Chippewas of the Thames First Nation
- Munsee Delaware Nation
- Oneida Nation of the Thames
- Six Nations of the Grand River
- Walpole Island First Nation

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October 20, 2016

RE: Southwestern Landfill Environmental Assessment
First Nations Workshop – November 2nd, 2016

As Walker Environmental conducts this Environmental Assessment (EA) for its Southwestern Landfill (SWLF) Proposal, engaging and consulting First Nations remains a priority. We recognize the unique rights, culture and perspectives of Indigenous peoples and seek to incorporate these views in our how we conduct our EA. We also seek to create dialogue, share knowledge and identify opportunities where we can collaborate on aligned interests.

We would like to formally invite two attendees from your Nation to a workshop that will focus on First Nations perspectives of the SWLF EA. We have already had several conversations on this event and may have already confirmed your attendance, however this letter will provide additional details and information about the event.

The intention of the day is to provide an update on the status of the SWLF EA, review some key feedback we have received to-date from previous consultation with First Nations and have an open dialogue around we can best move forward with the SWLF EA process.

Meeting Details

Date: November 2nd, 2016

Time: 10:00 am to 3:00 pm

Location: Quality Hotel & Suites
580 Bruin Blvd. Woodstock, ON N4V 1E5 (519) 537-5586

Proposed Agenda

Time	Topic
10:00 – 10:15 am	Welcome & Opening Remarks Agenda Overview
10:15 – 10:45 am	Southwestern Landfill EA - Background & Update
10:45 – 12:30 pm	Preferred Alternative Discussion
12:30 – 1:30 pm	Lunch
1:30 – 2:30 pm	Next Steps
2:30 – 3:00 pm	Wrap-up and Closing Remarks

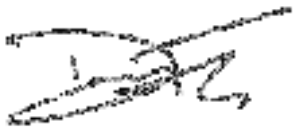
Please note:

- We have scheduled the event to allow for same-day travel.
- Mileage will be reimbursed upon request.
- Outcomes from the day will be recorded and distributed to all invited First Nations.

We would like to thank you and your community for expressing an interest in our Southwestern Landfill Proposal. We are still in the early stages of the EA and are working closely with First Nations, interested community members and government agencies while we conduct this Environmental Assessment; please visit *www.walkerea.com* for more information. The figure below illustrates where we are in the EA process.

If we haven't already, we will be following up by phone shortly to confirm who from your community will be attending. Should your community need to send more than two attendees to this session, please let us know so that we can arrange meeting logistics. We look forward to this opportunity to reconnect, share insight into this EA and discuss how best to proceed into the next stages of the EA. Thank you again.

Sincerely,



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Project Website: www.walkerea.com

Southwestern Landfill Environmental Assessment

First Nations Workshop - Reference Materials November 2, 2016

This document was prepared as a resource for the November 2, 2016 First Nations Workshop.

Who is Walker Industries?

Walker Industries is a 5th generation, family-owned company that has been operating in Ontario since 1887. Walker Industries employs more than 700 people and the company provides infrastructure to meet municipal, commercial, and residential needs. Walker Industries group of companies offers products and services including aggregates (used in construction), paving & construction services, emulsions (ex: provides moisture resistance for building materials), as well as waste management and recycling services.

Walker Environmental Group Inc., a subsidiary of Walker Industries, provides resource recovery, recycling and waste disposal solutions across Canada.

With a focus on responsible business practices, Walker Environmental has become recognized nationally as a trusted company across our three core business lines: waste management, renewable energy, and organics recycling. Walker Environmental is committed to building facilities that use proven technology to manage society's waste in an environmentally responsible manner.

Our Commitments for Landfill Management

1. Environmental Protection
2. Technical Excellency
3. Environmental Protection

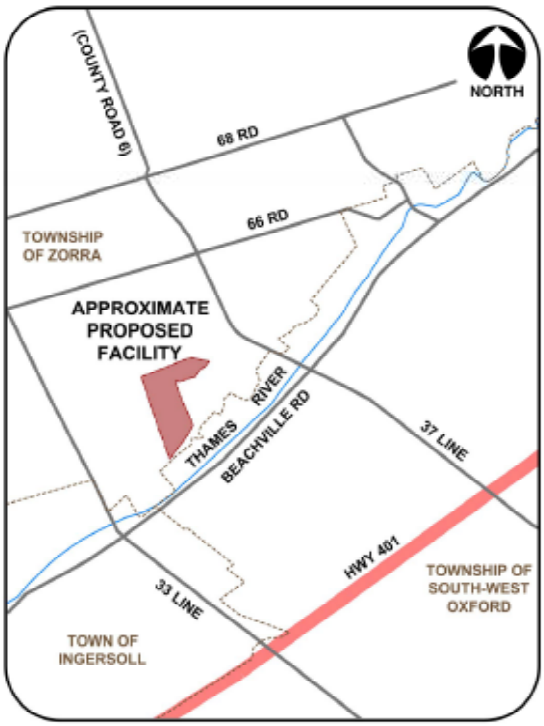
What is the Southwestern Landfill Environmental Assessment?

Walker Environmental is proposing a landfill in the Township of Zorra. The landfill proposal is undergoing a Provincial process called an Environmental Assessment (EA). An EA is a provincial planning and decision-making process that considers potential environmental impacts before a project is allowed to begin. Once complete, the Ontario Minister of the Environment and Climate Change will decide if the landfill is approved.

The proposed site would accept up to 850,000 tonnes of waste per year plus cover material (typically soil) for a total capacity of approximately 17 million cubic metres over a 20-year operating period. If approved, it would accept only non-hazardous waste that is created in Ontario.

Project Location

The proposed location for the landfill is in a mined quarry on the Carmeuse Lime (Canada) property, 374681 37th Line (Oxford County Road 6) in the Township of Zorra.



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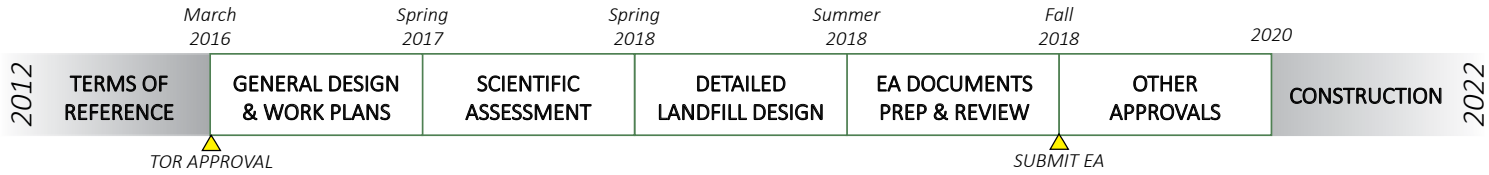
Introduction

Where in the EA process are we?



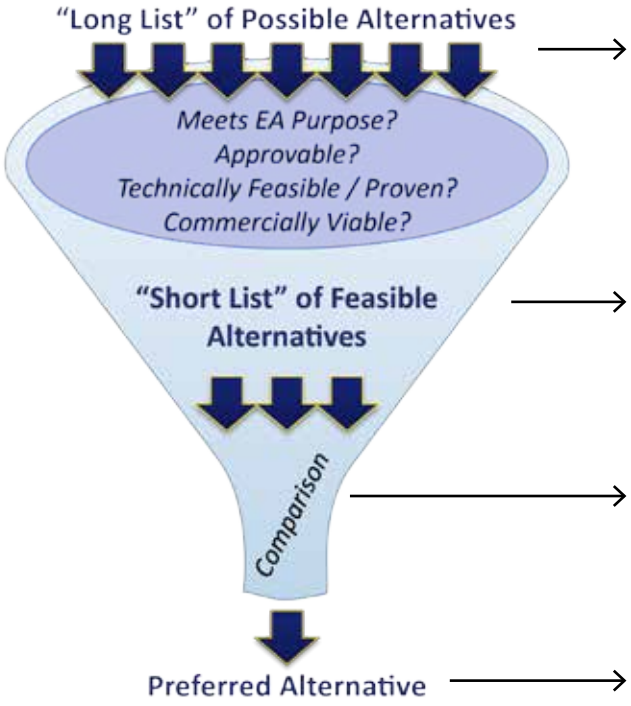
EA Phase: "Evaluation of Alternative Methods and Identification of the Preferred Alternatives"

At this stage in the EA, Walker has identified the Preferred Alternatives (Options) for different landfill components.

1. Landfill Footprint - Where it is located on the chosen site.
2. Landfill Design - How the landfill sits in the landfill footprint
3. Haul Route and Site Entrance - How vehicles go to and from the landfill
4. Leachate Management - How water that has come into contact with waste is treated
5. Landfill Gas Management - How gas that is created in the landfill is managed and used

The "Preferred Alternative" for each of the above landfill components is integrated into an overall general design for the landfill called "Facility Characteristics". This design is studied as part of the "Impact Assessment".

Example: Haul Route



→ List of ways trucks can get to and from the landfill.

→ List narrowed down to feasible haul routes.

→ Feasible haul routes are compared to each other using criteria.

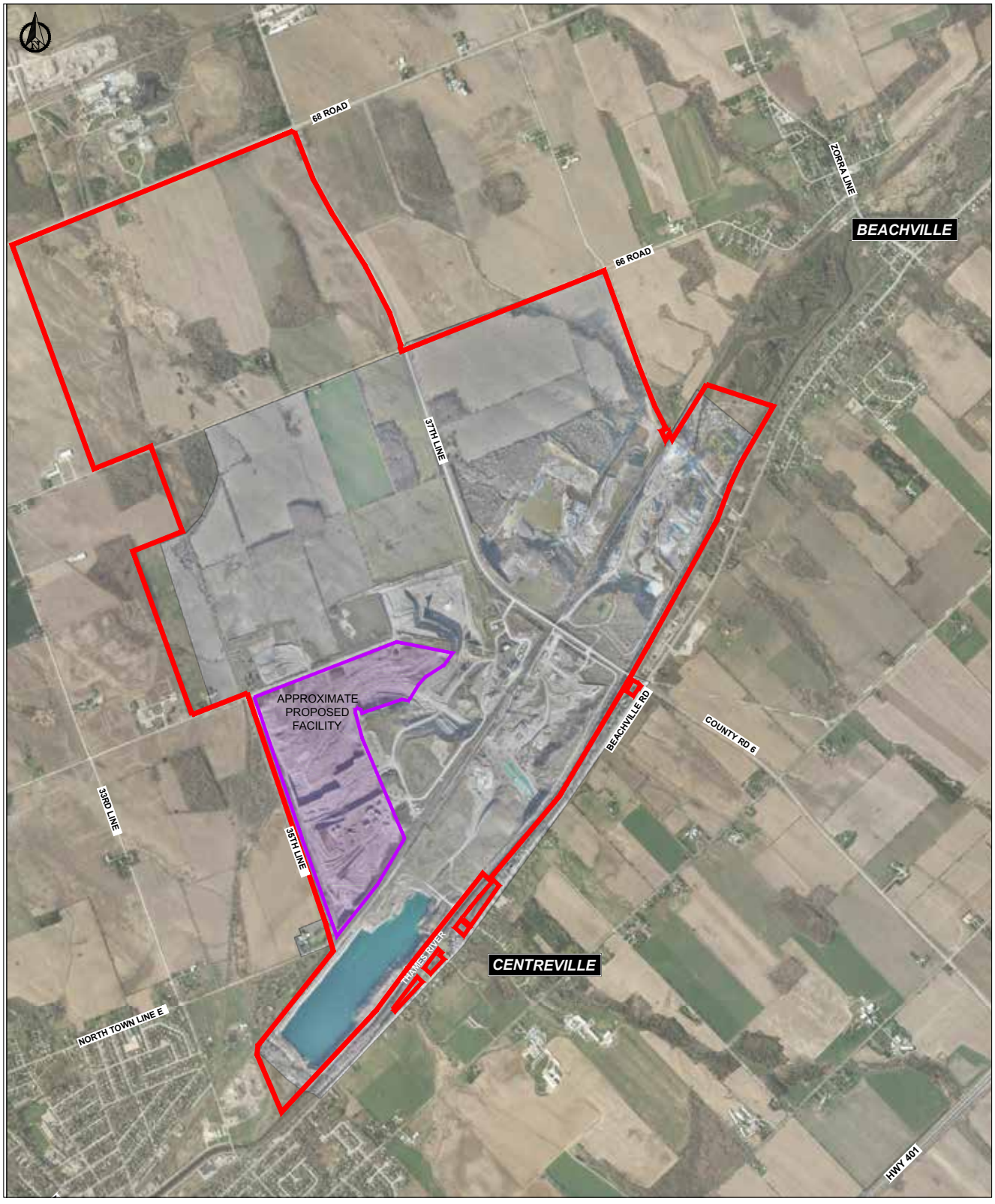
→ The haul route with the most advantages / least disadvantages compared to others.

Summary of Preferred Alternatives

We have completed a draft assessment to determine Preferred Alternatives. We are seeking your input on these Preferred Alternatives and how we identified them.

Component	Preferred Alternative
Landfill Footprint	Unconstrained portion of the active quarry area. Quarrying and landfilling would co-exist on the site during landfill construction and beginning of landfilling operations.
Landfill Design	A deep design configuration using the Generic Double Composite Liner system designed and approved by the Ministry of Environment and Climate Change.
Haul Route/Site Entrance	Truck haulage on Route 3 - from Exit 222 on Highway 401, north on County Road 6, then west onto a private road on Carmeuse property that would be constructed. Site entrance in the northwest portion of the landfill footprint.
Leachate Treatment	An on-site leachate treatment plant.
Landfill Gas Management	Enclosed flaring, with the potential for future development of gas utilization when there is sufficient gas production and in respect of regulations and energy market conditions at that time.

Preferred Landfill Footprint



What is the Landfill Footprint?

As part of the Environmental Assessment, the entire Carmeuse property in Zorra township must be evaluated to determine the most preferred location for the proposed landfill.

Key Considerations

The landfill footprint will be further refined in the Facility Characteristics and throughout the Environmental Assessment. The input Walker receives from First Nations and community stakeholders will continue to be taken into consideration as the EA process progresses.

Key Input Received	Response
Maximize distance from the Thames River.	Footprint considerations include moving the southern boundary of the site as far north as possible, away from Beachville Road and the Thames River, to maximize the buffer area.
Maximize distance from residents and town centre.	Footprint considerations include moving the southern boundary of the site as far north as possible, away from Beachville Road and the Thames River, to maximize the buffer area.

Summary of Landfill Footprint Screening

Only one option (active quarry and lime plant) for the landfill footprint passed all four screening criteria applied. Other footprint options were screened out due to several constraints including:

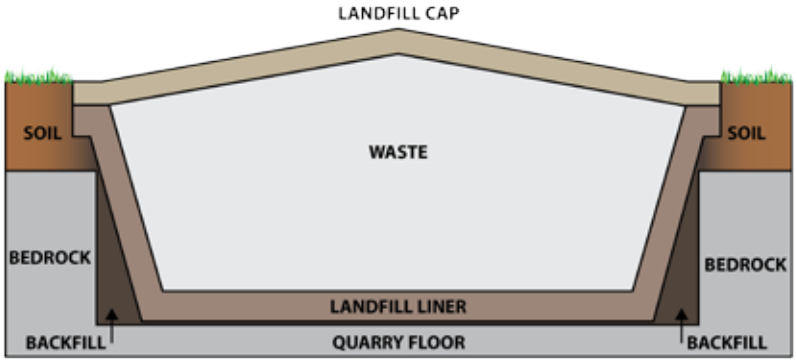
- Section 27(3) of the Environmental Protection Act prohibits landfills in several types of areas where water exists.
- Lands designated in the Oxford County Official Plan as a high-purity calcium stone resource are protected from “sterilization” (unable to access) under the Provincial Policy Statement (PPS). Although it is possible under the PPS to change the land designation, Walker does not see a strong case for the change, making an approval unlikely.
- In some areas of the Carmeuse property, there is infrastructure that cannot be moved to access the area for landfilling. Reasons include:
    - Carmeuse does not plan to relocate infrastructure (disruptive to operations)
    - Infrastructure relocation is cost prohibitive
- The minimum area required for the landfill waste fill area and minimum buffer lands is 53 hectares (131 acres). After ruling out constraints (physical and approval), only one option had sufficient area for the landfill.

Additional Information

Additional details regarding identification of the Preferred Landfill Footprint are located in Appendix A.

Preferred Landfill Design

Deep Configuration with Generic Double Composite Liner



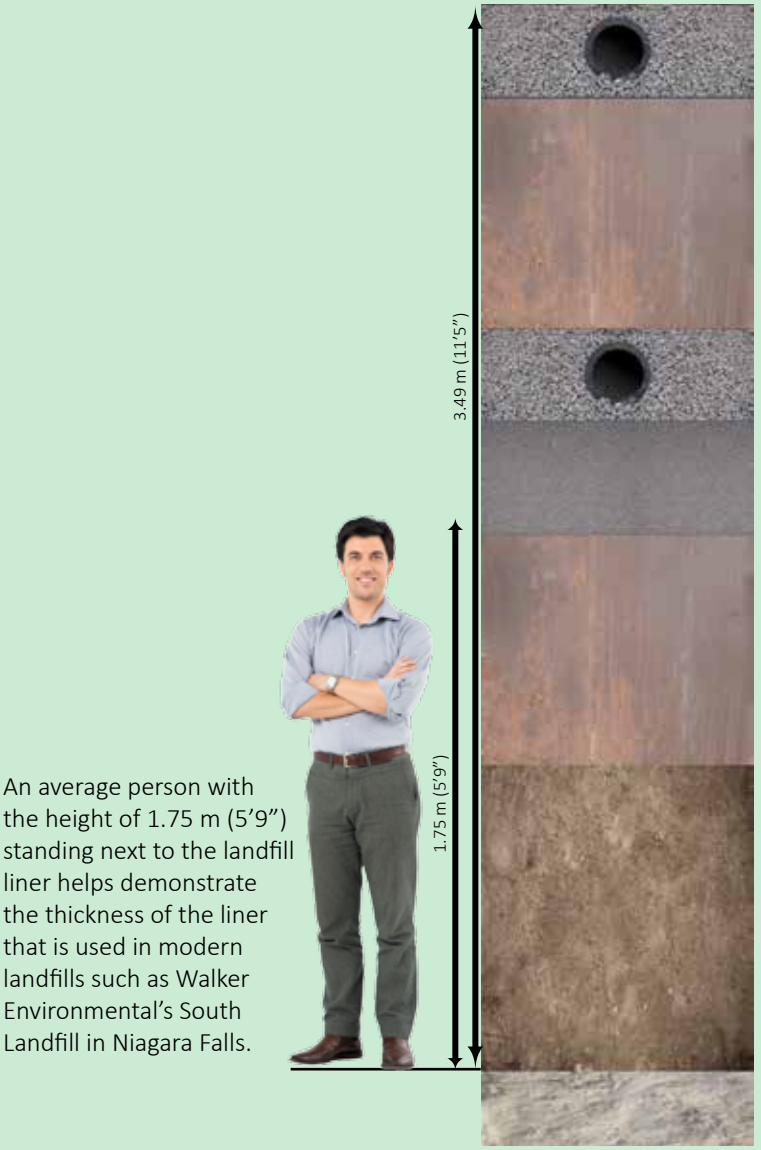
Deep Configuration

- Most of waste is below ground surface.
- The landfill is designed to have minimum slope above ground surface.

Key Advantages:

- Lower height reduces the exposure and duration of landfill construction and operations above ground surface. This has advantages, including:
  - Lower risk of excessive fine particulate emissions (fine dust), reducing potential health impacts.
  - Better containment and control of particulate (dust), odour, noise, and blowing litter, reducing potential nuisance impacts.
  - Lower visual impact to the closest neighbours and the surrounding community.
  - Lower risk of negative property value impacts as a result of the above.
- Deep design has shallower final cover slopes (less of a hill than other designs), which allows for more options for after-use planning.

Generic Double Composite Liner at Walker Environmental's South Landfill in Niagara Falls



An average person with the height of 1.75 m (5'9") standing next to the landfill liner helps demonstrate the thickness of the liner that is used in modern landfills such as Walker Environmental's South Landfill in Niagara Falls.

The Generic Double Composite Liner is selected as the liner system for the Southwestern Landfill because:

- It was designed and approved by the Ministry of the Environment and Climate Change to be fully protective of the environment in a broad range of hydrogeological settings.
- It supports an average waste thickness that fits in the available landfill footprint.
- Walker has experience building and operating with this type of liner at the South Landfill in Niagara Falls (also in a mined quarry).

Key Considerations

The landfill design will be further refined in the Facility Characteristics and throughout the Environmental Assessment. The input Walker has receives from First Nations and community stakeholders will continue to be taken into consideration as the EA progresses.

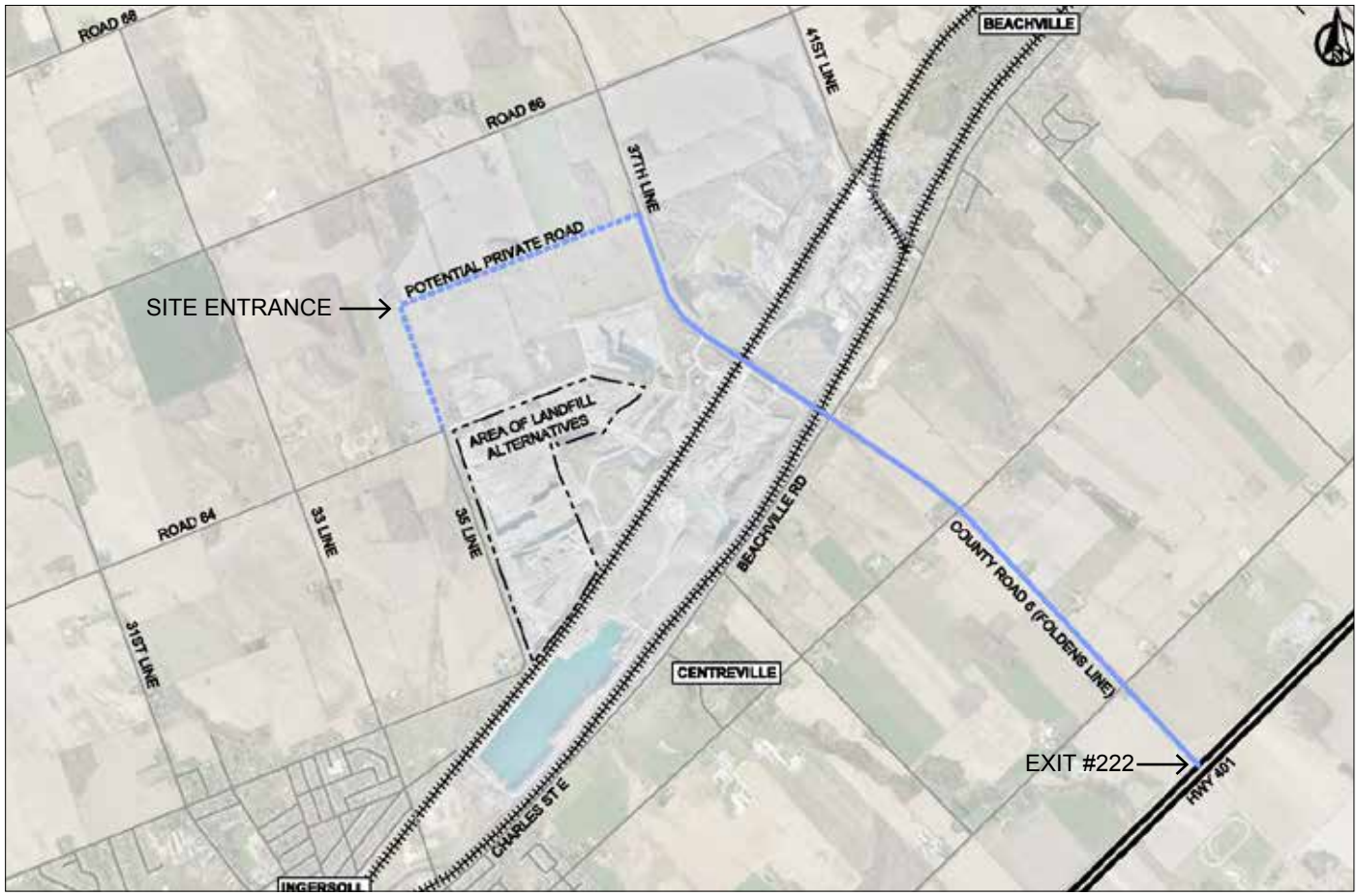
Key Input Received	Considerations
Minimize impacts: odour, visual, birds, dust, garbage flying off-site.	Design considerations include maximizing construction and operations occurring below ground level, which reduces the potential for these impacts (one of the main benefits of the deep design).
Protect all water, including groundwater and the Thames River from contamination.	The landfill liner is designed to be fully protective of the environment. Later in the EA, there will be opportunity to discuss monitoring and contingency planning.
Maximize distance from residents.	Design considerations could include maximizing the buffer space between the landfill and Beachville Road.
Concerns regarding impacts of adjacent blasting on liner integrity.	Potential impacts to the landfill liner and other infrastructure will be studied as part of the Impact Assessment. Walker has over 30 years of experience landfilling adjacent to active quarry operations.

Additional Information

Additional details regarding identification of the Preferred Landfill Design are located in Appendix B.

Component 3: Haul Route & Site Entrance

Preferred Haul Route & Site Entrance



Exit #222 on Highway 401, North on County Road 6, turn west onto private road into the landfill.

The site entrance is located in the Northwest corner area - location will be refined in Facility Characteristics and throughout the Environmental Assessment.

Key Advantages of Preferred Haul Route:

- Shortest haul route on public roads
- Fewest residences, farms, public institutions, recreational uses, and businesses along the route
- Passes the fewest farm field entrances
- Fewest turns, intersection crossings
- Designated for heavy truck traffic
- Avoids truck traffic along the Beachville Road bicycle route

Key Considerations

The haul route and site entrance will be further refined in the Facility Characteristics and throughout the Environmental Assessment. The input Walker has receives from First Nations and community stakeholders will continue to be taken into consideration as the EA progresses.

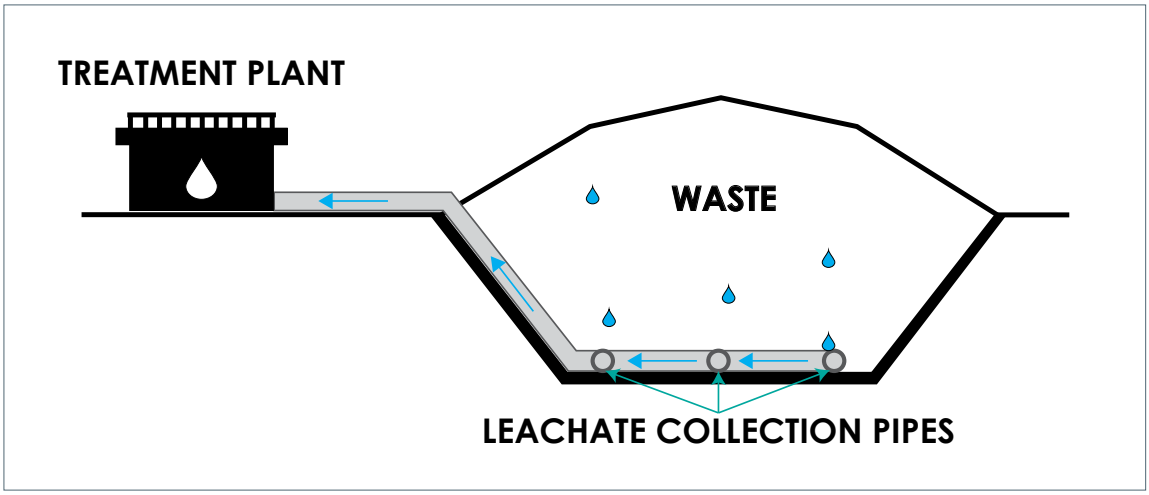
Key Input Received	Considerations
Preference for the shortest route using public roads (Route 3).	Length of route on public roads was taken into consideration and was an advantage of Route 3 (Preferred Alternative).
Beachville Rd. is not appropriate for a haul route due to the number of residents and official bike route designation.	Number of residents and designated bike routes were taken into consideration and were disadvantages for Routes 4, 5 and 6.
Corner at Beachville Rd. and Pemberton St. is challenging for truck traffic.	Number of truck turns was taken into consideration, and was a disadvantage identified for Routes 4, 5 and 6 (only routes with Beachville/Pemberton turn).
Highway 401 Exit 222 (westbound) to County Road 6 is challenging and could post safety risks due to the service station off-ramp.	The exit from highway 401 to County Road 6 will be considered as part of the EA. Walker will consult with the Ministry of Transportation (MTO) regarding Highway 401 and Exit 222.
Incline at the 4-way stop at County Road 6 and Beachville Rd. could present issues, including risk to public safety.	The intersection will be studied by experts as part of the Impact Assessment, including considerations of public health and safety.

Additional Information

Additional details regarding identification of the Preferred Haul Route & Site Entrance are located in Appendix C.

Preferred Leachate Management System

On-Site Treatment Plant



Concept diagram of leachate being removed from landfill and sent for treatment.

Examples of on-site wastewater treatment infrastructure.

In general, how is leachate managed?

1. Leachate is collected in pipes, then pumped out of a landfill for treatment.
2. It is initially stored to balance flow into the treatment system.
3. It is treated and the treated water is returned to the environment.
4. Leachate treatment and management continues after landfill closure.

Key Considerations

The leachate management system will be further refined in the Facility Characteristics and throughout the Environmental Assessment. The input Walker has receives from First Nations and community stakeholders will continue to be taken into consideration as the EA progresses.

Key Input Received	Considerations
Leachate holding ponds need to be fully protective of the environment.	Walker agrees and this will be a key consideration when designing any holding ponds required for the leachate management system.
Potential future issues in event Walker abandons site.	As part of post-EA approvals (Environmental Compliance Approval), Financial Assurance is required by the Ministry of the Environment and Climate Change (MOECC). This is money set aside for the MOECC to use in the event Walker does not care for the site as required.

Summary of Leachate Management Screening

Of the four options for leachate management, only one option passed all four screening criteria as feasible (on-site treatment plant). The other three have been screened out due to:

- Piped to local Municipal Waste Water Treatment Plant (WWTP) and Haul to local Municipal WWTP not permitted under Oxford County By-Law.
- Hauling leachate to WWTP outside of the County is a prohibitively high cost.
- On-Site Evaporation Plant technology not yet proven at this scale.

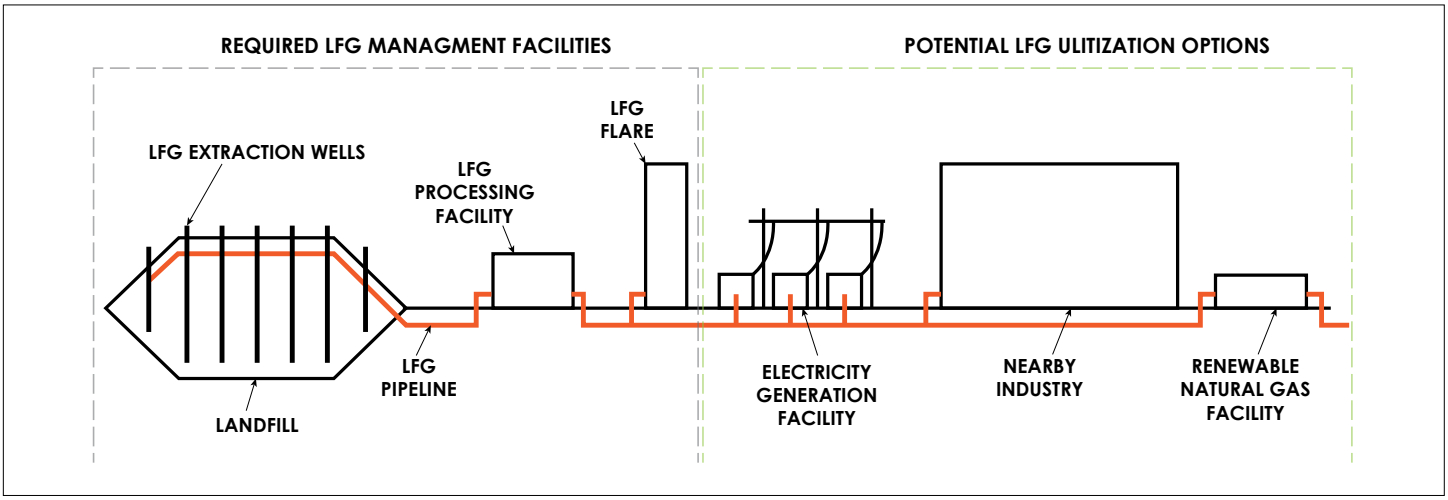
Additional Information

Additional details regarding identification of the Preferred Leachate Management System are located in Appendix D.

Preferred Landfill Gas Management System

Flaring and Gas Utilization (Combined Preferred Alternative)

- Despite the beneficial aspects of gas utilization, a flaring system would be required to safely manage gas that is not used (i.e. early/later years, low demand periods, maintenance, etc.)
- Landfill gas production will not reach commercially viable quantities until at least five years into the landfill operations (approximately 2028). A flaring system would be required until then.
- Utilizing the landfill gas as a renewable energy source would help Ontario reduce its Greenhouse Gas (GHG) emissions. Different ways of utilizing the landfill gas exist and further studies would determine how and when a utilization project could be implemented.



Concept diagram of landfill gas being extracted from landfill and managed.

Walker South Landfill - landfill gas flares

Walker South Landfill - landfill gas utilization infrastructure

Key Considerations

The landfill gas management system will be further refined in the Facility Characteristics and throughout the Environmental Assessment. The input Walker has receives from First Nations and community stakeholders will continue to be taken into consideration as the EA progresses.

Key Input Received	Considerations
Safety of burning landfill gas (particularly methane component) and risk for fire or explosion.	One of the main purposes of managing landfill gas and burning it in a controlled environment is to minimize the risk for fire or explosion. Fires and explosions resulting from landfill gas are very uncommon, particularly in modern landfills that collect and manage gas. This will be taken into consideration as the landfill gas management infrastructure is designed, including meeting or exceeding all safety and building requirements.
Risk of odour from landfill gas management.	One purpose of managing landfill gas is to prevent odours. This will be taken into consideration as the landfill gas management system and procedures are developed. For example, in Niagara there is a full-time technician who “tunes” each landfill gas well every week for maximum performance and odour control.

Summary of Landfill Gas Management Screening

Out of the three options for landfill gas management, two options were carried forward as a combined preferred alternative – flaring and gas utilization (using landfill gas for renewable energy) and one alternative – passive venting was screened out.

Passive Venting was screened out because it is not permitted under Ontario Regulation 232/98.

Additional Information

Additional details regarding identification of the Preferred Landfill Gas Management System are located in Appendix E.

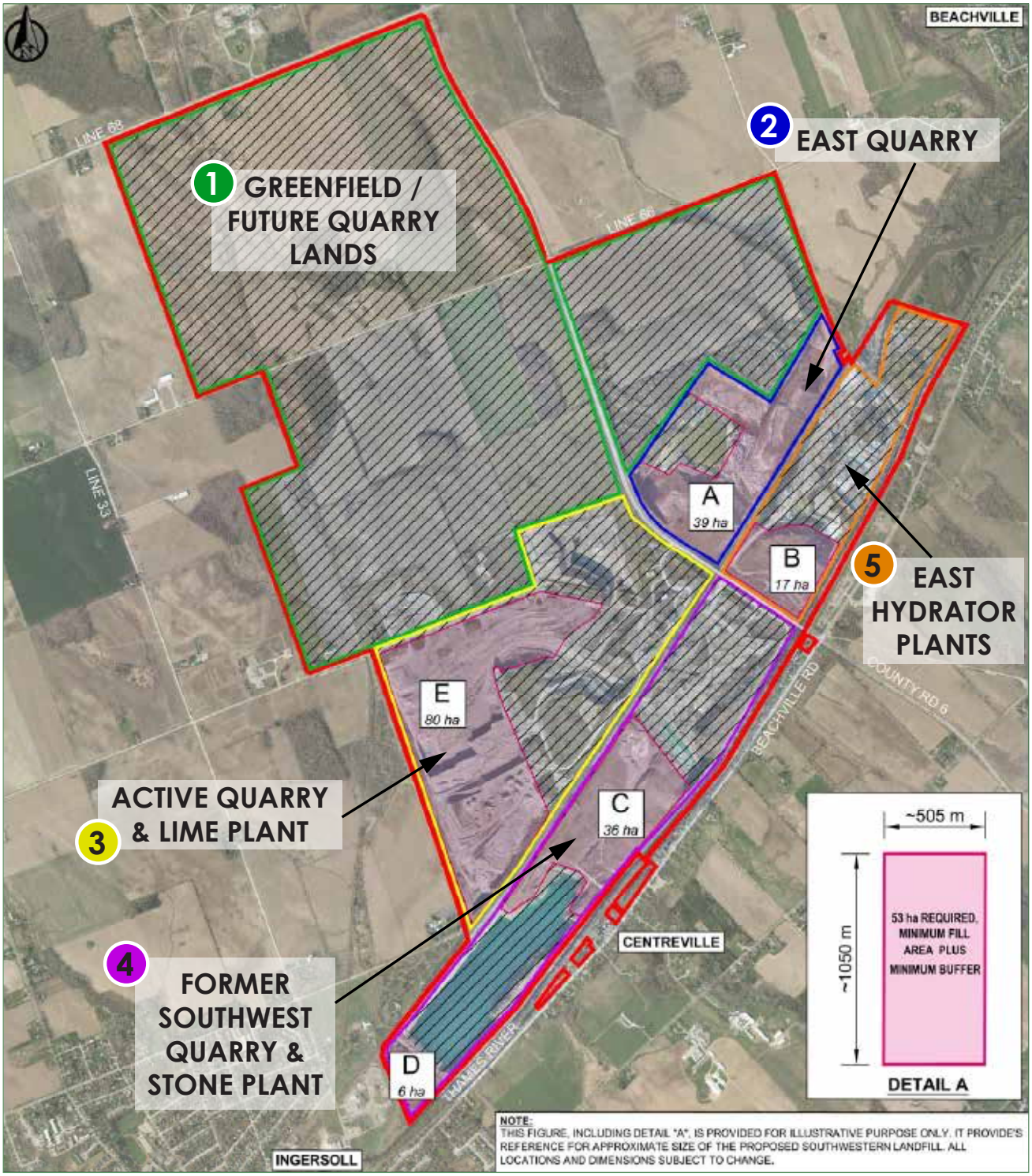
Notes

Record your thoughts here...

Appendix A - Landfill Footprint Supporting Information

Summary of Landfill Footprint Alternatives Assessment

The minimum required space for the landfill (including minimum buffer) is **53 hectares (131 acres)**.



Landfill Footprint Supporting Information

1. Greenfield / Future Quarry Lands

- Farm land owned by Carmeuse intended as future quarry lands. Some areas are licensed for quarrying, some are not. Land is designated in the Oxford County Official Plan as a high-purity calcium stone resource.
- ***Approval Constraint:*** Under the Provincial Policy Statement (PPS), "sterilizing" (unable to use or access) a resource is not allowed. Although it is possible under the PPS to change the land designation, Walker does not see a strong case for the change, making an approval unlikely.

2. East Quarry

- Mined quarry. Central quarry floor area covered with water.
- ***Approval Constraint:*** Cannot build a landfill in the water-filled area [EPA s.27(3)].
- ***Unconstrained Area:*** 39 hectares, not large enough for the landfill (53 hectares minimum).

3. Southwest Active Quarry & Lime Plant

- Rock is actively being quarried. Lime plant and offices in northeast.
- As quarrying progresses, landfill construction and operations could begin. Walker has experience with the coexistence of quarry and landfill operations.
- ***Unconstrained Area:*** 80 hectares, large enough for the landfill (53 hectares minimum).

4. Southwest Quarry & Stone Plant

- Stone plant in northeast. Former quarry filled with water in southwest, currently undergoing rehabilitation.
- ***Approval Constraint:*** Cannot build a landfill in the water-filled area [EPA s.27(3)].
- ***Unconstrained Area:*** 36 hectares and 6 hectares, not large enough for the landfill (53 hectares minimum).

5. East Hydrator Plant

- Hydrator plant, maintenance shop and stormwater management ponds. Eastern portion naturalized with vegetation and trails.
- ***Unconstrained Area:*** 17 hectares, not large enough for the landfill (53 hectares minimum).

	Alternatives				
Feasibility Screening Criteria	**1. Greenfield / Future Quarry Lands**	**2. East Quarry**	**3. Southwest Active Quarry & Lime Plant**	**4. Southwest Quarry & Stone Plant**	**5. East Hydrator Plant**
Consistent with EA purpose?					
Approvable under Ontario and Federal laws?	✘ Not consistent with PPS 2.5.2	✘ Prohibited by EPA s.27(3)		✘ Prohibited by EPA s.27(3)	
Technically feasible and proven technology?					
Commercially viable?	✘ Sterilize high value aggregate reserves/ resources.			✘ Cost prohibitive to relocate stone processing plant.	✘ Cost prohibitive to relocate hydrators & maintenance facilities.
Preliminary Conclusion	✘ **Screened out from further evaluation**	✘ **Screened out from further evaluation**	**Carried forward as the preferred alternative**	✘ **Screened out from further evaluation**	✘ **Screened out from further evaluation**

Notes

Record your thoughts here...

Appendix B - Landfill Design Supporting Information

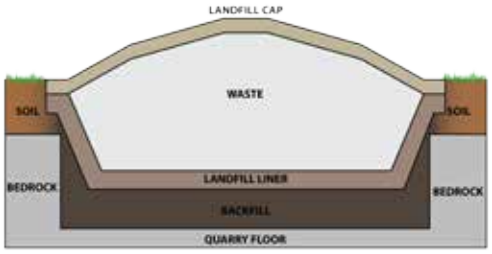
Summary of Landfill Design Alternatives Assessment

Walker carried out a two-part evaluation including Feasibility Screening followed by Comparative Evaluation (next page). Below are the three designs that were evaluated:

1. Deep

- The landfill is designed to have minimum slope above ground.

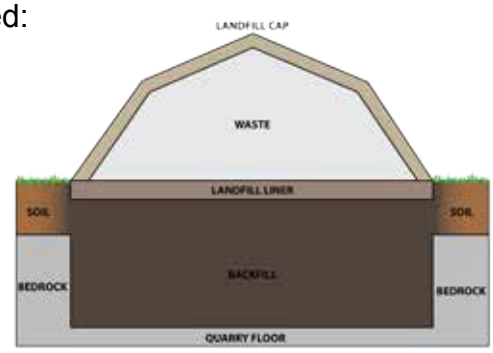
Preferred Alternative



2. Conventional

- Some waste below ground, some above ground.

Less advantages / more disadvantages than the Deep configuration (more construction & operations above ground has more potential for impacts)



3. Above Ground

- The landfill liner sits at ground surface height; waste above ground as a hill.

Not enough area for above ground option.

Feasibility Screening for Landfill Design

	Alternatives		
Feasibility Screening Criteria	**1. Deep**	**2. Conventional**	**3. Above Ground**
Consistent with EA purpose?			
Approvable under Ontario and Federal laws?			
Technically feasible and proven technology?			✘ There is not enough area for the above ground option.
Commercially viable?			
Preliminary Conclusion	**Carried forward for further evaluation**	**Carried forward for further evaluation**	✘ **Screened out from further evaluation**
	See Landfill Design Alternative Comparative Evaluation - Next Page		

Comparative Evaluation for Short List of Landfill Design Alternative Methods

	Criteria	Indicator(s)	Deep Design Alternative	Conventional Design Alternative
Public Health & Safety				
3	Effects due to fine particulate	• Peak working elevation of the landfill.	• Peak working elevation approximately 15 m or less above surrounding ground surface.	• Peak working elevation greater than 20 m above surrounding ground surface.
Preferred Alternative - Public Health & Safety			**The lower height of the deep alternative will result in reduced potential for wind exposure and lower risk of fine particulate emissions.**	
Social and Cultural				
10	Disruption to use and enjoyment of residential properties.	• Peak working elevation of the landfill.	• Peak working elevation approximately 15 m or less above surrounding ground surface.	• Peak working elevation greater than 20 m above surrounding ground surface.
11	Disruption to use and enjoyment of public facilities and institutions.	• Peak working elevation of the landfill.	• Peak working elevation approximately 15 m or less above surrounding ground surface.	• Peak working elevation greater than 20 m above surrounding ground surface.
13	Visual impact of the waste disposal facility.	• Peak working elevation of the landfill.	• Peak working elevation approximately 15 m or less above surrounding ground surface.	• Peak working elevation greater than 20 m above surrounding ground surface.
Preferred Alternative - Social & Cultural			**The lower height of the deep alternative will reduce potential for operational nuisances experienced at surrounding residential properties, public facilities and institutions.**	
Economics				
23	Property value impacts.	• Peak working elevation of the landfill.	• Peak working elevation approximately 15 m or less above surrounding ground surface.	• Peak working elevation greater than 20 m above surrounding ground surface.
Preferred Alternative - Economics			**The lower height of the deep alternative will result in reduced potential for operational nuisances experienced at surrounding properties and lower risk of property value loss.**	
Natural Environment & Resources				
37	Displacement of agricultural land.	• Amount of the final landfill cover that would be at maximum slope (4:1)*.	• None of the final landfill cover would be at maximum slope (4:1).	• Perimeter of the final landfill cover would be at maximum slope (4:1).
Preferred Alternative - Natural Environment & Resources			**The lower final cover slopes of the deep alternative will allow an opportunity for agricultural rehabilitation of the majority of the landfill.**	
Preferred Alternative - Overall			**The deep design is preferred in all four groups and overall. Its lower height and slopes will minimize visibility and exposure, thereby reducing potential for off-site effects and allowing more opportunity for agricultural rehabilitation.**	

* According to the Canada Land Inventory, maximum cover slopes of 4:1 (25%) under O. Reg 232/98 are Class 7T (no capability for common field crops), while minimum cover slopes of 20:1 (5%) can be improved to Class 2T (only moderate limitations for common field crops). (source: OMAFRA).

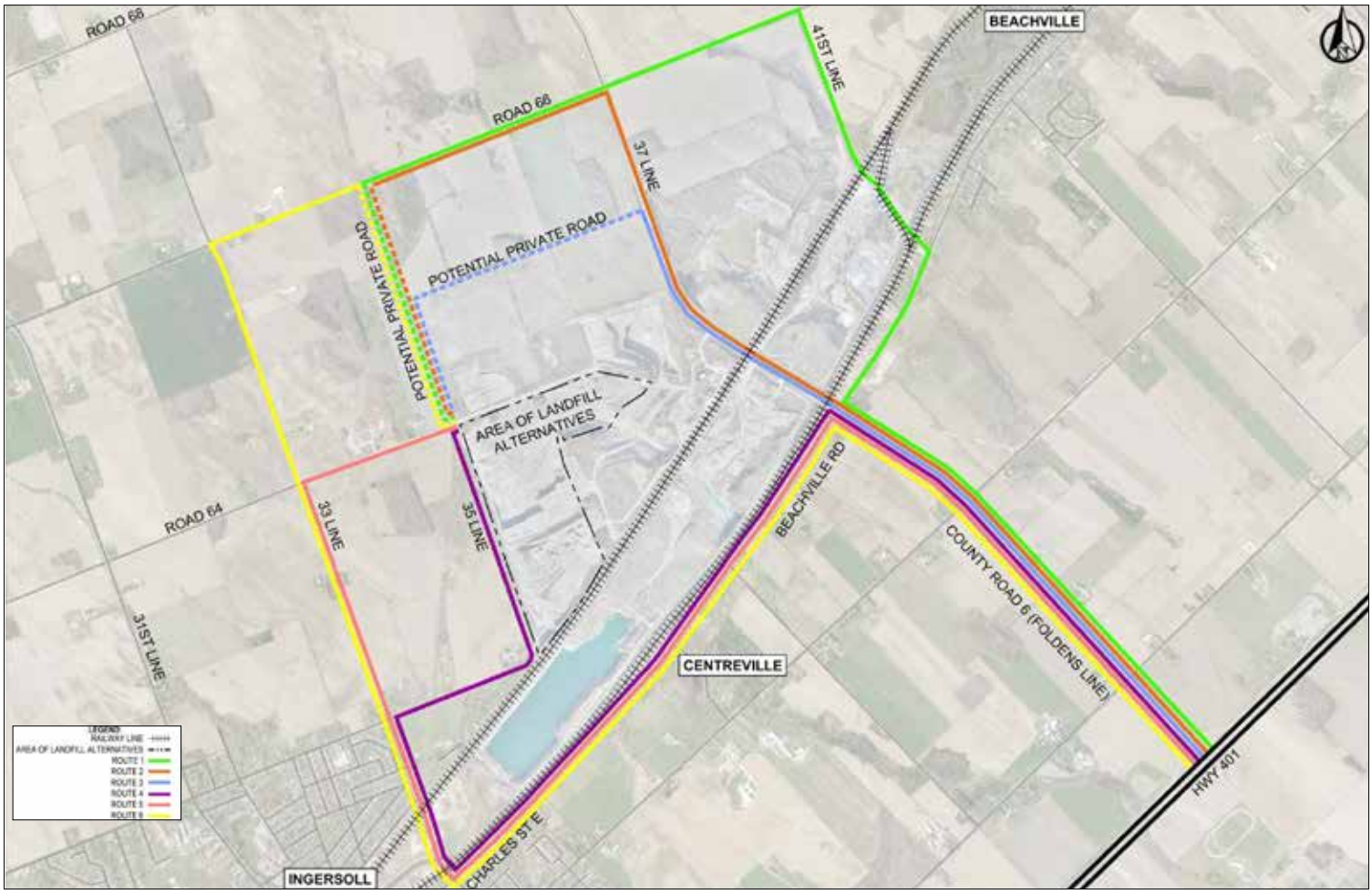
Notes

Record your thoughts here...

Appendix C - Haul Route & Site Entrance Supporting Information

Summary of Haul Route & Site Entrance Alternatives Assessment

Walker carried out a two-part evaluation including Feasibility Screening followed by Comparative Evaluation (next page). Below are the 7 haul routes that were identified and their evaluation:



Haul Route & Site Entrance Supporting Information

ROUTE 1
- 10 km public road, 1.5 km private road
- Upgrades to 41st line required to accommodate truck traffic.
- Weight limit for bridge does not support truck traffic. Upgrades are cost prohibitive

ROUTE 2
- 8.5 km public road, 1.5 km private road
- Upgrades needed for Road 66 traffic.

ROUTE 3
- 4.75 km public road, 2.25 km private road.

ROUTE 4
- 10 km public road
- Upgrades to 35th Line would be required to accommodate truck traffic

ROUTE 5
- 10 km public road
- Upgrades to Road 64 would be required to accommodate truck traffic

ROUTE 6
- 11.5 km public road, 1.5 km private road
- Upgrades to Road 66 would be required for truck traffic

ROUTE 7 - RAIL HAUL
- Would still require truck haul route.
- Not economical for distances less than 400 km.
- Waste coming from multiple sources is difficult to manage by rail.

	Alternatives						
Feasibility Screening Criteria	**ROUTE 1**	**ROUTE 2**	**ROUTE 3**	**ROUTE 4**	**ROUTE 5**	**ROUTE 6**	**ROUTE 7 RAIL HAUL**
Consistent with EA purpose?							
Approvable under Ontario and Federal laws?							
Technically feasible and proven technology?							
Commercially viable?	✘ Cost prohibitive to reconstruct bridge over CN tracks						✘ Cost prohibitive
Preliminary Conclusion	✘ **Screened out from further evaluation**	**Carried forward for further evaluation**	**Carried forward for further evaluation**	**Carried forward for further evaluation**	**Carried forward for further evaluation**	**Carried forward for further evaluation**	✘ **Screened out from further evaluation**
		Routes 2 - 6 were compared to each other in Comparative Evaluation to determine the Preferred Haul Route (Next Page)					

Comparative Evaluation for Short List of Haul Route Alternative Methods

	Criteria	Indicator(s)	Haul Route #2	Haul Route #3	ROUTES TRAVELLING DOWN BEACHVILLE ROAD Haul Route #4	Haul Route #5	Haul Route #6
Public Health & Safety							
3	Effects due to fine particulate.	• Number of residences along route	• 0 residences along County Road 6 • One residence on Road 66	• 0 residences along County Road 6	• 91 adjacent residences along Beachville Road • 21 adjacent residences along Pemberton Street	• 91 adjacent residences along Beachville Road • 21 adjacent residences along Pemberton Street	• 91 adjacent residences along Beachville Road • 21 adjacent residences along Pemberton Street
7	Potential for traffic collisions.	• Length of route on public roads • Number of intersection crossings • Number of truck turnings • Number and type of railroad crossings	• Approximately 6.7 km of haul route on public roads • One intersection crossing and two turns • One signaled level rail crossing	• Approximately 4.4 km of haul route on public roads • One intersection crossing • One turn • One signaled level rail crossing	• Approximately 9.7km of haul route on public roads • One intersection crossing • Five turns • Two signaled level rail crossings	• Approximately 9.7 km of haul route on public roads • One intersection crossing • Three turns • Two signaled level rail crossings	• Approximately 11.2 km of haul route on public roads • Two intersection crossings • Five turns • Two signaled level rail crossings
Preferred Alternative - Public Health & Safety				**Haul Route #3 alternative is the shortest on public roads and has fewest adjacent residences.**			
Social and Cultural							
10	Disruption to use and enjoyment of residential properties.	• Number of residences along route • Number of intersection crossings • Number of truck turnings	• 0 residences along County Road 6 • One residence on Road 66 • One intersection crossing • Two turns	• 0 residences along county Road 6 • One intersection crossing • One turn	• 91 adjacent residences along Beachville Road • 21 adjacent residences along Pemberton Street • One intersection crossing • Five turns	• 91 adjacent residences along Beachville Road • 21 adjacent residences along Pemberton Street • One intersection crossing • Three turns	• 91 adjacent residences along Beachville Road • 21 adjacent residences along Pemberton Street • Two intersection crossings • Five turns
11	Disruption to use and enjoyment of public facilities and institutions.	• Number of community facilities and institutions along route • Number of intersection crossings • Number of truck turnings	• None • One intersection crossing • Two turns	• None • One intersection crossing • Two turns	• Two institutions (Hi Way Pentecostal Church & Ingersoll Rural Cemetery) • One intersection crossing • Five turns	• One institution (Hi Way Pentecostal Church) • One intersection crossing • Three turns	• One institution (Hi Way Pentecostal Church) • Two intersection crossings • Five turns
12	Disruption to local traffic networks.	• Number of stops and turning movements associated with route	• Two turns • Existing 4-way stop • Existing 2-way stop • Road construction required	• One turn • Existing 4-way stop	• Five turns • Existing 4-way stop • 4 existing 2-way stops • Road construction required	• Three turns • Existing 4-way stop • 4 existing 2-way stops • Road construction required	• Five turns • Existing 4-way stop • 4 existing 2-way stops • Road construction required
17	Displacement/destruction of archaeological resources.	• Length of new or widening of both public and private roads	• Approximately 3 km	• Approximately 2 km	• Approximately 3 km	• Approximately 3 km	• Approximately 4.5 km
19	Effects on other public services.	• Length of each route on local road system (i.e.; other than Provincial, County, or private roads)	• 1.5 km	• 0 km	• 6.9 km	• 7 km	• 8.5 km
20	Changes to community character/cohesion.	• Number of residences along route	• 0 residences • One residence on Road 66	• 0 residences	• 112 residences	• 112 residences	• 112 residences
21	Compatibility with municipal land use designations and official plans.	• Provincial and municipal road designations for heavy truck traffic • Existing provincial and municipal land use designations for closed or unopened sections of road allowances	• Road reconstruction required to meet standards for heavy truck traffic • 1.5 km on local roads	• Currently compatible with heavy truck traffic. • 0 km on local roads	• Road reconstruction required to meet standards for heavy truck traffic • 6.9 km on local roads	• Road reconstruction required to meet standards for heavy truck traffic • 7.0 km on local roads	• Road reconstruction required to meet standards for heavy truck traffic • 8.5 km on local roads
Preferred Alternative - Social & Cultural				**Haul Route #3 alternative is designated for heavy truck traffic and has the fewest truck turns, intersection crossing, residences and institutions.**			

Comparative Evaluation for Short List of Haul Route Alternative Methods

	Criteria	Indicator(s)	Haul Route #2	Haul Route #3	ROUTES TRAVELLING DOWN BEACHVILLE ROAD Haul Route #4	Haul Route #5	Haul Route #6
Economics							
22	Displacement/disruption of businesses or farms.	• Number and types of businesses and farms along route	• One large heavy industry (Carmeuse operations) • Two farms	• One large heavy industry (Carmeuse operations)	• 5 businesses (Welding shop, mechanics shop, hydraulics shop, transport company) • 6 farms	• 5 businesses (Welding shop, mechanics shop, hydraulics shop, transport company) • 6 farms	• 5 businesses (Welding shop, mechanics shop, hydraulics shop, transport company) • 9 farms
23	Property value impacts.	• Number of properties adjacent to route • Number and types of businesses and farms along route	• 0 residences on County Rd 6 • One residence on Road 66 • Two farms • One large heavy industry (Carmeuse operations)	• 0 residences • One large heavy industry (Carmeuse operations)	• 112 residences • 6 farms • One institutional • 5 businesses	• 112 residences • 6 farms • One institutional • 5 businesses	• 112 residences • 9 farms • One institutional • 5 businesses
28	Public costs for indirect liabilities.	• Length of each route on local road system (i.e.; other than Provincial, County, or private roads)	• 1.5 km	• 0 km	• 6.9 km	• 7 km	• 8.5 km
30	Effect on the cost of service to customers.	• Relative cost of road reconstruction/ upgrade for heavy truck traffic	• Road reconstruction required to meet standards for heavy truck traffic	• No significant reconstruction or upgrading required.	• Road reconstruction required to meet standards for heavy truck traffic	• Road reconstruction required to meet standards for heavy truck traffic	• Road reconstruction required to meet standards for heavy truck traffic
Preferred Alternative - Economics				**Haul Route #3 alternative does not require any significant road reconstruction or upgrading, and the least potential to affect adjacent property values**			
Natural Environment & Resources							
38	Disruption of farm operations.	• Number of field entrances along the haul route	• 8 field entrances	• 1 field entrance	• 5 field entrances	• 4 field entrances	• 3 field entrances
41	Loss/disruption of recreational resources.	• Number and proximity of recreational resources along route • Number of playgrounds along route • Length of haul route coinciding with bike routes	• None known	• None known	• Beachville Road is a designated bicycle route • 3.5 km	• Beachville Road is a designated bicycle route • 3.5 km	• Beachville Road is a designated bicycle route • 3.5 km
Preferred Alternative - Natural Environment & Resources				**Haul Route #3 alternative has the fewest farm field entrances and no known adjacent recreational resources.**			
Preferred Alternative - Overall				**Haul Route # 3 alternative is preferred overall. It is the only alternative that is preferred in all four groups of criteria.**			

Notes

Record your thoughts here...

Appendix D - Leachate Management Supporting Information

Summary of Leachate Management Alternatives Assessment

Alternatives

1. Pipe to Municipal Wastewater Treatment Plant (WWTP)

- Leachate is pumped to the municipal sewer system by pipe and is treated at a municipal wastewater treatment plant.

2. Haul to Municipal Wastewater Treatment Plant (WWTP)

- Leachate is trucked to a municipal wastewater treatment plant where it is treated.

3. On-Site Treatment Plant

- Treat the leachate on-site at the landfill.
- Use of treatment processes designed for the leachate produced at the landfill.
- Several private landfills in Ontario use this option.

4. On-Site Evaporation Plant

- On-site treatment.
- Heat and evaporate leachate to produce steam.

	Alternatives			
Feasibility Screening Criteria	**1. Pipe to Municipal WWTP**	**2. Haul to Municipal WWTP**	**3. On-Site Treatment Plant**	**4. On-Site Evaporation Plant**
Consistent with EA Purpose?				
Approvable under Ontario and Federal law?	✘ Not permitted under Oxford County by-law	✘ Not permitted under Oxford County by-law.		
Technically feasible and proven technology?				✘ Not yet proven technology at this scale.
Commercially viable?		✘ Prohibitively high cost to haul elsewhere.		
Preliminary Conclusion	✘ **Screened out from further evaluation.**	✘ **Screened out from further evaluation.**	**Carried forward for further evaluation**	✘ **Screened out from further evaluation.**

Notes

Record your thoughts here...

Appendix E - Landfill Gas Management Supporting Information

Summary of Landfill Gas Management Alternatives Assessment

Alternatives

1. Passive Venting

- Landfill gas is allowed to pass through the landfill cover into the atmosphere.
- Vent pipes may be required in the cover or around the perimeter to assist with venting.

2. Flaring

- Landfill gas is (burned) under controlled conditions.
- Exhaust from flare must meet air quality standards.
- Capturing and flaring is the primary means to reduce greenhouse gas emissions.

3. Utilization (Energy from Landfill Gas)

- Landfill gas can be pre-treated (remove moisture and some impurities), compressed and then used:
  - As an industrial fuel, to replace natural gas or other fuels
  - To power an engine generating electricity
  - Turned into renewable natural gas.

	Alternatives		
Feasibility Screening Criteria	**1. Passive Venting**	**2. Flaring**	**3. Gas Utilization**
Consistent with EA Purpose?			
Approvable under Ontario and Federal law?	✘ Not allowed under Ontario Regulation 232/98.		
Technically feasible and proven technology?			
Commercially viable?			
Preliminary Conclusion	✘ **Screened out from further evaluation.**	**Carried forward for further evaluation.**	**Carried forward for further evaluation.**

Version 1: Dated November 2, 2016

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November 7, 2016

RE: Follow-Up from Southwestern Landfill Environmental Assessment
First Nations Workshop – November 2nd, 2016

As per your request at the November 2, 2016 workshop, please find enclosed an additional copy of the materials, which include:

1) First Nations Workshop – Reference Materials (booklet)

2) November 2016 Community Exchange Newsletter

3) General Project Information (booklet)

I will also be sending out digital copies of the workshop materials with a summary of the event. Please let me know if you have any additional questions or requests.

Warm Regards,

Becky Oehler
Community Engagement Manager
905-680-3675
boehler@walkerind.com

Southwestern Landfill Environmental Assessment

Information Session Report

Session for First Nations Representatives

Topic: Finalization of the Technical Work Plans

Date: March 21, 2017

Location: SOAHAC Boardroom, Chippewas of the Thames First Nation

Key topics of discussion:

- The purpose and objectives of the technical work plans for the Southwestern Landfill Environmental Assessment, including the importance of input and how it is considered.
- How the technical work plans have been developed and reviewed; this is the second time they have been provided for review.
- How an evaluation of cumulative effects is integrated into each of the 12 studies and in the Environmental Assessment as a whole.
- Discussion about how archaeological studies are carried out, including considerations for artifacts.
- Discussion about a concept for treating leachate (water that has come into contact with waste) that could improve the quality of an agricultural drain that flows into the Thames River.
- Next Steps in the Environmental Assessment and the next information session/meeting.

Resource Materials:

1) *Summary booklet of technical work plans*
2) *Summary of input on technical work plans from First Nations and resulting consideration/revisions*
3) *List of technical studies and consultants hired to carry out each study*

EXECUTIVE SUMMARY

Project Overview

Walker Environmental is proposing a landfill in the Township of Zorra, Ontario (Oxford County). If approved, it would accept only solid non-hazardous waste that is created in Ontario. The landfill proposal is undergoing a provincial Environmental Assessment (EA). The provincial EA ensures that potential environmental effects are considered and addressed before a project is allowed to begin. Once the EA is complete, the Minister of the Environment and Climate Change will decide if the landfill is approved.

Previous Consultation & Engagement

Walker Environmental has been consulting and engaging with First Nations about the Southwestern Landfill EA since the inception of the project in 2012. This consultation has included several workshops, information sessions, presentations and meetings with Chiefs and Councils, staff, committees, and community members, as well as tours of Walker's facilities and operations.

Walker recognizes that First Nations have unique rights and perspectives, and are committed to engaging, consulting, and collaborating with First Nations to create opportunities for meaningful dialogue and consultation. This information session was scheduled in response to a request at the November 2, 2017 session, and to recognize the key milestone of updating and finalizing the technical work plans that will guide the technical studies of the proposed landfill.

Workshop Overview

The objectives and outcomes of the workshop are outlined below.

Objective 1: Discuss the updates to the technical work plans, which were drafted and reviewed during the Terms of Reference.	**Key Discussion & Outcomes:** • A booklet providing an overview and summary of the technical work plans was provided as a communication tool. • A red-line version of each technical work plan is available that shows all updates. In addition, Appendix B of each plan identifies how the work plans were updated in response to input. A summary of input from First Nations and how it was considered was also provided and discussed. • Discussion about how cumulative effects are integrated into the technical work plans and environmental assessment. • Discussion about participants' experiences with archaeological assessments and the benefit of monitors from First Nations working alongside archaeological consultants during field work. • Walker expressed that they are open to discussing the requests and processes of individual Nations during the finalization of the technical work plans and throughout the environmental assessment process.
Objective 2: Provide space for dialogue among First Nations representatives who have interest in the Southwestern Landfill Environmental Assessment.	**Key Discussion & Outcomes:** • From 12:30 pm until 3:00 pm, Walker representatives left the room to provide space for dialogue among participants.

Action Items

Follow-Up on Items from November2, 2016:

	Action Item	Follow-Up
1	Set up tours of Walker Niagara operations and Carmeuse site where new landfill is proposed (Township of Zorra, Ontario).	Walker is looking for opportunities to set up tours with consideration for the requests and schedules of participants.
2	Review Walker's Indigenous Relations Policy with consideration for the Truth & Reconciliation Report Calls to Action for Business.	Currently, Walker has an "Indigenous Relations Statement of Principles" which is posted online at http://www.walkerind.com/corporate/indigenous-relations/. We are in the process of reviewing these principles with consideration for the TRC Calls to Action for Business. Walker is taking actions, including: • Reaching out to First Nations employment centers to provide information about our job postings • Developing an Indigenous awareness/education program for employees.
3	Research the history of local place names that could give information about local history and natural systems (Indian Hill and Beachville).	It is a historical settlement area, we are unsure of which peoples were there. A local resident provided the information. The area is a hill with a small lake on one side.
4	Create connections between citizens local to the proposed landfill (Community Liaison Committee, Municipal representatives) and representatives from First Nations.	Walker will seek opportunities to create connections that enhance constructive dialogue and sharing of information. Recommendations are appreciated.
5	Arrange the next session, coordinating with Chippewas of the Thames First Nation to hold the event at their offices. Date: March 8, 2017	The session was held on March 21, 2017 (was postponed from original March 8th date due to venue scheduling conflict).

New Items from March 21, 2017:

	Action Item	Follow-Up
1	Walker to schedule the next meeting when they have a general schedule for the technical studies (potentially late May).	
2	Nations to decide if they would like to submit additional input on the updates to the technical work plans. Submissions would be appreciated by May 15, 2017. Please contact Walker if you require additional time for review.	Walker will receive input until May 15th or as discussed.
3	Walker to report back to the group on how they will proceed with the archaeology study. (Re: concerns about company as the consulting firm)	Walker to provide update at next session.
4	Create and distribute a form for reimbursement of travel expenses.	A travel expense reimbursement form has been created. Please email info@walkerea.com or call 1-855-392-5537 (toll-free) for a copy.

DETAILED WORKSHOP REPORT

Opening Prayer - Participant opened the workshop with a prayer.

Introductions - All participants introduced themselves (round table).

Summary of Information Presented

- Walker provided a brief overview of the company and the Southwestern Landfill Environmental Assessment for new participants.
- Walker introduced the main topic of the session; the updates to the technical work plans and this second opportunity for review in advance of their finalization. *(See "Key Points about Technical Work Plans" below)*
- Walker introduced a concept for treating leachate (water that has come into contact with waste) that could improve the quality of an agricultural drain that flows into the Thames River.
    - The outflow point for treated water would be the Patterson-Robbins Drain (also known as Cemetery Creek) which is also used as a municipal drain. This drain flows into the Thames River.
    - Leachate treatment plant (similar to municipal wastewater treatment plant) would produce treated water that meets all regulatory criteria.
    - A tertiary ("polishing") treatment could be employed after the plant, like an engineered wetland. The wetland could also filter water in the Patterson-Robbins Drain, which may be impacted by other activities (agriculture, road salt).
    - Walker is discussion this concept with the Upper Thames River Conservation Authority, with the ultimate goal of helping to improve water quality in the Thames River.

Key points about Technical Work Plans:

- There is one work plan for each of the 12 technical studies that will be carried out, as well as a work plan that describes how cumulative effects will be considered.
- The technical work plans are written by the consultants who will be carrying out each study. The plans are a guide for how the study will be carried out.
- The technical work plans are available for anyone to review. There are peer reviews being carried out by the Ontario government (led by the Ministry of Environment and Climate Change Environmental Assessment branch), as well as a Peer Review Team that works on behalf of the municipalities near the project (Oxford County, Township of Zorra, Town of Ingersoll, Township of South West Oxford).
- Walker received comments on the draft Technical Work Plans during the Terms of Reference from First Nations, and in particular a review by Neegan Burnside on behalf of Walpole Island First Nation. Walker is open to discussing the requests and processes of individual Nations during the finalization of the technical work plans and throughout the environmental assessment process.
- The updates to the technical work plans are the result of:
    - Input from First Nations, peer reviewers, local community members and organizations
    - Assumptions on what the proposed landfill would be like (document: Facility Characteristics Assumptions)
    - Climate Change projections (document: Climate Change Baseline Forecast)
    - Information on current and future municipal planning (document: Land Use Planning Forecast draft report)

Detailed Question & Answer

Topic /Question/ Issue / Comment	Walker Response
Local History "Indian Hill" – area in proximity to proposed site; Darren reporting back to group that it is a historical settlement, yet unsure of which peoples were there. Question: Who provided the answer?	A local resident provided the information. The area is a hill with a small lake on one side.
Water Quality Question: Has Walker done any water quality testing?	Not yet since the studies have not yet begun. Water quality testing will be carried out over the next year or so, through all four seasons. We have talked to the Upper Thames River Conservation Authority (UTCRA) and concept of working to improve water. This could include simple measures like planting trees to improveriver banks. We have also been discussing a concept with UTCRA for tertiary leachate treatment like an engineered wetland to improve the quality of the Patterson-Robbins Drain where the treated water would outflow.
Water Quality Question: What is the length of the Patterson-Robbins Drain between the proposed water treatment area and the Thames River?	Approximately 1.5 km. *(**NOTE**: fact check after the meeting shows it is actually approximately 2.5 km)*
Water Quality Comment: A participant noted that people from their community fish on the Thames River and so water quality is important. Question: Is the distance from the treatment plant to the Thames River ideal?	The treated water that would come from the treatment plant would have to meet all of the standards right where the water comes out. We wouldn't be relying on the Drain to provide any additional treatment or dilution, so the distance to the Thames won't have any effect on quality.
Water Quality Question: The drain is not on Carmeuse property. Would you purchase or lease land?	We don't know. We have to figure out if this concept is feasible with the conservation authority and through the technical study looking at water.
Water Quality Question: What water quality standards will you be using for the discharge from the treatment plant?	The standards will come from the Province, so we expect it will be related to the Provincial Water Quality Objectives, and there may be additional or more strict criteria based on local requirements (ie. current quality and parameters of concern in the Thames River).
Water Quantity Question: Would there be an increase in flow to the Thames River? How much?	The treated water going to the Thames is really just rainwater that filters through the landfill and therefore needs treatment. So it's water that would normally be falling on the land and running off into the river. Right now, there's a quarry, so the rainwater goes into the ground, or is pumped out as dewatering for quarry activities. The increase in flow could benefit the Thames, particularly during dry periods.

Topic /Question/ Issue / Comment	Walker Response
Water Quality Question: Will you be considering changes to groundwater due to climate change?	Yes, that is part of the groundwater study. We are using projections about climate change provided by the Ministry of Natural Resources and Forestry.
Water Quality Question: You've discussed treating water and how it could improve the Patterson-Robbins Drain. Has there been discussion around improving the Thames River as a whole, perhaps by working with First Nations?	We had a few workshops specifically focused on the Thames River, some people in attendance today participated. Part of that discussion was about the challenges around water quality of the Thames. We're open to continuing those discussions. Right now our focus is how we could improve water quality in the Thames within the context of the design for the proposed landfill, and we think the treatment plant is a good opportunity.
Water Quality Question: What are the main issues regarding the Thames?	Answer from another participant: Water quality is the key issue. This affects members who fish for sustenance and ceremonial reasons. There is a lot of agricultural activity; phosphorus is the highest and has the most focus.
Water Quality Question: Are there programs to address issues with water quality in the Thames River?	Answer from another participant: Chippewas, Muncey and Oneida (CMO) have been discussing a water monitoring program to fill in data on a stretch of the river that's not currently monitored. Baseline data from monitoring helps to assess impacts to Aboriginal and Treaty rights.
Water Quality Question: Would Walker support a water monitoring program to fill in data gaps?	Yes, we would support additional monitoring. We do a lot of water monitoring for our operations, so we might be able to help by sharing our experience.
Archaeology Question: I see that Walker has hired a company for the Archaeology study. Have they done a Stage 1 and the plan is to do a Stage 2?	Yes that is the consultant that we've hired to write the work plan and carry out the study. They haven't done any studies or even background research yet, that all comes during the study phase.
Archaeology Comment: Some Nations expressed interest archaeological montors working alongside Walker consultants during field work.	We are open to monitors working alongside our consultants. We'll work with the First Nations as we develop more refined study timelines.
Archaeology Question: Would Walker be open to monitors from multiple Nations working with the archaeology consultant?	We're open to this – what have you found to be typical on a study like this? Comments from Participants: - It's not uncommon to have monitors from multiple nations working at the same time. - A participant noted that they had a good experience with having the archaeological crew being First Nations working directly with the consultant rather than "monitoring" their work.
Archaeology Comment: The First Nations monitor(s) typically provide reports back to their communities to keep them appraised of the project.	Thank you for this information.

Topic /Question/ Issue / Comment	Walker Response
Archaeology Group discussion: Some participants had a poor experience with the former archaeology company. According to some participants, in some cases their work is under review by the MTCS. Participants recommended that proponents check with First Nations *before* hiring an archaeology consultant.	Thank you for sharing your experiences, it's important information for us. We will get back to the group on how we will proceed next time we get together, which may be changing consultants or closely monitoring the work done. We would also appreciate your comments on the archaeological technical work plan to let us know where you see potential issues regarding the work to be carried out.
Archaeology Group discussion: Artifacts are often found during archaeological assessments. Those artifacts are rarely repatriated to First Nations and are often held in storage by Archaeologists. Requirements are very strict for Nations to receive artifacts (museum-quality) while archaeologists can store almost anywhere (ie. basements). There are a couple of sustainable archaeology programs at universities you can look into, but that still isn't "home" for the artifacts. Question: How would Walker deal with any artifacts that are found?	Thank you for sharing this information, it's something we're not very familiar with and we'll look into further. Your guidance on this subject is very valuable, and we will work with you and the archaeology consultant to do what we can to properly care for any artifacts that are found. Regarding the area that will be studied for archaeology, the main areas will be the new road into the site, and maybe the buffer area around the landfill. Since the landfill itself would be going into a mined quarry, that area has already been significantly disturbed.
Cumulative Effects Question: How do you define cumulative effects? You said it includes the future, but it is often left out. Rehabilitation plans are particularly important.	Cumulative effects are defined in two ways in our studies 1) Multiple effects of the same type from different sources, ie. noise coming form the landfill and the quarry. We look at that throughout the lifetime of operations, including after closure of the landfill. We project what the landfill will be like, what the quarry will be like, and what the surrounding area will be like based on the information available. 2) Different types of effects impacting the same receptor, ie. noise, dust, and traffic all impacting a resident or a park. We project this into the future as well. For closure and rehabilitation of the landfill, we don't know what it will be used for at that time. For the purpose of our studies, we make an assumption that it will be passive parkland or agricultural, but 20 years is a long time, and it could be that there is a use that would better serve the needs at that time. For example, at our East Landfill in Niagara Falls, part of it is used for farming and part of it is used for recycling materials like wood and shingles. We couldn't have known more than 20 years ago that there would be an opportunity to recover resources at a facility on top of the landfill.

Topic /Question/ Issue / Comment	Walker Response
Modelling Comment: You'll have to pay money to the Government of Ontario for the landfill (financial assurance). That money decreases after the closure of the landfill, so there is concern that you won't be able to care for the site down the road if there are issues.	Yes, landfills and other types of projects are required to provide money to the Province called financial assurance (FA). The Province sets out the calculations that have to be used for FA and puts the amount in our Waste Disposal Site Approval. That money is there for the government to care for the site in the event that Walker is unable to do so (ie. bankruptcy). However, that money is really a contingency. The owner of the landfill is responsible for caring for the site into the future, including monitoring, maintenance and any issues. An example of maintenance would be the leachate treatment plant – the plant will need maintenance and upgrades over time.
Review of Work Plans Comment: A participant noted that they will be reviewing the work plans. Question: When will the work plans be available?	The work plans are available now. For each one we've provided a red-lined version that shows all of the changes from the drafts that were done during the Terms of Reference. Appendix B of each work plan holds tables that identify where specific input produced changes in the work plans. We've set a deadline for comments from the local community for May 15th. Please let us know if you'll need additional time. There is no approval process for the work plans, so we can continue receiving input really until we start work, which we expect will be in June.
MOECC Project Officer Question: Who at the MOECC is overseeing this project?	We have had different project officers, we will get you the full name and contact information of our project officer. *Project Officer as of May 4, 2017:* *Daniel Delaquis* *dan.delaquis@ontario.ca* *416-314-7765*
Workshop vs. Information Session Comment: This session should not be called a workshop because it is not a workshop. It is an information session.	Thank you for this input; we will change the name in the notes to "Information Session".
Consultation Question: Does Walker consider this to be consultation? Group discussion: Some participants noted that Walker should not identify this meeting as "consultation". There are specific protocols to be followed for consultation involving Chief and Council. *Note as requested*: For Six Nations of the Grand River, this is not consultation. Consultation involves Chief and Council.	Thank you for this input. We think of these meetings as part of an overall process of consultation and engagement. This is a tool we use to communicate and have dialogue with you, but it's certainly not the only way. We are open to working within Nation-specific consultation protocols as well as meeting with Chief and Council, enirovironment committees, and community members. Has there been value in the dialogue today? Comments from Participants: - Yes, this type of meeting augments the consultation process; it helps in terms of information sharing. - It is good that all participants are hearing the same message and have the opportunity to speak to each other.

Topic /Question/ Issue / Comment	Walker Response
Consultation vs. Consent Group discussion: When consultation occurs, it should not be misconstrued as consent.	Walker understands that consultation is not consent.
Record of Consultation Question: Do you have a consultation record? Six Nations would like a copy.	We have the consultation record from the Terms of Reference, which is available on our website with all its Appendices. Please let us know if you'd like a hard copy. We have been recording the consultation, engagement, and information sharing that we've done during the Environmental Assessment phase, but it's not yet documented in a Record of Consultation, which will be part of the Environmental Assessment documents.
Travel Expenses Question: Will Walker reimburse travel expenses? Do you have a form?	Yes, please send us any travel expenses you've incurred. We do not have a form, but that's something we can put together.
Project Updates Question from Walker: What is the best way to provide information to the group about the status of the project? Would a monthly email update be helpful?	Participants: General agreement that a monthly update email would be acceptable.
Sharing of Meeting Notes Question from Walker: There is interest in our discussions here from residents in Ingersoll and Beachville. Would the group be comfortable with Walker sharing all or part of the meeting summary?	Participants: Some hesitation to share meeting notes. Agreement that it is ok to let people know that representatives from different Nations have met as a group with Walker to discuss the project, but not to share the meeting notes/summary.
Carmeuse Comment: There is interest in a tour of the Carmeuse property, and in meeting with Chris Martin, Regional Environmental Manager for Carmeuse.	Walker agrees to work on setting up a tour, which would be attended by Chris Martin. Walker confirmed that Carmeuse currently owns the property where the landfill is proposed and is quarrying there. Walker currently has a lease to carry out the Environmental Assessment, but would need to purchase the land if the Environmental Assessment is approved.
Citizen Groups Comment: Residents who live near the proposal (Ingersoll, Beachville) that are part of a group against the landfill (OPAL Alliance) have contacted some of the Nations (both consultation offices and general community members). Participants noted that this is common.	Thank you for your role in fielding these calls and information. Please let us know if we can provide support, or if you need any additional communication information for your community members, we are happy to provide this.

NEXT STEPS

Ideas and Preferences for Upcoming Meetings, Dialogue & Consultation

- First Nations can provide input on the updates to the technical work plans. Walker is requesting input by May 15, 2017. Please let Walker know if you are seeking additional time for review.
- The next meeting should be held once Walker has a general schedule for the technical studies. There is interest in a tour of the Carmeuse property, which could be included in the next meeting or a future meeting.
- There is also interest in a tour of the Walker Niagara operations (this is a full-day commitment; can be done later in the process).
- Walker will be working with individual Nations within their specific consultation protocols.
- Representatives from First Nations are to let Walker know if they would like Walker to speak to Chief and Council, to environment committees, or community members. In addition, any requests for additional communication materials (summaries, information sheets, etc.)

Workshop Attendance

There were 15 people in attendance at this workshop, including First Nations (11), Walker Environmental (2) and Shared Value Solutions (2) representatives.

Representatives from the following First Nations were in attendance:

- Aamjiwnaang First Nation
- Chippewas of Kettle & Stony Point First Nation
- Chippewas of the Thames First Nation
- Mississaugas of the New Credit First Nation
- Munsee Delaware Nation
- Six Nations of the Grand River
- Walpole Island First Nation

Proposed Workshop Agenda

Date: Wednesday, March 21, 2017

Time: 10:00 am – 4:00 pm

Location: SOAHAC Boardroom, 77 Anishinaabeg Drive, Muncey, Ontario

Time	Description
10 am – 10:30 am	Update on status of Southwestern Landfill EA
10:30 am – 12:30 pm	Presentation and Discussion – Key updates to the Technical Work Plans *Focus on input received from First Nations during the Terms of Reference and how it has been integrated into the work plans.*
12:30 pm – 1:30 pm	Lunch
1:30 pm – 3:00 pm	First Nations discussion *Walker representatives will leave the room to provide space for discussion among First Nations representatives.*
3:00 pm – 4:00 pm	Wrap-up discussion, next steps, Q&A.

walker environmental

Southwestern Landfill
Environmental Assessment

Summary of Updated Technical Work Plans
First Nation Workshop March 21, 2017

General Information

Who is Walker Industries?

Walker Industries is a Canadian, 5th generation, family-owned company that has been operating in Ontario since 1887. Walker Industries now employs more than 700 people and the company's mission is to provide infrastructure to meet municipal, commercial, and residential needs. Walker Industries group of companies offers products and services including aggregates (used in construction), paving & construction services, emulsions (ex: provides moisture resistance for building materials), as well as waste and recycling services.

Walker Environmental Group Inc., a subsidiary of Walker Industries, provides resource recovery, recycling and waste disposal solutions across Canada.

With a focus on responsible business practices, Walker Environmental has become recognized nationally as a trusted company across our three core business lines: waste management, renewable energy, and organics recycling. Walker Environmental is committed to building facilities that use proven technology to manage society's waste in an environmentally responsible manner.

Our Commitments for Landfill Management

1. Environmental Protection
2. Technical Excellency
3. Environmental Protection

What is the Southwestern Landfill Environmental Assessment?

Walker Environmental is proposing a landfill in the Township of Zorra. The landfill proposal is undergoing a Provincial process called an Environmental Assessment (EA). An EA is a provincial planning and decision-making process that considers potential environmental impacts before a project is allowed to begin. Once complete, the Ontario Minister of the Environment and Climate Change will decide if the landfill is approved.

The proposed site would accept up to 850,000 tonnes of solid, non-hazardous waste per year plus cover material (typically soil), totalling approximately 1.1 million tonnes per year. The landfill would operate for approximately 20 years and have a total volume of approximately 17 million cubic metres. If approved, it would accept only solid non-hazardous waste that is created in Ontario.

Project Location

The proposed location for the landfill is in a mined quarry on the Carmeuse Lime (Canada) property, 374681 37th Line (Oxford County Road 6) in the Township of Zorra.

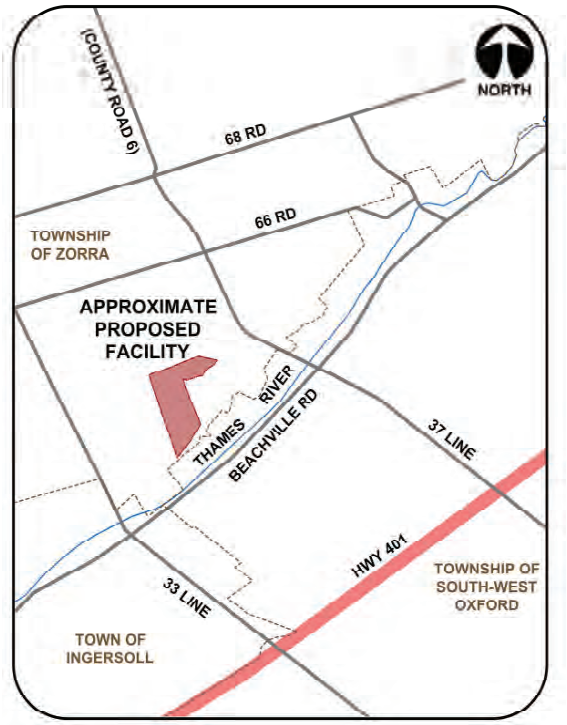


Table of Contents

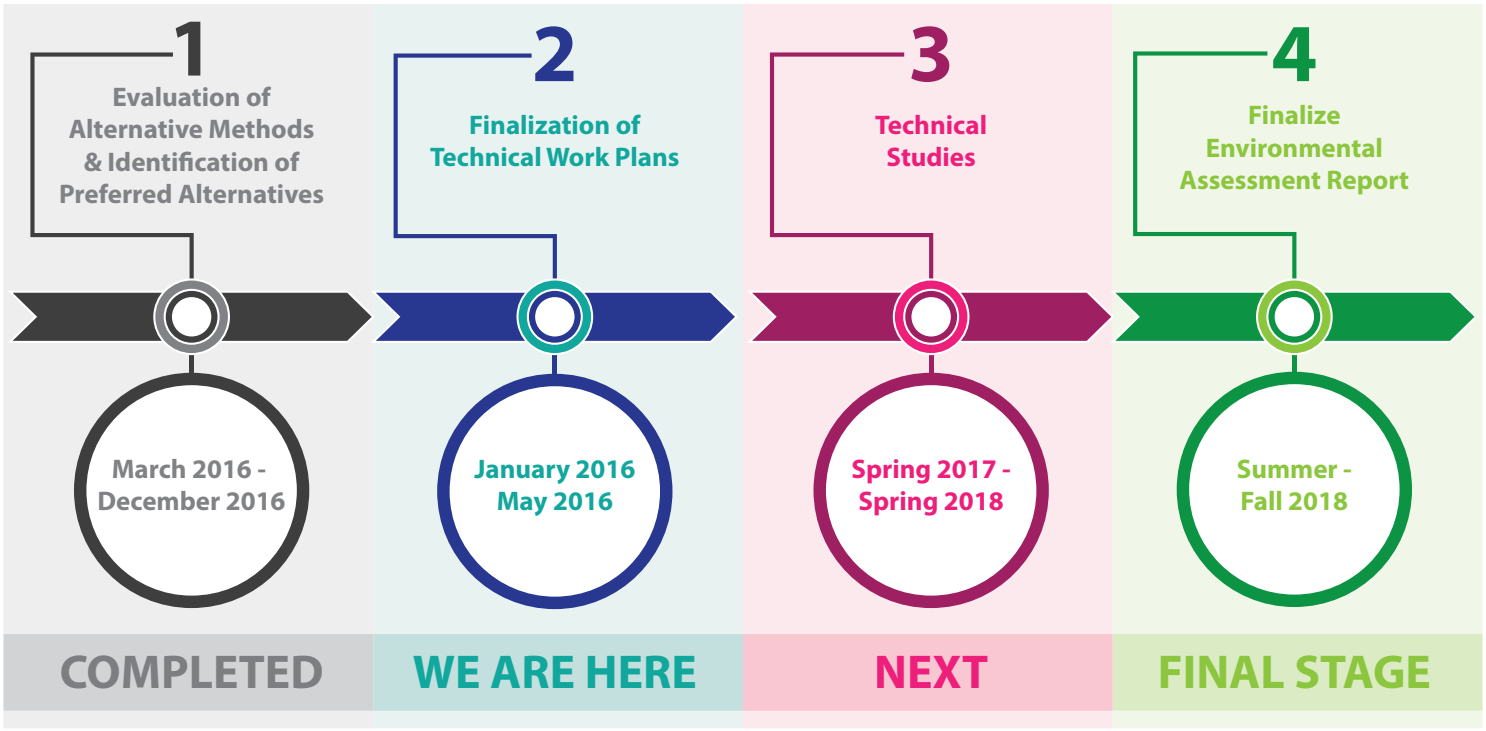
This document is meant to serve as a summary of the updates made to the technical work plans. The information presented in this document (text, graphics, and maps) are all subject to change, and/or improvement.

This information is provided to facilitate dialogue and is not a final product.

Where in the EA process are we?

The landfill proposal is in the middle of a Provincial process called an Environmental Assessment (EA). The EA will assess if the landfill can be developed and operated safely. Once complete, the Ontario Minister of the Environment and Climate Change will decide if the landfill is approved.

The EA has four main stages:



What is the purpose of this Workshop & Document?

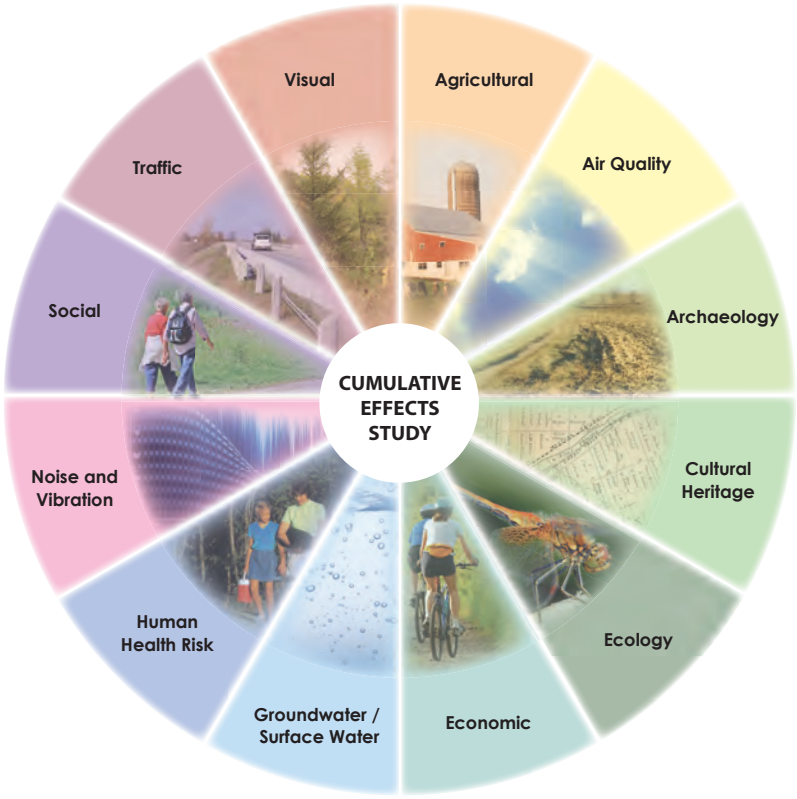
- Provide information on how the upcoming 12 technical studies will be conducted.
- Highlight the key changes that were incorporated in the technical work plan as a result of technical reviews and consultations with First Nations and other parties.
- Provide space and resources to promote constructive dialogue about the updates to the technical work plans.

What is a Technical Work Plan?

The Technical Work Plans provide a guide for how the proposed landfill will be studied. For the Southwestern Landfill proposal, there are 12 technical studies.

This is the second time we have reviewed the Technical Work Plans.

- They were drafted and reviewed during the Terms of Reference:
  - First Nations-specific peer review(s) and workshop
  - Peer Review by the experts hired by the Joint Municipal Coordinating Committee (Zorra, Oxford County, Ingersoll, South West Oxford)
  - Peer reviewed by the Government Review Team (Provincial Government)
  - Discussion at 7 Community Liaison Committee Meetings
  - A public event (May 2013)



Technical Study Approach

All of the studies must follow the same study approach found in Section 8.2 of the Approved Amended Terms of Reference (paraphrased here):

- Describe the environment potentially affected
- Carry out an evaluation of the potential environmental effects
- Carry out an evaluation of any additional actions that may be necessary to prevent, change or mitigate (any negative) environmental effects
- Prepare a description and evaluation of the environmental advantages and disadvantages
- Prepare monitoring, contingency, and impact management plans to remedy the environmental effects

In this case, "environment" means the natural, social, and economic environment.

How will Cumulative Effects be Studied?

Cumulative effects will be studied in 2 ways:

1. **“Future Baseline”** - How the same type of effect (ie. noise) can combine from different sources (now and into the future)

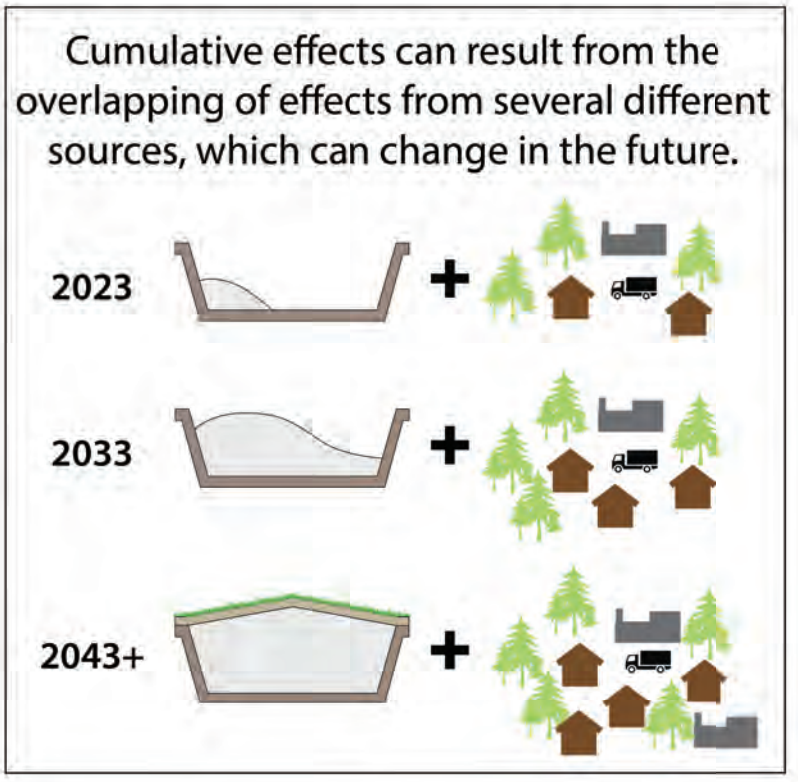
   A lot of different things can contribute to the same type of effect. This will be evaluated for different types of potential effects. For example, there is some noise from landfill activities, and there is also noise from traffic, quarries, construction, and regular day-to-day activities. The noise from the landfill will be combined with other noises to get a “cumulative effect” for noise. Also, we will predict how noise may change in the future - it might increase or decrease depending known or on predicted local activities. This will also be taken into account.

   Noise Example:

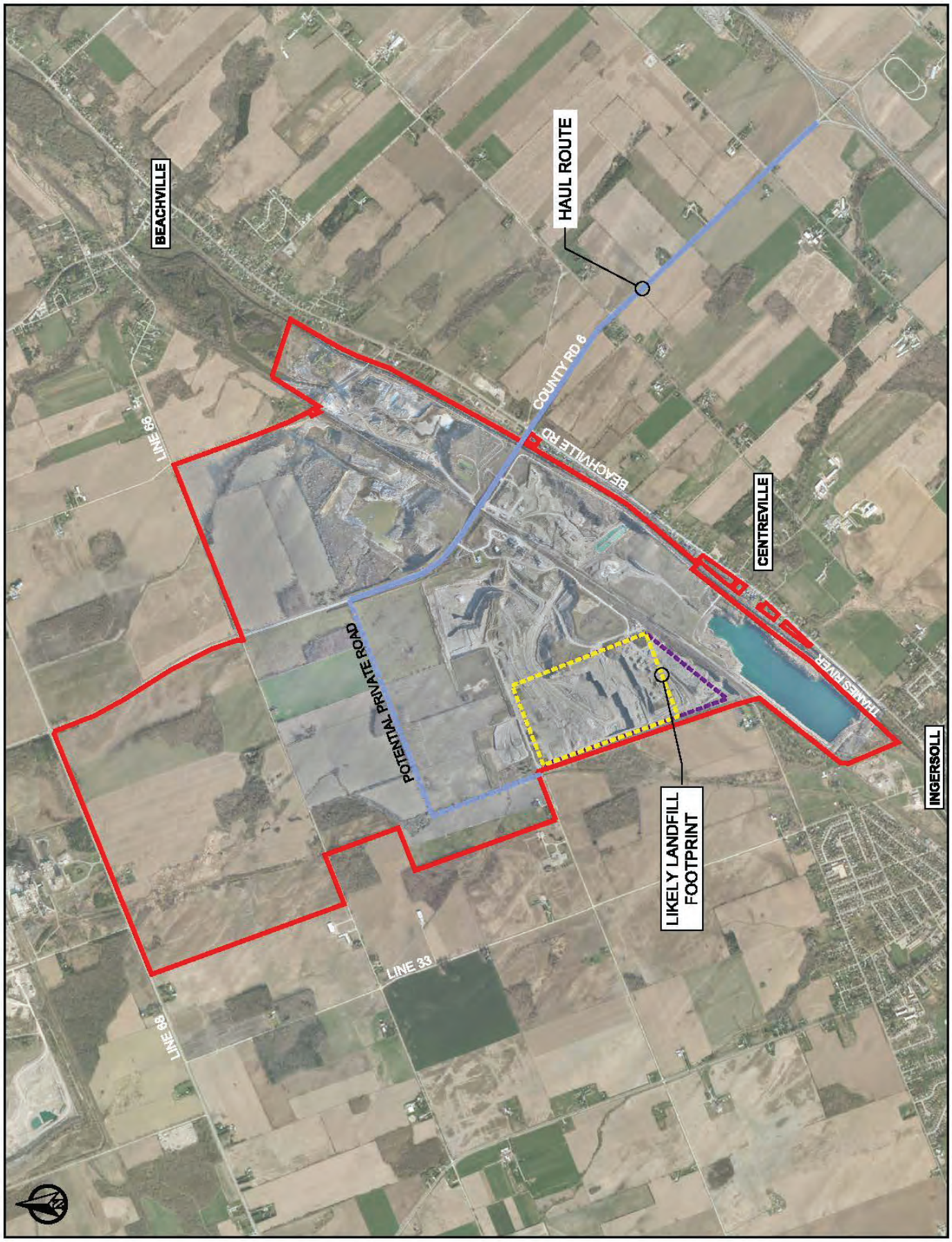
2. **“Common Receptors”** - Evaluates multiple types of effects (noise, dust, etc.) on the same receptor (ie. residence)

   Key “receptor points” will be used, like a neighbourhood or public space, to examine how different types of effects can add up at the same location. For example, for a single resident, there could be multiple effects like noise, dust, and odour. This will be evaluated and predicted into the future through the landfill lifespan.

   For example, combining the anticipated degree of noise, dust, traffic, visibility, etc. at a property near the project site and assess whether that could result in a significant effect.



Landfill Footprint Map



Agriculture

Definition

Agriculture is the science, art, or practice of the cultivating of soil, producing of crops, and raising of livestock.

The agriculture study will produce a report about any potential impacts the proposed landfill could have on agriculture.

Examples of potential impacts:

- Change in agricultural land
- Change in farm operations

The agriculture study includes:

- Agricultural resources
- Agricultural facilities
- Agricultural operations

Study Area

On-site & Site Vicinity	• The area proposed for the waste facility plus its associated buffer zones. • All agricultural lands and facilities situated immediately adjacent to the proposed landfill.
Along the Haul Route	• All farm properties located on both sides of the haul route. • Includes access to both farm facility land-ways and field access points.
Wider Area	• Refers to the larger agricultural area around the proposed site. Agricultural census data will be used that describes agricultural context in the broader area

Specific Approach for the Study

1. **Review of existing background information:**
   - Land resource characteristics supporting agriculture: soil, drainage, topography and micro-climate to determine soil capability for common field crops and specialty crops.
   - Agricultural land use and related activities: livestock production, specialty crop and common field crop production, general agricultural and agri-business support services and facilities.
2. **Field data collection** including mapping of agricultural and nonagricultural land use within the Site Vicinity and liaison with landowners and interested agriculture stakeholder groups.
3. **Data analysis** to characterize the nature, capacity, and level of production of the nearby agricultural resources, as well as the potential for changes or impacts due to the proposed landfill.

Summary of Input Received About Agriculture

- Concern for potential impacts on agricultural lands including flooding or drainage disruption
- Concern for potential impacts on agricultural activities and production
- Concern for negative impacts to soil and water (e.g. contamination)
- Additional truck traffic could make it more difficult to move farm equipment on roads

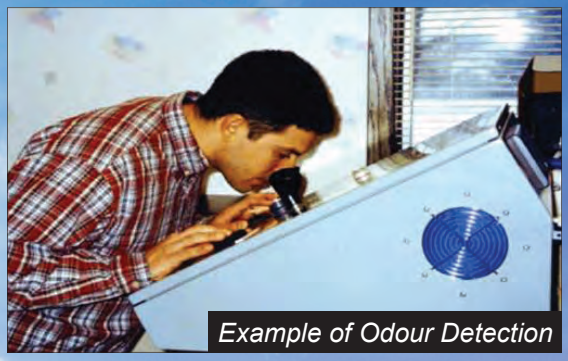
Key Updates to Technical Work Plan

- Additional indicator to recognize farm business impacts.
- Inclusion of agricultural land use forecasting during operations and post-closure.
- The Carmeuse rehabilitation plan will be reviewed for the potential for crop production.
- Expansion to include impacts on support services and suppliers and impacts on farm community character and cohesion.

Air Quality

Definition

The Air Quality study assesses the potential effects on air quality from the proposed landfill using guidelines and criteria such as dust, landfill gas emissions, odour, and blowing litter.



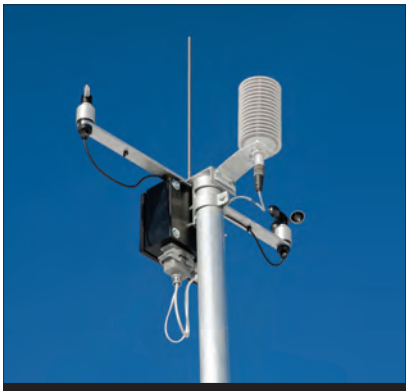
Example of Odour Detection

Dust	*Current levels of dust will be assessed and dust from the proposed landfill will be predicted using computer models. The study will determine if the anticipated total level of dust is acceptable or if other prevention/mitigation measures would be required.*
Air Quality	*Air quality includes vehicle tail pipe emissions, combustion emissions from landfill gas flaring operations and other fugitive sources (waste sources).*
Landfill Gas	*23 different compounds of interest for landfill gas that will be assessed according to the MOECC Guide to Assess Air Impacts from Landfills, including greenhouse gases.*
Odour	*The potential impacts from odour will be estimated, taking into account the design of the landfill site and the location of neighbouring properties.*
Blowing Litter	*The potential for waste that does not stay on-site and associated impact zones will be studied.*

Study Area

On-site & Site Vicinity	• Extends to approximately 5 km from the proposed landfill footprint.
Along the Haul Route	• 500 m on both sides of the haul route.
Receptor Locations	• There will be a number of receptor locations such as homes and public spaces.

Specific Approach for the Study



Sample Weather Station

1. **Review of existing background information including:**
   - Relevant technical reports from Carmeuse
   - Air quality complaints from the past 5 years
   - Five years of hourly meteorological data
   - Existing background air quality monitoring (Carmeuse and MOECC)
   - Existing Environmental Compliance Approval(s) (Air/Noise)
   - Sensitive locations for receptors
2. **Field data collection:**
   - Site visit to examine the proposed landfill location and surrounding area (topography), and to determine receptor locations.
   - Review of current contaminant levels and verify on-going dust data for baseline (current) conditions.
   - Estimate the level of dust and air emissions from the proposed site with and without the proposed landfill gas collection system, including greenhouse gases.
   - Run computer models to simulate effects of the proposed landfill site compared with baseline conditions.
3. **Data analysis** of the baseline (current) information and future predictions will be used to:
   - Compare modeling results to MOECC air quality limits and guidelines.
   - Assess baseline (no landfill), operational (with landfill), and post-closure scenarios for greenhouse gas emissions from stationary and mobile sources of emissions.
   - Evaluate the environmental effects.
   - Evaluate the cumulative effects of the proposed landfill in addition to existing local operations.
   - Recommend measures to prevent, change or mitigate negative effects, if necessary.
   - Describe and evaluate any environmental advantages and disadvantages (net effects).
   - Recommended monitoring and contingency plans, as well as triggering mechanisms.

Based on the results, a detailed recommendation section will be developed for each parameter (ie. dust, air quality, odour, greenhouse gas and blowing litter) to help minimize the potential for off-site impacts. If needed, monitoring programs, contingency plans, and triggering mechanisms will be developed.

Summary of Input Received About Air Quality

- Request for receptor locations near daycare or child care facilities, heritage farms, and nature trails.
- Concern for gas emissions from landfill and on-site vehicles.
- Concern for dust from construction activities, landfill operations, and on-site and off-site vehicles.

Key Updates to Technical Work Plan

- Addition of potential receptor locations for the study and monitoring.
- Addition of detail on how the greenhouse gas emissions will be assessed and how blowing litter data will be analyzed.

Archaeology

Definition

Study of historic or prehistoric people and their cultures through artifacts, inscriptions, monuments, and other remains.

The Archaeology Study will:

1. Determine if there are any archaeological resources that would be impacted by the proposed landfill.
2. Determine the degree of significance and value of any archaeological resources.
3. Recommend the most appropriate strategies for conserving archaeological sites.
4. Recommend mitigation measures where necessary.

Study Area

Includes the undisturbed portions of the landfill site, buffer areas, the new proposed private road, and along the haul route where there could be physical disturbances (ie. construction) due to the landfill.

Specific Approach for the Study

1. **Review of existing background information** like previously documented sites, local history, historic maps, archival data, and other background information from the study area.
2. **Field data collection** to create an inventory of archaeological resources of cultural value or interest, which includes written observations photographs, and supplemental historical research.
3. **Data analysis** to determine potential effects on archaeological sites and to recommend mitigation measures if necessary, including conservation and monitoring plans.

Summary of Input Received About Archaeology

- Possible archaeological resources on-site and on any new road developments.
- The local area may have archaeological resources from First Nations traditional land use, initial Euro-Canadian settlement in the area, and War of 1812 activity.

Key Updates to Technical Work Plan

- Clarification on the study process, specifically in determining the study areas and the expanded areas of archaeological potential.
- Discussion notes from First Nations on cultural history of the vicinity and of Euro-Canadian settlement history for the local area have been incorporated.
- Discussion notes from OPAL Alliance have been incorporated regarding respect for archaeological resources potentially affected by the proposed landfill.

Cultural Heritage & Heritage Landscapes

Definition

Cultural conditions that are part of community life, including built structures and broader landscapes.

Example Cultural Heritage Resources:

Farmhouses, barns, silos, places of worship, dwellings, stores, cemeteries, and above ground ruins.

Source: www.woodstocksentinelreview.com

BEACHVILLE.

A Village in the township of West Oxford, situated on the east branch of the River Thames, 5 miles west from Woodstock, on the plank road. It contains nearly 300 inhabitants. Churches and chapels, three: viz. Episcopal, Catholic and Methodist.

Post Office, post every day.

Professions and Trades.—One grist mill, two saw ditto, carding machine and fulling mill, distillery, two stores, two taverns, one fanning mill maker, one chair factory, two tanneries, one cabinet maker, two waggon makers, two shoemakers, two blacksmiths and two tailors.

Source: Smith's Canadian Gazetteer - Author: Smith, Wm. H. (William Henry)

Example Cultural Heritage Landscapes:

Road scape's, farm complexes, agricultural lands, water scape's, quarries and railway rights-of-way.

Any change to built or cultural heritage resources and landscapes are included in the study.

Study Area

On-site & Site Vicinity	On-site areas that might contain cultural heritage resources and a one (1) kilometer catchment area around the proposed landfill site.
Along the Haul Route	A 100-metre area on either side of the haul route, measured from the edge of the road right-of way.

Specific Approach for the Study

1. **Review of existing background information** like past classifications, studies, and cultural reference materials from the study area.
2. **Field data collection** including written observations, photographs, and historical research to create an inventory of buildings and landscapes of cultural value.
3. **Data analysis** to determine if and how cultural buildings or landscapes could be affected by the landfill, and to recommend mitigation measures, including conservation and monitoring plans.

Summary of Input Received About Cultural Heritage & Heritage Landscapes

- The Thames River as a Canadian Heritage River
- Identification of the nearby Ingersoll Rural Cemetery as a location of cultural significance

Key Updates to Technical Work Plan

- Introduction was revised.
- Clarification in the title that the assessment relates to both built resources and landscapes.

Source: http://ingersolllibrary.wordpress.com

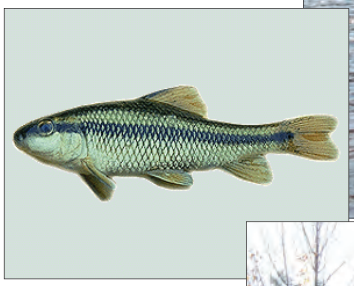
Source: http://ingersolllibrary.wordpress.com

Source: http://ingersolllibrary.wordpress.com

Ecology

Definition

The ecology study will identify how and to what extent the ecological system could be impacted by the landfill.



Aspects of ecology included in the study:

- Benthic Invertebrates (organisms that live-in sediment underwater)
- Fish Community, Fish Habitat
- Indicator Species (ie. Rainbow Darter, Iowa Darter)
- Species at Risk
- Ecological Land Classifications
- Wetlands and Woodlands
- Birds and Gulls

Study Area

On-site & Site Vicinity	• Loss or disturbance to aquatic ecosystems. • Loss or disturbance to terrestrial ecosystems (within 120 m). • Disease transmission via insects or vermin. • Aviation impacts due to gull interference (within 500 m).
Along the Haul Routes	• Loss or disturbance to aquatic ecosystems. • Loss or disturbance to terrestrial ecosystems (within 50 m).
Wider Area	• Loss or disturbance to aquatic ecosystems. • Loss or disturbance to terrestrial ecosystems (within 1 km). • Aviation impacts due to gull interference (within 20 km and 16-60 km).

Specific Approach for the Study

1. **Review of existing background information** like past ecological studies from the area.
2. **Field data collection** including aquatic and terrestrial sampling and surveying related to four different topics:
   - **Loss or Disturbance to Aquatic Life:**

     Annual (Spring or late Fall) sampling of benthic invertebrates and semi-annual (Spring and Fall) sampling of the fish community, with attention to Species at Risk, both upstream and downstream of the proposed landfill site.
   - **Loss or Disturbance to Terrestrial Ecosystems:**

     Field data will be collected throughout the seasons, including ecological land classification and floral surveys, species at risk/rare species survey, breeding bird surveys, amphibian visual and auditory surveys, winter wildlife use observations, and landscape connectivity using aerial photography and verified with a field inspection.
   - **Disease Transmission via Insects or Vermin:**

     Assessed by identifying the primary vectors (types of insects/vermin) and the likelihood of disease transmission based on the information available from the aquatic and terrestrial surveys.
   - **Aviation Impacts due to Gull Interference (increased risk of bird strikes):**

     Assessed using the Airport Bird Risk Assessment Process.
3. **Data analysis** will evaluate the potential impacts of the proposed landfill on local ecology and recommend mitigation measures including a proposed management and monitoring plan, as necessary.

Summary of Input Received About Ecology

- Concern for water quality, which could have an impact on the local ecology.
- Concern with the potential for disease-carrying birds to impact livestock.
- Interest in having an ecological study completed on the new roads needed for the proposed landfill.

Key Updates to Technical Work Plan

- Increased aquatic baseline study area relative to the Thames River. Downstream distance to be determined during the study as it progresses.
- Intensive vegetation monitoring may be undertaken in critical locations (ie. rare sensitive / important species where negative effect is possible).
- Future habitat for Species at Risk will be considered (in addition to current habitat).
- The bank swallow (likely to occur in the area) will be addressed as a Species at Risk.
- For mussels, the survey will focus on habitat because moving or removing mussels can have significant adverse effects on them.

Economic

Definition

The economic study will identify the potential economic and financial effects associated with the proposed landfill, and measures the potential changes in business revenues, business profits, personal finances, and/or jobs.

It includes the following areas of study:

1. Impact on businesses (income and land use)
2. Effects on employment
3. Project-associated business opportunities
4. Public costs and liabilities
5. Effects on municipal tax bases and finance
6. Effects on the cost of service for customers
7. Effects on the provincial and federal tax bases
8. Effects on property value

Study Area

On-site & Site Vicinity	• Displacement and disruption to area businesses • Property value effects • Public costs and liabilities
Along the Haul Routes	• Displacement and disruption to area businesses • Property value effects • Public costs and liabilities
Wider Area	• Public costs and liabilities • Effects on municipal tax bases and finance • Effects on cost of service for customers • Effects on provincial and federal tax bases

Specific Approach for the Study

1. **Review of existing background information** like economic development reports, municipal finance documents, real estate sales records and databases, waste management industry reports, and Statistics Canada data.
2. **Field data collection** including a business inventory and interviews with property owners.
3. **Data analysis** will produce predictions, estimates and forecasts of the potential economic impacts including:
    - Potential effects on local businesses.
    - Direct, indirect, and induced impacts on employment, labour income, gross domestic product and provincial, federal and property taxes.
    - Potential cost and revenue impacts of the proposed landfill on lower tier municipalities and the County of Oxford using municipal financial models.
    - Southwestern Ontario customer cost within current waste management systems, and the prospective customers cost for using the proposed landfill.
    - Potential impacts on property value.
    - Economic implications of greenhouse gas (GHG) emissions under the Province's new cap and trade program.

Summary of Input Received About Economic Aspects

- Concern for potential impacts on area businesses including commercial farm operations.
- Interest in the potential for local area job creation and new business opportunities.
- Concern for potential imposition of costs and liabilities on local area municipalities.
- Concern for potential property value effects (both residential and commercial).
- Interest in the potential impact on of the proposed landfill on existing waste management programs and their customers.

Key Updates to Technical Work Plan

- Addition of economic analysis of potential greenhouse gas (GHG) emissions.
- Use of Teranet on-line data to assist with the determination of property value effects.

Groundwater & Surface Water

Definition

Surface Water Water that collects and is visible above ground.

Groundwater Water that is below the surface, moving through rocks and soil. You may be familiar with the term “water table” which is the depth where groundwater starts below the surface.

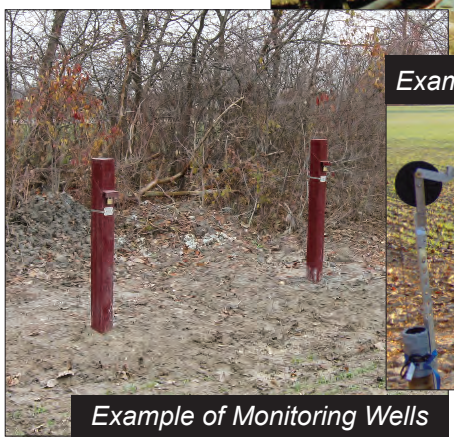
The study will examine:

- The movement of groundwater and surface water (e.g., the rate and direction of flow).
- Water quality - samples will be tested in an accredited laboratory for a wide range of chemical compounds, reflecting the government’s standards for drinking water and aquatic life.
- The potential for underground movement of landfill gas is also included in this study.

Example of Borehole Drilling

The technical study will address:

- The potential for groundwater or surface water contamination.
- Flood and erosion hazards.
- Whether streams would need to be re-routed.
- Whether any wells would go dry or lose capacity.
- Whether the flow to any streams would change (lower or higher).
- Whether any gas from the landfill could move off-site under the ground.



Example of Monitoring Wells

Example of Geophysical Borehole Logging

Study Area

- Existing Carmeuse Lime (Canada) Limited site, landfill buffer zones, and local area where surface water discharge from the quarry is currently permitted (ie. the Thames River).
- Where the groundwater may potentially be drawn down to below original water levels, as a result of the proposed landfill activities (as determined by the study).

Specific Approach for the Study

1. **Review of existing background information** including geology, hydrogeology and surface water features of the site and vicinity.
2. **Field data collection** includes the following and more (full list in technical work plan):
    - Continual monitoring of groundwater and surface water
    - Monitoring wells to characterize the groundwater quality and quantity.
    - Quarterly recording of water levels and temperatures.
    - Quarterly groundwater sampling, to determine the seasonal variations, water levels and temperatures.
    - Mapping of the exposed bedrock at the site for rock characteristics and evidence of karst features.
    - Characterization of surface water flow and quality.
    - Collection and testing of surface water grab samples, on a seasonal basis (spring, summer, fall and winter), at locations in the Thames River and tributary streams that feed into the river.

What is Karst?

Karst is the name for holes or caves in rocks, caused by part of the rock dissolving over time.

3. **Data analysis:**
    - Development of a hydrogeologic model to provide a framework for evaluating potential impacts.
    - Predictions of the quality and quantity of surface water discharges from the landfill and/or the leachate treatment system, as well as predicted surface water runoff, peak flows, and quality conditions associated with the landfill.
    - Computer modeling to predict how the landfill will interact with groundwater and surface water.
    - Identification of any potential effects on groundwater and surface water, assuming impact prevention and mitigation measures are implemented, like the landfill liner.

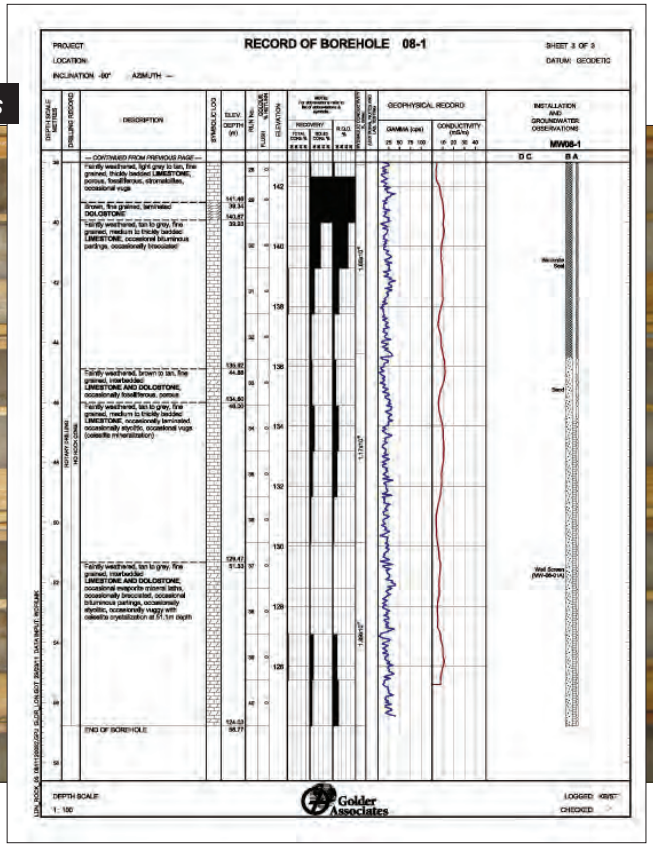
Summary of Input Received About Groundwater & Surface Water

- Maximize distance from Thames River to minimize potential impacts to water quality.
- The landfill liner must be effective in protecting all water.
- Leachate holding ponds need to be fully protective of the environment.
- Concern regarding impact of treated water on Thames River Watershed and drinking water (quantity, quality, ecology).
- Request to consider historical flooding in Oxford County.
- Concern regarding discharge location of treated water.

Key Updates to Technical Work Plan

- Flood events predicted to occur once every 250 years will be considered.
- An assessment of the existing flow regime in the Thames River and local tributaries will be completed.
- An assessment of the quantity and quality of any seepage into the quarry and the potential for seepage from the Thames River will be included.
- The assessments will specifically identify, recognize and determine any potential effects on the Wellhead Protection Areas associated with the municipal drinking water wells, Highly Vulnerable Aquifers and Significant Groundwater Recharge Areas identified in source water protection studies.
- The modeling of future baseline conditions will consider ongoing dewatering and rehabilitation of the quarries by Carmeuse.

Example of Detailed Records of Geological Formations



Example of Rock Core Samples

Additional Related Background Information

- The landfill would feature a generic double composite liner system plus compacted backfill ranging from 5 m to 22 m between the quarry floor and the liner.
- Leachate can be collected using either or both of the primary and secondary leachate collection systems.
- Storm water that comes into contact with the active working areas of the landfill will be treated as potentially contaminated and will be directed into the leachate collection system.
- The liner extends from the bottom of the landfill, up the side slopes, to the ground surface.

Examples of Flow Measurement & Water Sampling

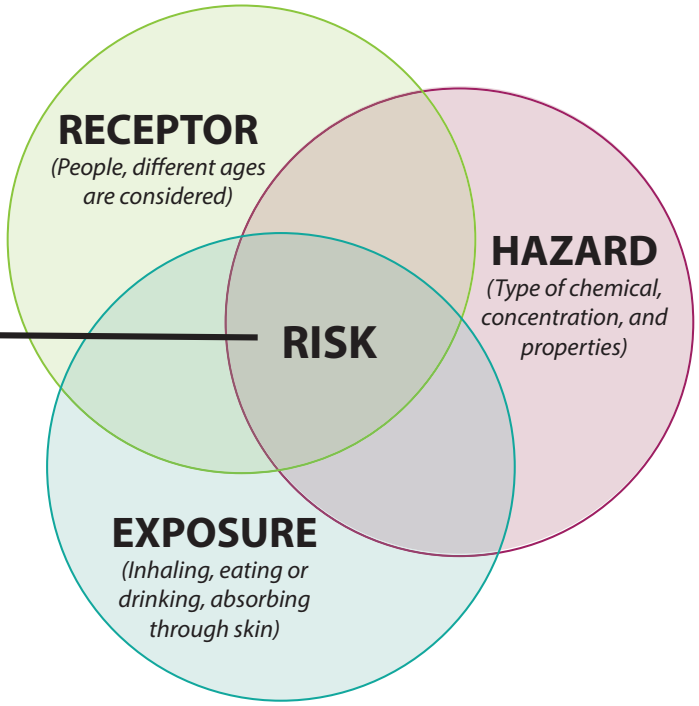
Human Health Risk Assessment

Definition

The Human Health Risk Assessment (HHRA) uses information collected from other studies to evaluate the potential risks to human health from the proposed landfill.

The study will provide information about the potential risk to human health due to contaminants in the environment (ie. air, soil, sediment, surface water, groundwater, food, etc.). This risk will be assessed without the proposed landfill (current conditions) and then with the proposed landfill (predicted conditions).

For there to be risk to human health, there has to be a hazard, exposure and receptor.



Study Area

On-site & Site Vicinity	• On-site extends to approximately 5 km from the proposed landfill • The area will vary depending on the exposure pathway examined. For instance, air quality will be considered up to 5 km, or beyond where necessary, whereas water quality and quantity will take into account where there would be discharge to surface water and where groundwater would be lowered due to landfill activities.
Along the Haul Route	• 500m on both sides of the haul route.
Wider Area	• There will be a number of identified receptor locations (places where people are) that will be used to determine the potential effects of the proposed landfill. • Receptor locations include features such as neighbourhoods, businesses, and recreational areas.

Specific Approach for the Study

1. **Background information and data collection:** Background measurements and predicted future air concentrations for the relevant contaminants will be provided by the Air Quality Study and water concentrations will be provided by the Groundwater/Surface Water Study.
2. **Data analysis** on the gathered information to predict if and how individuals could be exposed to specific chemicals, to determine the potential risk to health from exposure. Consideration will also be given to chemical mixtures.
    - For each contaminant, the "worst-case scenario" approach will be used for each receptor-type (infant, toddler, child, adolescent, and adult) considering different exposure pathways (inhalation, ingestion, and skin contact) to ensure a conservative assessment.
    - If there is potential for negative impacts to human health, there will be recommendations for risk management and mitigation measures.

New Addition:
Supplementary Health Review

Suggested by Walker and endorsed by the Minister of the Environment and Climate Change.

The health expert will review the findings of the social and economic studies to assess the potential for related health effects.

Summary of Input Received About Human Health

- Concern for potential health issues due to:
    - Exposure to air emissions from the landfill and trucking vehicles using the haul route
    - Ingestion from home gardens or agricultural food from facility air emissions
    - Contact with soils contaminated by emissions to air or water from the facility
    - Exposure to groundwater or surface water contamination due to discharges by the facility

Key Updates to Technical Work Plan

- Update to the list of potential receptor locations
- Addition of the Supplementary Health Assessment in response to Amendment #13 of the Terms of Reference Notice of Approval.

Noise / Vibration

Definition

An acceptable level of noise / vibration does not disturb the daily enjoyment of activities within a community. If noise / vibration levels are causing such a disturbance, then mitigation measures are needed.

Study Area

On-site & Site Vicinity	Extends to approximately 5 km from the proposed landfill footprint.
Along the Haul Route	500 m on both sides of the haul route and dominant emergency detour routes.

* If modeling predictions indicate noise/vibrations beyond 5 km of the study area or 500 m of the haul route, the study area will be adjusted accordingly.

Specific Approach for the Study

1. **Review of existing background information** will pull data from the traffic study including:
   - Existing traffic that is related and unrelated to Carmeuse activities
   - Projected future landfill-related traffic volumes along the haul route
   - Normal background noise (traffic noise not related to Carmeuse or Walker operations)
2. **Field data collection** through site visits, modeling of future conditions, assessments of compliance, and placement of field receptors.
3. **Data analysis** will follow the applicable guidelines for these types of predictions. If noise is predicted to exceed acceptable levels, noise mitigation measures and a landfill noise management plan will be developed.

Mitigation Measures may include:

- Adding perimeter or higher berms.
- Altering the facility characteristics and activities to limit noise levels or rescheduling operating hours.
- Adding localized, portable noise barriers near the working face of the landfill.
- Monitoring, contingency plans and triggering mechanisms.

The Landfill Noise Management Plan would outline:

- Required noise mitigation measures.
- Complaint response and investigation procedures.
- Monitoring procedures and frequency.
- Triggering mechanisms for the review and potential addition of alternative noise mitigation measure.

Summary of Input Received About Noise / Vibration

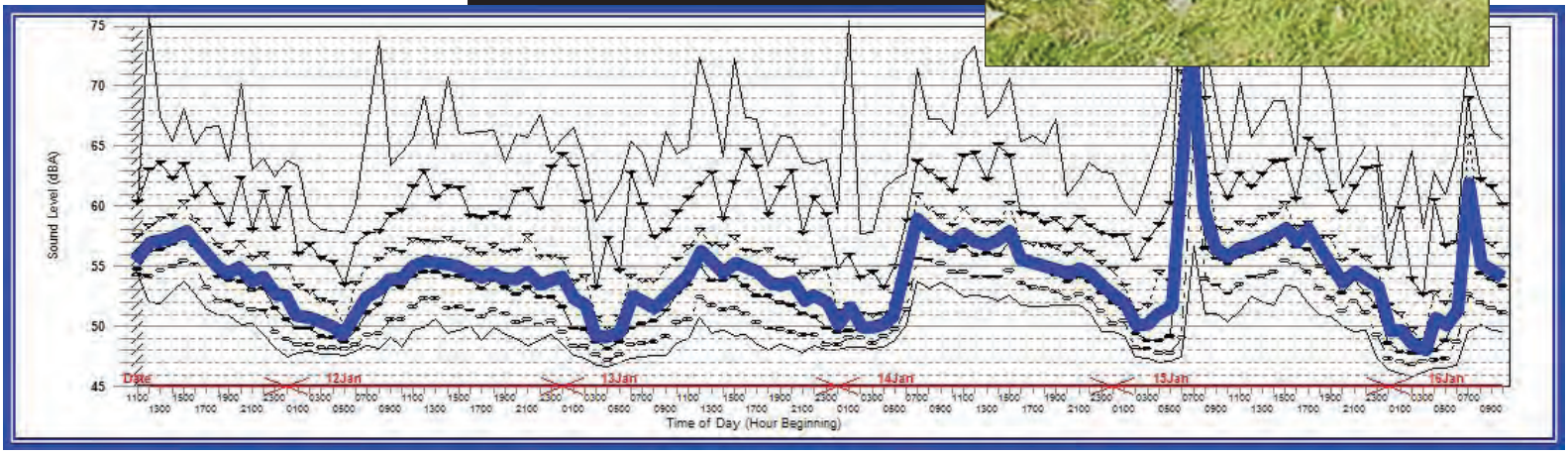
- Concern for the noise potential from operations, construction activities and cumulative impacts with Carmeuse operations.
- Potential for noise from increased traffic.
- Importance of receptors located at daycare centres and farms.
- Importance of minimizing noise along nature trails.

Key Updates to Technical Work Plan

- Modifications and additional detail about how the field data collection and modeling will occur.

Sample Model of Noise Levels Around a Facility

Sample Noise and Vibration Monitoring



Social

Definition

The Social Study is the process of analyzing the intended and unintended social consequences, both negative and positive, of a project on a community, and recommending methods to reduce and manage residual negative effects.

The social study will report on the potential for effects on:

- **People's way of life:** where and how they live, work, play and interact with one another on a day-to-day basis
- **The community:** its cohesion, stability, character, services and facilities
- **The environment:** the cumulative effects of possible changes in the quality of air, water dust and noise as well as other issues such as litter, pests or visibility
- **Traditional Activities:** Indigenous land resources and interests

Study Area

On-site & Site Vicinity	• On-Site: the waste disposal facility and associated buffer zones • Site Vicinity: - All properties within a 2 km radius from the proposed landfill buffer zone - Extended to include all properties along the haul route and into the community appropriate, as well as the community of Beacvhille, towards the western boundary of Woodstock
Along the Haul Routes	• Includes all properties within approximately 500 m on either side of Highway 6 running north from the interchange at Highway 401 to the proposed landfill site entrance
Wider Area	• County of Oxford, Townships of Zorra, Township of South West Oxford, Town of Ingersoll
Traditional Lands	• Effects on land resources, traditional activities or other interests of Indigenous peoples

Specific Approach for the Study

1. **Review of existing background information** like:
    - Field mapping of residences, businesses, farm operations and community facilities/service areas
    - Statistics Canada and other federal department data
    - Municipal Data, including planning data
    - Municipal vision statements, economic development and sustainability plans, infrastructure and recreational plans (ie. cycling plans), etc.
    - Indigenous land use, traditional knowledge, and socio-economic data
    - Information available from public facilities and institutions, community groups, and organizations
2. **Field data collection:** a variety of formats will be used to capture a full-range of data including:
    - Review workshops documents, Community Liaison Committee meetings (CLC), First Nation Workshops
    - Group Meetings / Focus Groups
    - Interviews and survey with residents
3. **Data analysis** consists of evaluating how the project will interact with the community, (positives and negatives), with full consideration of the community's concerns and aspirations.

    For significant effects, a social management plan will be designed and may include:
    - Actions to avoid or reduce negative effects and to maximize benefits
    - Policies / Programs to ensure a timely and appropriate response to potential and unanticipated impacts
    - Other forms of accommodation for effects on Indigenous interests

Summary of Input Received About Social Aspects

- Concern about potential impacts such as noise, odour, vibration, dust, and visual effects
- Concern about potential impacts to property value
- Concern about change in satisfaction with living in the area
- Concern about change in the sense of health, safety and well-being of the community
- Concern about loss of enjoyment of public and recreational features
- Concern on the potential impacts to nearby residents and farms

Key Updates to Technical Work Plan

- Additional detail about the scope and objectives for each of the data collection methods.
- Confirmed the number, timing and general areas for the Kitchen Table meetings and personal and/or telephone interviews to be undertaken.
- Additional detail about the assessment scope for land resources, traditional activities and other interests of Indigenous peoples.

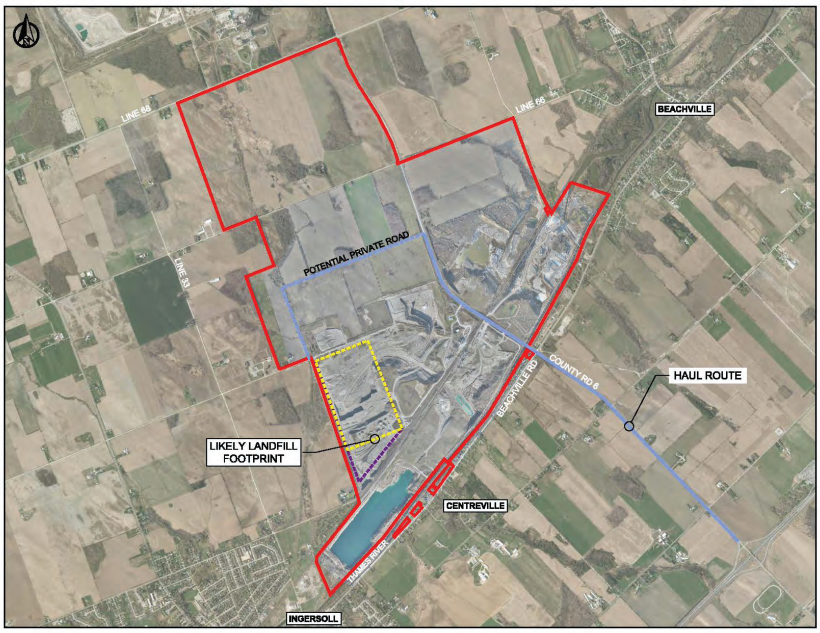
Traffic

Definition

Consideration of potential issues and impacts from a proposed development on existing road infrastructure, traffic modes, and road safety. Also identifies what measures will be taken to deal with anticipated transportation impacts.

The traffic study will assess:

- Existing traffic conditions
- Future background (baseline) traffic conditions without the proposed landfill
- Future traffic conditions with the landfill in operation.



Study Area

The traffic study will focus on the area along the proposed haul route. The primary haul route for landfill truck traffic consists of County Road 6 between Highway 401 and new private road to the west to the landfill site entrance.

Specific Study Approach

1. **Review of existing background information** like historic traffic data (examples: traffic counts, operating speeds, collision data, road inventory, aerial mapping, road design plans, railway volumes, number of driveways along the haul routes, background studies).
2. **Field data collection** including sampling of traffic counts and surveys representing peak periods as well as hours that coincide with the planned operating hours of the proposed landfill. Traffic counts and surveys can be collected manually or by video recording.
3. **Data analysis** to determine existing traffic conditions, predict future baseline traffic conditions without the proposed landfill, and future conditions with the proposed landfill. Also, to recommend mitigation measures including monitoring, contingency plans, and triggering mechanisms.

Summary of Input Received About Traffic

- Beachville Road is an official bike route and the proposed haul route crosses Beachville Road.
- The intersection at County Road 6 and Beachville Road can be challenging for trucks due to the hill, particularly in winter. This is a busy intersection where additional traffic could increase the safety risk.
- Highway 401 Exit 222 is challenging due to the service station off-ramp, and additional traffic could increase safety risks.
- Request to include a review existing County traffic studies on County Road 6 (specifically southbound traffic) including the school bus routes for all school boards.

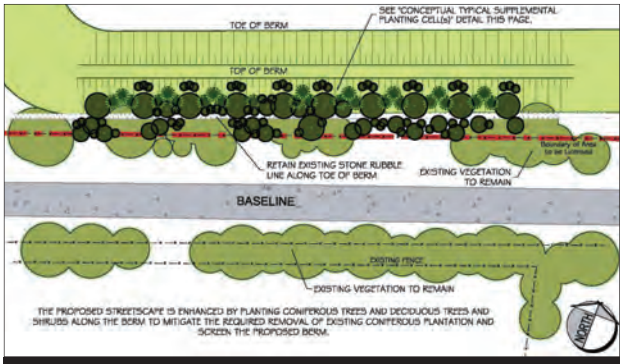
Key Updates to Technical Work Plan

- A meeting with the MTO will be scheduled to convey and discuss public concerns regarding Highway 401 operations between the County Road 6 interchange and the rest stop to the east.
- The horizon year for the traffic assessment based on an opening day for landfilling in 2023.
- The traffic analysis will focus on the peak season of the year, a representative week day and Saturday based on expected site operations, and AM and PM peak hours within the receiving hours.
- The traffic forecasts for the landfill will be based on approximately 163 inbound trucks per day of various sizes during the operation of the landfill.

Visual Impacts Assessment

Definition

A visual impact is a change in the appearance of the landscape as a result of development which can be positive (improvement) or negative (detraction).



Example Visual Simulation

The Visual Impact study will simulate the visual effects of the proposed landfill including construction, operations, and post-closure.

Study Area

The study area for this assessment is on-site and within the site vicinity, as well as along the haul route. Visual impacts may occur along haul routes where road widening or intersection improvements may be required. Visual effects of additional traffic which will also be acknowledged.

Specific Approach for the Study

1. **Review of existing background information** including land use planning and forecasting documents from the municipality.
2. **Field data collection** will include site visit(s) to document and describe the existing conditions (view of the site), maps, and aerial photography to compare the proposed facility to existing visual conditions and to anticipated conditions over the duration of the project.
3. **Data analysis** will identify representative viewpoints where the landfill might be visible and include a description and assessment of the anticipated change and degree of impact over the duration of the project. Viewpoints may include residences and public areas such as the cemetery and pedestrian trails. A report will be written of the findings and proposed mitigation measures to reduce visual impacts, like berms and vegetation.

Summary of Input Received About Visual Impacts

- Concern for visual impact to nearby neighbours from the proposed landfill..
- Concern for visual impact of trucks along the haul route.

Key Updates to Technical Work Plan

- Revisions to the methodology to clarify the study approach.

Sample: Creation of Visual Simulation & Mitigation Measure Development

Next Steps

The technical work plans explain how each technical study will be carried out, and the next step is to start the studies. This means the consultants responsible for each study will start collecting background information and carrying out field work and/or computer models. Then, they will evaluate their results and write a report.

Walker will provide updates about the studies as they progress. You will be able to find this information in the Community Exchange Newsletter or on the project website, www.walkerea.com.

Definitions

Key Definitions

Baseline Conditions	*The conditions that would exist now and in the future if the landfill was not built and operated.*
Environmental Assessment (EA)	*A provincial decision-making process that considers the potential for environmental impacts prior to a project being constructed.*
Environment	*In an Environmental Assessment, the environment includes, the natural, social, and economic environment*
Landfill Gas	*The gas that is created when organic matter breaks down in the landfill. It is approximately 50% methane (natural gas), which can be used as a renewable energy source.*
Leachate	*Water (Typically precipitation) that has come into contact with waste.*
Leachate Treatment System	*The system that is used to produce treated water from leachate. In the case of the Southwestern Landfill Environmental Assessment, this is an on-site treatment plant, similar to a municipal waste water treatment plant.*
Mitigation Measures	*Policies, procedures or activities that reduce the potential for negative impacts.*
Ministry of the Environment and Climate Change (MOECC)	*The Ontario Ministry that is responsible for overseeing the Environmental Assessment Process.*
Triggering Mechanisms	*A level or standard that is set to identify when an action should take place like a mitigation or contingency plan. (ie. wind speed that triggers additional mitigation like mobile litter fences, or closing the landfill for the day).*

Version 1: Dated March 21, 2017

Technical Expert List

The table below identifies the consulting company and main contact person for each of the 12 technical studies for the Southwestern Landfill Environmental Assessment.

This list is current as of March 21, 2017.

ENVIRONMENTAL ASSESSMENT TECHNICAL TEAM		
ROLE	**CONTACT**	**COMPANY**
Agriculture	Jerry Hagarty	Conna Consulting Inc.
Air/Noise/Vibration	Brad Bergeron	RWDI Air Inc.
Archeological	Employee of Company	Company
Cultural/Heritage	Dan Currie	MHBC Planning
Ecology	Brian Henshaw & Jo-Anne Lane	Beacon Environmental
Economics	Andy Keir	Keir Corp
Groundwater	Keith G Lesarge	Golder Associates Ltd
HHRA	Glenn Ferguson	Intrinsik
Karst	Dr. Stephen R.H. Worthington	Worthington Groundwater *(To be subcontracted by Golder Associates)*
Land Use Planner	James Parkin	MHBC Planning
Social Impact	Tomasz Wlodarcyzk	SLR Consulting
Surface Water	Kevin M. Mackenzie	Golder Associates Ltd
Traffic	Carl Wong	HDR Corporation
Visual Impact	Dave Barrett	MHBC Planning

There are 12 technical studies that will be conducted during the Environmental Assessment.

Vol IV Appendix I-11 IndigenousCommunities Meetings

Chippewas of the Thames First Nation (COTTFN)

From:	Becky Oehler
To:	Info@walkerea.com
Cc:	Darren Fry
Subject:	Communications Report - COTTFN
Date:	Monday, August 29, 2016 10:01:01 AM

Date: Thursday, August 25, 2016
Time: 10 -12 am
Group: Chippewas of the Thames First Nation

Type: In-person meeting
Team Members: Darren and Becky

Summary: The meeting was opened with a smudge and prayer. Then, everyone introduced themselves. Darren and Becky introduced the project for those who we haven't spoken with before, and answered questions about how the proposed landfill would work and how potential impacts could be mitigated, particularly regarding water (Thames River) and odour. Waste approval practices were also discussed in question and answer. The conversation was closed out by discussing how COTTFN would like to be consulted. The COTTFN Consultation Protocol is in the works, and will be discussed once complete.

COTTFN OPEN HOUSE-EVENT SUMMARY

Date: March 6th, 2019
Time: 5pm-7pm

Location: Antler River's Senior Center
Attendance: 10-12 community members

SUMMARY:

Walker Environmental Group (Walker) and Shared Value Solutions (SVS), with guidance from Chippewa of the Thames First Nation (COFFTN) staff, organized a day for data collection with the Chippewa of the Thames First Nation community. The purpose of the day was to collect land use information as part of the First Nations aspect of the social assessment in the environmental assessment. The day involved one-on-one interviews and a public open house. Walker arrived at COTTFN administrative building at 12:15pm on Wednesday March 6th to be available before and after interviews to introduce themselves and answer any questions about the project. SVS interviewed 5 community members. The open house was from 5pm-7pm at the local senior's center with approximately 10-12 community members in attendance. Conversations were respectful and provided a great opportunity for meaningful dialogue.

MAIN DISCUSSION POINTS:

- Project proximity to the Thames River
- Water monitoring and protections (liner, contingency, financial assurance)
- Importance of preserving water quality in the Thames River watershed for future generations
- How people currently use the land within the broader region around the proposed landfill site (hunting, fishing, other harvesting)
- Ensuring this event was not considered consultation
- Management of waste in Ontario
- Odour

Attention: Walker Environmental Group recognizes the Wiindmaagewin protocol for consultation, and acknowledges that this event is not consultation.

COTTFN SPECIAL COUNCIL-EVENT SUMMARY

Date: April 16th, 2019

Time: 5pm-7pm

Location: Chippewa of the Thames First Nation Band Office

Attendance: 2-5 COTTFN staff members
6-8 council members
2 Walker representatives
2 SVS representatives

SUMMARY:

Walker Environmental Group (Walker) and Shared Value Solutions (SVS), with guidance from Chippewa of the Thames First Nation (COFFTN) staff, organized a special Council meeting. The purpose of the meeting was to collect land use information as part of the First Nations aspect of the social assessment in the environmental assessment. The meeting was also an opportunity for Walker to provide an overview and update on the Southwestern Landfill Proposal. Walker arrived at COTTFN administrative building at 4:30pm on April 16th 2019. SVS interviewed the council in the second half of the meeting.

MAIN DISCUSSION POINTS:

- Project proximity to the Thames River
- Importance of preserving water quality in the Thames River watershed for future generations
- How people currently use the land within the broader region around the proposed landfill site (hunting, fishing, other harvesting)
- Ensuring this event was not considered consultation
- Management of waste in Ontario
- Odour
- The local community perceptions around landfill

Attention: Walker Environmental Group recognizes the Wiindmaagewin protocol for consultation, and acknowledges that this event is not consultation.

Vol IV Appendix I-11
Indigenous Communities Meetings

Mississaugas of the Credit First Nation (MCFN)

From: Becky Oehler
To: Info@walkerea.com
Cc: Darren Fry
Subject: Communications Report - Mississauga of the New Credit First Nation
Date: Monday, June 20, 2016 10:58:28 AM

Organization: Mississaugas of the New Credit First Nation – Department of Consultation and Accommodation (DOCA)
Date: June 17, 2016
Time: 10- 11 am
Team member: Becky
Type: In-person meeting (follow-up communication)

Summary:
Becky met with DOCA employees to discuss status of the SWLF proposal and next steps. [redacted] and [redacted] are new to the proposal, so Becky gave an introduction to Walker Industries and Walker Environmental, as well as basics about the SWLF proposal. [redacted] has had some interaction with Walker Aggregates in the past, and was surprised to learn about other parts of Walker Industries. Becky talked about the proposed site and [redacted] were particularly interested in the liner, monitoring and after use planning. Fawn gave first hand account of a closed landfill she visited that looked like parkland with trails. She said you would never have known it was a landfill except for the landfill gas pipes coming out of the ground. There was a lot of interest in how the DOCA office "monitors" can be involved through the process. Monitors are community members who have received environmental/ecological and archaeological training. The main responsibility of the Monitors is to make sure community rights and traditional areas are respected. There was interest in Walker providing training about standards/regulations, monitoring and testing and how we go above and beyond for the Monitors. Becky said that we can probably set something like that up pretty easily if Walker does the training. We agreed that the off-season (winter) is a good time to do something like that.

Regarding past consultation, Fawn said she liked the workshops and thinks they are good idea moving forward, in addition to consultation with the DOCA office and the Monitors accompanying our technical team during the studies and during monitoring if the landfill is approved. Becky noted that we are considering three workshops at key points and will provide some dates in the near term.

Follow-up: provide potential dates to Fawn for first two workshops (Becky and Jeremy Shute)

From:	Becky Oehler
To:	Fawn Sault; "megan.devries@newcreditfirstnation.com"
Cc:	Darren Fry
Subject:	Follow-Up from February 14 Meeting
Date:	Friday, February 17, 2017 10:50:46 AM
Attachments:	Proposal Map.pdf Walker Technical Team List.pdf FN Workshop November 2, 2016 Summary.pdf

Hi Fawn and Megan,

Thanks for meeting with Darren and I on Tuesday. There were a few things I said I would follow-up with you about:

1) Clear map of project area with the proposed landfill footprint outlined (attached)
    a. There was also a request for a general timeline of the studies. I don't have that information yet, but I will provide it as soon as I can.

2) List of Technical Work Plans and associated consultants (attached)

3) More information about Technical Work Plans → Go to http://www.walkerea.com/en/learn-more-about/Technical-Work-Plans.asp
    a. This web page will be updated with work plans and plain language summaries as the information becomes available.

4) Summary from the November 2nd workshop (attached)

Also, if someone is looking for general information about the project and how landfills are built and operated, I recommend our General Information Booklet:
http://www.walkerea.com/uploads/730/Doc_636141935487775932.pdf

Also, a reminder that you are both invited to the workshop on March 21, 2017 (10 am – 4 pm), as well as anyone else from your department who is interested. It will be hosted at a Chippewas of the Thames First Nation facility - SOAHAC Boardroom , 77 Anishinaabeg Drive, Muncey, Ontario N0L 1Y0 *(If using GPS/Google Maps: 6609 Switzer Drive, Melbourne, ON).* The focus of the workshop will be the technical work plans and upcoming studies. Please RSVP by March 14.

Fawn, I will touch base with you soon regarding some potential dates for a community event.

Have a great weekend,
Becky

Vol IV Appendix I-11 Indigenous Communities Meetings

Métis Nation of Ontario (MNO)

Walker Environmental Southwestern Landfill EA

Metis Nation of Ontario

Region 9 Consultation Committee Meeting

February 7, 2018

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Walker Industries

5th Generation, Family Owned

Committed to Environment, Community & Future Generations

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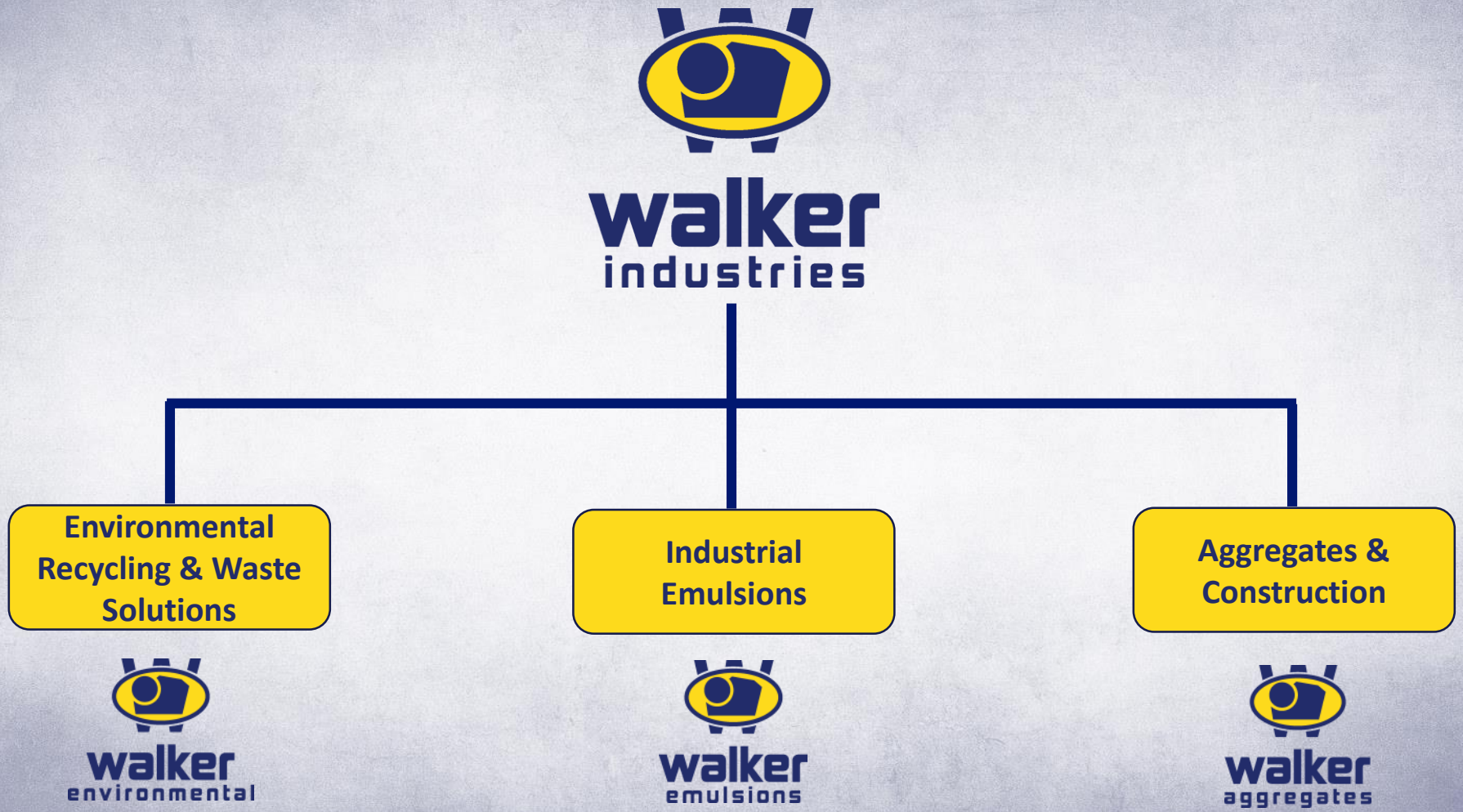


Dynamic & Diversified Corporation

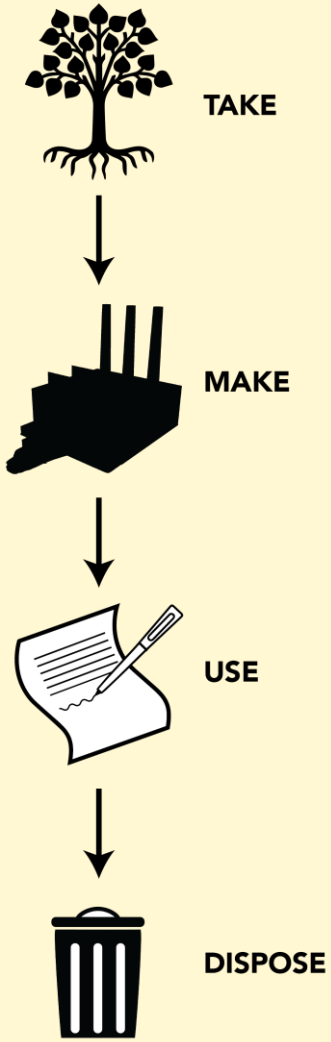
Dedicated to the environment and the community

walker environmental

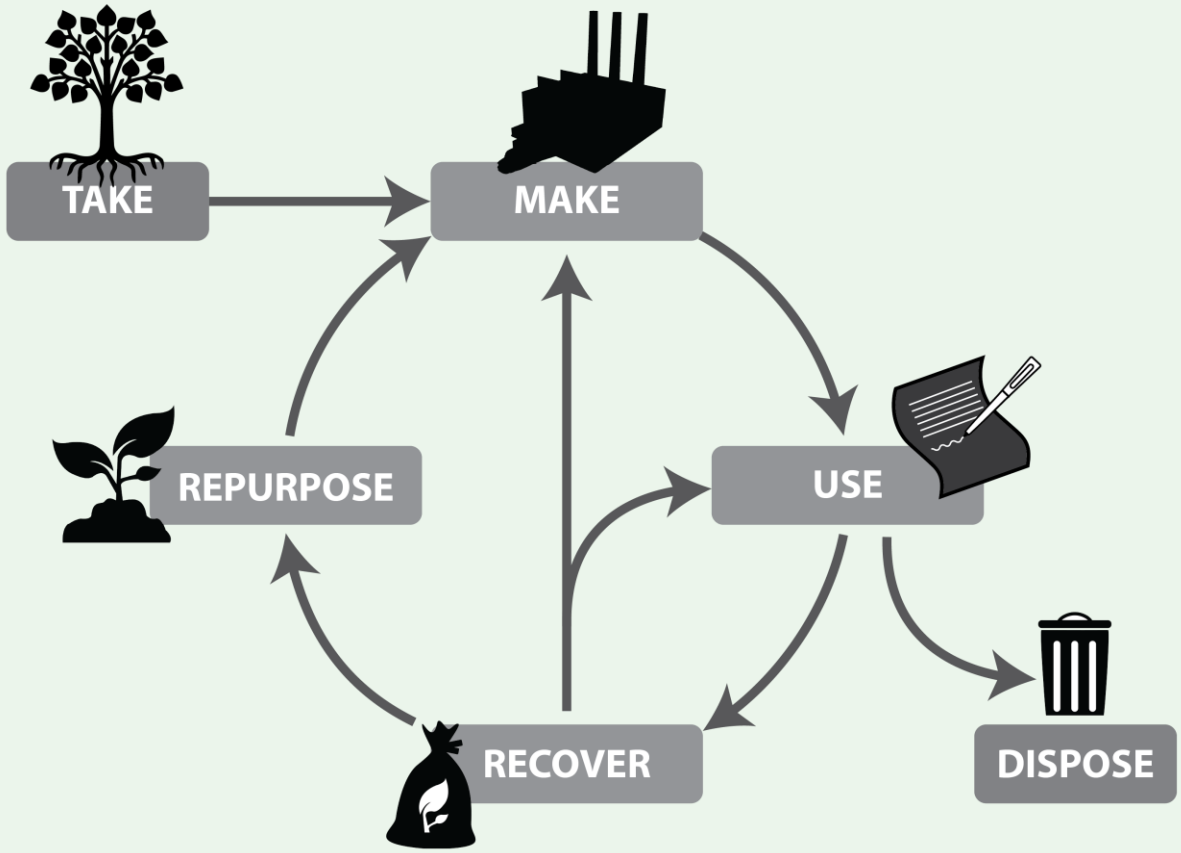
Generational Thinking

walker environmental

Linear Economy Model



Circular Economy Model



Operating in the Circular Economy

Committed to the Environment & Tomorrow's Generations

Composting

Returning food waste back to the earth

walker environmental

Derrick Crane – Low Carbon Fuels Group

Investing in our future

Creating “green” jobs for future generations

walker environmental

Low Carbon Fuels to displace coal

Mulches & Low Carbon Fuels

Transitioning to a Low Carbon Economy

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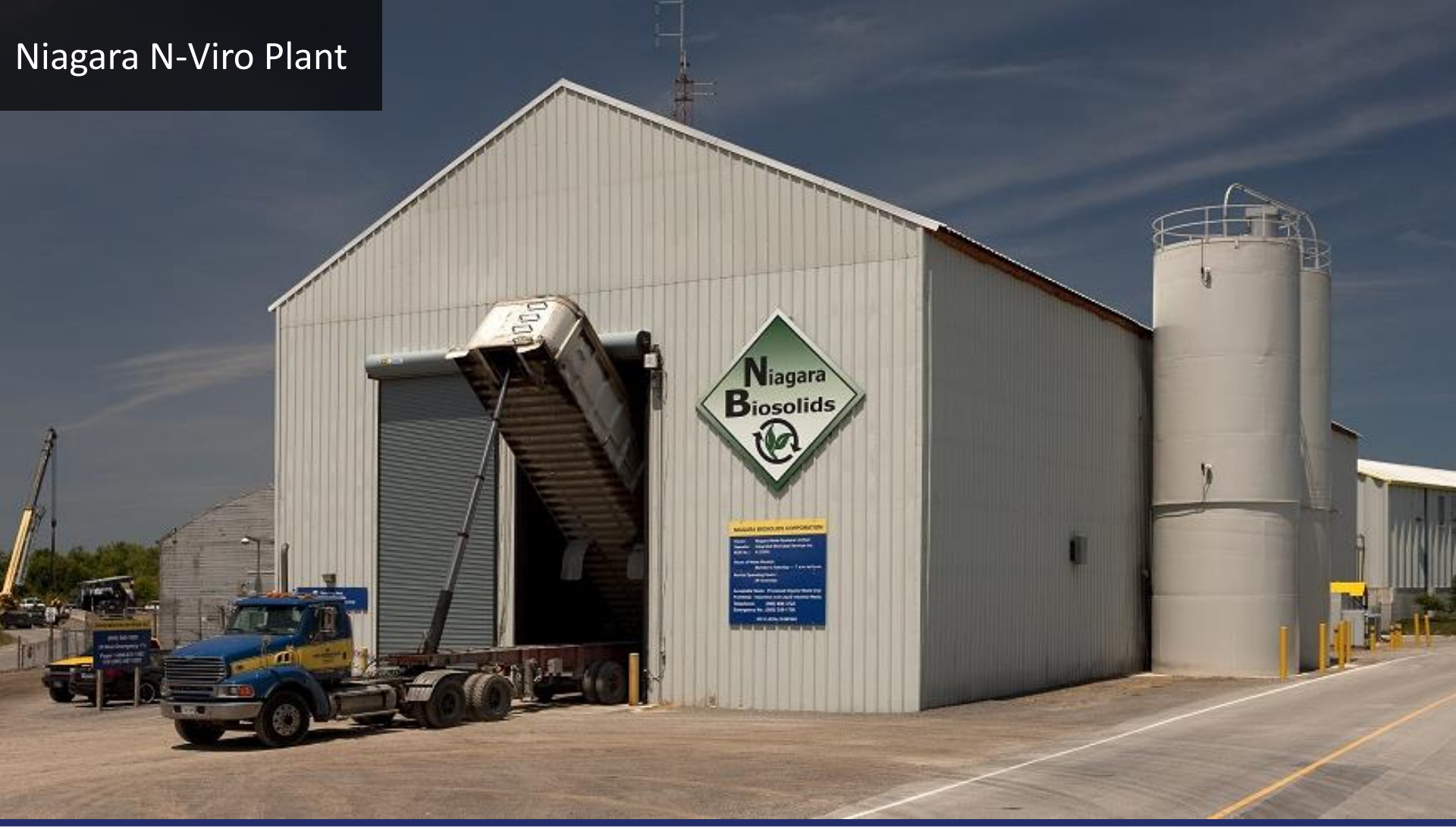
Niagara N-Viro Plant



Waste In – Commodity Out

Looking to nature for sustainable solutions

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Organics Residual Recovery System

Natural Fertilizer

N-Rich® Product

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Grease and Used Cooking Oil Collection

Creating renewable fuel sources

walker
environmental

From Leftovers to Lights

Turning food into renewable energy

walker environmental

Tackling Climate Change

Turning Landfill Gas into Energy

walker environmental

Safe & Reliable Waste Disposal

South Landfill – Niagara Falls, ON

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Walker's South Landfill – Niagara Falls

Waste Disposal

A Long-Term Safe Solution

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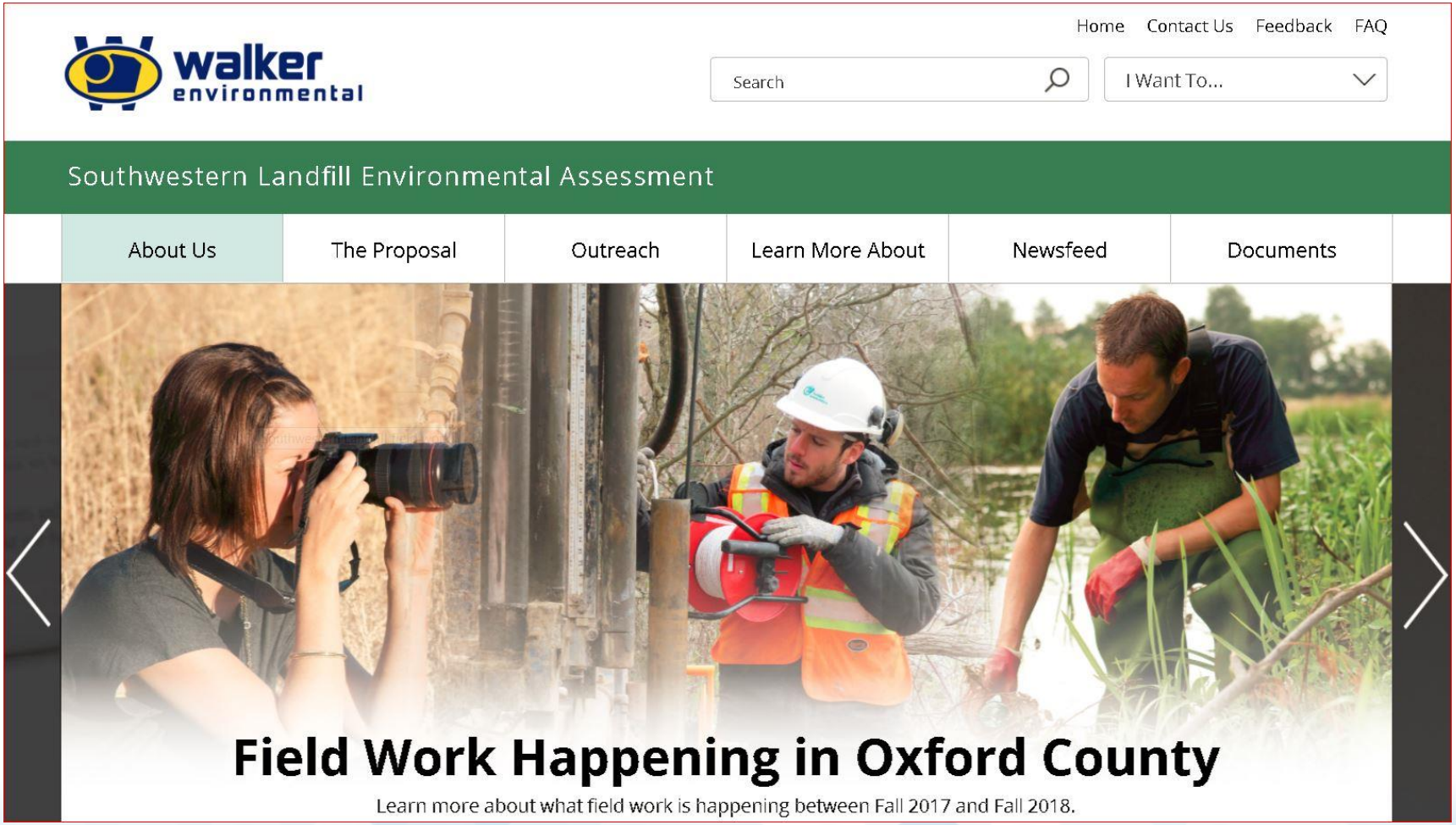
Southwestern Landfill EA

Walker is conducting an Environmental Assessment (EA) for a new, solid, non-hazardous landfill site in Oxford County.

Walker has been engaging with Indigenous Nations & communities throughout this process.

Project Overview
EA Website

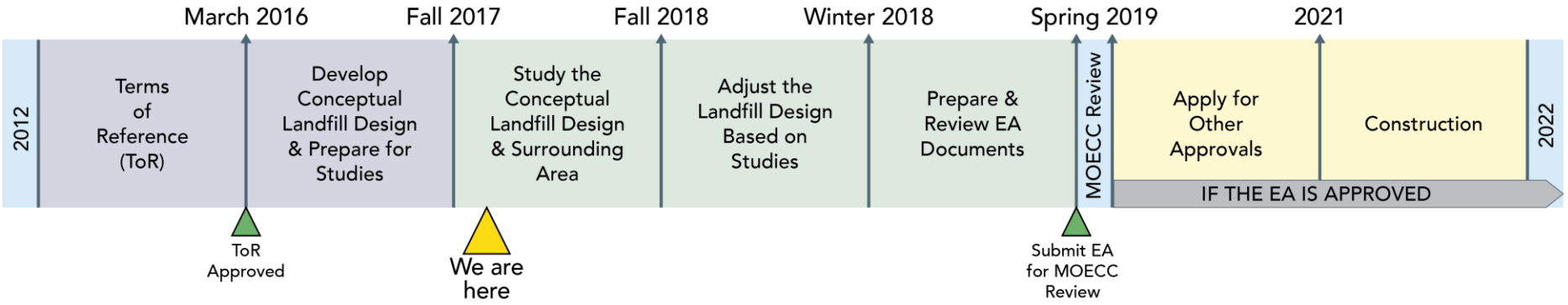


Southwestern Landfill EA

Zorra Township, Oxford County

walker environmental

Southwestern Landfill EA



- The EA was started in 2012
- Terms of Reference approved in 2016
- Currently beginning the Technical Studies
- Studies during 4 seasons (Fall 2017 – Fall 2017)
- EA submission anticipated in Spring 2019

Technical Studies

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

Date: **April 15, 2019**

Time: **12:00 pm – 3:00 pm**

Location: **160 Carnegie Street, Ingersoll ON**

Attendance

- 6 R9CC Members
- 5 Métis Guests
- 3 Walker Environmental Representatives

MEETING SUMMARY:

Walker Environmental Group (Walker) and Shared Value Solutions (SVS), with guidance from Métis Nation Ontario (MNO) staff, organized an informal meeting for introductions, project presentation, and discussion. The purpose of the meeting was to introduce the Southwestern Landfill (SWLF) team and the proposed landfill project to the MNO R9CC, and to learn how the MNO would like to participate in the process.

The format of the meeting was a working lunch with informal introductions between both parties followed by a presentation by Walker about the SWLF project with the opportunity for questions, comments, and discussion throughout. Finally, MNO provided input on how they see their involvement in the proposed project, how they would like to receive the draft EA documentation, and a commitment from Walker to meet again in the coming months.

KEY DISCUSSION ITEMS:

- **About Walker Environmental**
- **SWLF EA Project Timeline**
- **Proximity to the Thames River**
- **Protecting Groundwater Quality**
- **Quality Control**
- **Odour Control**
- **Long-term Environmental Protection & Financial Assurance**
- **Extending the Invitation for MNO Field Monitors for Archaeology Work**

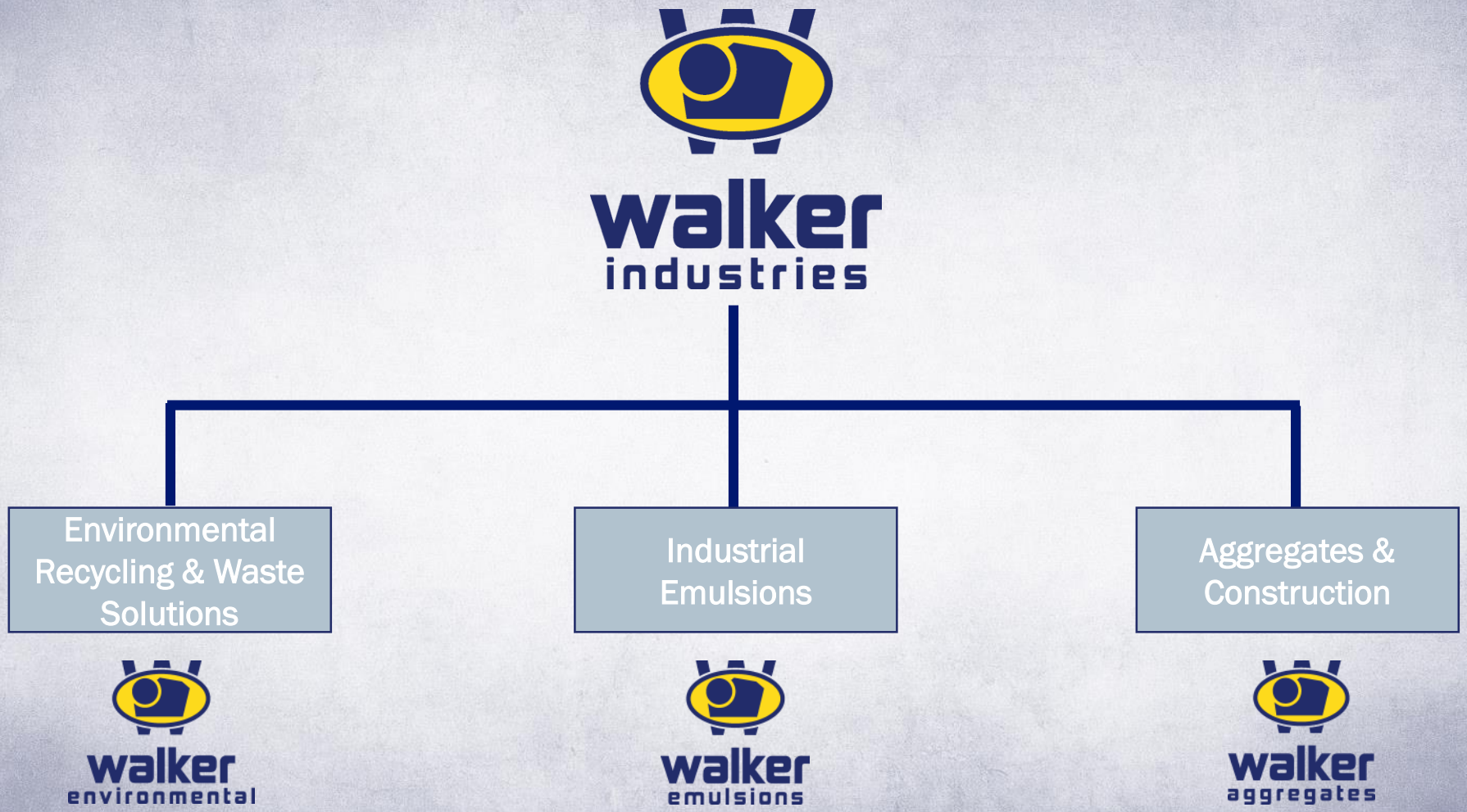
Recovering Resources Managing Waste

April 15, 2019 MNO Presentation

walker environmental

Walker Industries

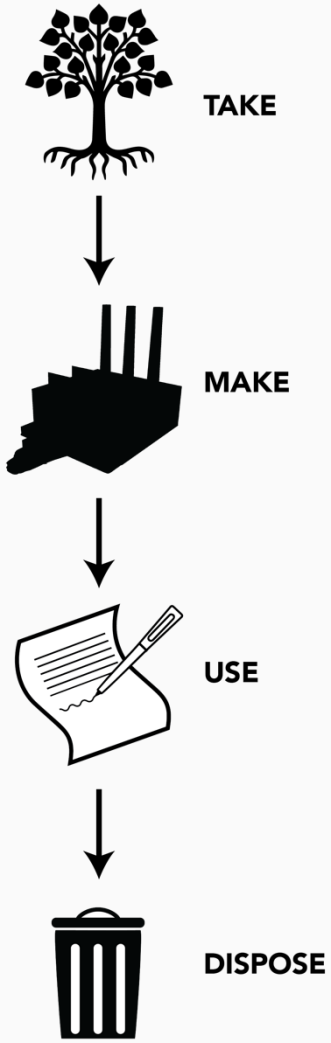
Dynamic & Diversified Company



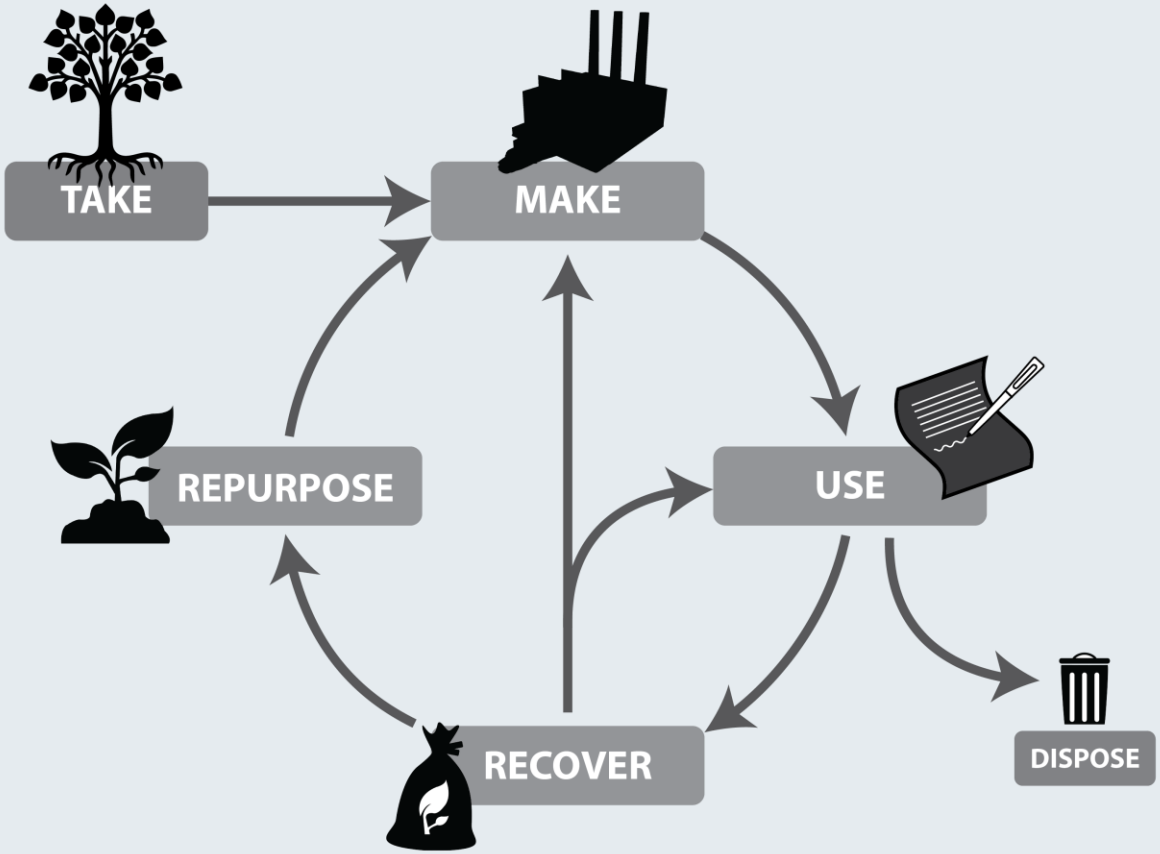
Committed to Environment, Community & Future Generations

Generational Thinking

Linear Economy Model



Our Approach - Circular Economy Model



What we do…

Providing solutions to minimize waste while safely managing what can't be reused or recycled.

walker environmental

Composting


Returning food
waste back to earth
Niagara Gore
Compost Facility

Investing in our future

Creating “green” jobs for future generations

Mulches & Low Carbon Fuels

Waste In – Commodity Out

Grease & Used Cooking Oil Collection

Tackling Climate Change

Waste Disposal

Southwestern Landfill EA

Walker is conducting an Environmental Assessment (EA) for a new, solid, non-hazardous landfill site in Oxford County.

Walker has been engaging with Indigenous peoples throughout this EA process.

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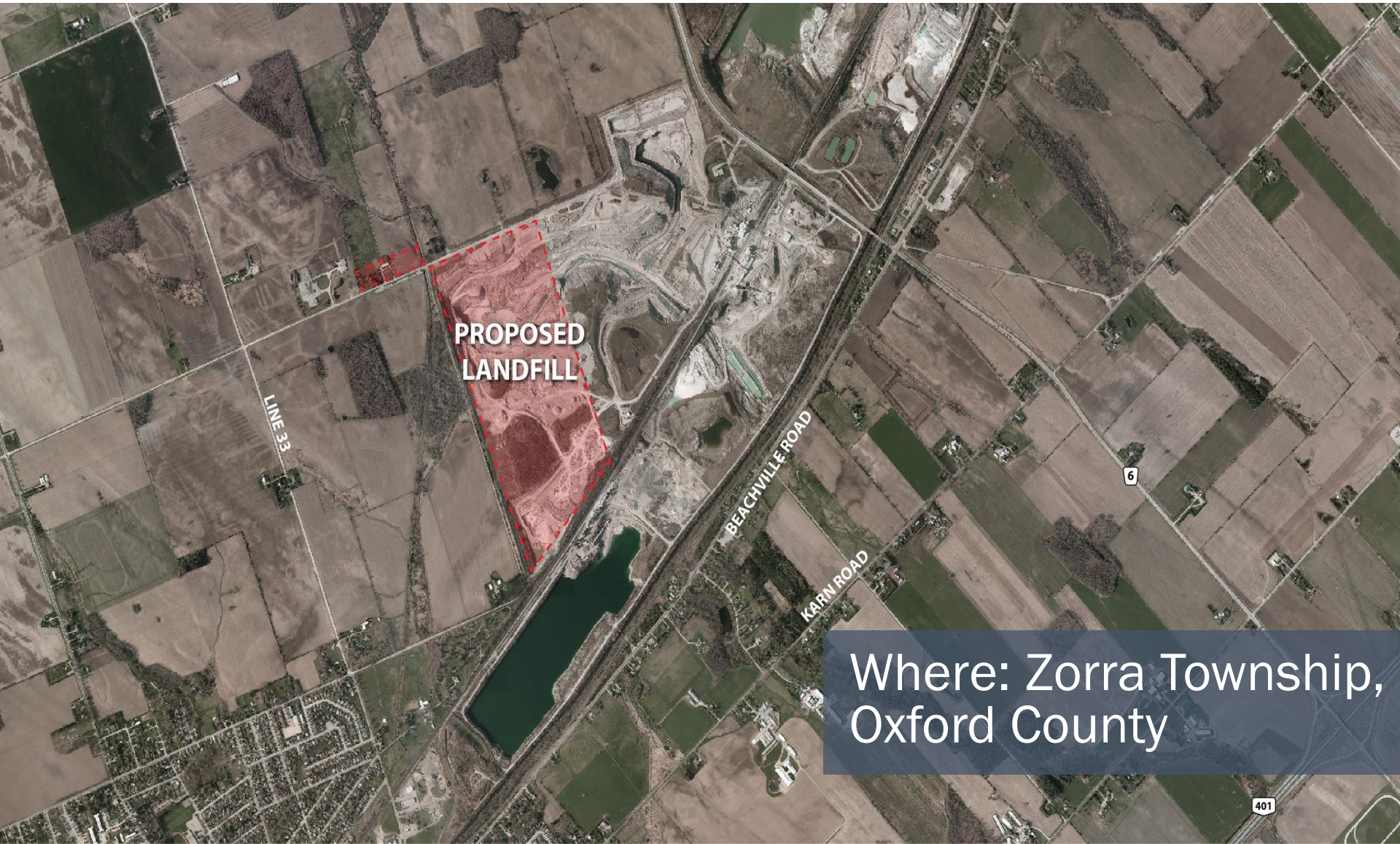
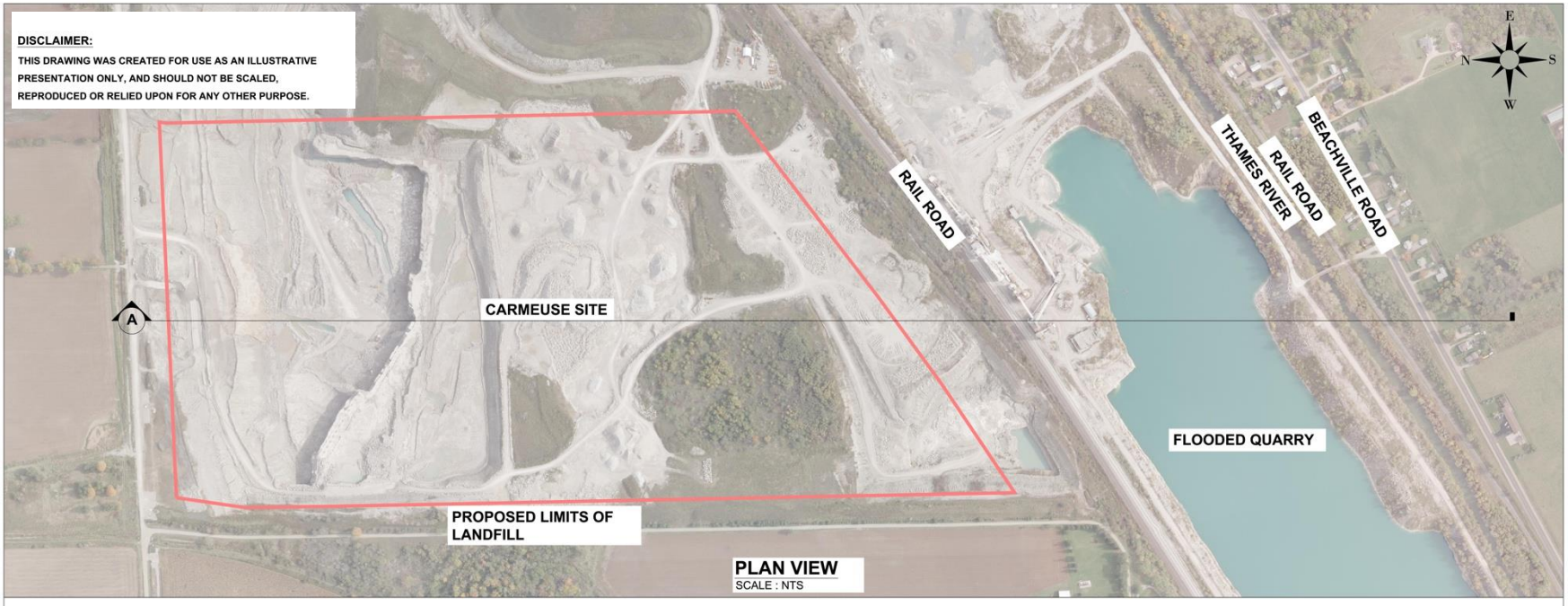
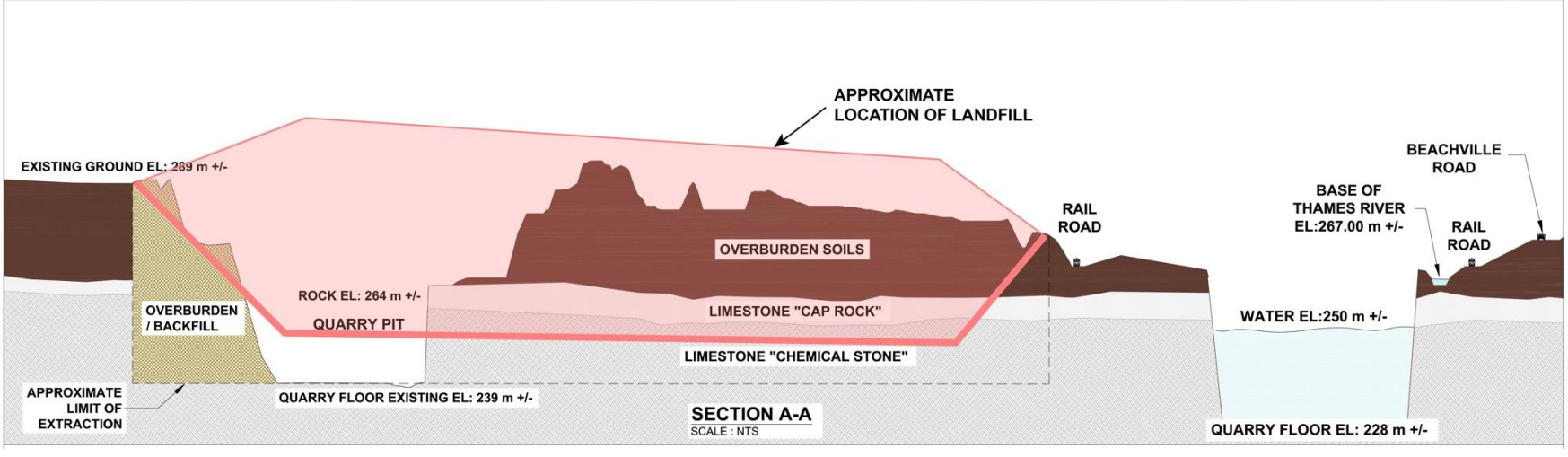
Proposed Southwestern Landfill



Proposed Site – Cross Section





Proposed Landfill Liner System

Currently used at our Niagara South Landfill

- Over 10 feet thick
- Multiple layers of plastic membrane and low permeable (clay) soil liners
- Leak detection system which can act as secondary collection system if needed
- ‘Gold standard’ of modern landfill liner systems

Southwestern Landfill EA

Indigenous Communities were the first to be notified of Walker's intent to proceed with the EA.

Walker has, and continues to, incorporate Indigenous input/perspectives into the EA.

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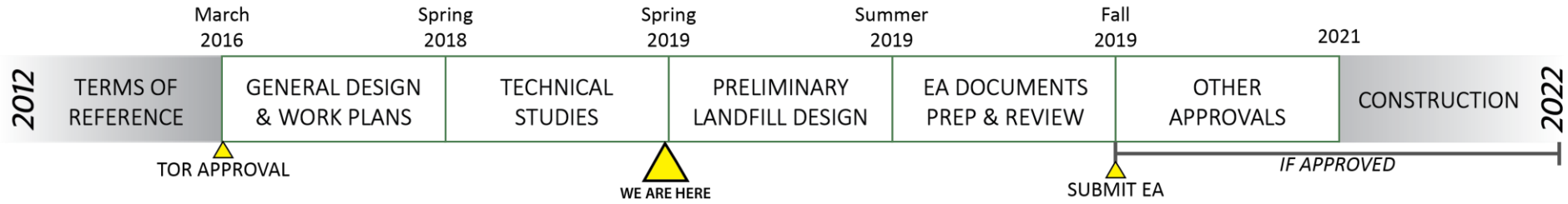
Southwestern Landfill EA



- The EA was started in 2012
- Terms of Reference approved in 2016
- Currently finishing the Technical Studies
- 4 seasons of studies (Spring 2018 – Spring 2019)
- Draft EA submission anticipated June 2019
- Final EA submission Fall 2019

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Technical Studies

13 Technical Studies

12+ months of field work/data collection

Indigenous land monitor participation

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Fieldwork monitoring

Indigenous land monitors were involved during the Archaeology Study

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EA Engagement & Consultation

- Draft EA will be available for review and comment in late spring/early summer 2019
- We are anticipating a 3 mo. review/comment period.
  - Specific MNO engagement/consultation processes?
  - Comments sent to Walker
- Final EA will be submitted in the Fall 2019
  - Any residual comments sent to Minister (MECP)

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Questions, Comments, Concerns

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

Walker Industries Inc.
PO Box 100
Thorold, ON L2V 3Y8
Tel.: 905.680.1900
Fax: 905.680.1916
Toll Free 1.800.263.2526
dfry@walkerind.com
www.walkerind.com

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Recovering Resources
Managing Waste

Thank you

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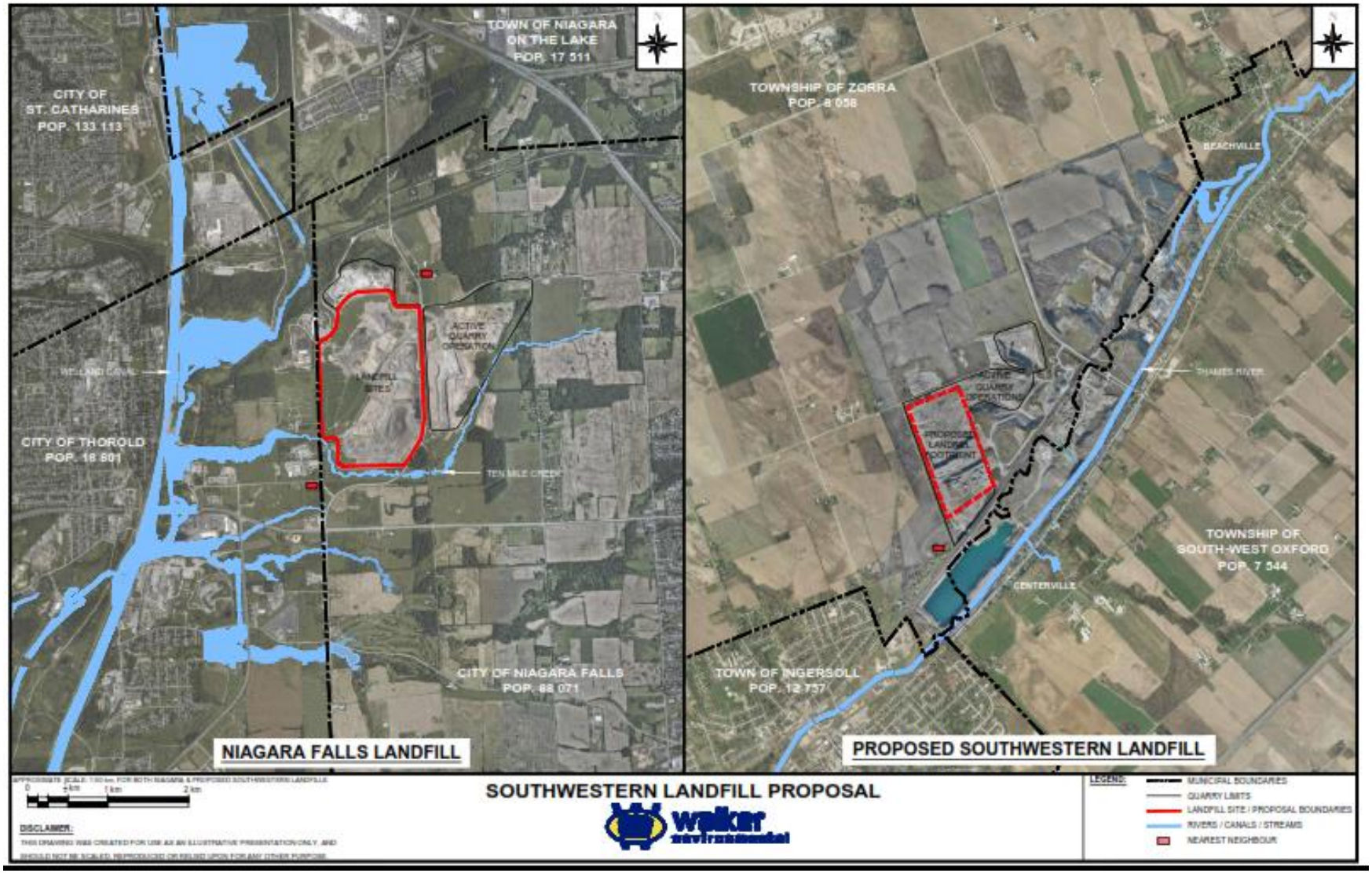
South Landfill vs Proposed SWLF



Niagara Water Monitoring

Yellow Dots: Ground Water Monitoring Wells

Red Dots: Surface Water Monitoring Locations

Ontario Waste Disposal

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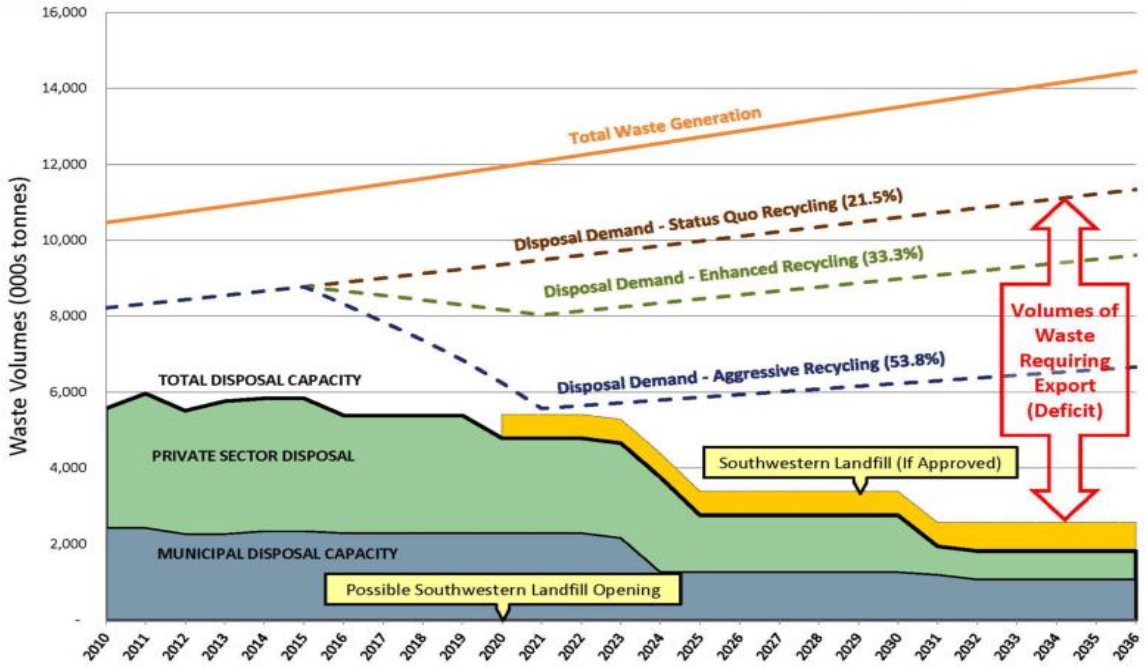
Projected Southern Ontario Waste Disposal Deficit



References include: Minstistry of Finance 2010 Population Projects 2010-2036; Statistics Canada Waste Management Survey: Business and Government Sectors 2010, 2008, 2006, 2004, 2002, 2000; Ministry of the Environment and Climate Change Landfill Inventory Management Database.

PO BOX 100, THOROLD, ON L2V 3Y8

905.680.3745 contactweg@walkerind.com www.walkerind.com

Vol IV Appendix I-11
Indigenous Communities Meetings

Oneida Nation of the Thames First Nation (Oneida)

From: Becky Oehler
To: Info@walkerea.com
Subject: Comms Report - Oneida of the Thames
Date: Thursday, May 05, 2016 10:44:45 AM

Date: April 7
Time: 1 -2 pm
Stakeholder: [redacted]
Team members: Darren Fry, Jeremy Schute, Becky Oehler
Type of comm: in-person meeting

Summary:
DF, JS and BO met [redacted] at the Oneida of the Thames. [redacted], with the environmental portfolio. We gave an overview of where we are in the process and next steps, and asked how [redacted] would like to be engaged, as well as the council and the community. [redacted] liked the FN working group and said [redacted] will talk to council about who would like to attend moving forward. [redacted] also asked if they would be able to have a tour of our Niagara campus for members of the community, including councilors.

Recovering Resources
Managing Waste

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Walker Industries

5th Generation, Family Owned

Committed to Environment, Community & Future Generations

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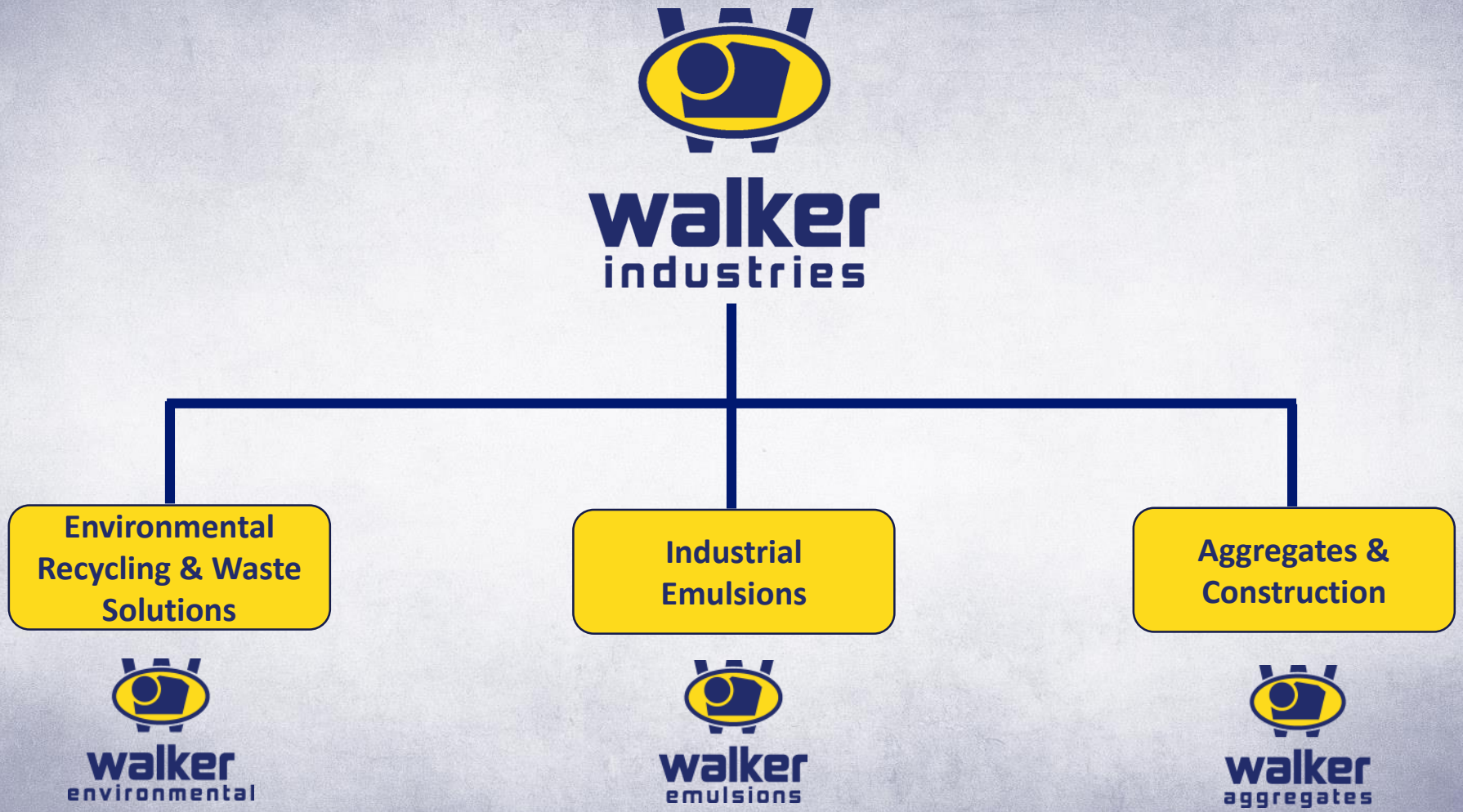


Dynamic & Diversified Corporation

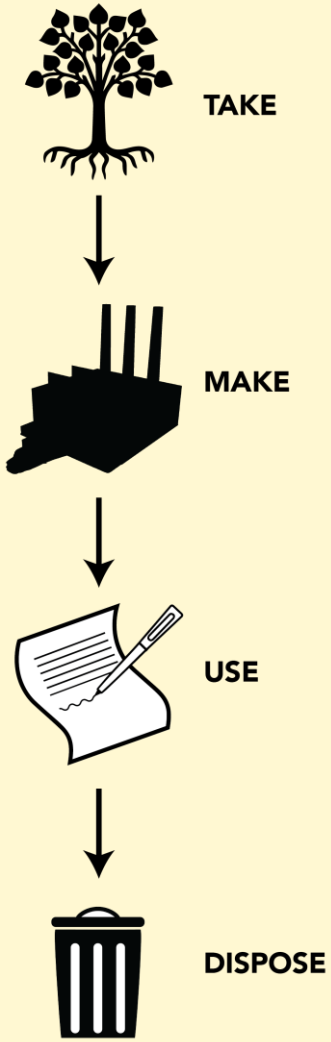
Dedicated to the environment and the community

walker environmental

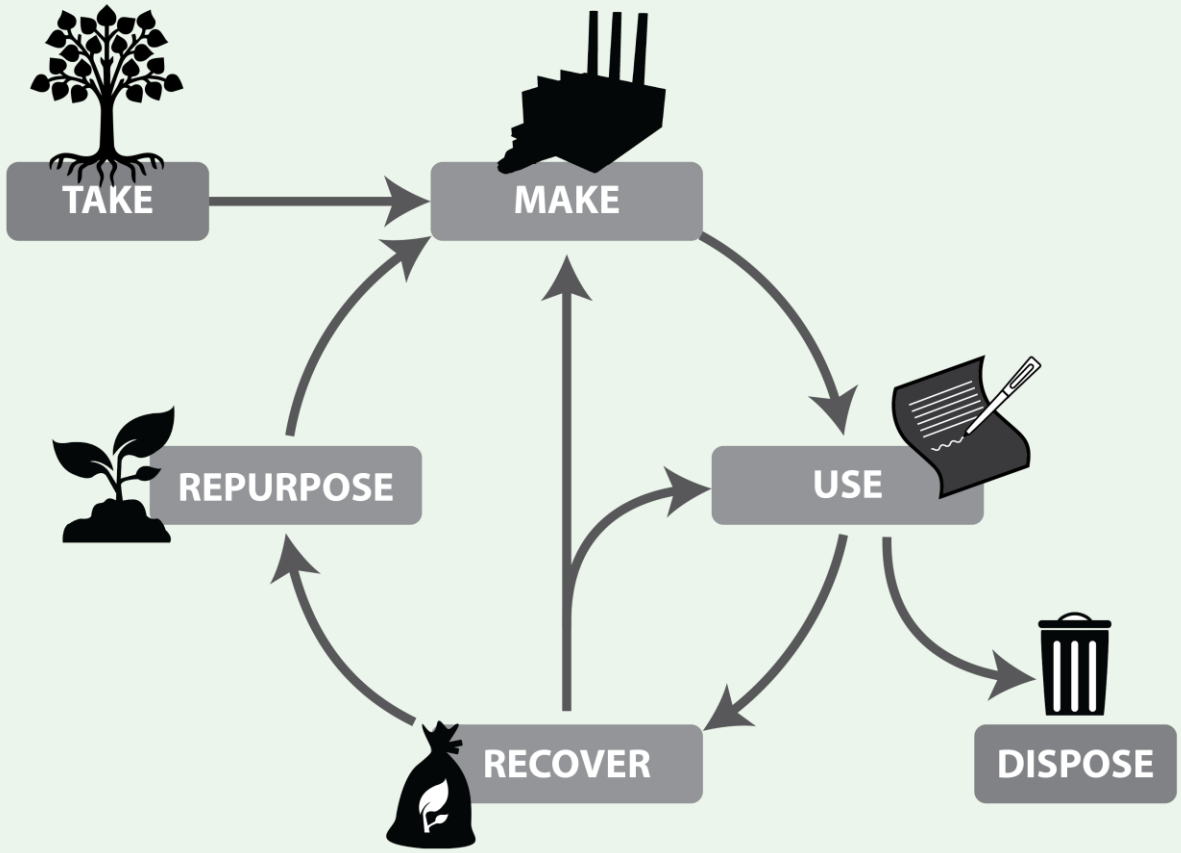
Generational Thinking

walker environmental

Linear Economy Model



Circular Economy Model



Operating in the Circular Economy

Committed to the Environment & Tomorrow's Generations

Composting

Returning food waste back to the earth

walker environmental

Derrick Crane – Low Carbon Fuels Group

Investing in our future

Creating “green” jobs for future generations

walker environmental

Low Carbon Fuels to displace coal

Mulches & Low Carbon Fuels

Transitioning to a Low Carbon Economy

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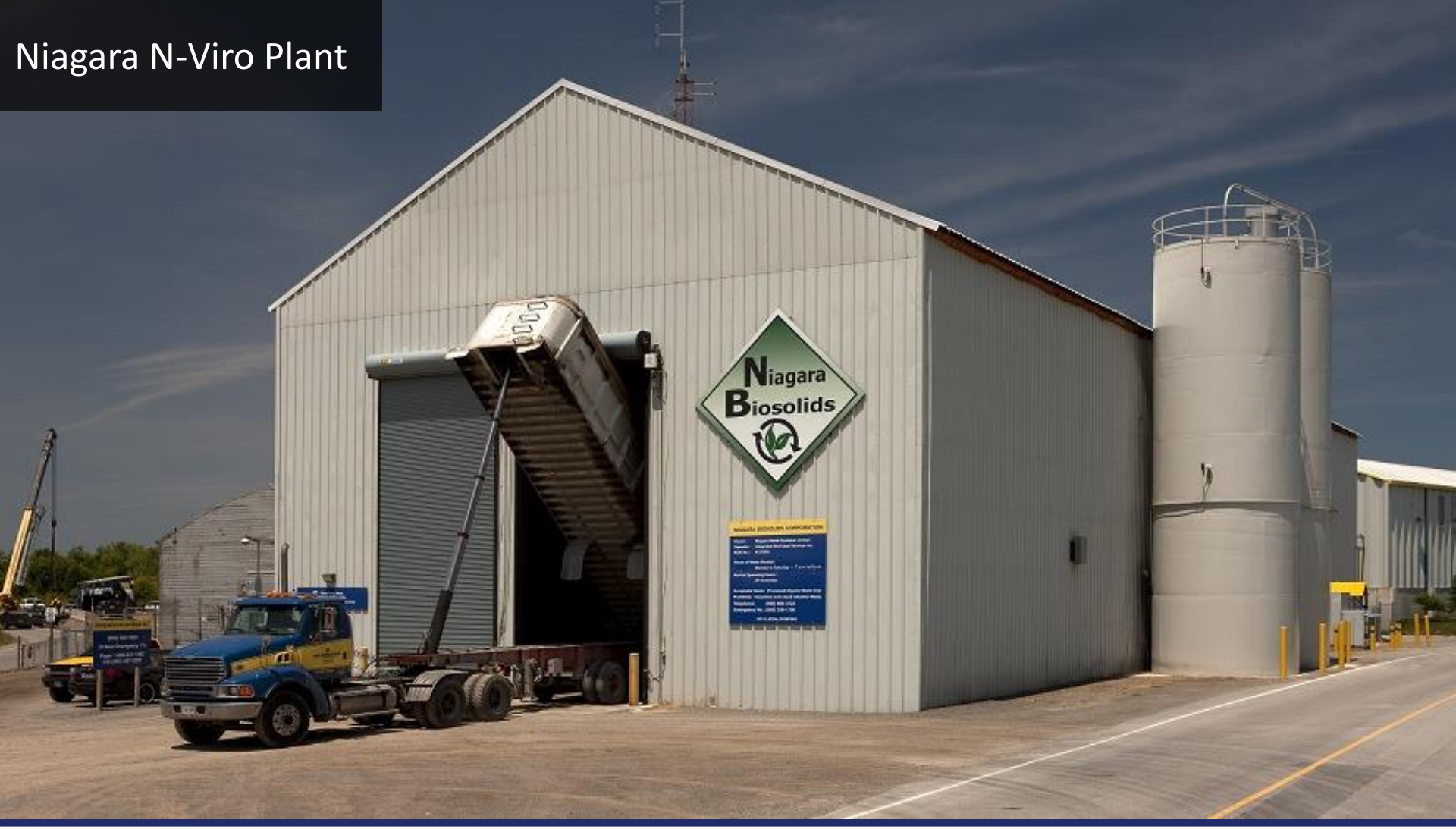
Niagara N-Viro Plant



Waste In – Commodity Out

Looking to nature for sustainable solutions

walker environmental

Organics Residual Recovery System

Natural Fertilizer

N-Rich® Product

walker environmental

Grease and Used Cooking Oil Collection

Creating renewable fuel sources

walker
environmental

From Leftovers to Lights

Turning food into renewable energy

walker environmental

Addressing Climate Change

Turning Landfill Gas into Energy

walker environmental

Waste Disposal

South Landfill – Niagara Falls, ON

walker environmental

Walker's South Landfill – Niagara Falls

Waste Disposal

A Long-Term Safe Solution

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Southwestern Landfill EA

Walker is conducting an Environmental Assessment (EA) for a new, solid, non-hazardous landfill site in Oxford County.

Walker has been engaging Oneida of the Thames throughout this process.

Southwestern Landfill EA

Zorra Township, Oxford County

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Southwestern Landfill EA

Indigenous Nations were the first to be notified of Walker's intent to proceed with the EA.

In addition to notification letters and other correspondence, Walker has consistently met with representatives of Oneida since the start of the EA.

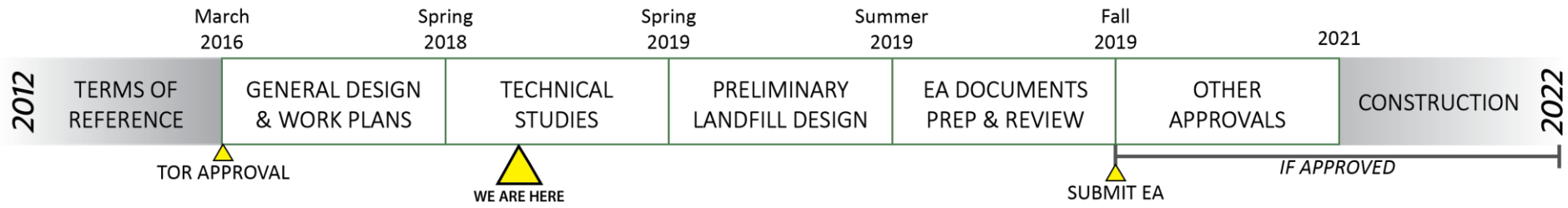
Walker has, and continues to, incorporate Indigenous input/perspectives into its EA.

Southwestern Landfill EA

Walker has also held several multi-nations meetings and tours of Walker's Niagara environmental campus to incorporate Indigenous input and perspectives into this EA:

- Oct. 1-2, 2012 – Multi-nation workshop
- Oct. 3, 2012 – Tour of Walker's Niagara campus
- May 7-8, 2013 - Multi-nation workshop
- Nov. 2, 2013 – Multi-nation workshop
- Nov. 2, 2016 – Multi-nation workshop
- Mar. 21 ,2017 – Multi-nation workshop

Southwestern Landfill EA



- The EA was started in 2012
- Terms of Reference approved in 2016
- Currently beginning the Technical Studies
- 4 seasons of studies (Spring 2018 – Spring 2019)
- EA submission anticipated in Fall 2019

Technical Studies

- 13 Technical Studies
- Field work beginning:
  - Groundwater/Surface water
  - Air & Noise
  - Ecology
  - Archeology
  - Economic
- Indigenous Land Monitors
- Site visits by appointment

Oneida Engagement

Walker is seeking to continue to engage and consult with Oneida of the Thames to make significant and meaningful contributions to the SWLF EA, possibly through an Indigenous land monitors process or another process deemed appropriate by Oneida.

Engagement Methods

- First Peoples Group (FPG) can bring examples of successful Indigenous engagement.
- For example, Oneida could create a land monitoring program to oversea land development in the Nation's territory.
- Elders and knowledge holders from the community could train other community members and youth to learn about preserving their lands, waters, archeological and sacred sites, protection of wildlife, and other sacred elements of land protection and management.

Land Monitors

- Walker would like to discuss with Oneida of the Thames an Indigenous land monitoring program or models/approaches the Nation sees necessary or appropriate.
- The environmental monitors would work with and advise Walker and its EA specialists during the EA process.

Land Monitors

- The Land Monitor program could offer a variety of benefits and opportunities to the community:
  - Promoting culture, language, and protection of sacred lands, both members that participate and the community as a whole.
  - Employment for Oneida members who wish to participate in the process as knowledge holders, trainers, or trainees to set up the program and deliver it.
  - Establishing a relationship with leading environmental company and exploring options to grow and expand the relationship.

Land Monitors

Based on the outcome of a monitor process that would provide input to Walker for the shared value of respect for the land – this would give the community an opportunity to meaningfully advise Walker as it conducts the EA process.

Potential Opportunities between Walker Industries and Oneida of the Thames

Walker is growing, has incorporated the TRC Calls to Action in its growth plan, and is looking to explore and create economic partnerships with Indigenous Nations.

Business and Partnership Opportunities

Walker is committed to expanding its waste management and resource recovery business, invest in southern Ontario, and explore partnership and business development opportunities with Indigenous peoples (which falls within the TRC Calls to Action).

Business and Partnership Opportunities

The SWLF project presents one opportunity to explore new business opportunities with Indigenous Nations, but there are many other opportunities as well. For example, Walker is currently looking to build an organic processing facility in southwestern Ontario, which Oneida may be interested in partnering on.

Moving Forward

If Oneida of the Thames decide wish to explore a monitor program with funding from Walker, or wish to further explore business and partnership opportunities, FPG and Walker will work to gather on the information necessary to move forward.

We commit to answering any questions or concerns Oneida of the Thames may have, and will work with the Nation and its staff to set out an action plan and implementation strategy.

Questions, Comments, Concerns

Contact:

Neegann Aaswaakshin, Juris Doctor (JD)
Saulteaux Tribe of the Anishinaabe Nation
Special Advisor on Indigenous Law, Reconciliation & UNDRIP

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Fax: 613.241.2252
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FIRSTPEOPLESGROUP

walker industries

walker environmental

Yaw'ko!

Niawen!

Miigwetch!

Thank You!

Vol IV Appendix I-11
Indigenous Communities Meetings

Six Nations of the Grand River First Nation (Six Nations)

RoC - Six Nations

Darren Fry
Sent: Friday, June 01, 2018 7:52 AM
To: Info@walkerea.com; Kevin Kehl; Frank Kielbowich

Meeting with Six Nations Consultation & Accommodation Committee
May 31, 2018
Six Nations
Attended: D. Fry, K. Kehl, F. Kielbowich (WEG/WAI)
SN Attendees: Lonnie Bomberry, [redacted] Matt Jocko, [redacted]

Agenda:

- SWLF EA Update
- [redacted]

SWLF

1. Provided update on status of EA
2. Stated EA studies were underway
3. Offered tour/site visits or if SN had monitors that would be interested in participating
    a. PM stated he had been on tours before, Walker has been open in dialogue
    b. **ACTION** - DL indicated that WEG notify SN (her) once archeology is scheduled and they will see if they have monitors available
4. Discussed general concerns about groundwater
    a. WEG illustrated liner & contingency concepts and that groundwater is being studying intensively
    b. No follow action required.
5. Would like to discuss End-Use concepts (naturalization, environmental, etc) at a later date.
6. No further actions/concerns.