

## 8.0 SUMMARY AND RECOMMENDATIONS

### 8.1 Summary of Review

An update review of the ADI 2005 Independent External Review of the Crane Mountain Landfill was completed. The main focus of the update review was on priority aspects relevant to CMEI's objectives and mandate as interpreted by ADI. A general overview of status/ findings for each of the 2005 recommendations was developed by ADI as part of the initial update review work.

The Crane Mountain landfill is considered unique among the six provincial regional solid waste landfills in that it is located within the recharge area, and upgradient and in relatively close proximity to approximately 1000 potable water supply wells. In this regard, during the EIA process a commitment was made to address concerns of area residents with respect to landfill operations in general, and in particular potential impacts on aquifer and domestic well water quality. One of the primary objectives of CMEI's mandate is therefore to ensure that the necessary efforts and measures are assessed and implemented to protect the groundwater resource on which the community relies to meet their current and future potable water requirements.

Key CMEI priorities as identified by ADI are:

**Priority One - Groundwater Resource Protection:** Understanding and protecting the potable water resource;

**Priority Two - Landfill Construction, Operation and Management:** Ensuring that the landfill and related facilities and constructed, operated, and managed in a manner that promotes optimal environmental protection.

**Priority Three - Landfill Life and Perpetual Care:** Ensuring that appropriate plans and sufficient funds are in place to support proper management and long term care of the site.

Based on information reviewed over the course of the update review it is concluded that there is significant opportunity to improve on landfill related aspects in the context of FRSWC's commitments and obligations to the host community, and in particular the downgradient domestic well users. The main aspects for improvement and further consideration are broadly categorized as:

- develop an improved understanding of the hydrologic flow system and related aspects of contaminant fate and transport within the flow system with respect to protecting water quality and downgradient groundwater use;
- improve interpretative aspects of the groundwater monitoring program and integrate the domestic well monitoring as a key component of the overall monitoring and reporting program;
- complete further assessment of the landfill liner system;
- develop improved interpretation and reporting protocols related to documenting changes in design and construction and key operational aspects (e.g. leachate buildup in the landfill and related leachate management infrastructure, changes in cell cap, proposed changes in landfill footprint); and
- develop more detailed contingency plans, economic analysis, and verify adequate post closure planning timeline in the context of the unique setting of the Crane Mountain landfill.

Specific recommendations are summarized below.

## **8.2 Recommendations**

Recommendations from the 2009 update review by facility aspect are summarized in the following table.