



# WM Responses to Fact Sheet Circulated in Some Communities Over the Past Day or So – June 7th, 2010

	From Fact Sheet	From Fact Sheet	WM Response
	Waste Management Proposes:	Considerations:	
1	A new 6.5 million cu. m. landfill that would take 400,000 tonnes of garbage per year.	This would be nearly double the average annual intake at the current dump and impede waste diversion programs.	<i>400,000 is only the maximum number. The current permits do not impose any maximum. Waste diversion programs need infrastructure. We are supplying infrastructure. People supply the philosophical conviction. Governments supply the rules and, sometimes, incentives.</i>
2	A diversion rate of 20% i.e. 100,000 of 500,000 tonnes. With a possible 60% target in 20 years. Only if landfill is approved.	The Province of Ontario has mandated a diversion rate 60% by 2008 or ASAP. The city of Ottawa has a strategy to achieve 60% ICI diversion by 2015. Landfills – highest profits	<i>Any facility that provides diversion capacity will need disposal capacity for the residual waste. Our proposal provides for both and will assist the City in achieving its goal.</i>
3	There are no acceptable alternatives to a new landfill. The Carp road site is the best and only location for a new landfill and no other locations will be considered	Landfills have been used for thousands of years and are outdated now. They have become more technical over the years but are also much bigger than they have ever been. There are many operational alternative waste handling processes that are superior to landfills. The Carp road site is located in a rapidly growing community of over 125,000 people. As well it is located in an area where the groundwater is very vulnerable to contamination. Definitely not suited for a landfill.	<i>Landfills are not outdated, and in fact are used all over the world for disposal of waste. Operational alternatives to waste handling do exist, however a variety of factors determine if these alternatives are appropriate for certain areas. These factors include volume, volume control, cost (both capital and disposal), and technology acceptance among others. The only technology, other than landfill, that has been proven to be capable to handle large volumes of waste in an environmentally safe manner is “mass burn technology”. The City has decided, at least for the time being, not to utilize that technology; that may change. There are other technologies which have been proposed but, at least at this stage, none has been demonstrated to have the capability to handle large volumes of mixed residential, commercial, industrial and institutional waste.</i>
4	That the landfill will have full liners that will prevent contaminants from leaking into the groundwater and natural environment.	Modern landfill liners are designed to be the best possible protection against contaminate leakage into the environment but only delay leaks. Landfills produce leachate (contaminated water) for hundreds of years. Liner manufactures guarantee their produce for only tens of years. Liner integrity is greatly depended on installation quality, the temperature and chemical nature of leachate. In fact liner material can be impacted by exotic chemicals like benzene as well as common materials like fuel oil, some household cleaners, and turpentine.	<i>Modern landfills are designed with built-in systems to address the specific concerns related to leachate. They are designed with double composite liner systems, leak detections systems and leachate collection systems. This combination uses the best technology to address the potential for leakage. The removal and treatment of leachate allows for the orderly and managed removal of contaminants from the landfill. Studies have shown that modern landfills are performing at least as well as anticipated, and in most places far better than anticipated. The same regulations that applied in the permitting of the City’s Trail Road landfill will apply to the proposed new landfill footprint at this site.</i>  <i>The Liners are composed of two distinctly different materials. The clay portion is 0.75 meters thick and passes water at the rate of 0.00000001 cm per second. The high density polyethylene portion is 0.080 inches thick and essentially allows no water to pass through it. The dramatically different materials are combined to overlap their strengths. Any defects or partial failure of either is backed by the performance of the other. On top of the liner is a liquid collection layer of stone 0.5 metres thick, which passes water at a rate of 1.0 cm per second. This layer covers the entire surface of the liner. The surface of the liner is sloped at 2% to promote drainage to a sump (low point). The sump is equipped with electronically controlled pumps, which limit the depth of water in the sump to 0.3 meters. This system is then duplicated, so any liquids that penetrate the top liner are collected in the collection system below it. The result is that liquids in the landfill that reach the liner are diverted to the sump through the rock layer which moves water 1,000,000 times faster than the liner and removed from the landfill. Because the liquid is removed from the landfill, it is not available to penetrate the liner and escape to the environment.</i>
5	We fully understand the hydrological environment and can protect the groundwater and surface water from contamination	The Carp site is on sand and gravel deposits that are highly permeable to water flow over fractured limestone. Solution weathering of the limestone can develop complex interconnected channels through which contaminated groundwater can move in directions that are difficult to predict and control. Off site groundwater contamination has been a problem at the site for many years and efforts to correct it has been a problem at the site for many years and efforts to correct it have yet to be proven effective	<i>The Carp Road site is on sand and gravel overlying limestone bedrock. The hydrogeological conceptual model for the site is well understood and accepted by the Ministry of the Environment. Solution weathering, given the right set of environmental, geologic and geochemical circumstances, can occur in limestone bedrock. At the Carp Road site, there is no evidence of solution weathering of the limestone, and no expectation that any will occur in the future.</i>  <i>It is important to note that any offsite impacts from the existing facility have been identified, treated, and have already been reduced to nearly insignificant concentrations. This has been accomplished in response to impacts from old landfill units which do not have liners or leachate collection systems. The proposed facilities will add even more layers of protection. The double liner and double collection system allow a second opportunity to collect any liquids that might penetrate the top liner. The final protection in a modern engineered landfill are the strategically placed groundwater monitoring wells which will identify any concern well in advance of migration anywhere near the property boundary .</i>
6	Odours will be controlled through gas collection and destruction	The horrendous odours that impacted the community in the past have been controlled by putting in a full gas collection system, putting on final cover, reducing intake and thus limited the active disposal area. Most of these measures can only be fully implemented when the landfill is near capacity. The new landfill with 400,000 tonnes of annual intake will only have partial odour control until it is near capacity in 10 to 20 years and the community will have to deal with odour issues again	<i>The infrastructure consisting of the main piping system, the gas handling equipment and the gas destruction equipment, to collect and properly control landfill gas will be constructed with the initial disposal cell and be available for operation when disposal operations commence at the landfill. Any landfill gas generated will be collected and burned in either the energy generating facility or the flare.</i>  <i>The odours experienced at Ottawa did not come from the working face. They were a result of gas build up in the previously filled portions of the landfill. Therefore, reduction of the size of the working face has nothing to do with our ability to control the odour. The vacuum extraction technology that we use is capable of controlling odour from sites with more than twice the volume than what is projected at WCEC. One of our landfills in Illinois operated with this technology within 300 metres of a minor league baseball stadium. This stadium set Class A attendance records and is the most popular tourist attraction in its county.</i>
7	Collected landfill gas will be used to generate electricity. (Mandated by the provincial government)	It has been questioned how much landfill methane will be produced if organic materials are diverted from the landfill to the Organics Processing Facility. Information would indicate that a 400,000 t/yr. landfill on Carp Rd with a 75% diversion of organic material would provide (at maximum production) less than 20% of the landfill gas currently being captured at the existing Carp landfill. This might run one small engine for a short time.	<i>The Ottawa gas to energy plant can meet its current commitment with the energy provided from the existing unit. Future organic diversion technologies may be able to supplement the existing landfill gas flows with syngas. Both S4 and Enerkem technologies are capable of providing a synthetic gas that is compatible with our landfill gas and is capable of being converted, with our existing gas to energy system, into electricity.</i>
8	Impacts on the community will be minimal	With an intake of 400,000 tonnes disposal and 100,000 tonnes diversion there will be an annual 500,000 tonnes of truck traffic going to the site. As well there will be 100,000 tonnes of diverted material leaving the site resulting in 600,000 tonnes of traffic. Regular garbage trucks handle 10 – 15 tonnes thus there could be 40 – 60 thousand more trucks on the very busy Carp road increasing accident risk and road wear. This could be reduced somewhat by using larger trucks when possible	<i>As the comment is addressed to traffic, we will focus on that. Truck traffic and any required mitigation measures will be fully examined as part of the environmental assessment.</i>  <i>There is no question that growth is placing significant demands on the roads. Traffic to and from the WCEC will never be more than a small fraction of that, though.</i>
9	There will be benefits for the community	Both Waste Management and BP in the gulf of Mexico have said that their project decisions were made on the best business case (money) and thus not the best environmental and social case. The community may get a few soccer pitches, some funding for concerts, and possibly a few new jobs in the near future; but in the long run there will be a huge pile of garbage in the middle of the community that will be a source of ongoing environmental and social concern for our children, grandchildren, great grandchildren.... Landfills are forever.	<i>Yes, any proposal from private business is prepared for the purpose of generating a profit. There is no reason whatsoever, though, why profit must be obtained at the expense of environmental and social values. The best projects respond well to all of these values while preserving the business incentive. To dismiss the package of community benefits as window dressing is unfair and misleading. The combination of massive upfront expenditure in infrastructure, ongoing procurement, jobs, recreational and other community facilities, as well as the community trust fund will provide people with an ongoing daily reminder that industrial projects responding to wider needs can make lasting positive contributions to local life.</i>