



## **1.0 INTRODUCTION**

### **1.1 Purpose and Scope**

This Design and Operations (D&O) Report supports an application for approval under the *Environmental Assessment Act* (EAA), and also subsequent Environmental Compliance Approvals (ECA) under the *Environmental Protection Act* (EPA) and *Ontario Water Resources Act* (OWRA) for the Capital Region Resource Recovery Centre (CRRRC). The CRRRC is a proposed integrated waste management facility which, if approved, would provide facilities and capacity for recovery of resources and diversion of materials from disposal for wastes and soils generated by the Industrial, Commercial and Institutional (IC&I) and Construction and Demolition (C&D) sectors in Ottawa and eastern Ontario, as well as landfill disposal capacity for post-diversion residuals and materials that are not diverted.

The D&O Report provides a detailed description of the proposed CRRRC Site design to a level that will satisfy ECA requirements. The D&O Report is also intended for use by the operators of the facilities comprising the Site during the operational life of the CRRRC, after closure, and during the long-term maintenance period. The D&O Report addresses all relevant matters, including:

- Regulatory and approval requirements;
- Site development boundaries;
- Details about the characteristics and quantities of waste to be accepted at the Site;
- Assessments of potential impacts from the Site;
- Design and operation approach for each facility on-Site;
- Environmental controls in place to manage potential impacts from the Site;
- Monitoring, maintenance and reporting programs;
- Trigger mechanisms for the implementation of remedial measures, as part of a contingency plan; and,
- Site closure and post-closure maintenance.

The design and operation of each of the processing and treatment facilities as well as the landfill component are provided in the appendices to this report.

### **1.2 Regulatory Requirements**

The proposed CRRRC requires approval under the EAA, the EPA and the OWRA. The application for approval under the EPA and OWRA are combined into an application for an ECA. Taggart Miller Environmental Services (Taggart Miller) is submitting the documentation to support both EAA approval and a subsequent EPA/OWRA application jointly in one submission. Taggart Miller is seeking EAA approval prior to actual submission of the application forms required for the EPA/OWRA approval.



### **1.2.1 Environmental Protection Act (EPA)**

Waste disposal sites are subject to Part V of the EPA. Section 27 of the EPA requires that an ECA be obtained from the Director of the Ministry of the Environment and Climate Change (MOECC) for the establishment, operation, alterations, or enlargement of a waste disposal site or for the waste diversion, processing and transfer facilities.

Legislative framework for waste management is provided in Part V of the EPA Regulatory Requirements for the design and operation of a landfill, as detailed in *Ontario Regulation (O. Reg.) 347* (MOE, 1990) and O. Reg. 232/98 (MOE, 1998a). O. Reg. 347 provides a definition of waste management terms and classes and provides standards for design and operation of landfills less than or equal to 40,000 cubic metres (m<sup>3</sup>) in volume. O. Reg. 232/98 provides standards for design and operation of landfill sites greater than 40,000 m<sup>3</sup> in volume. As the landfill component of the CRRRC is greater than 40,000 m<sup>3</sup> in volume, the design and operation of the landfill are subject to O. Reg. 232/98.

The definition of “municipal waste”, as described in O.Reg. 347 (MOE, 1990) is “any waste, whether or not it is owned, controlled or managed by a municipality, except, (i) hazardous waste, (ii) liquid industrial waste, or (iii) gaseous waste. Therefore, the following regulations that refer to municipal waste also apply to the CRRRC.

#### **1.2.1.1 Guideline for the Production of Compost in Ontario**

The Guideline for the Production of Compost in Ontario (MOE, 2012a) recommends planning, design and operational practices for aerobic composting facilities. The companion Ontario Compost Quality Standards (MOE, 2012b) sets environmentally protective standards for the production of compost for beneficial use and applies to compost produced by aerobic composting of non-hazardous organic materials. This guideline was used as guidance when developing this D&O report.

#### **1.2.1.2 Ontario Regulation 101/94 – Recycling and Composting of Municipal Waste**

Part IV and Part V of O.Reg. 101/94 (MOE, 1994b) applies to sites whose only function is to accept and transfer municipal waste as described in O.Reg. 347 (which includes waste from the IC&I and C&D sectors) for recycling, or to compost leaf and yard waste. Part IV and Part V of O.Reg. 101/94 were used as guidance when developing this D&O report for the diversion and composting facilities.

#### **1.2.1.3 Ontario Regulation 232/98 – Landfill Sites**

O. Reg. 232/98 (MOE, 1998a) contains detailed requirements for the design, operation, closure and post-closure care of municipal waste (as defined in Section 1.2.1) landfills. The document entitled *Landfill Standards, A Guideline on the Regulatory and Approval Requirements for New or Expanding Landfill Sites* (MOE, 1998b) provides guidance to the application of the Regulation.

#### **1.2.1.4 Ontario Water Resources Act (OWRA)**

The purpose of the OWRA is for the protection and conservation of surface water and groundwater resources in the Province of Ontario. Any system that discharges to a surface water body requires approval under the OWRA. The CRRRC requires OWRA approval (Section 53 – Sewage Works) for the leachate pre-treatment facility and for the discharge of surface water from the Site to the Regimbald Municipal Drain to the northeast, to the Simpson Municipal Drain in the central portion, and to the Wilson-Johnston Municipal Drain via an existing ditch in the southern portion.



### **1.3 Related Documentation**

Submitted in support of the Environmental Assessment (EA) and in association with this report are the Environmental Assessment Study Report (EASR) (Volume I), technical support documents (TSD's) for the EASR, and the Geology, Hydrogeology & Geotechnical Report submitted as Volume III of the EASR.