

**Summary – Considerations for Determining the Preferred Alternative To
New Waste Management Capacity
Environmental Assessment
City of Temiskaming Shores**

Alternatives:	Do Nothing	Thermal waste treatment facility	Energy from waste facility	Waste export	Waste import	Landfilling
Environmental Considerations						
Potential for destruction terrestrial and aquatic habitat	No additional adverse effects	Greenfield site development would have potential for impacts / displacement of habitat and wildlife Landfill component may lead to additional adverse effects on habitat and wildlife	Greenfield site development would have potential for impacts / displacement of habitat and wildlife Landfill component may lead to additional adverse effects on habitat and wildlife	Potential for such impacts limited to transfer stations that are likely required within the City	Greenfield site development would have potential for impacts / displacement of habitat and wildlife; impact larger than for a facility tailored solely to the City's needs	Greenfield site development would have potential for impacts / displacement of habitat and wildlife Expansion of existing landfill would allow to minimize such effects as part of infrastructure is already in place
Potential for air emissions (incl. Local and global considerations)	No additional adverse effects	Potential for adverse effects from air emissions Increased transport related emissions (incl. GHG emissions) due to high transport efforts	Potential for adverse effects from air emissions Increased transport related emissions (incl. GHG emissions) due to high transport efforts	Odours from transfer station High transport related emissions (incl. GHG emissions) Potential for air emissions at receiving site dependent on technology used for management/ treatment	Potential for additional adverse effects through increased haul traffic and increased haul distance (GHG emissions) Potential for emissions further dependent on technology used for management	Transport related air emissions (incl. GHG emissions) Potential for landfill gas emissions (if not captured/managed)
Potential for effects on groundwater resources	No additional adverse effects	Ongoing need for landfilling of by-products Landfill component would pose potential for adverse effects on groundwater resources	Ongoing need for landfilling of by-products Landfill component would pose potential for adverse effects on groundwater resources	No additional adverse effects (transfer station would likely be located at existing landfill)	Increased volume of waste would result in a greater potential for adverse effects	Potential for adverse effects
Other:						
Socio/Cultural Considerations						
Potential for land use conflicts	No additional adverse effects	Potential for land use conflicts (air emissions, noise levels at nearby receptors)	Potential for land use conflicts (air emissions, noise levels at nearby receptors)	Increased truck traffic, odours from transfer station Potential conflicts at receiver location	Along haul route and as a result of additional haul trucks Potential for conflicts dependent on technology used for management	Noise levels at nearby receptors, odours from landfill, additional dust from hauling trucks; If landfilling through expansion of existing site new land use conflicts would be minimal
Number of facilities required	No additional adverse effects	Two: One incinerator plus one landfill site	Two: One incinerator (including a generator) plus one landfill site	Two: One transfer station plus one facility at receiving end	Two: Probably one transfer station near source and plus one facility in COTS	One
Other:						
Economic Considerations						
Construction Cost	N/A	High (incinerator plus landfill site)	Very High (EFW facility plus landfill site)	Moderate (transfer station)	Dependent on technology chosen for management	Low
Operating Cost	N/A	High (facility has to operate on a continuous basis in order to be cost effective; this requires on-going maintenance)	Very High (facility has to operate on a continuous basis in order to be cost effective; this requires on-going maintenance); Potential for cost offsets from energy generation with significant waste stream	Moderate (transfer station)	Dependent on technology chosen for management	Low
Transport Cost	N/A	Moderate to High (transport component includes transport of waste to incinerator and transport of ashes to landfill site)	Moderate to High (transport component includes transport of waste to incinerator and transport of ashes to landfill site)	High (cost effort depending on location; trucking cost could be reduced through construction and operation of transfer station which require capital and operation cost)	High (cost effort depending on source location; trucking cost could be reduced through construction and operation of transfer which require capital and operation cost)	Moderate
Approval Time/Cost/Risk	N/A	Extensive approval requirements due to complexity of facility and the fact that two facilities are involved (facility siting, engineering, air dispersion modeling); Potential risk that current landfill capacity would be consumed before this option can be operational	Extensive approval requirements due to complexity of facility and the fact that two facilities are involved (facility siting, engineering, air dispersion modeling, negotiations with utility companies etc.); Potential risk that current landfill capacity would be consumed before this option can be operational	Moderate to Low. If exported to an existing facility licensed for import of waste from the City approvals would be limited to the transfer station development. If not licensed to receive waste from the City, Certificate of Approval for receiving facility would need to be amended.	Dependent on technology chosen for management	Low
Legal/Contractual Risk	COTS non-compliant with MOE approval	Would have to be run by a third party, commitment of waste stream	Would have to be run by a third party, commitment of waste stream Need for a market/agreement for generated energy	Contractual risk with potential receiver	Dependent on technology chosen for management	Low
Other:						

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Technical Considerations						
Complexity of technology (maintenance requirements, staffing, training monitoring)	Low	High maintenance requirement, skilled staff required, air monitoring required	High maintenance requirement, skill staff required, air monitoring required	Low	Dependent on technology chosen for management	Low
How well is need/problem addressed?	Does not address problem	Would add additional life to landfill, yet landfilling is still required	Would add additional life to landfill, yet landfilling is still required	Problem addressed	Dependent on technology chosen for management	Problem fully addressed
Technical Risk (proven technology? Reliability?)	No change	Only one facility currently in operation in Ontario	Not a proven technology within Ontario	Coordination of hauling trucks	Dependent on technology chosen for management	Low (acceptable technology proven in this environment)
Additional Studies Required	N/A	Additional studies pertaining to waste stream volumes and composition of waste in order to size the facility (i.e., furnaces)	Additional studies pertaining to waste stream volumes and composition of waste in order to size the facility (i.e., furnaces, turbines)	No additional studies required	Dependent on technology chosen for management	No additional studies required
Other:						
Municipal Policy Considerations						
Compliance with Draft WMMP	No	No	No	No	No	Yes Explicit objective of Draft WMMP
Potential to support waste diversion efforts	No	No Alternative does not support overall objective of reducing waste stream; this alternative requires considerable capital investment tailored to address a specific waste volumes; reduction in the waste volume would potentially jeopardize economics behind the investment	No Alternative does not support overall objective of reducing waste stream; this alternative requires even more capital investment than the thermal treatment alternative; reduction in the waste volume would potentially jeopardize economics behind the investment and potentially the power supply agreements and associated revenue streams	No Typically export agreements are based on specified minimum waste quantities; a change in waste generation rates (e.g., as a result of intensified diversion) may adversely affect contract and/ or tipping fees	Yes	Yes
Municipal preferences	No	No	No	No	No	Yes Explicit objective of Draft WMMP Explicit objective of Municipal Council
Other:						