

CIF Project #367 – Eastern Ontario Regional Diversion System Modelling Study

Background

In 2011, the CIF hired AECOM to provide an analysis of an optimum diversion network for Eastern Ontario. The study was to incorporate program tonnages, costs and flows among public and private sector MRFs and to consider the impacts of re-purposing, closing or expanding existing facilities, as well as development of a new regional facility.

This project built upon and utilized the findings of Project #254: “Public Sector MRF Capacity and Capability Study”, which was completed by AECOM earlier that year.

Summary of Results

Initially the analysis compared the current system costs to alternative system configurations, including:

- Repurposing existing public sector MRFs (to Regional MRFs and/or transfer stations);
- Utilizing Durham as a Regional MRF; and
- Developing a new strategically located Greenfield MRF.

After some initial steps were taken, it was decided that this approach was “MRF centric”, and that the focus of the study should shift to a more program centric perspective. The rationale for the shift was that the program centric approach would address the processing requirements for the entire waste shed as opposed to only those programs which were currently being served by the MRFs in the initial scope of work.

The findings were reported to the WDO Board in April 2011 in a PowerPoint presentation. Following this, staff was instructed to evaluate three further scenarios that included Ottawa, specifically:

- Ottawa as a Regional MRF;
- Both Ottawa and Kingston as operating MRFs; and
- Ottawa as a regional MRF taking the entire waste shed except for Kingston, which would be transferred to Durham.

Overall, 10 scenarios were evaluated and the following summary findings were reported:

- The scenarios that included a Regional MRF in Kingston or a new 'greenfield' MRF warranted additional detailed analysis to further optimize system efficiency;
- Based on the analysis conducted, the optimum centroid for a greenfield MRF is located in the vicinity of Smiths Falls; and
- Direct haul of materials from the northwest corner of Eastern Ontario (i.e., Hastings County) to the Peterborough MRF instead of the Addington Transfer Station (transferring to the Ottawa Valley MRF) was projected to save approximately \$500,000 annually in system costs.

Financials

The CIF approved funding of \$75,475 plus tax for this project. The final cost was \$66,128.

Learnings

As reported by AECOM at the time, there was an opportunity identified to further align WDO (now RPRA) Datacall information (i.e., format and content) to support Province-wide system modelling. Application of this type of diversion system analysis on a provincial basis would, in the view of the consultant, enable the identification of additional insights and optimization scenarios across Ontario. The study also identified potential opportunities to consolidate processing operations in Eastern Ontario. This work ultimately led to the development of a province wide infrastructure study (i.e., Project #428: MIPC Optimization Study).

One of the key learnings with projects such as this and Project #428 has been the risk of drawing faulty conclusions based on the analysis of data in an artificial environment rather than considering 'real world' conditions. In identifying the potential savings of consolidation of existing infrastructure, these studies failed to consider free market conditions and the potential changes to pricing that would result from a change in processing capacity. As a result, they have been found to be of limited value in predicting cost savings resulting from changes to provincial infrastructure.