

Business Case Analysis

**Supporting Document #1 Walker
South Landfill Phase 2 Environmental
Assessment**



March 07, 2024

Prepared By: GHD Limited
70 York Street, Suite 80
Toronto, Ontario M5J 1S9



Contents

1. Introduction	1
2. Background	2
2.1 Working Towards a Circular Economy	3
3. Purpose of the Undertaking	10
3.1 Waste Disposal at Walker’s Resource Management Campus and its Importance to Niagara Region	11
3.2 Waste Generation & Disposal Capacity in Ontario	14
4. Analysis of “Alternatives To” the Undertaking	17
4.1 Potential Options to Address the Economic Opportunity	17
4.1.1 Do Nothing	17
4.1.2 Continuation of Landfill Disposal Capacity at Walker’s Niagara Campus	18
4.1.3 Options Not Considered	18
4.2 Analysis of “Alternatives To”	19
4.3 Preferred Option	19
5. Summary of Walker’s Business Decisions	20
6. Future Role of the South Landfill Phase 2 in the Context of the Resource Management Campus	20
7. Conclusion	21

Table index

Table 3.1	Disposal of Niagara Region solid non-hazardous residual waste at Walker’s Niagara Campus (Annual)	11
-----------	---	----

Figure index

Figure 2.1	Walker's Resource Management Campus in Niagara	5
Figure 2.2	Walker's Niagara Composting Facility, Niagara, Ontario	6
Figure 2.3	Resource Recovery Area, Niagara, Ontario	7
Figure 2.4	Resource Recovery Area, Niagara, Ontario	7
Figure 2.5	Closed & Rehabilitated Portion of Walker's East Landfill, Niagara, Ontario	8
Figure 2.6	N-Rich® Product, Niagara, Ontario	8
Figure 3.1	Comparison of Waste Disposal Datasets	12
Figure 3.2	Waste Disposal in the Region of Niagara (based on historical recycling trends)	12
Figure 3.3	Niagara Region Population Growth Rate	13
Figure 3.4	Ontario Waste Exported to US Landfills (Note: no data for New York or Ohio for 2022)	14
Figure 3.5	Ontario's Remaining Landfill Capacity in Years	15
Figure 3.6	Ontario's Remaining Landfill Disposal Capacity including Walker's proposed South Landfill Phase 2	16
Figure 3.7	Ontario's Recycling and Disposal Rates	17

1. Introduction

Walker Environmental Group Inc. (Walker, Proponent) has identified an economic opportunity associated with its ability to continue to provide waste disposal capacity to its existing customer base within the City of Niagara Falls, the Regional Municipality of Niagara (“Niagara Region” and “Regional Niagara”) and the Province of Ontario once the approved capacity at the existing South Landfill, located within Walker’s Resource Management Campus (Campus, Site), has been reached.

This opportunity – the development of the next phase of the South Landfill (Phase 2) – will provide several key benefits including:

- The provision of future waste disposal capacity for a growing Niagara Region and surrounding communities,
- The continuation of approximately 500 jobs currently supported by Walker’s Resource Management Campus,
- Continued revenue streams to host municipal communities, and
- A future, local source of renewable natural gas (equivalent to power approximately 10,000 homes).

The above will ensure the continued viability, growth and benefits of the integrated Resource Management Campus, and specifically the resource recovery and waste diversion operations, such as its municipal compost site, municipal biosolids facility, low carbon alternative fuel facility and residential waste and recycling drop-off.

As a privately owned and operated company conducting business in the Province of Ontario, the question as to whether there is a need for the services that Walker provides is largely based on business decisions. Similarly, the question as to how the company provides these services is a business decision.

The Ministry of Environment, Conservation and Parks (MECP) *Code of Practice: Preparing and Reviewing Terms of Reference for Environmental Assessments in Ontario* (January, 2014), outlines how a Proponent can proceed under subsection 6(2)(c) and 6.1(3) of the *Environmental Assessment Act (EA Act)*¹ if the Proponent is further along in the defined planning process and additional detail is known regarding its proposal. As an example, the Code of Practice states:

...what is reasonable for one Proponent to implement may not be reasonable for another when trying to solve a similar problem because the circumstances between Proponents may vary widely. A private sector Proponent’s inability to expropriate land or implement public programs will influence the range of alternatives it may examine.

As it relates to the Proponent and its business, the Code of Practice also references private sector Proponents in the waste industry as follows:

The private sector Proponent may only consider landfill or on-site diversion because:

- *It cannot implement a municipal waste diversion program such as curbside recycling;*
- *Export would affect their business; and,*
- *Thermal technology is not economically viable because waste volumes are too small.*

Justification for preparing the Terms of Reference (ToR) with a predetermined Purpose of the Undertaking and Alternatives To the Undertaking is provided in detail within this Supporting Document.

¹ Under the amended *EA Act* through Bill 197, the proposed project falls under Part II.3 – Comprehensive Environmental Assessments and the appropriate Section is 17.4(2)c: *The proposed terms of reference must (c) specify in detail the requirements for the preparation of the environmental assessment, which may include requirements to provide information that is greater than or less than what is required under subsection 17.6 (2). 2020, c. 18, Sched. 6, s. 29.*

2. Background

Walker is a wholly owned subsidiary of Walker Industries Holdings Limited (Walker Industries), an Ontario-based, 5th generation family-owned company known for its service to its customers and communities for over 130 years. With over 40 years of experience, Walker provides critical services and infrastructure for communities to recover resources, manage waste and contribute to a circular economy. As Canada's largest, fully integrated resource recovery business, Walker provides environmental solutions to both public and private sector customers, processing over 1.1 million tonnes of organic materials annually into high-quality end-products, including fertilizers, mulch, compost and alternative low carbon fuels, which are sold back into the marketplace. Resources that cannot be recovered or repurposed, are safely disposed of with our environmentally-sound landfill disposal services.

Walker is a leading renewable energy company where it works with landfill owners (private and municipal) to capture landfill gas (LFG) and turn it into Renewable Natural Gas (RNG) or other carbon-based fuels, to fuel engines or turbines, generate electricity, or power industrial appliances such as boilers or furnaces to make heat or steam. Walker has recently built and successfully commissioned the largest RNG facility in Ontario at its Niagara Campus. The RNG plant will generate enough clean energy to heat 8,750 homes and reduce Greenhouse Gas (GHG) emissions by 48,000 tonnes every year.

Walker achieves this status by producing long-term value through innovation, with operations from coast-to-coast in Canada. Whether it is through technological advancement or business practices, we operate through a Social-Economic-Environmental (SEE) Model that ensures our projects are truly sustainable. This approach is used at all levels in the company and touches every aspect of our business.

Walker's Mission Statement: We support communities through what we do, how we do it, and by caring about our people, our neighbours, and the environment. It is our legacy and our future.

Vision Statement: Building a sustainable future, working in partnership with our communities.

Walker's environmental division's businesses in Canada include:

- 1 GORE® Cover Composting System, static pile and open windrow compost facility producing AA compost from source-separated organics (SSO), food waste, digestate and yard waste. Licensed for up to 170,000 tonnes of in process waste. (Arthur, Ontario)
- 1 GORE® Cover Composting System and open windrow compost facility producing AA compost from SSO, food waste and yard waste. Licensed for up to 90,000 tonnes annually. (Niagara, Ontario)
- Multiple leaf and yard waste open windrow composting facilities, producing soils, mulch, growing media and potting mixes. (Multiple locations across Ontario)
- All Treat Farms® located in Arthur, Ontario, which became part of Walker in 2016, is one of the largest and most successful composting, soil blending and packaging facilities in the province of Ontario.
- Gro-Bark®, located in Caledon, Ontario, which became part of Walker in 2017, provides sustainably sourced bulk soils and mulches. Natural mulch and soil, growing media and soil amendments. Grinding and processing waste wood for hog fuel as a low carbon fuel alternative.
- 1 Waste to Resource Recovery Area located in Niagara, Ontario which accepts old railway ties, asphalt shingles, waste wood and clean soils. Approximately 50,000 tonnes of materials are diverted from landfill annually and recycled through the grinding process and reintegrated back into use as manufactured soils, alternative low carbon fuels, and recycled asphalt products.
- 6 Alkaline stabilization biosolids facilities producing about 100,000 tonnes of fertilizer called N-Rich®. (Niagara, Sarnia, Leamington, Sudbury, Halifax and Summerside, Ontario) The product, a Canadian Food Inspection Agency registered fertilizer, is marketed to agricultural clients and to a lesser extent used in mine reclamation.
- 7 Grease trap and liquid organic waste processing facilities. (Toronto, Woodstock, Ottawa, Saint-Hyacinthe, Nisku, Calgary and Vancouver) Produce feedstock for anaerobic digestion and renewable energy production.

- 1 Landfill located in Niagara, Ontario, with disposal capacity of 1.1 million tonnes annually. This site provides safe and secure disposal option for contaminated soils and solid non-hazardous wastes as well as recovery options for waste shingles, wood and railway ties.
- 1 Transfer station located in the heart of Burlington, Ontario, providing 1,000 tonnes/day for waste disposal, waste diversion, and organics and mixed recyclables for commercial, residential and municipal customers.
- 1 Residential drop-off located in Niagara, Ontario, providing waste disposal and waste diversion services to commercial and residential customers across the Region of Niagara.
- Design, build and operations of 2 residential drop-off locations in the County of Norfolk, Ontario.
- 6 LFG utilization and GHG reduction plants which includes the development of Ontario's first LFG to RNG facility. These facilities total approximately 32 Megawatts of renewable energy.
- A waste and bulk material transportation fleet consisting of more than 100 tractors and trailers servicing Ontario, Quebec, and New York State.

In total, Walker's fully integrated resource recovery business, recovers and processes over 1.1 million tonnes of organic materials annually and high-quality, sustainable end-products, including fertilizers, mulch, compost and alternative low carbon fuels, which are re-entered back into the marketplace.

Residual materials that cannot be recovered are safely and reliably managed at Walker's Landfill (South Landfill Phase 1).

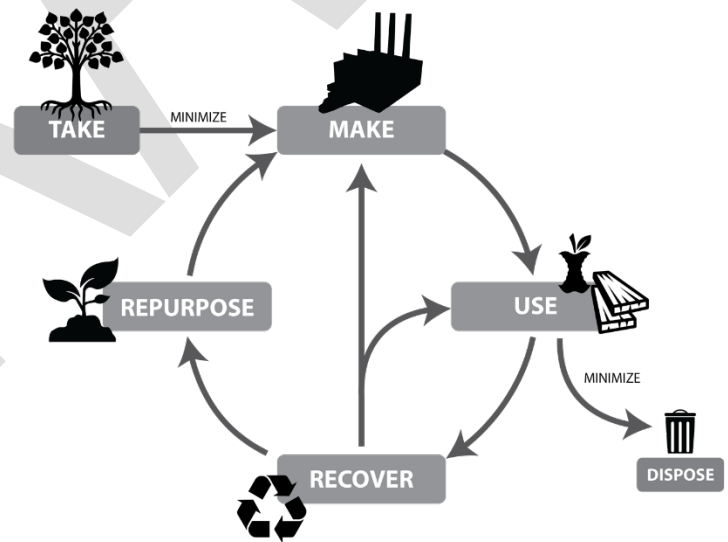
2.1 Working Towards a Circular Economy

Walker is driven to be a North American leader in resource recovery and strives to achieve a circular economy in all of our operations. Our dedication to this is guided by our EARTH 1st Philosophy, and the development and sustainment of our operations using our SEE Model approach.

EARTH 1st Philosophy

Walker believes that sustainability goes beyond social responsibility or ethics. It is what drives us to innovate and become pioneers in our industries. Our EARTH 1st Philosophy acknowledges that as a company and as individuals, we are part of the environment. It taps into people's desire to make a difference and empowers employees to go beyond compliance and move toward higher environmental standards. The program guides our employees and therefore our businesses to embrace the following principles:

- Efficiently operate
- Acknowledge our part
- Reduce our impacts
- Take time to plan
- Higher environmental performance
- **1st** Innovation and leadership



Walker SEE Model

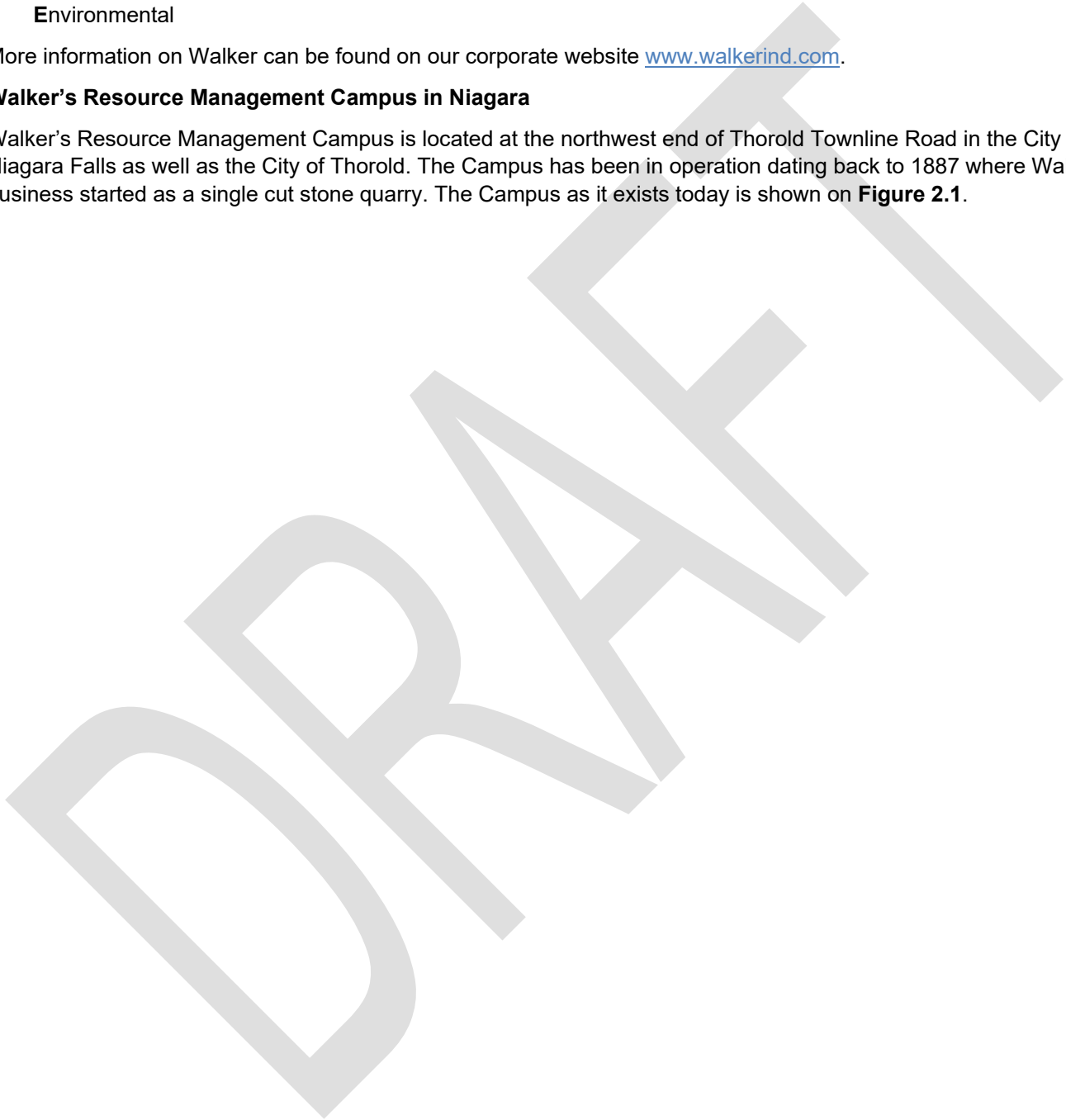
Walker operates using a SEE Model, which provides a framework that helps us to build and operate sustainable businesses. This approach is employed at all levels of the company and touches every aspect of our business.

- **S**ocial
- **E**conomic
- **E**nvironmental

More information on Walker can be found on our corporate website www.walkerind.com.

Walker's Resource Management Campus in Niagara

Walker's Resource Management Campus is located at the northwest end of Thorold Townline Road in the City of Niagara Falls as well as the City of Thorold. The Campus has been in operation dating back to 1887 where Walker's business started as a single cut stone quarry. The Campus as it exists today is shown on **Figure 2.1**.



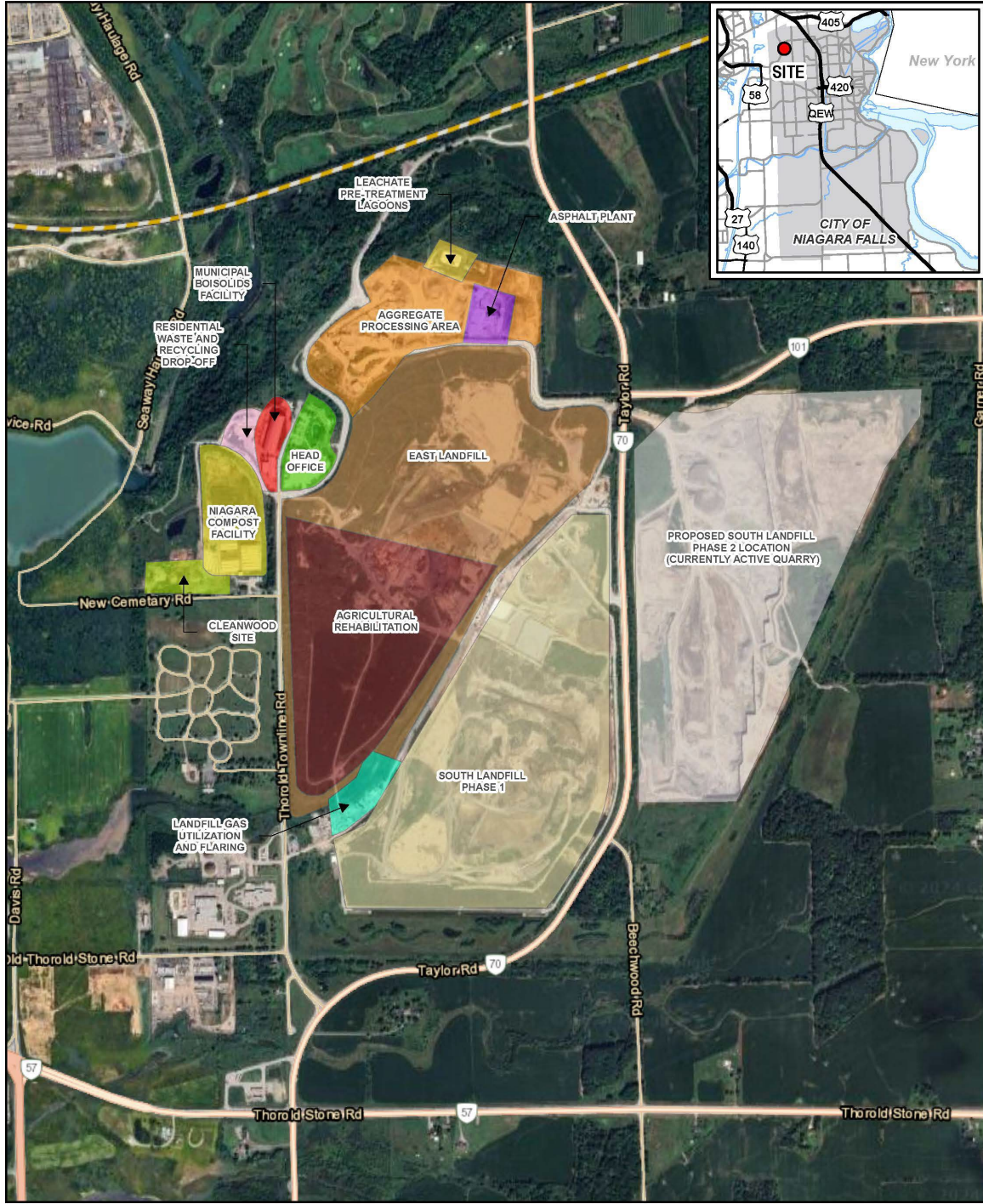


Figure 2.1 Walker's Resource Management Campus in Niagara

Walker's operations have grown and diversified substantially since 1887, with the Niagara Campus presently home to the following facilities, as shown in Figure 2.1:

- South Landfill (Phase 1)
- Niagara Compost Facility
- Municipal Biosolids Facility
- East Landfill & Agriculture Rehabilitation
- Residential Waste & Recycling Drop-Off
- Walker Resource Recovery Area
- Head Office
- Leachate Pre-Treatment Lagoons
- Aggregate Processing Area
- Active Quarry
- Asphalt Plant
- Clean Wood Site
- Landfill Gas Utilization & Flaring

A brief overview of key components of Walker's Resource Management Campus is provided below to illustrate the resource recovery elements of the Campus and how these operations are centralized and dependent upon the core South Landfill facility.

Walker's Niagara Compost Facility

Walker is a North American leader in organic waste management with decades of experience managing contracts for green cart programs, including the City of Toronto, Region of Peel, and the Region of Niagara. Walker was an early adopter of the GORE® Cover Composting System technology which is modular and scalable.



Figure 2.2 Walker's Niagara Composting Facility, Niagara, Ontario

The use of compost and other soil amendment products have significant environmental benefits which include improved soil health through the sequestration of carbon and the reduced reliance on chemical

fertilizers, improved plant/crop yield due to improved water retention and increased microbial activity, as well as improved human health which is tied to a higher amino acid concentration in food-crops.

As one of Canada's largest processors of waste-to-compost, Walker is licensed to accept a combined total of up to 260,000 tonnes of source separated organic waste at our facilities in Arthur and Niagara with additional capacity for leaf and yard waste at multiple facilities across Ontario. Walker's compost products are sold in name-brand retailers with successful long-term relationships including Home Hardware (since 1976), Walmart (since 1993), and Metro (since 1997).

Walker's Niagara Compost Facility is licensed to process up to 90,000 tonnes of source separated organic waste and is a key component of the Region of Niagara's municipal waste diversion program. The facility's proximity to the South Landfill provides fast and effective disposal of residuals which can be odorous, shared leachate management infrastructure, and shared grinding/screening equipment. Additionally, residuals or overs are used at the South Landfill as a biocover material which is used to help control odours and oxidize methane further reducing GHG emissions.

Walker's Resource Recovery Area (WRR)

Resource recovery is an integral part of our business and is becoming more so as Ontario looks for innovative ways to divert material from landfill. Walker currently processes over 1.1 million tonnes of organic materials annually into



Figure 2.3 Resource Recovery Area, Niagara, Ontario

WRRRA involves the diversion and conversion of old roofing shingles into recycled asphalt end-product, which is utilized on walking trails, roadways, and pathways.

These large-scale resource recovery businesses were researched, piloted, and commercialized at Walker’s Campus thus illustrating the importance and interconnectivity of the integrated Campus approach. The WRRRA is located on an unused portion of Walker’s East Landfill within the Campus. This close proximity to the South Landfill allows for materials to be cost effectively diverted and researched, and for trials to be conducted to evaluate recovery and newly developed products. Shared infrastructure such as grinding, screening, and mobile equipment provide the economic opportunity to pursue the development of new and innovative methods for diverting materials from landfill.

high-quality end-products. At Walker’s Campus, reclaimed wood is processed to create a low-carbon alternative fuel source which is used by steel mills and cement kilns to reduce their GHG emissions (by displacing carbon intensive fuels such as coal or pet coke).

Walker currently partners with Stelco, a steel producer located in Hamilton, Ontario, on a program that uses old railway ties to replace a portion of coal used in their coking process. This mutually beneficial program diverts material from landfill, displaces the use of coal, and reduces GHG emissions.

Another resource recovery program at the



Figure 2.4 Resource Recovery Area, Niagara, Ontario



Figure 2.5 Closed & Rehabilitated Portion of Walker's East Landfill, Niagara, Ontario

Enhanced Landfill Post-Closure Rehabilitation

Walker has a number of initiatives for land rehabilitation and enhancement at its Niagara Campus. One of the most creative projects involved working in partnership with the University of Guelph's Agricultural Science program on a successful study to enable closed landfills to be converted into agricultural land at the end of their active disposal lives. This technology allows the land to grow forage or energy crops long after the active landfill operations stop. Portions of Walker's closed East Landfill has been farmed for several seasons, safely producing competitive yields with high quality crops. When the now active South Landfill is eventually closed, it too could potentially be converted into agricultural land.

Municipal Biosolids Recovery

Walker's biosolids management solutions are designed to help municipalities beneficially re-use their wastewater treatment residuals in an environmentally responsible way. At the Niagara Resource Management Campus, Walker's patented N-Viro® Alkaline Stabilization Process treats dewatered biosolids to produce a Canadian Food Inspection Agency (CFIA) registered fertilizer called N-Rich®. On an annual basis, over 15,000 tonnes of municipal biosolids from the Niagara Region's wastewater treatment facilities is recovered and processed into N-Rich®.

For over 20 years, N-Rich® has been marketed and sold to farm clients through the Agromart Group, a fertilizer distributor. The use of N-Rich® reduces dependency on fossil fuel derived fertilizers helping clients reduce their overall carbon footprint. Shared infrastructure at the Campus supports this operation which is a core component in the Region of Niagara's municipal biosolids beneficial re-use program.



Figure 2.6 N-Rich® Product, Niagara, Ontario

South Landfill – Phase 1

Walker's Campus contains two distinct landfills, the East Landfill and South Landfill. The East Landfill, which is partially closed and home to the Post-Closure Agricultural Rehabilitation project is not the primary waste disposal facility at Walker's Campus.

The South Landfill is active and the primary disposal facility operating under Environmental Compliance Approval (ECA) No. 0084-78RKAM since its establishment in 2009 and is permitted for an overall capacity of approximately 17.7 million cubic metres (m³) of waste disposal. It is approved to accept residential and industrial, commercial, and institutional (IC&I) waste from the City of Niagara Falls, Niagara Region, and the Province of Ontario. The South Landfill (Phase 1) is anticipated to reach its permitted waste disposal capacity between 2029 and 2031, based on its

approved maximum annual waste receipt limit of 1,100,000 tonnes (850,000 tonnes of waste and up to 250,000 tonnes of cover material).

The South Landfill is the hub of the Campus where it provides essential infrastructure, equipment, synergies, and contingencies necessary to support the waste diversion and resource recovery operations across the Campus. Without the landfill as the core waste disposal facility, the peripheral waste diversion and resource recovery operations at the Campus would be significantly curtailed.

Landfill Gas Utilization and Renewable Natural Gas

Walker and its long-time partner Comcor Environmental Limited (Comcor) are recognized as pioneers of LFG utilization in Canada. Since 2001 and founded from a project at Walker's Resource Management Campus, this partnership has led to a series of innovative and successful LFG capture and utilization projects with the objective of creating renewable energy resources, reducing GHG emissions and helping landfill owners reimagine LFG from a liability to an asset.

Before regulations were put in place that require new and existing large landfills to capture and control LFG emissions, Walker and Comcor installed a LFG recovery system that captured LFG from Walker's East Landfill in Niagara, Ontario. The captured gas was flared, preventing the potent GHG methane, from being emitted into the atmosphere. As an early adopter, this project generated a large number of Emission Reduction Credits which have since helped countless businesses reduce their carbon footprint. In addition to simply flaring the captured LFG, the partnership commissioned Enbridge Gas Inc. (Enbridge) to supply and install two pipelines from the landfill facility to a nearby pulp and paper mill, where the LFG was used to directly offset the mill's reliance on fossil natural gas. Prior to the mill's closure in 2013, Integrated Gas Recovery Services (IGRS) was supplying up to 90 percent of the fuel needed by the mill to make steam for day-to-day operations. As more gas became available from the landfill, the partnership continued to diversify its utilization projects by adding a 1-megawatt engine/generator to supply electricity to the grid under the province's Renewable Energy Standard Offer Program. Since 2007, this LFG powered engine has been supplying clean, renewable electricity to the residents of Ontario and will remain in service until at least 2027.

As additional LFG became available at Walker's Campus, two other large-scale innovative renewable projects were developed:

St. Catharines General Motors Project

At the end of 2020, the General Motors (GM) propulsion plant in St. Catharines, Ontario began offsetting approximately 35 percent of the facility's electricity needs by installing generators fueled by renewable landfill gas piped in from Walker's Campus, approximately 3.5 kilometres (km) away. Additionally, the heat created by this process is recovered and used in the plant. As a result, the St. Catharines GM plant has become one of the most competitive plants in its North American operations, through reduced electricity cost while cutting the facility's GHG emissions by approximately 70 percent. This project has allowed significant environmental and economic benefits to be mutually shared by all parties involved, lowering the future energy and carbon costs for GM while providing a long-term economic opportunity for Walker.

Enbridge & IGRS Renewable Natural Gas Project

In 2023, Walker, through its partnership with Comcor and Enbridge, commissioned the largest RNG plant in Ontario. The more than \$40 million facility is located on Walker's Campus. This plant transforms LFG into renewable natural gas and injects it into the Enbridge Gas distribution network, where it will blend with the overall supply mix to reduce reliance on fossil natural gas. The RNG plant will generate enough clean energy to heat 8,750 homes and reduce GHG emissions by 48,000 tonnes every year. Walker and its project partners are working with landfill owners across Canada (private and municipal) to export their proven, made-in-Niagara technology and knowledge to other jurisdictions.

In total, the renewable energy harnessed from Walker's Niagara Campus is equivalent to powering over 25,000 homes for the next several decades. These facilities and energy services are a direct result of the renewable energy resource provided by Walker's existing landfill.

The examples illustrated above demonstrate how Walker's Resource Management Campus is an integrated facility that provides essential resource recovery, waste management and renewable energy services to communities throughout the Niagara Region and across Southern Ontario. These essential services, which allow communities to grow and thrive, have been at the cornerstone of Walker's business model. The Campus is an example of the how public and private interests can align to provide efficient, reliable, safe, and affordable public infrastructure while creating an economic opportunity where private company investment creates jobs, innovation, local products and services, and broader community benefits.

Walker's Campus, which has provided a growing suite of environmental services and businesses for over 40 years, is strongly rooted in the Niagara economy. It has grown to become a unique, integrated resource management campus that provides a wide range of benefits, some of which are noted below:

- Jobs – over 500 jobs are currently supported by the existing Campus
- Infrastructure partnerships with local municipalities, utilities, and businesses
 - Source Separated Composting Facility processing Niagara's green bin materials
 - Municipal Biosolids Recovery Facility converting Niagara's biosolids into an approved fertilizer
 - Residential Waste & Recycling Drop-off providing essential waste management services for local residents in the northern part of the Niagara peninsula
 - RNG project in partnership with Enbridge Inc. where landfill gas is transformed into a RNG and injected into the local gas distribution system where it provides enough clean energy to heat approximately 8,750 homes
 - LFG-to-Energy project where processed landfill gas is provided to the local GM St. Catharines Propulsion plant where it provides renewable heat and electricity to this important auto sector manufacturing plant
- Municipal revenue streams centred around property tax, Host Municipal Fees, and the broader economic impact from the Campus businesses
- Walker's long and proven history of significant philanthropic investments in the community coupled with commitment to volunteerism and being a leading community business partner

3. Purpose of the Undertaking

Walker currently operates the South Landfill, located within Walker's Resource Management Campus, which is an integrated resource recovery and residuals disposal facility that provides safe and reliable disposal for IC&I and residential solid non-hazardous waste. Walker has been providing resource recovery and residuals disposal services to Niagara and surrounding communities for over 40 years. Walker intends to continue serving its existing customer base and is responding not only to the economic opportunity to provide waste management services, but the important need for sustainable and affordable resource recovery and residual materials management solutions within the province of Ontario.

Walker embarked on an internal business planning process to examine options related to long-term disposal capacity to continue providing waste management disposal services to clients beyond the current approved capacity at the South Landfill (Phase 1). It determined that a long-term solution for solid non-hazardous residual waste disposal capacity beyond the current approved capacity at its South Landfill was required to provide it with flexibility in how best to serve its existing local clients while remaining a competitive provider of waste management services.

As part of the business plan, Walker reviewed the following:

- Historic volumes accepted at the Campus with a specific focus on waste generated within Niagara Region;
- Projected waste generation volumes in Niagara Region based on population forecasts; and
- Ontario's residual waste generation and disposal volumes, including an examination of existing and approved disposal capacity within Ontario.

3.1 Waste Disposal at Walker’s Resource Management Campus and its Importance to Niagara Region

The currently operating South Landfill at Walker’s Campus is permitted to accept up to 850,000 tonnes of solid non-hazardous residual waste annually plus an additional 250,000 tonnes per year of cover soils. Waste capacity at the site is reserved for Niagara customers first with any merchant or surplus capacity offered to customers in surrounding communities. As part of the EA process for Phase 1 of the South Landfill, Walker entered into an agreement with the Regional Municipality of Niagara to provide an annual reserve/emergency capacity of 100,000 tonnes for use at its discretion (i.e., to help manage increased waste volumes in the event of a disaster or reduced operational capacity at its landfills).

Due to the lack of disposal capacity in Ontario, the South Landfill operates at its full capacity to ensure residents, municipalities, businesses, and Indigenous communities have access to safe, affordable, and reliable waste disposal facilities. It is further noted that Walker routinely declines requests from businesses, municipalities, and Indigenous communities to receive waste due to conditions of its ECA limiting waste receipt volumes to 1.1 million tonnes annually.

This demand is demonstrated by Walker having to place allocations with its existing customers and declining requests for increased allowances late in the year due to limited disposal options in Southern Ontario. Customers are therefore required to seek other means of disposing their residual waste, usually via export to the United States (U.S.) (for IC&I waste) which has economic (i.e., increased transportation costs, wear and tear on highways, risk of border closure, etc.) and environmental (i.e., increased GHG emission, loss of renewable energy sources, etc.) impacts.

As part of the business case established by Walker, a review of historical tonnages received at the South Landfill was undertaken to understand the role Walker plays in managing the residual solid non-hazardous residential and IC&I residual material generated locally and regionally within the approved service area of the facility. Table 3.1 identifies approximate annual tonnages of solid non-hazardous municipal and IC&I material generated from within Niagara Region and disposed of at the South Landfill based on data current to July 2022.

Table 3.1 Disposal of Niagara Region solid non-hazardous residual waste at Walker’s Niagara Campus (Annual)

Source	Residential Waste (tonnes)	IC&I Waste (tonnes)
Region of Niagara and lower tier municipalities	39,250	
Local IC&I Customers		400,000

According to Resource Productivity & Recovery Authority Datacall records², Niagara Region reported a total of 88,923 tonnes of residual residential waste requiring disposal in 2021. Based on these values, it is estimated that Walker’s South Landfill provides for approximately 44 percent of Niagara Region’s municipal residual waste disposal needs. This is consistent with a provincial trend identified by Waste to Resource Ontario (W2RO, previously Ontario Waste Management Association [OWMA]) where municipalities are increasingly reliant on private sector landfills to manage residential waste (see Figure 3.1).

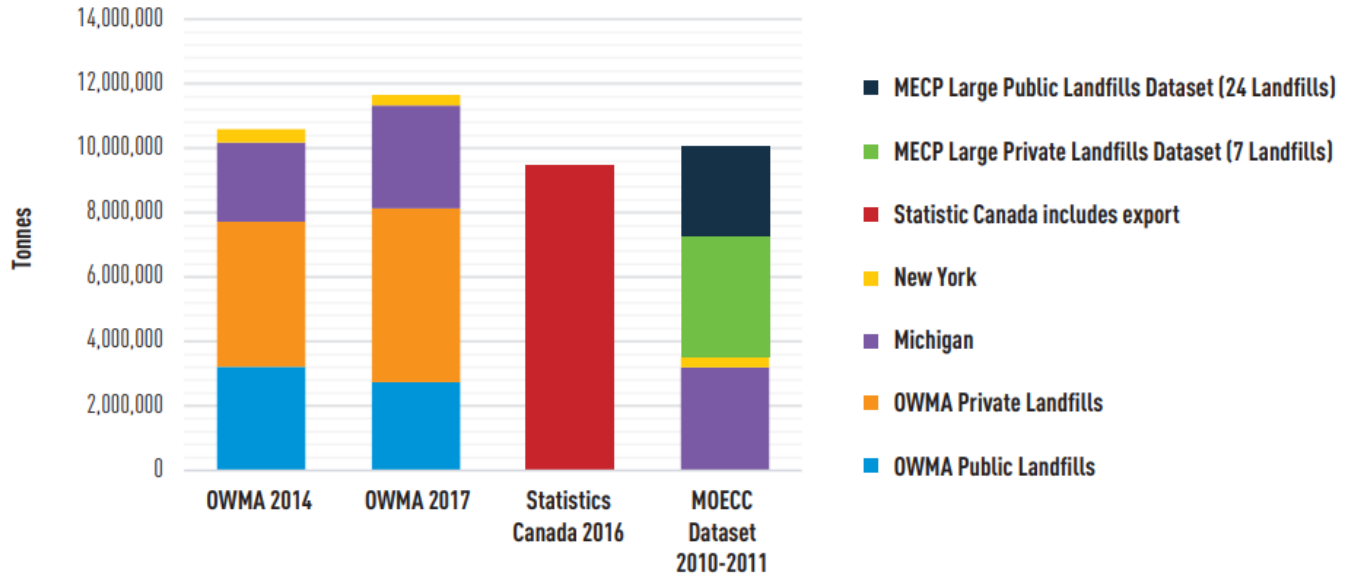


Figure 3.2 Comparison of Waste Disposal Datasets³

Further, based on historical trends, Walker’s South Landfill provides disposal capacity for approximately 74 percent of all waste generated within the Region of Niagara (see Figure 3.2).

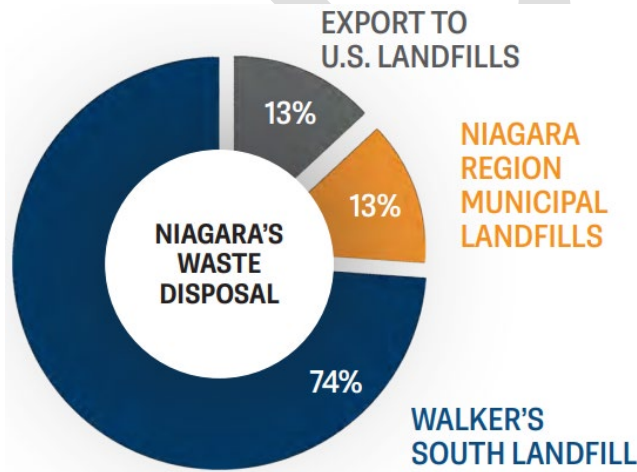


Figure 3.1 Waste Disposal in the Region of Niagara (based on historical recycling trends)

Future Growth

The growing population of Niagara Region and the resulting increased demand for residual waste disposal capacity is also important to consider as part of this Business Case. Figure 3.3 depicts the reported census population and annual growth rate for Niagara Region over a 35-year period and indicates a significant boost in the growth rate starting in 2011. In 2016, Statistics Canada reported the population of Niagara Region to be 447,888⁴, growing to 477,941 in 2021⁵. This is an increase of 30,053, or 6.7 percent, which is indicative of a steady five-year growth rate and accounts for a significant increase in waste production.

² Datacall - RPRA

³ OWMA. State of Waste in Ontario: Landfill Report. Ontario Waste Management Association. December 2018. Retrieved February 28, 2024 from <https://www.owma.org/articles/2019-owma-landfill-report>

⁴ Government of Canada. Ontario, Census Profile, 2021 Census of Population. 2022. Retrieved November 30, 2023.

⁵ Niagara Economic Development. Demographics. 2021. Retrieved November 30, 2023, from <https://niagaracanada.com/data/demographics/>

As for future growth, the Minister of Municipal Affairs and Housing recently approved a projected population of 694,000 people by the year 2051 for the Niagara Region⁶. The Ontario Government reported that Niagara is included in the census division where population is projected to increase by 25 to 40 percent over 2021 to 2046⁷.

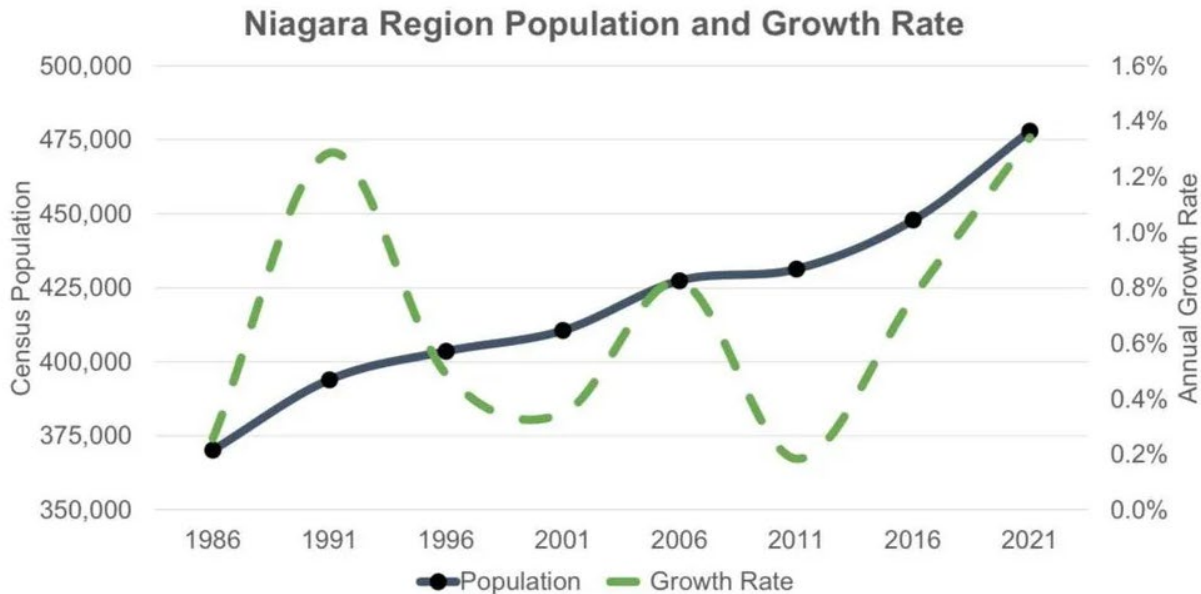


Figure 3.3 Niagara Region Population Growth Rate¹

This will result in much greater demand for local residual waste disposal services within the region, including at Walker’s Campus.

Naturally, a significant increase in population and growth rate creates a surge in housing demand. To respond to this growth, the Government of Ontario recently introduced legislation (*More Homes Built Faster Act, 2022*⁸ through Bill 23) that includes a 2031 Housing Target of 1,229,000 homes for municipalities across Southern Ontario that will support Ontario’s Housing Supply Action Plan⁹. The Housing Supply Action Plan is part of a long-term strategy to increase housing supply and provide more attainable housing options in Southern Ontario. The overall total of 1,229,000 new homes in Southern Ontario includes 8,000 homes within the City of Niagara Falls and 11,000 homes within the City of St. Catharines¹⁰. These combined housing targets mean an additional 19,000 homes (approximately) will be built in Niagara Region in the coming years, and with that substantial additional residual waste disposal needs for construction related residual waste.

As evidenced above, Walker’s Campus plays a critical role in supporting local industry and the local economy with well-located, environmentally sound resource recovery and waste disposal infrastructure for residual residential and IC&I waste materials. Today, nearly 50 percent of the materials received at the South Landfill come directly from residential and IC&I sources located within Niagara Region and that need will only increase in the coming decades.

⁶ Niagara Region. Niagara Official Plan: Recommendation Report for Adoption. June 15, 2022. eSCRIBE Published Meetings. Retrieved December 8, 2023, from <https://pub-niagararegion.escribemeetings.com/>

⁷ Government of Ontario. Ontario population projections (2021). Retrieved December 8, 2023, from <https://www.ontario.ca/page/ontario-population-projections>.

⁸ Government of Ontario. More Homes Built Faster Act, 2022, S.O. 2022, c. 21 - Bill 23. Retrieved December 21, 2023, from <https://www.ontario.ca/laws/statute/s22021>

⁹ Government of Ontario. More Homes, More Choice: Ontario’s Housing Supply Action Plan. Retrieved December 21, 2023, from <https://www.ontario.ca/page/more-homes-more-choice-ontarios-housing-supply-action-plan>

¹⁰ Environmental Registry of Ontario, 2031 Housing Target (2022). Ministry of Municipal Affairs and Housing. Retrieved December 8, 2023, from <https://ero.ontario.ca/notice/019-6171>.

3.2 Waste Generation & Disposal Capacity in Ontario

In 2021, W2RO published the *State of Waste: 2034 is Right Around the Corner*, which provided a breakdown of the amount of residual waste landfilled in Ontario as well as the amount of residual waste exported to other jurisdictions, specifically Michigan and New York State, based on 2019 data. The W2RO report estimated that Ontario produced approximately 12 million tonnes of residential and IC&I waste in 2019, of which over 2.75 million tonnes were landfilled in Michigan and roughly 450,000 tonnes were landfilled in New York (approximately 27 percent)¹¹. The estimated waste that Ontario exports to New York, Michigan, and Ohio from 2005 to 2022 is illustrated in Figure 3.4.

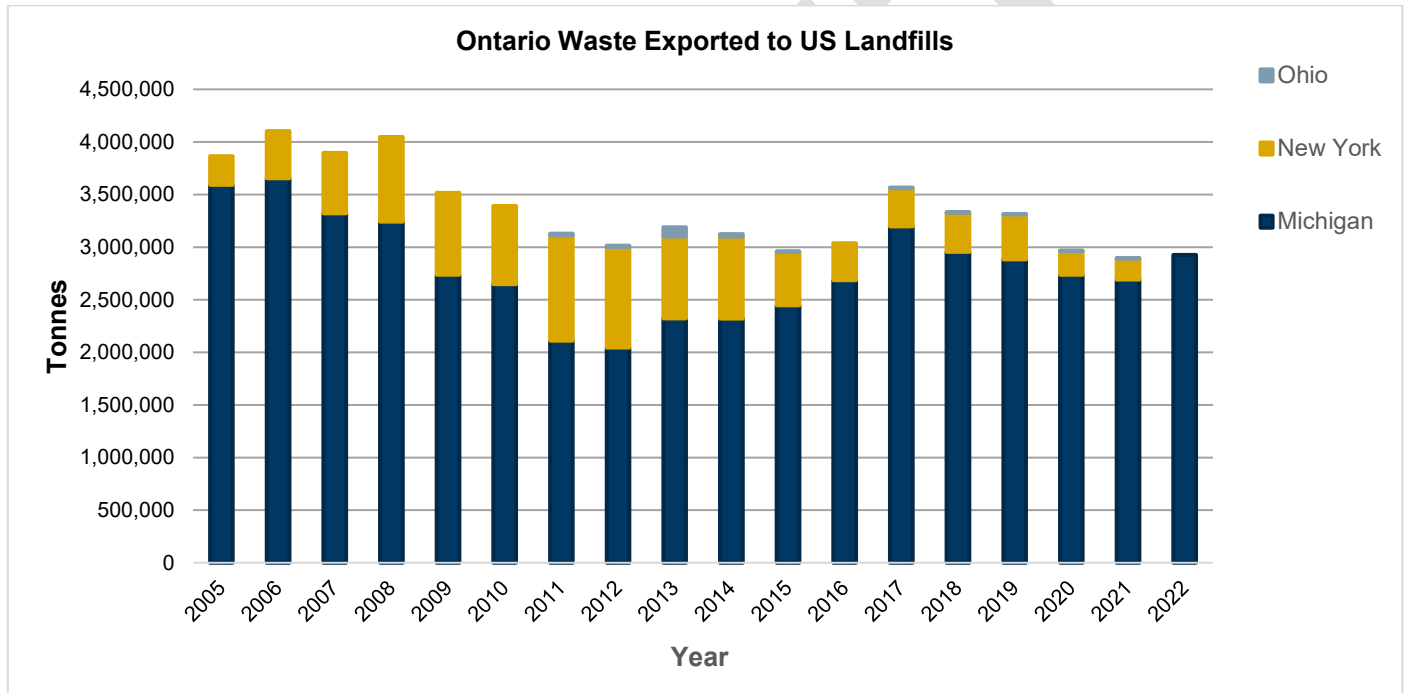


Figure 3.4 Ontario Waste Exported to US Landfills (Note: no data for New York or Ohio for 2022)

In 2016, the Province of Ontario implemented the *Waste-Free Ontario Act (WFO Act)*¹² and its accompanying *Strategy for a Waste-Free Ontario (Strategy)*¹³ intended to alleviate the pressures of increasing landfill capacity and decrease the reliance on the U.S. for residual waste disposal. The legislation's objectives are to alter the patterns of production, consumption, and disposal towards circularity to achieve a zero waste Ontario and zero GHG emissions from the waste sector, with interim targets of 30 percent diversion by 2020, 50 percent diversion by 2030, and 80 percent diversion by 2050. As the *Strategy* outlines, while the province as a whole works towards its goal of zero waste, there will still be a need for landfill space in the interim.

At the time of implementing the *Waste-Free Ontario Act* and *Strategy*, the government forecasted the need for approximately 16 new or expanded landfills by 2050. Based on current and projected waste generation rates, existing and approved landfill capacity, and taking into consideration the percentage of residual waste being exported to landfills in the U.S., W2RO estimates that Ontario will reach its approved landfill capacity in 2036¹⁴, just five to seven years after Walker's South Landfill is anticipated to reach its permitted capacity.

¹¹ OWMA. State of Waste in Ontario: Landfill Report. Ontario Waste Management Association. September 15, 2022. Retrieved November 30, 2023, from <https://www.owma.org/>

¹² Government of Ontario. Waste-Free Ontario Act, 2016, S.O. 2016, c. 12 - Bill 151. Retrieved December 21, 2023, from <https://www.ontario.ca/laws/statute/s16012>

¹³ Government of Ontario. Strategy for a Waste-Free Ontario: Building the Circular Economy. 2017. Retrieved December 21, 2023, from <https://www.ontario.ca/page/strategy-waste-free-ontario-building-circular-economy>

¹⁴ OWMA. State of Waste in Ontario: Landfill Report. Ontario Waste Management Association. January 2021. Retrieved November 30, 2023, from <https://www.owma.org/>

Should legislative or economic changes result in waste no longer being exported to the U.S., Ontario’s available landfill capacity will be exhausted sooner, by the year 2032, as illustrated in Figure 3.5, just three to five years after the South Landfill reaches capacity. Should Governor Gretchen Whitmer of Michigan’s February 2024 budget proposal be passed, tipping fees for solid waste disposal at Michigan landfills would increase from USD\$0.36/ton (CAD\$0.54/tonne) to USD\$5/ton (CAD\$7.45/tonne)¹⁵. A landfill tipping fee increase of more than one thousand percent (1,000 percent), such as the one proposed in Michigan, would likely lead to one of two options: 1) a decrease in – if not a complete stop to – waste tonnages exported to Michigan for disposal or 2) a significant increase in the cost to Ontarians for their waste disposal services.

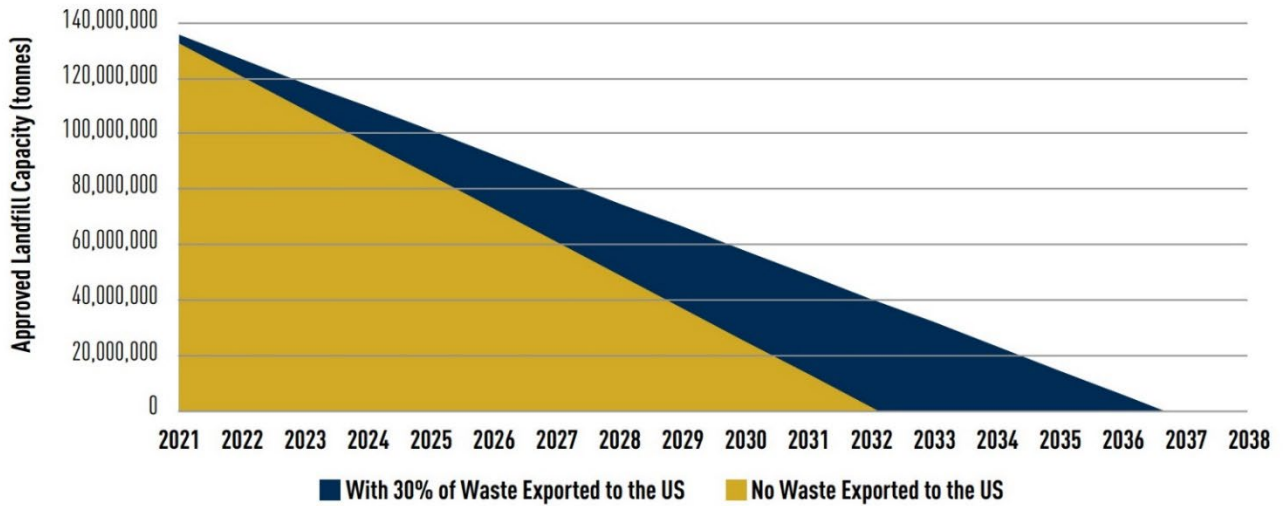


Figure 3.5 Ontario’s Remaining Landfill Capacity in Years¹⁶

Ontario’s estimated remaining landfill disposal capacity is predicated on the continued export of approximately 30 percent of solid waste generated in Ontario to the U.S. Private landfills now account for 53 percent of landfill capacity in Ontario, up from 36 percent in 2017 and the trend of municipalities relying on private sector capacity is increasing due to limited disposal capacity of their own and/or the inability or aversion to establishing new capacity for their residents¹⁷. The majority of Ontario’s remaining landfill disposal capacity is increasingly limited to a handful of sites. Importantly, this means local management of waste materials is becoming more difficult to achieve, and the related need to haul waste materials long distances is increasing. Based on W2RO’s database, 60 percent of Ontario’s remaining landfill capacity is concentrated in just seven sites (both private and public), while 85 percent of the remaining capacity is held by 15 sites (both private and public)¹⁸. This reinforces both the fact that landfill capacity in Ontario is decreasing for all sectors and the significant role private landfills are positioned to play in reaching Ontario’s current and future residual waste disposal needs.

When considering the additional disposal capacity that Walker’s proposed South Landfill Phase 2 will provide, the projected year that Ontario will run out of landfill capacity increases to approximately 2038, as shown in Figure 3.6. This projection assumes that there is no disposal export to the U.S. and that *WFO Act* and *Strategy* diversion targets are being met. Further, when considering an approximate 30 percent export of non-residential waste to the U.S., in addition to Walker’s proposed South Landfill Phase 2, the projected landfill disposal capacity depletion year for Ontario increases to beyond 2050.

These findings underscore that even with accelerated diversion efforts combined with continued waste exports to the U.S., due to population growth and the limited amount of approved landfill capacity, it is anticipated that Ontario will run out of landfill disposal capacity in the next 10 to 12 years if no new disposal capacity is approved.

¹⁵ Gov. Gretchen Whitmer proposes \$80.7B budget for a 'Michigan Guarantee' | Bridge Michigan

¹⁶ OWMA. State of Waste in Ontario: Landfill Report. January 2021. Retrieved December 21, 2023, from <https://www.owma.org/cpages/landfills>

¹⁷ Ibid.

¹⁸ Ibid.

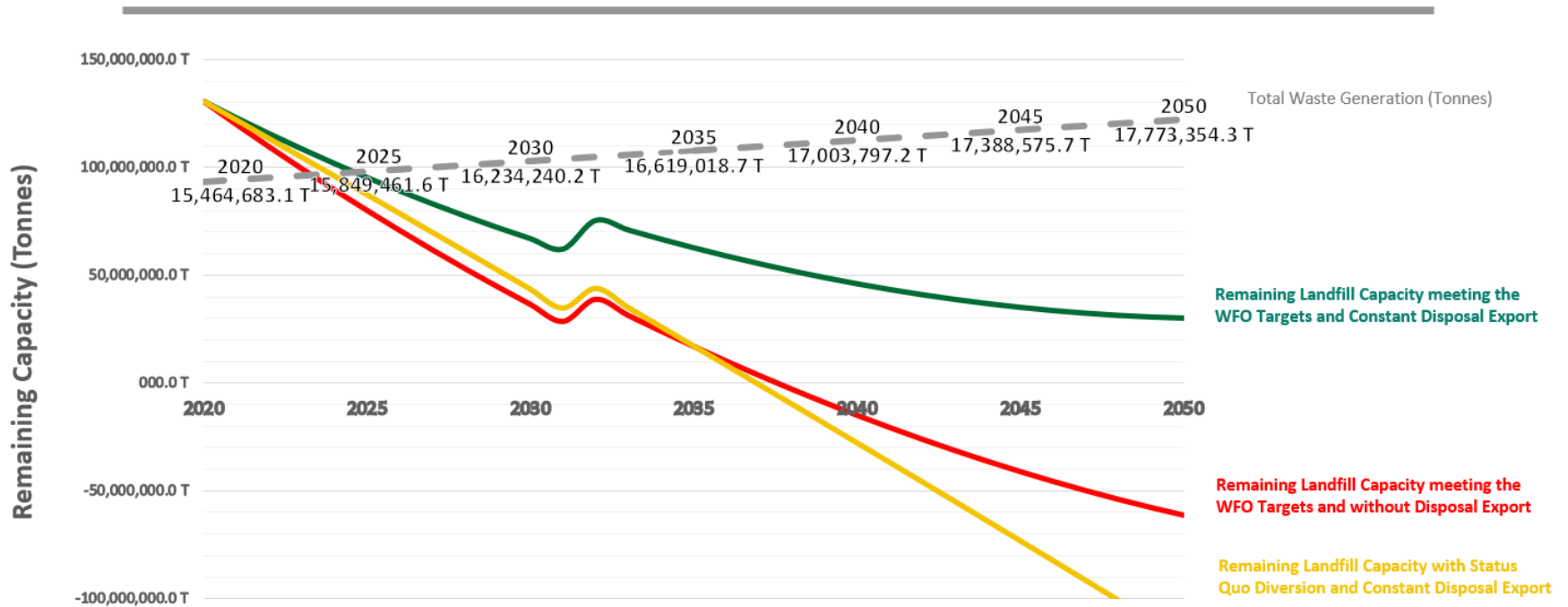


Figure 3.6 Ontario's Remaining Landfill Disposal Capacity including Walker's proposed South Landfill Phase 2

While there have been significant efforts to increase recycling and green bin composting, the tonnage of residual waste materials that require safe disposal in landfill still supersedes these efforts. As shown in Figure 3.7, the Association of Municipalities of Ontario's (AMO's) *Ontario Baseline Waste and Recycling Report* predicts Ontario disposal rates in 2035 and 2045 to remain over 70 percent¹⁹, meaning that landfills will still play a crucial role in the coming decades. AMO note that in Ontario there are still over 2.3 million tonnes of organic waste being sent to landfills despite efforts made to date to increase organic waste diversion²⁰.

With the above in mind, it is concluded that developing local solutions to address in-province waste management needs is environmentally responsible, financially sound, and provides for secure waste management infrastructure for the Province of Ontario. Based on the historic tonnages accepted at the Niagara Campus, Walker has determined that there is a sustainable economic opportunity for the company to continue to provide resource recovery and residual waste disposal capacity for solid non-hazardous residential and IC&I residual material.

ONTARIO'S RECYCLING & DISPOSAL RATES

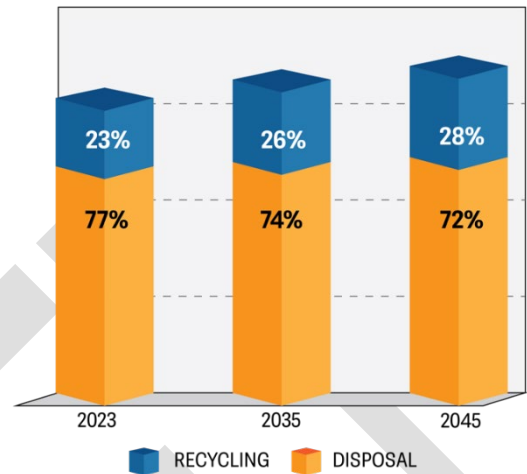


Figure 3.7 Ontario's Recycling and Disposal Rates¹

4. Analysis of “Alternatives To” the Undertaking

4.1 Potential Options to Address the Economic Opportunity

After identifying that there is an economic opportunity for Walker to continue to provide landfill disposal capacity for residual solid non-hazardous residential and IC&I residual material at the existing Niagara Campus, Walker examined potential long-term options to achieve this. As part of the business plan, the following two potential options (Alternatives To) were developed and reviewed:

1. Do nothing
2. Continuation of landfill disposal capacity at Walker's Niagara Campus

A summary of the options (Alternatives To) reviewed during a series of internal business planning sessions is provided in the subsections below.

4.1.1 Do Nothing

The “do nothing” alternative must be considered in the evaluation of Alternatives To to identify the implications of doing nothing to address the identified problem or opportunity. The “do nothing” option would mean that upon the South Landfill reaching its permitted capacity between 2029 and 2031, Walker would no longer continue to provide waste disposal capacity in the Niagara Region. This scenario would result in the discontinuation of Walker's existing

¹⁹ Association of Municipalities of Ontario (AMO). Ontario Baseline Waste and Recycling Report. September 7, 2023. Retrieved December 21, 2023, from <https://www.amo.on.ca/sites/default/files/assets/DOCUMENTS/Waste/2023/AMO-ON-Baseline-2023-v6-AODA.pdf>

²⁰ AMO. Ontario Baseline Waste and Recycling Report. September 7, 2023. Retrieved December 21, 2023, from <https://www.amo.on.ca/sites/default/files/assets/DOCUMENTS/Waste/2023/AMO-ON-Baseline-2023-v6-AODA.pdf>

contracts with customers at the South Landfill, requiring customers to seek alternative facilities to meet their disposal needs. Hardest hit would be residents of Niagara who currently rely on Walker's South Landfill for disposal of approximately 44 percent of their residential waste, as well as local businesses and institutions (IC&I) customers given approximately 74 percent of all waste generated within the Region of Niagara is currently disposed of at the South Landfill. Cascading impacts on the waste diversion and resource recovery operations that make up Walker's Resource Management Campus would be experienced under the "do nothing" scenario, such a curtailment, interruption or a loss of these businesses which play a critical role in Niagara Region's waste diversion infrastructure as well as a significant economic loss to the local community.

4.1.2 Continuation of Landfill Disposal Capacity at Walker's Niagara Campus

This option would see Walker continuing to dispose of up to 1,100,000 tonnes of solid non-hazardous residential and IC&I residual material annually at its Niagara Campus, allowing Walker to continue to service its existing customer base within the City of Niagara Falls, Niagara Region, and the Province of Ontario once the approved capacity at the existing South Landfill has been reached.

Continuation of landfill disposal capacity at Walker's Resource Management Campus would be categorized as a landfill expansion per the definition of "Site" as described in Ontario Regulation (O. Reg.) 347, Section 1(1):

"site" means one property and includes nearby properties owned or leased by the same person where passage from one property to another involves crossing, but not travelling along, a public highway.

As Walker would be seeking approval for landfill expansion rather than the establishment of a new landfill, host municipal approval or that of any municipality within 3.5 km of the Site would not be required per the new sections of the *EA Act* introduced under Bill 197 (*COVID-19 Economic Recovery Act, 2020, S.O. 2020, c. 18*).

To realize the economic opportunity associated with the continuation of service, Walker has identified a target expansion capacity of approximately 18 million m³. This capacity could not be achieved through an expansion within the existing footprint of the currently operating South Landfill as its capacity was optimized at the time of approval. An expansion to the East Landfill is also not a viable option because the targeted capacity is not achievable within its contours and agricultural rehabilitation is underway in its southern portions. An envelope including the Southeast Quarry and its immediate surrounding area is the only feasible location within Walker's Resource Management Campus to accommodate the continuation of landfill disposal to an ultimate capacity of approximately 18 million m³, thereby realizing the identified economic opportunity.

Undertaking an expansion at Walker's Resource Management Campus provides Walker with the ability to utilize the existing significant infrastructure critical to various landfill operational requirements as well as the existing significant "Green Technology" infrastructures currently approved and operating at the Site. Further, continuation of landfill disposal capacity at the Campus post-closure of the South Landfill would allow for the continued operation of the co-located ancillary facilities, such as the Residential Waste & Recycling Drop-Off Centre, Compost Facility, Municipal Biosolids Facility, Walker Resource Recovery Area, and Clean Wood Site.

4.1.3 Options Not Considered

As noted above, the new sections of the *EA Act* introduced under Bill 197 (*COVID-19 Economic Recovery Act, 2020, S.O. 2020, c. 18*) provide both lower and upper-tier Ontario municipalities the legislative ability to refuse the siting of new landfills within their boundaries as well as within 3.5 km of their boundaries. For a private business such as Walker, the risk associated with undertaking an EA for the establishment of a new landfill is too great given the ultimate power of the municipal veto over EA approval. As such, establishing future disposal capacity elsewhere within Niagara Region is not a feasible option, nor would it complement the additional integrated solid waste services and infrastructure provided in the current Resource Management Campus setting.

The export of residual waste to the U.S. is also not considered as an Alternative To for this EA. While this option has the potential to address the identified economic opportunity to continue to provide waste disposal capacity to Walker's

existing customer base, the precarious position of being fully reliant on third party waste disposal capacity across the border – at the mercy of legislative or economic shifts – to maintain business operations is not palatable for Walker. Further, it does not provide a local solution to address the issue of residual waste disposal capacity within Ontario.

Finally, Walker is not in the business of incineration/thermal waste disposal, and it is not considered as a potential option for this EA. Thermal waste disposal as an alternative to landfilling has been explored by Walker in the past and, for reasons of financial feasibility, has been concluded not to be a reasonable alternative.

4.2 Analysis of “Alternatives To”

Walker reviewed the strengths and weaknesses of both the “do nothing” and continuation of landfill disposal capacity at the Resource Management Campus options described above, with the main evaluation lens on assessing whether the option would satisfy the economic opportunity that Walker is seeking to achieve by providing economic, long-term, solid non-hazardous residential and IC&I residual material disposal capacity to meet existing and growing demand.

As noted above, the “do nothing” option would not satisfy the identified economic opportunity and would not permit Walker to continue servicing its existing customer base. This would mean that approximately 44 percent of Niagara Region municipal waste and 74 percent of all waste generated within the Region of Niagara would require disposal elsewhere, which would have a significant impact on residents, local businesses, and institutions. The termination of solid non-hazardous residual waste being landfilled at Walker’s Campus would also affect – and in many cases discontinue – ancillary Campus operations related to resource recovery, resulting in cascading economic losses for the local community. Preliminary economic analysis prepared by Walker identifies the approximate economic impacts of the “do nothing” option as the loss of \$22 million to gross domestic product (GDP) per year including the loss of 245 full time equivalent (FTE) jobs per year.

The identified economic opportunity would be satisfied by implementing the continuation of landfill disposal capacity at Walker’s Resource Management Campus option. In addition to preventing the estimated economic losses associated with the “do nothing” option, Walker calculates that the continuation option would see increased economic benefits on the order of \$57 million GDP and 469 FTE jobs per year. Further, this option would provide a local solution to address the issue of residual waste disposal capacity in Ontario.

4.3 Preferred Option

Based on the work undertaken during the business case and planning process, Walker determined that the only viable option to meet the long-term requirements for additional solid non-hazardous residual residential and IC&I material disposal capacity, while also continuing to operate its business and meet its economic goals, is to undertake an expansion of landfill capacity at its Niagara Resource Management Campus. Walker has an opportunity to respond to the growing demands from local, regional, and provincial customers, including the Regional Municipality of Niagara, to provide safe and reliable disposal capacity, and an environmentally sound facility to support the current and predicted population growth. Should local customers have to send their material to another facility farther away, it would add significant cost and environmental impact from increased transportation. Walker is committed to improving environmental sustainability and the continuation of landfilling at the Campus would avoid increased GHG emissions and thus align with Ontario’s current priorities relating to climate change and the target of having zero GHG emissions within the waste sector by 2030. The preferred option would allow Walker to continue to provide approximately 245 well-paying jobs, with the potential to grow that number to approximately 469 jobs through ancillary Campus facilities and activities dependent upon the continuation of landfilling capacity at the Resource Management Campus.

The “do nothing” option does not address Walker’s economic goals or the identified opportunity, nor does it avoid significant business risks that could put the company at substantial economic disadvantage within the waste sector in Ontario.

5. Summary of Walker's Business Decisions

Given the economic opportunity that Walker may realize by continuing to provide waste disposal capacity to its existing customer base within the City of Niagara Falls, Niagara Region, and the Province of Ontario once the approved capacity at the existing South Landfill has been reached, Walker intends to consider expanding its landfill disposal capacity at its Resource Management Campus. Walker is therefore preparing to undertake the EA to provide for the continued operation of its Campus to accept the same material that it is currently permitted to receive, at the same permitted daily and annual rate, while increasing the overall disposal capacity for post-diversion solid non-hazardous municipal and IC&I residual materials.

In keeping with the MECP Code of Practice, Walker determined the rationale for its proposed undertaking based on an analysis of the key opportunities including:

- Walker has an economic opportunity to respond to the growing demands from local customers, particularly those within Niagara Region, and allow the company to continue providing waste management services and remain economically competitive in the waste sector in Ontario;
- Walker will continue to provide its existing regional customer base with a local, reliable, secure, and cost effective disposal option for solid non-hazardous residual residential and IC&I materials;
- Walker will be able to continue to provide essential waste diversion and resource recovery services at its Campus;
- Walker's proposal aligns with the Government of Ontario's direction on continuing to require a permitted, well-designed, environmentally-secure facility to manage residual materials, namely through the *Strategy for a Waste-Free Ontario: Building The Circular Economy*;
- Walker's Resource Management Campus will continue to provide a safe and secure facility able to accept residual material generated through the implementation of key Province of Ontario growth directives (i.e., *More Homes Built Faster Act*, Growth Plan); and
- Environmental impacts of GHG emissions will be minimized through a reduction in the number of waste related trucks hauling material over longer distances.

6. Future Role of the South Landfill Phase 2 in the Context of the Resource Management Campus

Walker has identified an economic opportunity associated with its ability to continue to provide waste disposal capacity to its existing customer base within the City of Niagara Falls, Regional Niagara, and the Province of Ontario once the approved capacity at the existing South Landfill, located within Walker's Resource Management Campus, has been reached. The Southeast Quarry and its immediate surroundings were determined to be the only feasible on-Site location to undertake a disposal capacity expansion that would satisfy the economic opportunity identified. To calculate the total volume that could be accommodated at its Resource Management Campus by undertaking a landfill expansion within the envelope of the Southeast Quarry, Walker undertook an internal review that examined the amount of available material that could continue to be captured at the Campus; the Southeast Quarry dimensions and feasible landfill contours; and the economic requirements to facilitate a continuation of capacity within the Campus. This initial capacity analysis was undertaken to guide the potential development of Alternative Methods, as well as to guide the economic considerations for the capacity expansion volume to be sought. An expansion of approximately 18 million m³ was determined to be the most suitable scenario, allowing Walker to provide a long-term disposal option to the existing and expanding customer base for the next 20 years and to achieve their long-term economic goals.

As noted above, while critical to the overall operations of Walker's Resource Management Campus, residual waste disposal is only one of the multitude of activities that are carried out within the Campus.

7. Conclusion

Walker has identified a sustainable market opportunity for the company to continue to provide disposal capacity for solid non-hazardous residual residential and IC&I material to its existing customer base in Niagara Region and the province of Ontario. Given the economic opportunity that Walker may realize by continuing to provide long-term disposal capacity for its customers, Walker is proposing to increase the residual waste disposal capacity of its Resource Management Campus by approximately 18 million m³ through landfilling of the area currently occupied by the Southeast Quarry. Walker is therefore preparing to undertake an EA to provide for the ongoing operation of its Campus to accept the same material that it is currently permitted to receive, at the same daily and annual rate, while increasing the overall capacity and life of the Site.

DRAFT

