



**Waste Management of Canada Limited
West Carleton Environmental Center
Environmental Assessment (EA)
Compliance Monitoring Program (CMP)**

EA File: 02-08-02

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Submitted by:

Waste Management of Canada Corporation

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1.0 Introduction

The Minister of Environment and Climate Change (Minister) approved the amended West Carleton Environmental Center (WCEC) Environmental Assessment (EA) for the Waste Management of Canada Corporation (WMCC) on September 5, 2013. The Minister's Notice of Approval (Approval) to proceed with the Undertaking, issued under Section 9 of the Environmental Assessment Act (EAA), dictates the conditions of the Approval of the Undertaking that must be adhered to by WMCC.

Condition 4.1 of the Approval required WMCC to prepare and submit to the Director (Director) of the Environmental Assessment and Approvals Branch (EAAB) of the Ministry of Environment and Climate Change (MOECC) an EA Compliance Monitoring Program (CMP) for the public record.

Condition 4.2 of the Approval requires WMCC to submit the CMP to the Director within one year of the date of the Approval or 60 days before commencement of construction whichever is earlier. WMCC submitted the CMP to the Director on September 5, 2014. This updated CMP, submitted to the Director on June 30, 2015 by WMCC, reflects the CMP structure as requested by the MOECC.

Condition 4.3 indicates that the CMP shall include the monitoring of the proponent's implementation of the undertaking in accordance with the EA and the conditions in the Approval with respect to mitigation measures, public consultation, and additional studies and work required. The CMP shall also include monitoring of compliance with all commitments made in the EA and the approval process of the EA with respect to mitigation measures, public consultation, and additional studies and work required.

Condition 4.4 states that the CMP must include an implementation schedule.

Condition 4.5 notes that the Director may require the proponent to amend the CMP, and that the proponent must carry out the CMP, as may be amended by the Director.

Condition 4.6 states that the proponent shall make the CMP available to the MOECC or its designate upon request in a timely manner when the MOECC requests.

This document serves as the WCEC EA CMP and includes information on the following matters:

- A restatement of the conditions from the Minister's Approval of the WCEC EA;
- A restatement of WMCC's commitments from the amended WCEC EA document; and
- A framework for reporting on the EA CMP and annual Compliance Monitoring Report (CMR).

2.0 EA Notice of Approval Conditions

The Approval for the WCEC included a number of conditions of approval. Table 1 includes the proposed format of the EA CMR that will document WMCC's compliance with the Approval conditions. WMCC will provide the status of compliance with each condition of approval in the annual CMR.

3.0 EA Commitments and Monitoring

The amended WCEC EA document includes a chapter on Environmental Commitments and Monitoring (Chapter 8). To ensure that proposed mitigation measures set out in WCEC EA address the predicted effects for each discipline, WMCC developed monitoring strategies of each discipline to enable ongoing monitoring of potential environmental effects during the construction, operation, and maintenance of the facility.

WMCC developed monitoring strategies for each discipline as part of the detailed impact assessments carried out in the EA to ensure that:

- Predicted net effects are not exceeded;
- Unexpected negative effects are addressed; and
- Predicted mitigation effects are realized.

Table 1 summarizes the EA commitments and monitoring for each discipline from the detailed impact assessments carried out in the EA.

4.0 Additional Environmental and Planning Approvals

As indicated in the amended WCEC EA, WMCC will obtain other approvals, including the Environmental Compliance Approval (ECA), Environmental Protection Act (EPA) Section 27 approval for waste disposal sites, Ontario Water Resources Act (OWRA) Section 53 approvals for the storm water management and leachate treatment facilities, and Planning Act for a zoning by-law amendment and site plan approval.

Table 1 summarizes the additional environmental and planning approvals, including the Environmental Compliance Approval (ECA), Environmental Protection Act (EPA) Section 27 approval for waste disposal sites, Ontario Water Resources Act (OWRA) Section 53 approvals for the storm water management and leachate treatment facilities, and Planning Act for a zoning by-law amendment and site plan approval.

5.0 EA Compliance Monitoring Program Framework

The EA CMP will consist of an annual report submitted to the Director on or before March 31 of each year. The EA CMR will document the activities conducted by WMCC over the prior calendar year (i.e., January to December). WMCC will submit an initial CMR for the WCEC in March 2014 for the calendar year 2013. As per the EA Approval conditions, WMCC will provide the CMR to the Director of the EAAB for the public record.

Table 1 - WCEC EA Commitments, Approval Requirements & EA Conditions

Category	EA Report Section	EA Commitment	EA Commitment Fulfillment	EA Condition No.	EA Condition	Status of Completion
Consultation	Section 7.9	Consult with stakeholders regarding ECAs, EMP(s) and BMPs, Contingency Plans, and End-Use/Closure Plan for the undertaking and other WCEC facilities prior to submission of the formal applications to the MOE. Consultation will include opportunities to review ECAs, EMP(s) and BMPs, Contingency Plans, and End-Use/Closure Plan for the undertaking and other WCEC facilities. Give notice of availability of draft documents on the project website for review for a 30-day period (e.g., local newspapers, project website, stakeholder email). Conduct consultation events on draft documents, if needed (e.g., Open Houses). Post final documents submitted to the MOE on the project website, including the results of the consultation process. Stakeholders will include the Carp Landfill Community Liaison Committee (CLCLC), the City of Ottawa, government agencies, and the public.	Document consultation undertaken regarding the ECAs, EMP(s) and BMPs, Contingency Plans, and End-Use/Closure Plan for the undertaking and other WCEC facilities.	8	2. The proponent shall post the draft Groundwater and Surface Water Monitoring Plan on the proponent's website for the undertaking for a period of thirty days for review and public comment. The proponent shall take any comments received into consideration prior to finalizing the plan. Once finalized, the proponent shall implement the plan. 3. Any monitoring reports prepared by the proponent in accordance with the Groundwater and Surface Water Monitoring Plan shall be made publicly available on the proponent's website for the undertaking.	
	Section 7.9	Consult with First Nations and Aboriginal communities regarding the ECAs, EMP(s) and BMPs, Contingency Plans, and End-Use/Closure Plan for the undertaking and other WCEC facilities prior to submission of the formal applications to the MOE. Consultation will include opportunities to review ECAs, EMP(s) and BMPs, Contingency Plans, and End-Use/Closure Plan for the undertaking and other WCEC facilities. Give notice of availability of draft documents on the project website for review for a 30-day period (e.g., mail/email/fax, phone, project website). Conduct consultation events on draft documents, if needed (e.g., meetings). Post final documents submitted to the MOE on the project website, including the results of the consultation process.	Document consultation undertaken regarding the ECAs, EMP(s) and BMPs, Contingency Plans, and End-Use/Closure Plan for the undertaking and other WCEC facilities.	8	2. The proponent shall post the draft Groundwater and Surface Water Monitoring Plan on the proponent's website for the undertaking for a period of thirty days for review and public comment. The proponent shall take any comments received into consideration prior to finalizing the plan. Once finalized, the proponent shall implement the plan. 3. Any monitoring reports prepared by the proponent in accordance with the Groundwater and Surface Water Monitoring Plan shall be made publicly available on the proponent's website for the undertaking.	
	Section 7.9	Continue to facilitate the ongoing function of the CLCLC as stated in Condition 3.1 of the current CofA (A461002) for the Ottawa WMF.	Continue participation on the CLCLC.	6	1. The proponent shall establish and maintain a CLC in respect of the undertaking to provide a forum for public concerns to be raised and for mitigation measures to be discussed where appropriate. 2. If there is no interest from the public in continuing the existing CLC or establishing and participating in a new CLC (once sufficient notice has been given) it may be discontinued. If discontinued the proponent shall publish a notice at least annually inviting expressions of interest in establishing or re-establishing the CLC. 3. If continued or re-established, the CLC shall serve as the focal point for dissemination, review and exchange of information and monitoring results relevant to the undertaking. 4. If there is interest in forming a CLC and members are willing to serve, the CLC shall be established. 5. The proponent shall provide administrative support for the CLC including, at minimum: a) providing CLC meeting space; b) preparing and publishing meeting notices; c) recording minutes of each meeting; and, d) preparing an annual report to be submitted as part of Compliance Reporting as required by Condition 5.	
EMPs and BMPs	Chapter 6	Prepare EMP(s) and BMPs following approval of the undertaking by the Minister of the Environment and prior to construction. The EMP(s) and BMPs will include a description of proposed mitigation measures, monitoring requirements, and commitments, as stated in Chapter 6 of the WCEC EA Report. The EMP(s) and BMPs will ensure these mitigation measures, monitoring requirements, and	Confirm EMP(s) and BMPs) have been prepared prior to the start of construction.			

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		commitments are implemented during construction, operation, closure, and post-closure of the undertaking and other WCEC facilities.				
Contingency Plans	Chapter 6	Prepare Contingency Plans related to groundwater, surface water, and atmosphere (i.e., odour, dust, noise, landfill gas) following approval of the undertaking by the Minister of the Environment and prior to construction. The Contingency Plans will include a description of proposed contingency measures, monitoring requirements, and commitments, as stated in Chapter 6 of the WCEC EA Report. The Contingency Plans will ensure these contingency measures, monitoring requirements, and commitments are implemented, if required, during construction, operation, closure, and post-closure of the undertaking and other WCEC facilities.	Confirm Contingency Plans related to groundwater, surface water, and atmosphere (i.e., odour, dust, noise, landfill gas) have been prepared prior to start of construction.			
Site Engineering	Chapter 6	Retain environmental and/or engineering personnel (WM or WM agent) to oversee the implementation of commitments made in the EA during construction of the undertaking and other WCEC facilities.	Confirm that environmental and/or engineering personnel have been retained prior to the start of construction.			
Property Value Protection	Chapter 6	Finalize and implement a Property Value Protection (PVP) Plan and provide notification (i.e., letter) to property owners to which the Plan applies.	Confirm the PVP Plan is finalized and in place prior to the start of construction.	10	1. The proponent shall implement the Property Value Protection Plan as described in Appendix D – Community Commitments of the environmental assessment. 2. Should additional studies required for future approvals under the Environmental Protection Act indicate potential impacts to the value of a property; the proponent shall identify the potentially impacted properties by municipal address in the Property Value Protection Plan and shall notify the owners of the properties.	
Community Host Agreement	Chapter 8	Finalize and implement a Community Host Agreement with the City of Ottawa.	Confirm the Community Host Agreement is finalized and in place prior to the start of construction.			
Odour Enforcement Mechanism	Chapter 6	Ensure the principles of the Odour Enforcement Mechanism, as outlined in Appendix D in the ToR, are implemented.	Confirm these measures have been transferred into the EMP.			
Permits and Approvals	Chapter 6	Acquire all necessary permits and/or approvals for the undertaking and other WCEC facilities.	Confirm all permits and/or approvals are obtained prior to the start of construction.			
Atmospheric (Particulate Matter) Detailed Impact Assessment	<i>SD #5 – Atmospheric (Particulate Matter) DIA, Section 6.2</i>	Develop a Dust BMP Plan that may include the following mitigation measures: <ul style="list-style-type: none"> • Watering suppressants on interim cover areas, unpaved roads, construction surfaces, and ancillary sources (e.g., WTPF and crushing activities). Water for these activities may come from the following sources: surface water from on-site SWM ponds, City of Ottawa water, and trucked water; • Limiting traffic movement on exposed surface areas; • Progressive vegetation seeding on surface areas; • Watering and sweeping on all internal haul routes; • Paving of primary on-site haul routes; and • Speed control of on-site traffic. 	Confirm mitigation measures have been included in the Dust BMP Plan.			
	<i>SD #5 – Atmospheric (Particulate Matter)</i>	Develop a Dust BMP Plan that may include the following monitoring measures:	Confirm monitoring measures have been			

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	<i>DIA, Section 8.1.1</i>	<ul style="list-style-type: none"> Annual particulate monitoring (e.g., between May and September at 3 locations along the northeast, northwest, and southwest of the landfill property line); Routine walkover surveys; Record keeping of watering suppressants application; and Record keeping of waste and construction activity locations. 	included in the Dust BMP Plan.			
	<i>SD #5 – Atmospheric (Particulate Matter) DIA, Section 8.2</i>	Increase the stack height of leachate evaporator stack to a minimum of 22 m above grade, should the contingency leachate management system be installed.	Confirm mitigation measure has been implemented, should the contingency leachate management system be installed.			
Atmospheric (Combustion Emissions) Detailed Impact Assessment	<i>SD #5 – Atmospheric (Combustion Haul Route) DIA, Section 6.2</i>	Develop a Combustion Haul Route BMP Plan that may include the following mitigation measures: <ul style="list-style-type: none"> Minimize on-site idling of vehicles; Routinely monitor for waste vehicles arriving to the site in unfit or un-maintained condition; and Properly plan for waste vehicles staging and sequencing on the site. 	Confirm mitigation measures have been included in the Combustion Haul Route BMP Plan.			
Atmospheric (Odour) Detailed Impact Assessment	<i>SD #5 – Atmospheric (Odour) DIA, Section 6.4, Section 8.1.2, and Section 8.2</i>	Develop an Odour and Landfill Gas BMP Plan that may include the following mitigation measures: <ul style="list-style-type: none"> Conduct regular maintenance of the landfill cap and interim cover areas to reduce the cracks and fissures due to erosion and settling; Conduct regular maintenance of landfill gas collection and control system to prevent leaks in the system and ensure proper function of the system; Progressively install the LFG collection system to improve collection efficiency; Flare or otherwise combust all collected LFG; Record meteorological conditions (i.e., wind) on a continuous basis and consider the conditions before undertaking highly odourous activities to minimize off-site odour impacts (i.e., excavation of previously filled areas); Minimize area of the landfill working face to reduce LFG and odour releases to the atmosphere; Cover landfill working face daily with appropriate cover materials (soil) to filter odour and apply odour suppressant chemicals, if necessary; Apply final or interim cover to completed waste cells in a timely manner to reduce LFG and odour releases to the atmosphere; Document, address and investigate all off-site odour complaints to determine odour source and to prevent or minimize future off-site odour impacts; and, Place the leachate collection system under negative pressure and send the leachate gases to the landfill gas collection system. 	Confirm mitigation measures have been included in the Odour and Landfill Gas BMP Plan.			
	<i>SD #5 – Atmospheric (Odour) DIA, Section 8.1.1</i>	Develop an Odour and Landfill Gas BMP Plan that may include the following monitoring measures: <ul style="list-style-type: none"> Total hydrocarbon or hydrogen sulphide surface surveys of both the existing and proposed alternative landfill mounds, as well as leachate collection manholes, to identify any cracks, fissures, or other hot-spots for escaping landfill gas; Continuous monitoring for temperature and flow on the landfill gas flares and the landfill gas-to-energy engine-generator sets to ensure proper operation; Volatile organic compound and hydrogen sulphide ambient air quality monitoring programs to continue to track annual emissions and identify increases in emissions over time; and Source testing of the SBR and leachate evaporator for source validation. 	Confirm monitoring measures have been included in the Odour and Landfill Gas BMP Plan.			

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Atmospheric (Landfill Gas (VOC)) Detailed Impact Assessment	<i>SD #5 – Atmospheric (Landfill Gas (VOC)) DIA, Section 7.2</i>	Develop an Odour and Landfill Gas BMP Plan that may include the following mitigation measures: <ul style="list-style-type: none"> • Progressively install the LFG collection system to improve collection efficiency; • Flare or otherwise combust all collected LFG; • Place the leachate collection system under negative pressure and send the leachate gases to the landfill gas collection system. • Minimize area of the landfill working face to reduce LFG and odour releases to the atmosphere; and • Cover landfill working face daily with appropriate cover materials (soil) to filter odour and apply odour suppressant chemicals, if necessary. 	Confirm mitigation measures have been included in the Odour and Landfill Gas BMP Plan.			
	<i>SD #5 – Atmospheric (Landfill Gas (VOC)) DIA, Section 9.1.1</i>	Develop an Odour and Landfill Gas BMP Plan that may include the following monitoring measures: <ul style="list-style-type: none"> • Total hydrocarbon or hydrogen sulphide surface surveys of both the existing and proposed alternative landfill mounds, as well as leachate collection manholes, to identify any cracks, fissures, or other hot-spots for escaping landfill gas; • Continuous monitoring for temperature and flow on the landfill gas flares and the landfill gas-to-energy engine-generator sets to ensure proper operation; • Volatile organic compound and hydrogen sulphide ambient air quality monitoring programs to continue to track annual emissions and identify increases in emissions over time; and • Source testing of the SBR and leachate evaporator for source validation. 	Confirm monitoring measures have been included in the Odour and Landfill Gas BMP Plan.			
Atmospheric – Air Quality	<i>Chapter 8</i>	Approval Requirement: An approval is required for the air emissions from the preferred undertaking and associated sources including landfill gas collection and management system, the leachate pretreatment system and the leachate evaporator system (should it be installed).				
Atmospheric (Noise) Detailed Impact Assessment	<i>SD #5 – Atmospheric (Noise) DIA, Section 6.2</i>	Develop a Noise BMP Plan that may include the following mitigation measures: <ul style="list-style-type: none"> • All WM trucks use standard (factory) silencers and be kept in good working order; • All WM equipment will comply with MOE noise guideline for site equipment; • Enclose stationary sources in buildings, where practical; • The existing landfill height of approximately 172 mASL will act as a berm for receptors to the south; • The finished height of the preferred landfill footprint of approximately 156 mASL will act as a berm for receptors to the north for sources travelling on the main access road; • Construction and landfill operations are conducted between the hours of 7:00 am and 7:00 pm to reduce potential impacts; and • Ancillary facilities, with the exception of the gas-to-energy plant, will operate between 7:00 am and 7:00 pm based on consultation with WM. 	Confirm mitigation measures have been included in the Noise BMP Plan.			
	<i>SD #5 – Atmospheric (Noise) DIA, Section 8.1.1</i>	Develop a Noise BMP Plan that may include the following monitoring measures: <ul style="list-style-type: none"> • 24-hr monitoring for impulsive noise sources at NR4 (292 Moonstone Road South) and NR8 (112 Willowlea Road). 	Confirm monitoring measures have been included in the Noise BMP Plan.			
Atmospheric – Noise	<i>Chapter 8</i>	Approval Requirement: In conjunction with the approvals for Air, emissions from stationary noise sources will be addressed as part of the Air ECA. Some mobile noise sources such as crushing equipment for C&D processing may also require a separate ECA. Other landfill operations equipment and potential on-site noise sources, including intermittent, will be addressed				

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		under the ECA for the site overall.					
Geology & Hydrogeology Detailed Impact Assessment	<i>SD #5 – Geology and Hydrogeology DIA, Section 6.2.1, Section 6.2.2 and Section 8.2</i>	Develop a Groundwater BMP Plan that may include the following mitigation measures for groundwater quality: <ul style="list-style-type: none"> • Establish concentration limits on the effluent infiltrating to the groundwater from the unlined pond stages; • Prepare an implementation plan for the design and construction of a purge well system (or other approved mitigation measure) in order to control leachate migration from the existing unlined (closed) landfill, if necessary. The implementation plan will be prepared and submitted to MOE concurrent with the application for approval under the Environmental Protection Act for the new WCEC landfill facility; • Install a series of purge wells along the northern toe of the existing landfill, between the existing unlined (closed) landfill and the new landfill in accordance with the implementation plan; and • Continue to operate and maintain the existing purge well system on the existing unlined (closed) landfill site to ensure that groundwater quality impacts from former operations remain within the boundaries of the CAZs. The purge well system will continue to be operated until such time as it can be demonstrated that the system is no longer required in order to maintain groundwater impacts within the CAZs. 	Confirm mitigation measures have been included into the Groundwater BMP Plan.	8	1. The proponent shall prepare and submit to the Regional Director a draft Groundwater and Surface Water Monitoring Plan for review and comment prior to the commencement of construction of the undertaking. The Regional Director may require the proponent to amend the plan. 2. The proponent shall post the draft Groundwater and Surface Water Monitoring Plan on the proponent's website for the undertaking for a period of thirty days for review and public comment. The proponent shall take any comments received into consideration prior to finalizing the plan. Once finalized, the proponent shall implement the plan.		
	<i>SD #5 – Geology and Hydrogeology DIA, Section 8.1.1</i>	Develop a Groundwater BMP Plan that may include the following monitoring measures for groundwater flow: <ul style="list-style-type: none"> • Monitor groundwater flow on-site and within the site-vicinity by measuring water levels in monitoring wells; • Monitor water levels in the SWM ponds; and • Use the collected data to map and interpret the groundwater flow orientations. 	Confirm monitoring measures have been included into the Groundwater BMP Plan.	8	1. The proponent shall prepare and submit to the Regional Director a draft Groundwater and Surface Water Monitoring Plan for review and comment prior to the commencement of construction of the undertaking. The Regional Director may require the proponent to amend the plan. 2. The proponent shall post the draft Groundwater and Surface Water Monitoring Plan on the proponent's website for the undertaking for a period of thirty days for review and public comment. The proponent shall take any comments received into consideration prior to finalizing the plan. Once finalized, the proponent shall implement the plan.		
	<i>SD #5 – Geology and Hydrogeology DIA, Section 8.1.1 and Section 8.2</i>	Develop a Groundwater BMP Plan that may include the following monitoring measures for groundwater quality: <ul style="list-style-type: none"> • Collect groundwater samples from selected monitoring wells located on-site and within the site-vicinity and analyze the samples for an appropriate site-specific indicator list; • Collect effluent samples from the unlined stages of the SWM Ponds to measure water quality in effluent infiltrating to the groundwater table; • Use the collected data to interpret groundwater quality conditions upgradient, between the landfill footprints, and downgradient from the new landfill facilities; and • Continue to monitor the existing purge well system on the existing landfill site to ensure that groundwater quality impacts from the existing unlined landfill remain controlled by the existing purge well system and natural attenuation across the CAZ. The purge well system will continue to be operated until such time as it can be demonstrated that the system is no longer required in order to maintain groundwater impacts within the CAZs. 	Confirm monitoring measures have been included into the Groundwater BMP Plan.	8	1. The proponent shall prepare and submit to the Regional Director a draft Groundwater and Surface Water Monitoring Plan for review and comment prior to the commencement of construction of the undertaking. The Regional Director may require the proponent to amend the plan. 2. The proponent shall post the draft Groundwater and Surface Water Monitoring Plan on the proponent's website for the undertaking for a period of thirty days for review and public comment. The proponent shall take any comments received into consideration prior to finalizing the plan. Once finalized, the proponent shall implement the plan.		
	<i>SD #5 – Geology and Hydrogeology DIA, Section 8.1.1</i>	Submit groundwater monitoring results to MOE for review in an annual report for the WCEC.	Confirm this measure has been included in the EMP.				
	<i>SD #5 – Geology and</i>	An EMP for groundwater flow and quality monitoring will be developed as	Confirm development	8	1. The proponent shall prepare and submit to the Regional		

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	<i>Hydrogeology DIA, Section 8.1.1 and Section 8.2</i>	part of the application for approval under the Environmental Protection Act for the new WCEC landfill facility. Details of the groundwater monitoring program, including specific sampling locations, physical/chemical parameters, and sampling frequencies, as well as trigger/compliance locations and parameter concentrations, will be developed as part of the EMP for the proposed undertaking.	of an EMP for groundwater flow and quality monitoring.		Director a draft Groundwater and Surface Water Monitoring Plan for review and comment prior to the commencement of construction of the undertaking. The Regional Director may require the proponent to amend the plan. 2. The proponent shall post the draft Groundwater and Surface Water Monitoring Plan on the proponent's website for the undertaking for a period of thirty days for review and public comment. The proponent shall take any comments received into consideration prior to finalizing the plan. Once finalized, the proponent shall implement the plan.	
	<i>Chapter 8</i>	Approval Requirement: Approval of an EMP: An EMP will be developed as part of the overall site ECA application for approval and be implemented through the ECA terms and conditions.				
	<i>Chapter 8</i>	Approval Requirement: Permit to Take Water (Section 34 of the Ontario Water Resources Act): An amendment to the existing Permit to Take Water (PTTW) for the current landfill site will be required in order to install and operate the proposed new purge well system. The new wells would be specified as additional sources on the existing PTTW.				
	<i>Chapter 8</i>	Approval Requirement: Industrial Sewage Works (Section 53 of the Ontario Water Resources Act): The collection of leachate, pretreatment of leachate, spray irrigation, and discharge of groundwater from the proposed SWM ponds will require approval under the Ontario Water Resources Act. These facilities will be required to meet all MOE design requirements outlined under "Design Guidelines for Sewage Works" (MOE, 2008) and the "Stormwater Management Planning and Design Manual" (MOE, 2003). Operations and monitoring requirements for all facilities would be specified in the terms and conditions of an ECA for the sewage works.				
Surface Water Detailed Impact Assessment	<i>SD #5 – Surface Water DIA, Section 6.2 and Section 8.2</i>	Develop a Surface Water BMP Plan that may include the following mitigation and monitoring measures: <ul style="list-style-type: none"> • Construction of SWM ponds to provide stormwater control during landfill cell and site development; • Direction of runoff and overland flow away from working areas and areas of exposed soils and maximize length of overland flow through to points where stormwater is collected; • Installation of swales and culverts, as required, to allow for surface flow to pass under the on-site roads; • Construct two-stage SWM facilities to address surface water runoff from the site and emergency response to accidental leachate seeps or spills; • Monitor inflow to SWM ponds regularly to identify emergency response situations, including leachate seeps and onsite spills; • Implement emergency response actions, as required, when emergency response situations occur, including leachate seeps and onsite spills; and • Monitor annual and periodic SWM pond inflow for parameters as identified by MOE in their surface water "assessment criteria" as it related to landfill sites. 	Confirm mitigation and monitoring measures have been included in the Surface Water BMP Plan.	8	1. The proponent shall prepare and submit to the Regional Director a draft Groundwater and Surface Water Monitoring Plan for review and comment prior to the commencement of construction of the undertaking. The Regional Director may require the proponent to amend the plan. 2. The proponent shall post the draft Groundwater and Surface Water Monitoring Plan on the proponent's website for the undertaking for a period of thirty days for review and public comment. The proponent shall take any comments received into consideration prior to finalizing the plan. Once finalized, the proponent shall implement the plan.	
	<i>SD #5 – Surface Water DIA, Section 6.2</i>	Develop a Sediment and Erosion Control BMP Plan that may include the following mitigation and monitoring measures: <ul style="list-style-type: none"> • Installation of silt fences, blankets, and/or berms around construction areas to prevent sediment runoff and erosion; • Retention of sediment and erosion control measures around construction areas until stabilized; • Storage and stabilization of stockpiled materials to prevent sediment 	Confirm mitigation and monitoring measures have been included in the EMP.	8	1. The proponent shall prepare and submit to the Regional Director a draft Groundwater and Surface Water Monitoring Plan for review and comment prior to the commencement of construction of the undertaking. The Regional Director may require the proponent to amend the plan. 2. The proponent shall post the draft Groundwater and Surface Water Monitoring Plan on the proponent's website for the	

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		<p>runoff;</p> <ul style="list-style-type: none"> • Storage and refueling of equipment to prevent potential fuel, oil and grit runoff; • Implementation of vehicle and equipment cleaning procedures to minimize mud, dirt, and debris tracking along the access routes and areas where sediment and control measures are not in place; • Monitoring of function and integrity of sediment and erosion control measures; and • Restoration and re-vegetation of the site to provide sediment and erosion control, when conditions allow. 			undertaking for a period of thirty days for review and public comment. The proponent shall take any comments received into consideration prior to finalizing the plan. Once finalized, the proponent shall implement the plan.	
	Chapter 8	Approval Requirement: As described in the third bullet in Section 9.3, the proposed SWM ponds and related conveyance systems will require approval as part of the ECA for the site. In addition to the PTTW requirements described above, the PTTW should include the ability to take surface water from the SWM ponds for on-site dust control (roads and stockpiles) and potentially for irrigation of landscaping.				
Biology Detailed Impact Assessment	SD #5 – Biology DIA, Section 7.2.2	<p>Develop a Biology BMP Plan that may include the following mitigation measures related to clearing and grubbing activities:</p> <ul style="list-style-type: none"> • Minimization of removal of native vegetation; • Minimization of impact to retained features; • Maintenance of water balance; and • Avoidance of native soil disturbance. 	Confirm mitigation measures have been included in the Biology BMP Plan.			
	SD #5 – Biology DIA, Section 7.2.2	<p>Develop a Biology BMP Plan that may include the following mitigation measures related to erosion and sediment control to prohibit sediment from entering adjacent water bodies, wetlands and forested areas:</p> <ul style="list-style-type: none"> • Minimization of soil mobilization; • Minimization of duration of soil exposure; • Retention of existing vegetation, where feasible; • Maintenance of low runoff velocities; and • Retention of sediment as close to its source as possible. 	Confirm mitigation measures have been included in the Biology BMP Plan.			
	SD #5 – Biology DIA, Section 7.2.2	<p>Develop a Biology BMP Plan that may include the following mitigation measures related to site grading:</p> <ul style="list-style-type: none"> • Minimization of the overall grading footprint; • Creation of low gradients, where possible; and • Avoidance of release of fuel, chemicals, and other materials from construction equipment and construction areas into natural areas and watercourses during equipment maintenance activities and material management. 	Confirm mitigation measures have been included in the Biology BMP Plan.			
	SD #5 – Biology DIA, Section 7.2.3.1	<p>Develop a Biology BMP Plan that may include the following mitigation measures related to edge management:</p> <ul style="list-style-type: none"> • Retention of a narrow zone where no root grubbing will occur (in order to stimulate suckering of cut trees); • Removal of hazard trees; • Installation of edge plantings using appropriate native species; • Installation of temporary vegetation protection fencing at the edge of the clearing limits where the edge of a forest community is removed; and • Restriction of tree removal to the working area, where possible. 	Confirm mitigation measures have been included in the Biology BMP Plan.			
	SD #5 – Biology DIA, Section 7.2.3.2 and Section 7.3.3	Develop a plan to address displacement of Bank Swallow colony, which may include relocation of colony to suitable sites within approximately 2 km of the WCEC and/or creation of a suitable site at the WCEC (i.e., exposed earthen cliff).	Confirm these measures have been included in the EMP.	9	1. The proponent shall develop and implement a Bank Swallow Mitigation, Compensation and Monitoring Plan in consultation with Environment Canada and the Ontario Ministry of Natural Resources prior to the commencement of construction of the undertaking.	

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					2. The Bank Swallow Mitigation, Compensation and Monitoring Plan shall include measures to mitigate impacts of the undertaking on the species, compensate for unavoidable adverse impacts and detail monitoring requirements.	
	<i>SD #5 – Biology DIA, Section 7.2.5.1 and Section 7.2.5.2</i>	Develop a Compensation and Restoration Plan to offset removals of natural forest and wetland in the landfill footprint.	Confirm these measures have been included in the EMP.			
	<i>SD #5 – Biology DIA, Section 7.3.3</i>	Include in the EMP the following compensation measures identified in the Biology Detailed Impact Assessment: <ul style="list-style-type: none"> • Create or enhance 4 ha of wetland habitat that is suitable for amphibian breeding at a location near the preferred landfill footprint that is yet to be determined; • Create or restore forest habitat on lands owned by WM or at location near preferred landfill footprint that is yet to be determined; • Create or restore old field habitat where possible on lands owned by WM; • Establish some natural vegetation between preferred landfill footprint and William Mooney Road. 	Confirm these measures have been included in the EMP.			
	<i>SD #5 – Biology DIA, Section 8.1.1.4</i>	Develop a Biology BMP Plan that may include the following monitoring measures related to vegetation and wildlife: <ul style="list-style-type: none"> • Monitoring of vegetation during clearing, planting and restoration; and • Monitoring of wildlife during clearing, planting and restoration. 	Confirm monitoring measures have been included in the Biology BMP Plan.			
	<i>SD #5 – Biology DIA, Section 8.2</i>	Contact OMNR should species at risk (e.g., Eastern Meadowlark and Barn Swallow) be encountered on-site and adhere to applicable permits, acts, and guidelines in detailed design and construction.	Confirm these measures have been included in the EMP.	9	3. The proponent shall conduct on-site surveys to determine the presence of Barn Swallow habitat on-site in consultation with the Ontario Ministry of Natural Resources. 4. Should Barn Swallow habitat be present, the proponent shall comply with the requirements of the Endangered Species Act, 2007. 5. The proponent shall conduct on-site surveys to determine the presence of Flooded Jellyskin habitat on-site in consultation with the Ontario Ministry of Natural Resources prior to the commencement of construction of the undertaking. 6. Should the presence of Flooded Jellyskin habitat be present, the proponent shall comply with the requirements of the Endangered Species Act, 2007.	
	<i>Chapter 8</i>	Approval Requirement: Tree clearing should adhere to applicable City of Ottawa By-Laws or approval requirements. A Wildlife Scientific Collectors Permit is required through MNR to capture, contain and release amphibians from one site to another, if required. No other approvals or permits are identified as required, assuming that the Endangered Species Act does not apply.				
Archaeology Detailed Impact Assessment	<i>SD #5 – Archaeology DIA, Section 5</i>	Confirm in writing from MTC - Heritage Operations Unit that all archaeological licensing and technical review requirements have been satisfied prior to any excavation activities within the study area.	Confirm these measures have been included in the EMP.			
	<i>SD #5 – Archaeology DIA, Section 6</i>	Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the Ontario <i>Heritage Act</i> . The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological field work, in compliance with Section 48 (1) of the Ontario <i>Heritage Act</i> .	Confirm these measures have been included in the EMP.			

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	<i>SD #5 – Archaeology DIA, Section 6</i>	The <i>Cemeteries Act</i> , R.S.O. 1990 c. C.4 and the <i>Funeral, Burial and Cremation Services Act</i> , 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.	Confirm these measures have been included in the EMP.			
	<i>Chapter 8</i>	Approval Requirement: Should any archaeological sites be uncovered during subsequent works, work must cease and an archaeological investigation must be done by a licensed archaeologist as per Section 48 (1) of the Ontario Heritage Act. Additional Stage 2 work may be required depending upon the specific location of the public drop off area.	Confirm these measures have been included in the EMP.			
Cultural Heritage Detailed Impact Assessment	<i>SD #5 – Cultural Heritage DIA, Section 8.1.1 and Section 8.2</i>	Develop a plan for visual buffering of the following cultural resources: <ul style="list-style-type: none"> • BHF3 – 2193 Richardson Side Road • CLU4 – 427 William Mooney Road • CLU5 – 569 William Mooney Road • CLU6 – 2485 Carp Road 	Confirm these measures have been included in the EMP.			
Transportation Detailed Impact Assessment	<i>SD #5 – Transportation DIA, Section 6.3</i>	Design and construct a northbound left turn lane in consultation with the City of Ottawa. Approval Requirement: The design and implementation of the proposed left hand turn lane from Carp Road into WCEC will require approval and agreement from the City of Ottawa.	Confirm implementation of transportation mitigation measures.			
	<i>SD #5 – Transportation DIA, Section 8.1.1</i>	Maintain communication with the City of Ottawa regarding transportation-related matters, including: <ul style="list-style-type: none"> • Collision experience and collision-prone areas; and • Existing and future level of service and travel demand forecasting. 	Confirm implementation of transportation monitoring measures.			
	<i>Chapter 8</i>	Approval Requirement: The proposed site access location, which is further north along Carp Road than the existing site entrance, is beyond 395 m from the controlled access highway (Highway 417) and hence an approval of the MTO is not required under the Public Transportation and Highway Improvement Act. Site signage that is visible from the controlled access highway may require approval, subject to determination of MTO.				
Integrated Gull Management Plan	<i>SD #5 – Integrated Gull Management Plan, Section 5</i>	Finalize the Integrated Gull Management Plan outlined in the Detailed Impact Assessment stage. This Plan may include the following measures related to gull control: <ul style="list-style-type: none"> • Design suggestions to minimize attractiveness of the site to gulls; • Deterrent methods to minimize gull habituation (i.e., lethal enforcement); • Contingency methods, if monitoring indicates these are necessary; and • Staff training and communications (i.e., Tier 1 and Tier 2). 	Confirm these measures have been included in the EMP.			
	<i>SD #5 – Integrated Gull Management Plan, Section 6.1</i>	Finalize the Integrated Gull Management Plan outlined in the Detailed Impact Assessment stage. This Plan may include the following measures related to the active tipping face: <ul style="list-style-type: none"> • Minimization of tipping face area; • Operation of only one tipping face at a time; • Diligent application of daily cover to the active face; • Minimization of waste protrusion through daily cover; and • Monitoring of daily cover operations. 	Confirm these measures have been included in the EMP.			
	<i>SD #5 – Integrated Gull Management Plan, Section 6.3, Section 6.4, and Section 6.5;</i>	Finalize the Integrated Gull Management Plan outlined in the Detailed Impact Assessment stage. This Plan may include the following measures related to site operations: <ul style="list-style-type: none"> • Implementation of litter management procedures and techniques to reduce the presence of exposed waste that may attract gulls to the site; • Placement of gull-resting deterrents on existing or new structures (i.e., needle or porcupine wire); and 	Confirm these measures have been included in the EMP.			

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		<ul style="list-style-type: none"> • Communication with Carp Airport personnel. 				
	<i>SD #5 – Integrated Gull Management Plan, Section 6.2, Section 9.1, and Section 10</i>	<p>Finalize the Integrated Gull Management Plan outlined in the Detailed Impact Assessment stage. This Plan may include the following monitoring measures related to gull control:</p> <ul style="list-style-type: none"> • Ensuring all activities are undertaken following standard practices and safety protocols (i.e., staff training and communication, permit acquisition, deterrent implementation); • Monitoring of gull activity and control (i.e., gull numbers, gull attraction, deterrent measures, firearm use details, lethal enforcement details); and • Documentation of gull activity and control (i.e., wildlife management log, annual summary, meeting with Carp Airport personnel). 	Confirm these measures have been included in the EMP.			
Land Use Detailed Impact Assessment	<i>SD #5 – Land Use DIA, Section 8.1.1</i>	<p>Monitor land use applications, plans, and/or policies, including Official Plan, Zoning By-Law, Community Development Plans, plans of subdivision, site plans, and OMB decisions, for the following:</p> <ul style="list-style-type: none"> • To determine any potential effects on the undertaking and other WCEC facilities; • To provide comments to the City of Ottawa, as necessary, in relation to the above; and • To take further action, as required, in relation to the above, including appeals. 	Confirm monitoring of land use applications, plans, and/or policies.			
	<i>Chapter 8</i>	<p>Approval Requirement: The existing landfill site is identified as a Waste Disposal Site in the City of Ottawa Official Plan. The Waste Disposal Site symbol does not determine the boundaries of the landfill site; the physical extent of a landfill site is to be regulated through the Zoning By-law. An amendment to the Official Plan is not required.</p> <p>Any expansion to an existing designated Solid Waste Disposal Site requires a zoning by-law amendment, which is subject to the same criteria applied to the establishment of new landfill sites (City of Ottawa Official Plan, Section 3.8, Policy 4).</p> <p>A segment of the On-Site Study Area is currently designated Sand and Gravel Resource Area. However, the mineral resources on the lands designated Sand and Gravel Resource Area have been fully extracted. Policy 14 of Section 3.7.4 states that where sand and gravel mineral resources have been fully extracted on a property, the property may be used for other purposes. WM understands the City will not require amendment of the Official Plan rather the Plan will be amended to accurately reflect the new use at the time of the next comprehensive Official Plan update or through general Official Plan amendment. However, in either scenario, Policy 14 imposes a number of requirements such as a technical study to demonstrate the resource has been exhausted, evidence that the license has been surrendered and any environmental issues have been addressed. Policy 15 states that lands that are predominantly surrounded by designations other than Agricultural Resource Area, the uses of General Rural Area will be permitted. Based on a review of Section 41 of the Planning Act, and the City of Ottawa Site Control By-law (By-law No. 2002-4), as amended, Site Plan Control is not required. Zoning By-law Amendment – A Zoning By-law Amendment is anticipated for the undertaking, for which the City of Ottawa may require a Community Information and Comment Session.</p>				
Agriculture Detailed Impact Assessment	<i>SD #5 – Agriculture DIA, Section 8.2</i>	Implement other BMPs, including Dust, Noise, Odour, and Surface Water, to mitigate potential nuisance effects caused by the undertaking and other WCEC facilities in relation to the surrounding agricultural operations.	Confirm implementation of other BMPs.			
Socio-Economic Detailed Impact	<i>SD #5 – Socio-Economic DIA,</i>	Implement other BMPs, including Biology and Compensation and Restoration Plan, and landscape/vegetation treatments to mitigate potential visual	Confirm implementation of			

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Assessment	<i>Section 6.7.10</i>	impacts caused by the undertaking and other WCEC facilities in relation to the surrounding areas (e.g., berms, rock outcroppings, and native grass, shrub, and tree species).	other BMPs, Compensation and Restoration Plan, and landscape/vegetation treatments.			
	<i>SD #5 – Socio-Economic DIA, Section 8.1.1</i>	Implement other BMPs, including Biology, Compensation and Restoration Plan, and landscape/vegetation treatments to monitor the effectiveness of the measures used to mitigate potential visual impacts caused by the undertaking and other WCEC facilities in relation to the surrounding areas (e.g., berms, rock outcroppings, and native grass, shrub, and tree species).	Confirm implementation of other BMPs, Compensation and Restoration Plan, and landscape/vegetation treatments.			
	<i>SD #5 – Socio-Economic DIA, Section 6.7.10</i>	Implement other BMPs, including Noise, Odour, and Landfill Gas, and transportation measures to mitigate potential socio-economic impacts caused by the undertaking and other WCEC facilities in relation to the surrounding areas.	Confirm implementation of other BMPs and transportation measures.			
	<i>SD #5 – Socio-Economic DIA, Section 8.1.1</i>	Implement other BMPs, including Noise, Odour, and Landfill Gas, and transportation measures to monitor the effectiveness of the measures used to mitigate potential socio-economic impacts caused by the undertaking and other WCEC facilities in relation to the surrounding areas.	Confirm implementation of other BMPs and transportation measures.			
	<i>SD #5 – Socio-Economic DIA, Section 6.3</i>	Implement Community Commitments from the ToR to create up to 75 jobs through the development of the undertaking and other WCEC facilities.	Confirm job creation through development of the undertaking and other WCEC facilities.			
				3 (Public Record)	<p>1. Where a document is required for the public record, the proponent shall provide two copies of the document to the Director: a copy for the public record file maintained for the undertaking and a copy for staff use.</p> <p>2. The EAB file number EA-02-08-02 shall be quoted on all documents submitted to the ministry pursuant to this Notice.</p> <p>3. For every document submitted to the ministry, the proponent shall clearly identify which condition the document is meant to fulfill</p> <p>4. Documents may be provided electronically where appropriate. The ministry may request that the document be provided in hardcopy.</p>	
				4 (Compliance Monitoring Program)	<p>1. The proponent shall prepare and submit to the Director for the public record, an environmental assessment compliance monitoring program.</p> <p>2. The program shall be submitted to the Director within one year from the date of approval, or 60 days before the commencement of construction, whichever is earlier.</p> <p>3. The program shall include monitoring of the proponent's implementation of the undertaking in accordance with the environmental assessment and the conditions in this Notice with respect to mitigation measures, public consultation, and additional studies and work to be carried out. The program shall also include monitoring of compliance with all commitments made in the environmental assessment and the subsequent review of the environmental assessment and the approval</p>	

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					process for the environmental assessment with respect to mitigation measures, public consultation, and additional studies and work to be carried out.	
					4. The program must contain an implementation schedule.	
					5. The Director may require the proponent to amend the program. The program, as it may be amended by the Director, must be carried out by the proponent.	
					6. The proponent shall make the program documentation available to the ministry or its designate upon request in a timely manner when so requested by the ministry.	
				5 (Compliance Reporting)	1. The proponent shall prepare an annual compliance report which describes the proponent's compliance with the conditions in this Notice and the results of the program.	
					2. The annual compliance report shall be submitted for the public record on or before March 31 of each year, with the first report being due in 2014, and shall cover all activities of the previous calendar year.	
					3. The proponent shall submit annual compliance reports until all conditions are satisfied.	
					4. When all conditions have been satisfied, the proponent shall indicate in the annual compliance report that it is the final annual compliance report.	
					5. The proponent shall retain, either on site or in another location approved by the Director, copies of the annual compliance reports for each reporting year and any associated documentation of compliance monitoring activities.	
					6. The proponent shall make the compliance reports and supporting documentation available to the ministry or its designate upon request in a timely manner when requested to so by the ministry.	
				7. (Complaint Protocol)	1. The proponent shall prepare and implement a protocol on how it will deal with and respond to inquiries and complaints with respect to the undertaking.	
					2. The proponent shall submit the Complaint Protocol to the Director at least 6 months prior to the start of construction.	
					3. The Director may require the proponent to amend the Complaint Protocol at any time. Should an amendment be required, the Director shall notify the proponent in writing of the amendment required and when the amendment must be completed.	
					4. The proponent shall submit the amended Complaint Protocol to the Director within the time period specified by the Director.	
					5. The proponent shall implement the Complaint Protocol and any amendments to it.	