

City of Ottawa
IC&I 3Rs Management Strategy
Scoping Document
FINAL



Submitted to:

City of Ottawa
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1. Introduction

In June 2006, the City of Ottawa Council passed a series of resolutions regarding solid waste, the Environmental Assessment applications by Waste Management Inc. and Waste Services Inc. respecting the Carp and Navan landfills, and the development of an Integrated Waste Management Master Plan (IWMMP). These resolutions, shown in part below, provided the direction to proceed with the development of an IC&I Waste Management Strategy¹.

MOTION 4

1. *Revisit its Integrated Waste Management Master Plan (IWMMP) to develop comprehensive city wide residential and IC&I waste management strategies, and*
 - a) *That this undertaking examine such matters as the management of IC&I waste, municipally-operated alternatives competing with, or replacing, privately owned landfills for both residential and IC&I waste, regulatory requirements, recycling programs, diversion measures, alternative disposal solutions, waste-to-energy systems, and environmentally-sustainable landfill, as well as the implementation of a process to ensure the Plan is regularly updated to include new insights garnered from initiatives piloted/implemented by other municipalities in Ontario and elsewhere.*

MOTION 5

1. *That City staff expedite the review of existing regulatory involvement, monitoring, diversion and service delivery opportunities and mandates to encourage diversion efforts with the local IC&I sector and report back to Planning and Environment Committee in Winter 2006/2007.*

Expanding on these motions, in August 2006, the City of Ottawa passed a resolution regarding the completion of an IC&I Waste Management Strategy for the City. This resolution, outlined below, forms the basis of the IC&I 3Rs Study²:

1. *Approve that the City adopt the Environmental Advisory Committee (EAC) recommendation to initiate an expedited review of its current waste management strategy, which would create a comprehensive IC&I sector waste plan that would consolidate, update and improve the Integrated Waste Management Master Plan (IWMMP). This comprehensive waste plan for the IC&I sector would:*
 - a. *create a blueprint for waste management in Ottawa;*

¹ The full text of the motions and accompanying documentation (68 pages) can be found on the City of Ottawa's website at <http://www.ottawa.ca/calendar/ottawa/citycouncil/occ/2006/06-14/pec/ACS2006-PWS-UTL-0011.htm>

² The full text of the motions and accompanying documentation (22 pages) can be found on the City of Ottawa's website at <http://www.ottawa.ca/calendar/ottawa/citycouncil/occ/2006/08-23/pec/ACS2006-PWS-UTL-0021.htm>

- b. *address opportunities to increase diversion in relation to IC&I waste (70% of Ottawa's waste);*
 - c. *explore how alternative technologies could be employed (building on the review that the City of Ottawa will be conducting on alternative technologies); and*
 - d. *assess the need for expansion of the Carp and Navan Road Landfills.*
2. *Approve that this IC&I sector review be done as expeditiously as possible that in any case the IC&I sector review not take longer than one year, and that effective, meaningful public consultation be undertaken in keeping with the spirit of the Environmental Assessment Act and address the need for landfill expansions in light of an analysis of "alternatives to" landfill expansions.*

The City issued a Request for Proposals in September 2006 to retain a consulting team to complete an IC&I Waste Management Strategy. The Terms of Reference for the study are included in Appendix A. Based on feedback during the development of this Scoping Document, with the knowledge that the City is completing a separate *Residuals Management Study*, the scope of this study now focuses strictly on waste diversion initiatives, i.e., the 3Rs.

This Study Scoping Document is the first report in the process of developing the IC&I 3Rs Strategy. In developing this Scoping Document, consultation (Phase One Consultation) was undertaken with key stakeholders, including waste generators, private sector waste service providers, the City's Environmental Advisory Committee and Business Advisory Committee, Non-Government Organizations (NGOs), and the general public, to determine the scope of the study.

Based on feedback from the Phase One Consultation and discussions with the City, the scope of work as put forward by the consulting team in their proposal (dated September 26, 2006) to the City was revised to ensure that the Study addresses the August 2006 resolution 1, part b: Address opportunities to increase diversion in relation to IC&I waste (70% of Ottawa's waste) and for the IC&I sector wastes only, the August 2006 resolution 1, part a: create a blueprint for waste management in Ottawa.

The primary outcome of the overall Study will be the development of the Ottawa *IC&I 3Rs Strategy*, which will identify options to maximize diversion from landfill disposal through traditional 3Rs approaches (reduction, reuse, recycling and composting/digesting).

The waste materials that remain after the implementation of the diversion initiatives developed the *IC&I 3Rs Strategy* study will form the basis of a separate *Residual Waste Management Study* that will address the August 2006 resolution 1, part c: explore how alternative technologies could be employed (building on the review that the City of Ottawa will be conducting on alternative technologies); and will determine the quantities of IC&I wastes requiring disposal in order to partially address the August 2006 resolution 1, part d: assess the need for expansion of the Carp and Navan Road Landfills.³

³ The study to examine alternative technologies and the need for landfill is not part of the study that this Scoping Document addresses. This Scoping Document refers only to 3Rs opportunities within the IC&I sectors.

This *Scoping Document* establishes the recommended scope, approach, and work plan for the Study. The results of the Phase One Consultation are outlined in Section 2. The methodology for characterizing Ottawa's IC&I waste is discussed in Section 3. Section 4 outlines the methodology for the development of 3R options, the assessment of those options, how different IC&I diversion options will impact diversion rates, the possible timelines for implementation, and the potential roles, responsibilities and costs associated with each of the options. Section 4 also presents waste diversion targets, and discusses how systems will be developed to achieve those targets, as well as the need to assess the implications associated with setting and reaching them. Section 5 outlines the timelines for the completion of the study and includes a summary of the work plan tasks and future phases of consultation.

The *IC&I 3Rs Strategy* will focus on diverting IC&I materials from disposal, consistent with the Ministry of Environment's objective of 60% diversion from disposal, where disposal is defined as any "landfill" or "thermal degradation site". 3Rs options (reduction, reuse, recycling and composting/digestion) will be investigated in addition to both front-end waste reduction options (primarily policy-related) as well as back-end management options (such as tipping fee surcharges). Best practices from other jurisdictions in North America, as well as relevant examples from Europe and Asia will be considered. These best practices, policies and programs will be reviewed for their application within the Ottawa, provincial, inter-provincial and federal contexts.

The City believes that waste generated by residents, workers and businesses with Ottawa, is a community issue. Therefore, policies and programs will focus on what can be done locally to maximize diversion and minimize the use of disposal capacity.

2. Consultation Feedback

Phase One Consultations were designed to raise awareness of the IC&I Waste Management Strategy project and to seek input from key stakeholders on what should be included in the scope of the project. The following activities took place in support of the scoping exercise:

- A list of stakeholders including waste generators, waste service providers, community groups and NGOs with an interest in waste management was developed (see Table 2.1);
- Waste generators, service providers and relevant NGOs were telephoned and emailed, and invited to meet;
- Community groups on the City's email contact list were invited to Public Open Houses;
- A Background Document on the scope of the IC&I Waste Management Strategy project was produced and provided to all stakeholders and members of the public who participated in the Phase One Consultations;
- Small group and one-on-one meetings were held with stakeholders interested in participating in the Phase One Consultations;
- The City's Environmental Advisory Committee and Business Advisory Committee were briefed on the project and invited to comment on the scope and to participate further;
- All meeting participants were asked a series of questions about waste generation and to provide comments on the scope of the project;

- Four open houses were held and the general public was invited to attend via notices published in local daily papers;
- A series of bilingual information panels were displayed at the Open Houses with City Staff and consultants available to discuss the project and answer questions;
- Open Houses attendees were given a copy of the Background Document and a survey that allowed them to provide specific comments on the project scope;
- A web page and email account were set up to enable stakeholders and members of the public to obtain information and to send comments electronically; and
- All stakeholders, participants in the Open House and email participants were offered an opportunity to be notified by email of future consultation events.

Table 2.1: Summary of Stakeholder Participation

Group	Number of Organizations Contacted	Number of Participants
Large Retail	7	0
Education	9	6
Health Care and Long Term Facilities	7	5
Restaurant	2	1
Offices	3	2
Hotels	1	1
Construction	7	4
Chambers of Commerce	7	4
BIAs	1	0
NGOs	9	3
Waste Service Providers	8	8
Manufacturing Associations	2	0
Community Groups	35	N/A – Participation was through Public Open Houses

Appendix B contains copies of the Background Document, the newspaper notice, the list of stakeholder participants, the panels developed for the Open Houses, and blank versions of the questionnaires used to collect data. Appendix C includes a summary of each meeting and a record of comments received at the Open Houses and by email from all participants.

The Study Team received significant feedback from the stakeholders and members of the public who participated in the process. As a result of this feedback, the Study Team is recommending that the study focus on 3Rs diversion, i.e., diversion that can be achieved through reduction, reuse, recycling and composting/digestion. The other requirements of the Council Resolutions of June and August 2006 will be addressed in a study on post-3Rs residuals management.

2.1 Stakeholder Participation

After working with the City to develop a list of stakeholders, the Study Team contacted all of the major stakeholders by email and on at least two occasions by phone. Participation rates varied between stakeholder groups, with overall participation rates summarized in Table 2.1.

In addition, the City of Ottawa published newspaper notices inviting members of the public to attend one of four Open Houses, held December 4th to 7th inclusively.

2.2 IC&I Waste Data

Most IC&I waste generators were unable to provide details regarding the types and quantities of waste produced, or how much was recycled versus disposed. However, many were able to provide anecdotal evidence of recycling practices carried out by their organizations. Similarly, waste management service providers were able to describe "last chance" recycling efforts carried out at landfills and other types of resource recovery and use practices, but not quantified amounts.

Stakeholder data on waste generation, recycling and other forms of diversion will be treated confidentially and used in completing Task 2 on waste characterization.

2.3 Problematic IC&I Wastes

A number of specific waste streams were identified as problematic including organics, construction waste and electronic waste. The following is a list of the most commonly identified materials. The number inside the bracket indicates the number of times that each waste was identified.

- Construction (building materials; drywall; wood) (x5)
- Medical (x4)
- Electronic (x3)
- Plastics (x3)
- Organic (x3)

Several organizations have difficulty disposing of plastics numbered 3 through 7, as well as wood, old furniture, twine, tires and batteries. Medical waste such as bedpans, face shields and old wheelchairs are problematic for the Health Care industry, while construction companies are having difficulty diverting drywall, concrete, gypsum and hazardous waste. Organic matter other than food waste is an issue for a number of organizations.

Many of the items identified do not represent a significant proportion of the overall waste stream. However, there appears to be willingness on the part of IC&I waste generators to look for specific diversion options that relate to their problem wastes. They also felt that meeting collectively was a positive step towards finding solutions for common waste problems such as old furniture and computers.

In addition to a focus on some of the more significant items such as organics, the consultation sessions suggested that there is an opportunity for the City to work with selected generators with common issues to try to tackle specific items thereby improving their overall diversion rates.

2.4 Services Requested

When asked the question “What services do you wish were available to you to divert materials from disposal?” participants made the following suggestions:

- Two generators indicated that they would prefer to be able to co-mingle recyclable materials and have them sorted off-site. The two examples were the office recycling stream (i.e., cans, glass, paper and plastics), and construction waste;
- One generator indicated that it would like to have access to contacts that could answer questions about recycling and provide cost estimates;
- One generator indicated that it would benefit from reporting services that provide specific details on diversion rates, materials and amounts; and
- Zero cost recycling for gypsum was also identified as a service that would be used by local generators.

IC&I waste service providers would prefer source separation by the generators, whereas some generators indicated that if they could co-mingle recyclables for example, they would be able to manage their programs more efficiently and at a lower cost (e.g. co-mingling glass with plastics.) Some generators indicated that co-mingling construction and demolition (C&D) wastes was necessary at some stages of their work.

2.5 Key Obstacles to Increased IC&I Waste Diversion

Generators interviewed during the Phase One Consultation indicated that there are many obstacles to increased diversion, but that the primary obstacle is cost. The following is a list of obstacles identified by stakeholders. The number inside the bracket indicates the number of times that the obstacle was identified.

- Cost (x14)
- Lack of available markets (x8)
- No storage space (x6)
- Convenience (x5)
- Lack of time (x2)
- Lack of onsite source separation (x2)
- Lack of information (x2)
- Risk of pests (for organics) (x2)
- Lack of staff or user commitment or support (x1)
- Contamination of clean recyclables (x1)
- Lack of owner support (for construction projects) (x1)
- Lack of enforcement (x1)

Many waste generators expressed a desire to increase diversion, and waste service providers indicated that they are open to discussions about diverting additional materials where a reasonable volume and market exists.

2.6 Role of the City

Overall, the feedback received from IC&I waste generators suggests that many would be open to an increased role by the City. Stakeholders focused on limiting landfill expansion believe that the City has already committed itself to increasing its role in the management of IC&I waste as a result of the June and August 2006 resolutions.

Stakeholder suggestions are summarized in Table 2.2.

Table 2.2: Summary of Suggestions for City Role on IC&I Waste

Possible Role	Sample Suggestions/Comments
Educate the Public/Schools	<ul style="list-style-type: none"> • “Send out bilingual flyers to the public and into the schools to educate everybody on protecting the environment.” • “Offer education and seminars on how to track waste and how to better manage waste.” • “Educate owners and others on the Ontario regulations, rationale for diverting CRD waste, and help them understand what it involves and how enhanced diversion can be done cost effectively.” • “Educate students – City creates the program and schools teach it.” • “City sponsored challenge for schools on recycling.” • “Open up City facilities to education. The tours of facilities were previously cut from the City budget.” • “Make waste diversion part of the curriculum.” • “Create an impact video on waste deposal and diversion for educational purposes.”
Offer Incentives	<ul style="list-style-type: none"> • “Offer incentives through building permit flexibility (taxation reduction or other small incentives to implement and document more aggressive CRD waste management).” • “Implement a "deposit-return" system where all construction projects put up a nominal fee and then need to produce a waste diversion report to get a refund.” • “Focus on positive incentives rather than punitive incentives.” • “Provide small performance-based incentives to property managers who do well ... can even be an awards/recognition program.” • “Offer deposits for beverage containers.”
Market Existing Programs	<ul style="list-style-type: none"> • “Better enforcement of existing programs (yellow bag, Rethink Garbage, etc.)”

Table 2.2 (cont'd): Summary of Suggestions for City Role on IC&I Waste

Possible Role	Sample Suggestions/Comments
Facilitate Partnerships	<ul style="list-style-type: none"> • “Should partner with companies rather than being at odds.” • “There can be a collaborative approach and more flexibility created by cooperation between the City, MOE and waste service providers.” • “The City and industry should approach and lobby the Provincial government with a shared voice – the public and private sectors should present a united front.” • “Coordinate with own internal departments; treat service providers as partners.” • “If the City, generators and waste haulers can speak with a shared voice, the Province may be more likely to act.” • “Support development of infrastructure and markets to recycle CRD waste and encourage it with building permitting flexibility, public/private partnerships for market development, etc.”
Enforce Regulations and Bylaws	<ul style="list-style-type: none"> • “When setting diversion targets for the IC&I sector, what is the simplest, most cost effective system for measuring success, giving recognition and implementing penalties when necessary?” • “Implement regulations.” • “Use LEED® or similar "LEED®-inspired" system to encourage waste diversion as opposed to regulating it.” • “Address provincial regulations.” • “Lift noise restrictions so waste providers can work at night.” • “Put in bylaws that apply to restaurants.”
Miscellaneous	<ul style="list-style-type: none"> • “Keep in mind the options that are feasible to small and medium businesses and rural versus urban businesses.” • “More encouraging of reuse as opposed to disposal and recycling.” • “Create or support coordination of regional CRD waste exchanges that involves existing building materials reuse centres, such as Habitat for Humanity, Cohen & Cohen, etc.” • “Increase landfill fees.” • “Move from talk to action by conducting pilots to determine whether some of these technologies will work.” • “One big role the City could play would be to serve as a market.” • “Develop a larger scale plasma gasification plant to handle all of the city’s waste, both residential and commercial.” • “One day amnesty for computers and other e-waste to be dropped off at a central location, loaded into transport trailers and shipped to a recycler.” • “Provide a green procurement program with a focus on packaging, boxes.” • “City can facilitate the process instead of being involved in it.” • “Strategies adopted should create a level playing field for all.”

Most respondents did not answer the question “Is there any role the City SHOULD NOT take in enhancing waste diversion in the IC&I sectors?” Those who did suggested that the City not offer waste collection services to the IC&I sector, nor should it impose new regulations. Specific concerns included increases in paperwork or taxation.

2.7 Role of Other Levels of Government

It has been suggested that in order to succeed, the City has to lobby the provincial and the federal governments to enforce existing legislation, and to implement appropriate legislation on:

- Packaging;
- Automotive refuse;
- Building materials;
- Chemicals; and
- Tires.

As part of the second round of consultation, the Study Team will meet with officials from the provincial and federal governments to discuss policies, regulations and enforcement. It was suggested that the City consult with the Ontario Ministry of the Environment (particularly someone from the local Ottawa MOE office) about the enforcement of the provincial IC&I waste legislation (particularly Ontario Regulations 102/94, 103/94 and 104/94). It has also been recommended that the City should secure legislative authority to manage the total waste generated within its borders in conjunction.

2.8 Other Suggestions

In their submissions to the Study Team a number of groups indicated that the scope of the project excludes many of the elements contained in Council's resolutions of June and August 2006. It became evident that it was unclear how this IC&I Waste Management Strategy fits with other waste initiatives being carried out by the City of Ottawa such as the Request for Expression of Interest (REOI) recently undertaken to examine alternative technologies for managing both residential and ICI waste streams, and the City's Integrated Waste Management Master Plan. The Study Team has taken note of this issue and it is addressed further Section 4.5 of this document.

There were a number of other important suggestions/comments that were provided by stakeholders and/or members of the public. The following is a summary of other suggestions.

- **The Study should include models, scenarios or targets for waste diversion** – Many participants suggested that the study set percentage diversion targets and then propose ways in which the IC&I sectors can meet these targets. The target of 60 per cent waste diversion by the year 2008 was specifically suggested.
- **The Study needs an explicit goal** – The concerns ranged from the need to be strategic to the need to enshrine a percentage diversion target to the need to attract public interest in the study. For example, it was suggested that the stated purpose of the study be to facilitate the closure of Carp landfill in a fixed number of years.

- **The Study should provide more time for input from stakeholders and the public** – A number of participants stated that the process is being rushed in order to complete the project within a 12 month period and have suggested that more time be provided for review of the Scoping Report in particular.
- **The Study should examine best practices** – Many also suggested examining best practices that are not currently being applied by the City. This included a general request to look at successes in other municipalities and more specific requests to look at processes such as crushing aluminium cans.
- **The Study should explore how alternative technologies could be employed** – This statement referred to both diversion technologies such as composting, as well as to disposal technologies such as energy from waste, incineration and plasma gasification.
- **The process should be more like an environmental assessment** – This included a number of recommendations such as a minimum of 30 days to comment on the draft strategy, an EA like process for review of the Terms of Reference and use of an ‘independent person’ to validate options.
- **The Study process should include a Stakeholder Advisory Committee** – The point is to allow for a more hands on contribution from stakeholders and NGOs.
- **The Study should explicitly address waste reduction as a key component of the overall strategy** – Many participants stressed the need to embed reduction as the first principle of waste diversion in any research and in the eventual strategy.
- **The Study should assess the need for expansion of the Carp and Navan Road Landfills** – This is not within the scope of this assignment but will be addressed in the subsequent study.
- **Any legal analysis with respect to the scope, all City reports and consultant reports on this topic should be made available to the public for review.**

3. IC&I Waste Characterization

Based on the feedback from the Phase One Consultations and consultation with the City, the recommended workplan for the determination of the IC&I waste characterization was revised and is outlined within this section.

3.1 Reason For IC&I Waste Characterization

The first step in any *IC&I 3Rs Strategy* is to understand the following key quantitative values:

- The amount of IC&I waste generated;
- The amount of IC&I waste currently recycled;
- What materials are currently recycled;
- Which IC&I sectors currently recycle, and which do not;
- The amount of IC&I waste currently disposed;
- The materials found in wastes currently disposed; and
- The major generators of IC&I waste.

This level of information is needed to develop strategies to target particular IC&I waste generators and specific materials in the IC&I waste stream, thereby diverting the most material

reasonable in an effective and efficient manner. The quantitative information is also used to estimate the impacts of various policies and programs on waste diversion tonnages, and to estimate the composition and quantities of residuals, which remain after various 3Rs programs, are put into place.

The Phase One Consultations carried out in support of Task 1 clearly showed that many IC&I waste generators in Ottawa are unaware of the amount or composition of the waste they generate. Therefore, general numbers and models will be used to develop waste quantity and composition numbers required for the Study. These estimates will be verified through discussions with industry associations representing the largest segments of the IC&I sector in City of Ottawa, and through contact with selected industry representatives involved in the consultation process.

IC&I waste differs from residential waste, in that different industries and businesses produce very different types of waste materials. For example, restaurants produce large quantities of food waste and cardboard, whereas manufacturing facilities tend to produce metals and plastics. It is for these reasons that different strategies are typically applied to different industry groups.

3.2 Task 2: Objectives and Approach

The objectives of Task 2 are to:

- Develop estimates of IC&I waste generation, composition, diversion and disposal in Ottawa; and
- Identify particular sectors that generate significant quantities of waste.

Estimates generated through Task 2 will be used to help determine the potential impacts of the various diversion measures identified and assessed during Tasks 3 and 4. Estimates will also be used to assess the impacts of the recommended *IC&I 3Rs Strategy* on residual generation rates in Ottawa.⁴

The approach to developing the estimates is as follows:

- Review information obtained through the consultation process;
- Review previous waste quantity and composition studies carried out by the City;
- Review previous waste quantity and composition studies carried out by other municipalities;
- Carry out a literature search to identify new sources of information;
- Input the available data into the IC&I WA Model (IC&I Waste Allocation Model);
- Use the model to identify the composition of the City of Ottawa IC&I waste stream; and
- Use the model to identify the significant IC&I waste generating sectors in Ottawa.

⁴ To date, no provincial study of this nature has been conducted.

3.3 Ontario 3Rs Regulations for IC&I and C&D Generators

3.3.1 3Rs Regulation Background

In 1994, the Ontario Ministry of the Environment enacted regulations to promote waste diversion among designated IC&I and C&D generators in the Province. Regulations 102, 103 and 104 require IC&I generators in certain categories to carry out waste audits and develop waste reduction plans. The regulations prescribe source separation requirements for businesses of different sizes. The regulations mostly target large IC&I generators. Some specific generators also must carry out packaging audits and develop packaging reduction workplans.

Current 3Rs Regulations require diversion of specific materials by designated IC&I waste generators in Ontario. Table 3.1 lists the IC&I sector members subject to the 3Rs regulations.

3.3.2 Data Limitations

The 3Rs regulations were enforced for a very short period of time, but enforcement ceased over time because of a lack of MOE resources. The Environmental Commissioner of Ontario (the Commissioner) carried out an evaluation of the current provincial regulations and determined that they have been poorly enforced and that many generators are unaware of their existence. In fact, the Commissioner drew attention to the lack of MOE enforcement staff and regulatory enforcement in the 2000-2001 Annual Report⁵. More significantly for this study, the Ontario MOE does not have any data on the number of IC&I generators impacted by the regulations, the amount of waste generated, diverted or disposed of by these generators. The lack of data has been identified in a number of consultations carried out by MOE⁶. This is a challenge entering into the Ottawa *IC&I 3Rs Strategy* study, as very little information is available on IC&I waste generation, diversion and disposal.

3.4 IC&I and C&D Waste Generation and Composition in City of Ottawa

3.4.1 Data Sources

Many cities (including City of Ottawa) carried out detailed waste composition studies in the late 1980's and early 1990's. Since that time, limited additional IC&I waste composition sampling has been carried out at landfills, where the overall IC&I waste stream could be characterized. Now, more focus has been placed on waste audits at specific generator sites. The approach used for the IC&I study will use available data from both of these sources.

⁵Page 96, Environmental Commissioner of Ontario. 2000-2001 Annual Report

⁶Kelleher Environmental, *IC&I Sector Consultation Session To Discuss Options to Achieve 60% Diversion of Waste in Ontario*, Report to Ministry of Environment, May, 2005

Table 3.1: Ontario’s 3Rs Regulations and Designated Sectors

IC&I Category	IC&I Establishments Required to Carry Out Source Separation and Develop Waste Reduction Plans
Hospitals	Applies to any public hospital classified as group A, B or F. Does not apply to nursing homes or homes for the aged.
Hotels and motels	Applies to hotels or motels with more than 75 units and located in a local municipality that has a population of at least 5,000.
Office Buildings	Designated if it has at least 10,000 square metres of floor space for use as offices and located in a municipality that has a population of at least 5,000.
Restaurants	Restaurants are designated if gross sales for all restaurants operated by the owner in Ontario were \$3 million or more in any of the two preceding calendar years. Applies to owner’s restaurants in municipalities that have a population of at least 5,000. If the restaurant is in a designated retail shopping establishment or complex, office building, hotel or motel, hospital or campus the owner of the designated establishment is responsible for implementing a source separation program.
Retail Shopping Establishments	Designated if it has at least 10,000 square metres of floor space and located in a municipality that has a population of at least 5,000. For example a department store in a mall can ensure compliance by participating in the program operated by the owner of the mall.
Retail Shopping Complexes	Designated if it has at least 10,000 square metres of floor space of establishments (parking not include) and located in a municipality that has a population of at least 5,000. The owner may allow tenants to implement their own program but it must meet the regulations.
Educational Institutions	Applies to operator of an educational institution with more than 350 person enrolled.
Large Manufacturing Establishments	Does <u>not</u> apply if during the two preceding calendar years there was no calendar month in which the hours worked by the persons employed at the site exceeded 16,000 hours and the owner is able to demonstrate this fact.
Multi-Unit Residential Buildings	The building must implement a source separation program if the building contains six or more dwelling units and is located within a local municipality that has a population of at least 5,000. It does not include institutions that provide medical care or prisons. Owners must include materials collected in the local municipal Blue Box recycling program.
Large Demolition Projects	A demolition projects must implement a program if is consists of more than one or more buildings under demolition with a total floor space of at least 2,000 square metres. Indoor parking is included in the floor space calculation. The person responsible is the general contractor for the project.
Large Construction Projects	A construction project must implement a program if is consists of more than one or more buildings under construction with a total floor area of at least 2,000 square metres. Indoor and underground parking is included in the floor space calculation. The person responsible is the general contractor for the project. Projects involving renovation of existing buildings are not designated.

Six sources of data are available on the quantities of IC&I and C&D waste generated in Ottawa:

- R.W. Beck and Associates. December 1992. Waste Composition Study: The Existing Solid Waste Management System, prepared for the Regional Municipality of Ottawa Carleton;
- Water and Earth Science Associates Ltd. (WESA). August 2000. The Region of Ottawa-Carleton Solid Non-Hazardous Waste Characterization Study, prepared for the Regional Municipality of Ottawa Carleton;
- California Integrated Waste Management Board’s IC&I Solid Waste Characterization Database;
- RIS International. March 2004. Summary of Available Data on IC&I Waste Composition, prepared for Natural Resources Canada;

- CG&S. December 2000. Report Construction, Renovation and Demolition (CRD) Waste Characterization Study, prepared for the Alberta Construction, Renovation, and Demolition Waste Advisory Committee
- 2005 commercial tonnage estimates provided by City of Ottawa staff, presented in Table 3.2.

Table 3.2: IC&I Waste Diverted and Disposed in Ottawa, 2005

Category/Landfill	Trail Road	WMI Landfill Carp	WSI Landfill Navan	Springhill	Metro Recycling	Greely Environmental	Goulbourn Stittsville Sanitation	Lafleche	Total
Commercial Waste	13,690	304,956	166,653	64,560				14,249	564,108
Construction & Demolition	9,925								9,925
Leaf and Yard	543		1,044			852			2,439
Metal	408		2,175						2,583
Aggregate			12,805						12,805
Asphalt			2,360						2,360
Concrete			545						545
Tires	17								17
Cont. Soil			197,900						197,900
Cover	100,486	203,136							303,622
Clean Fill	4,531		19						4,550
Wet Waste			36						36
Commercial Recycling		872		31,234	50,000		16,124	?	98,230
Total	129,600	508,964	383,537	95,794	50,000	852	16,124	14,249	1,199,120

Source: Data provided by Solid Waste Services, City of Ottawa, October 30, 2006

Appendix A, lists further documents provided in the Ottawa IC&I Terms of Reference (TOR) for this study.

The WESA 1998 study⁷ identified generation and diversion tonnages by sector:

Sector	Tonnes Generated	% Diverted	Tonnes Disposed
Residential	251,000	27	184,000
IC&I	212,350	28	152,660
C&D	123,700	68	39,200
Other	46,400	86	6,600

3.4.2 Estimating Generation Rates

Quantity data from the R.W. Beck 1990 study and the WESA 1998 study will be used to help develop a 2005 baseline of IC&I waste quantities using population figures provided by the City's Planning Department. Draft quantities will be compared to the figures in Table 3.2, and adjustments made as required. Current IC&I waste diversion rates will be assumed to include the numbers in Table 3.2. No other diversion was identified during the public consultation process. Verification of these quantities will include contacting the private sector companies who provided them to the City directly.

⁷Water and Earth Science Associates Ltd. (WESA). August 2000. The Region of Ottawa-Carleton Solid Non-Hazardous Waste Characterization Study, prepared for the Regional Municipality of Ottawa Carleton

A current IC&I waste diversion rate will be identified in Task 2 that will be used as the basis of estimating the diversion impacts of various options analysed in Tasks 3 and 4.

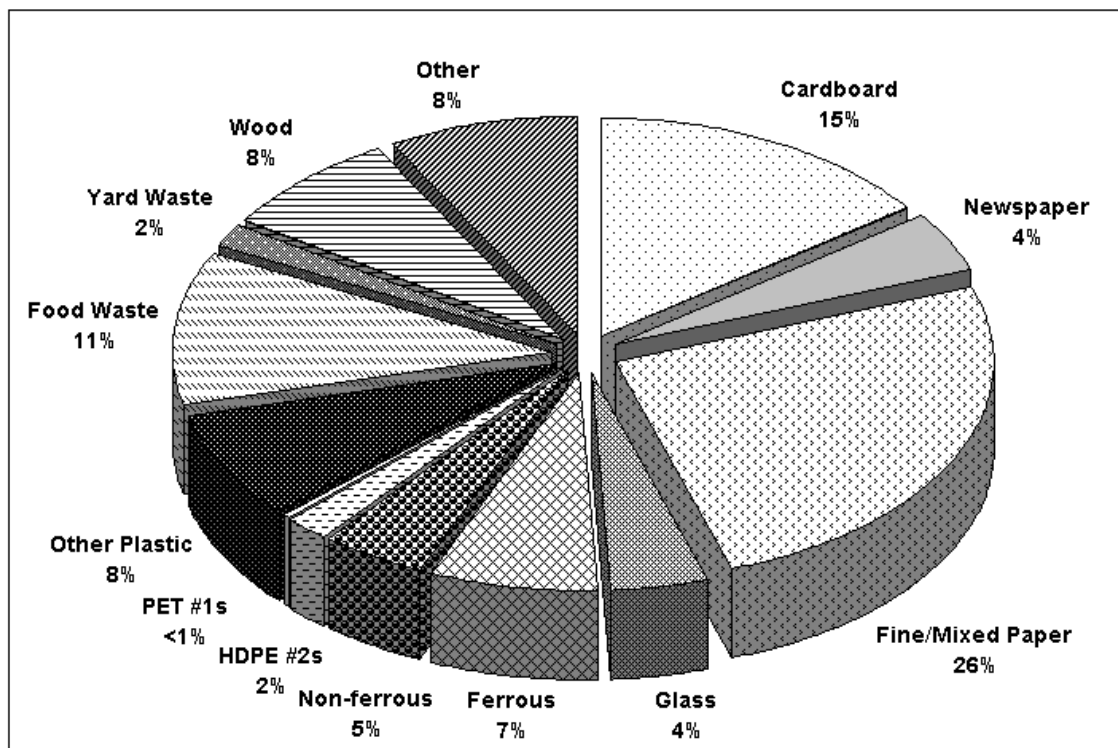
3.4.3 Estimating Composition Rates

The composition of the City of Ottawa IC&I waste stream will be estimated using an IC&I Waste Allocation (WA) Model. The results will be confirmed by comparing them to results of recent landfill IC&I waste composition studies, particularly those carried out in the City of Calgary in 2001. The results will also be compared as a further verification exercise, with information from the California Integrated Waste Management Board.

The IC&I WA Model is a planning tool for the preliminary planning of IC&I diversion strategies, using best available waste composition information. The output of the IC&I WA Model is customized to best reflect local circumstances and the local business mix, using employment by business sector as the indicator of the likely composition of the IC&I waste in a particular region. Background on the development of this model is included in Appendix D.

Figure 3.1 shows the average composition of IC&I waste in Ontario, developed as part of a provincial study for the Ontario Waste Management Association in 2004. A similar figure will be generated for the City of Ottawa IC&I waste stream, using the sources and approaches described above.

Figure 3.1: Characterization of Ontario’s IC&I Waste Stream



Source: Ontario Waste Management Association, December 2004.
The Private Sector IC&I Waste Management System in Ontario

Figure 3.1 shows that on average:

- In Ontario, paper (cardboard, newspaper, fine and mixed paper), constitutes by far the largest proportion of IC&I waste (45%).
- Other major materials in the IC&I waste stream are metals (12%), organics (11%) generated mostly by restaurants, hotels and hospitals, plastics (10%) generated by retail, wholesale and manufacturing operations%, and wood waste (8%).

Task 2 will create a waste composition profile for Ottawa’s IC&I waste. The composition will be used to identify materials that could be targeted as part of the *IC&I 3Rs Strategy*.

Table 3.3 shows an example of the waste composition estimated for the Province of Ontario by material in the OWMA study. The data has been disaggregated to reflect the major material categories of interest to end markets. More detailed composition is available for some industry sectors, and will be included in the Task 2 report where identified.

Table 3.3: Example of IC&I WA Model Output - Ontario IC&I Waste Composition, 2002*

Material	Estimated Amount Generated	Estimated Composition Generated
OCC	990,000	15.10%
ONP	290,000	4.40%
Paper	1,855,000	25.40%
Glass	275,000	4.20%
Ferrous	470,000	7.20%
Non-ferrous	300,000	4.60%
HDPE	120,000	1.90%
PET	15,000	0.20%
Plastic	535,000	8.20%
Food	740,000	11.40%
Yard	105,000	1.60%
Wood	505,000	7.80%
Other	520,000	8.00%
Total (1)	6,520,000	100.00%

(1) May not add due to rounding.

Source: Ontario Waste Management Association. December 2004.
 The Private Sector IC&I Waste Management System in Ontario
 *Similar Table to Be Generated for the City of Ottawa, 2005

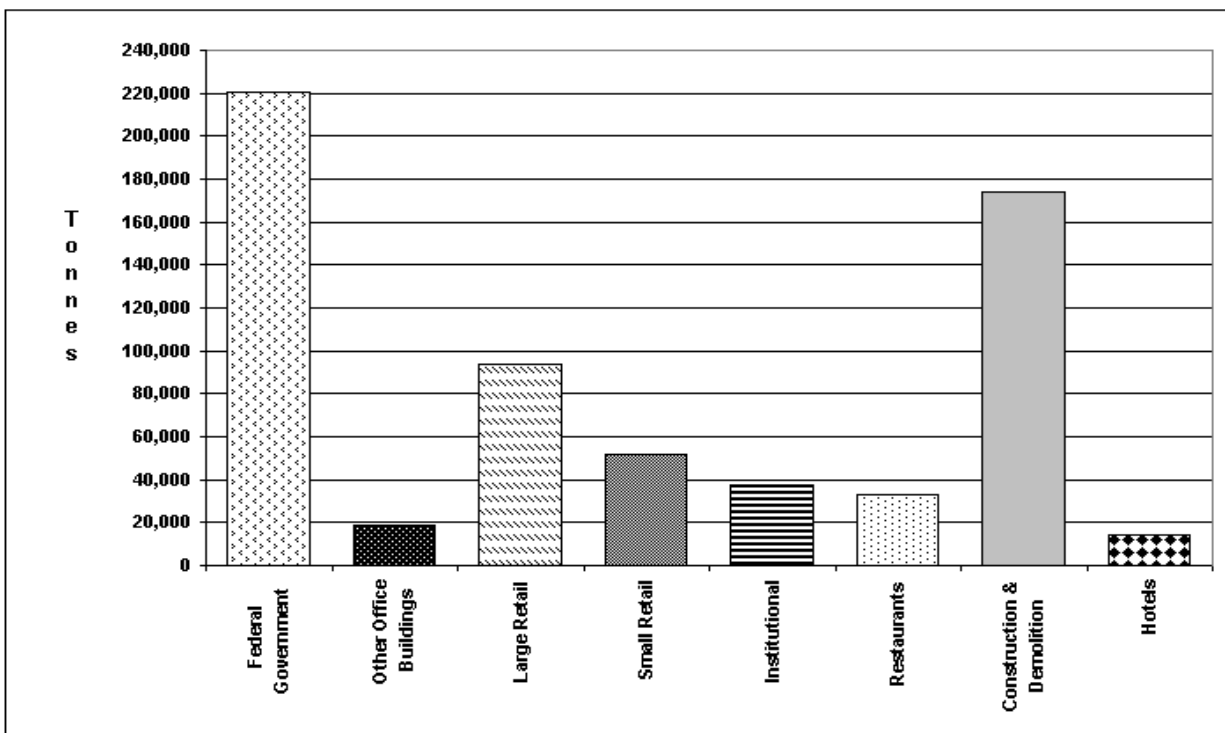
3.5 Waste Generation By Different IC&I Sectors in City of Ottawa

Waste generation by different sectors is an essential piece of information to develop the *IC&I 3Rs Strategy*. Figure 3.2 identifies the eight most significant generating sectors in Ottawa.

The amount and types of IC&I waste produced by a city depends on the number and types of businesses operating in that city. Most cities have comparable waste generation rates from hospitals and schools, as these are related to population. However, Ottawa has a large government sector, and a high-tech manufacturing sector, so this will influence the IC&I waste

produced. Employment by sector is an important indicator for the IC&I waste that will be produced. Available employment data for Ottawa is presented in Appendix E.

Figure 3.2: Sources of Ottawa’s IC&I Waste Stream



Source: R.W. Beck and Associates. December 1992. Waste Composition Study: The Existing Solid Waste Management System, prepared for the Regional Municipality of Ottawa Carleton

Table 3.4 provides estimates of IC&I waste generation in the Province of Ontario by key IC&I generating sources. A similar table will be developed for the Ottawa, using local employment data, and actual/available disposed, diverted, and/or generated IC&I waste quantities.

Table 3.5 outlines the format of the summary table of both quantity and composition data by generating source that will be developed for Ottawa.

Since the province already regulates large waste generators and appears to be increasing its enforcement efforts, the number of small waste generators, and the wastes they generate, may influence where and how the City focuses its efforts.

Table 3.4: Example of IC&I Model Output – Waste Generated By IC&I Sources in Ontario, 2002*

Sector	NAICS Code	IC&I Waste Quantities (te)	% of Total
Agriculture, forestry, fishing, hunting	11	75,000	1.10%
Mining, oil, gas extraction and utilities	21	25,000	0.40%
Manufacturing	31-33	1,730,000	26.50%
Wholesale Trade	41	560,000	8.60%
Retail Trade	44-45	950,000	14.60%
Transportation and warehousing	26,49	340,000	5.20%
Information and Cultural Industries	51	180,000	2.80%
Finance, Insurance, Real Estate, renting & leasing	30	150,000	2.30%
Professional, scientific, and technical services	54	200,000	3.10%
Admin & Support, Waste Management & Remediation Services	56	75,000	1.20%
Education Services	61	165,000	2.50%
Health Care and Social Assistance	62	690,000	10.60%
Arts, Entertainment & Recreation	71	130,000	2.00%
Accommodation and food services	72	890,000	13.70%
Other services (except public administration)	81	280,000	4.30%
Public Administration	91	80,000	1.30%
TOTAL		6,520,000	100.00%

*Similar Table to be created for the City of Ottawa, 2005
 Source: Ontario Waste Management Association. December 2004.
 The Private Sector IC&I Waste Management System in Ontario

3.6 Waste Characterization Report

The Phase 1 Consultation indicated that minimal, if any, data are available on waste generation and diversion by the IC&I sectors in Ottawa. Any information obtained through the consultation process will be used to develop the estimates in the Task 2 report. Based on currently available information, the estimates will likely rely on secondary published sources for waste composition and the output from the IC&I WA Model.⁸

The Waste Characterization Report will contain the following information:

- Amount of IC&I waste generated, diverted and disposed by City of Ottawa generators for 2005;
- Composition of IC&I waste generated in 2005;
- Description of the major sources and destinations, the environmental concerns regarding these wastes, and the existing market opportunities for their minimization, reuse and recycling;
- Composition of IC&I waste disposed in 2005; and
- Identification of IC&I sectors which generate significant amounts of waste.

⁸ Appendix A provides a preliminary list of secondary documents. Additional sources will be identified in the Task 3 report.

Table 3.5: IC&I Model Output - Estimated Unit Generation Rates and Waste Composition for Major NAICS Groups

Major IC&I Group	NAICS Code	Waste Composition														
			1 OCC	2 ONP	3 Paper	4 Glass	5 Ferrous	6 Non-Ferrous	7 HDPE	8 PET	9 Plastic	10 Food	11 Yard	12 Wood	13 Other	Total
1 Primary	11,21	%														
		(tonnes)														
2 Manufacturing	31-33	%														
		(tonnes)														
4 Transportation/ Communication/ Utilities	26,49	%														
		(tonnes)														
5 Trade: Wholesale	41	%														
		(tonnes)														
6 Trade: Retail	44-45	%														
		(tonnes)														
7 Financial, Insurance & Real Estate	30	%														
		(tonnes)														
8 Services: Non- Commercial	85,86	%														
		(tonnes)														
9 Services: Commercial	63, 77, 91, 92, 96, 97, 98, 99	%														
		(tonnes)														
10 Public Administration	91	%														
		(tonnes)														
Total Waste (tonnes)																
Composition (% total)																

4. Identification of Targets, Identification and Evaluation of IC&I Waste Management Options (Tasks 3 and 4)

This section outlines the recommended approach for the development, analysis and selection of management options that will form the *IC&I 3Rs Strategy*.

A wide range of waste management options will be considered, irrespective of their limitations (e.g., cost). Accordingly, it will be important that options are vetted by the stakeholders who will be most affected by their implementation. Input will be obtained to generate an implementation strategy that provides the greatest chance of success.

Options will not be limited by jurisdictional restrictions, i.e., “That isn’t our responsibility, it is X level of government’s responsibility”. Responsibility for waste management lies with all levels of government, and requires the completion of studies, such as the Ottawa *IC&I 3Rs Strategy*, to identify what actions are needed, how they can be done, and who should be doing them.

4.1 Identification of IC&I Waste Diversion Targets

Phase One Consultations identified the need to set waste diversion targets. The actual targets will be discussed at the first SAC meeting (see Section 4.5.2 for more details), but it is envisioned that short, medium and long-term targets will be established. Currently, IC&I waste diversion is estimated at between 17% and 22% (depending on the source of data used).

Programs are generally more successful when they have specific targets and timelines, as these provide focus and direction for program planning and implementation. Currently, the Ontario Government has a target of 60% diversion of waste from disposal by the end of 2008. As an initial starting point for the *IC&I 3Rs Strategy*, a goal of 60% diversion will be assessed along with the factors that influence the time required to achieve the target. This may not be ultimate target for diversion of IC&I waste. Targets set in other cities (e.g., Seattle, WA; State of Rhode Island; Vancouver, BC; Kootenay Boundary District, BC; etc.) will be reviewed to assess the how targets were established, the extent to which the targets were achieved, and what was done when the targets were not achieved.

The Study will assess how quickly various goals (30%, 40%, 50%, and 60%) can be achieved, making various assumptions regarding how quickly infrastructure and policies can be put in place, and how long it would take for the new policies to impact the IC&I sectors.⁹ Combinations of IC&I waste management options will be developed that will enable achievement of each of the targets. This is discussed further in Section 4.3.

⁹ This includes municipal, provincial and federal policies.

4.2 Identification of Waste Management Options

IC&I waste management options will focus on two broad option categories:

- Policies (which tend to be most effective for waste reduction); and
- Programs (which tend to be most effective for diverting waste which has been created).

Policies and programs will be investigated for their applicability in Ottawa and how they can contribute to waste reduction and/or divert materials from landfill disposal.

4.2.1 Policies

The Phase One Consultations identified the importance of waste reduction within the Ottawa *IC&I 3Rs Strategy*. Policies are likely to be the most effective tool to achieving waste reduction. For example, on the residential side, it is reasonable to assume that the City would not be achieving almost 40% diversion without policy directives at both the provincial and municipal level (e.g., O.R. 101.94).

There are many successful waste diversion policies to increase waste diversion, which have been implemented by cities throughout North America. There are also some less than successful policy approaches, which are worth documenting as well. Also companies have recently used purchasing specifications to reduce the amount of waste they generate. Common examples of policies include:

- Landfill bans;
- Differential tipping or service fees;
- Deposits on building permits; and
- Green procurement policies (e.g., minimum recycled content).

4.2.2 Programs

With the completion of the waste characterization analysis, the focus of the program elements of the *IC&I 3Rs Strategy* should be immediately apparent. For example, based on currently available information, the Study Team foresees that the following materials will likely be the focus:

- Paper (primarily fine paper);
- Metals (ferrous and non-ferrous);
- Wood, drywall, and other construction and demolition wastes (C&D);
- Food wastes; and
- Electrical and electronic wastes.

Paper continues to be a major portion of the waste stream, with the Federal Government being the largest employer in the City, and employment centred on office work. With the ability to recycle all paper types, there is no reason why any paper should be sent for disposal. Therefore,

means to maximize diversion of paper fibres will be identified, as this is an easy and inexpensive diversion program to implement and/or maximize.

Metals account for 12% of the disposed IC&I waste stream. Strategies to recover metals will be explored.

The Phase One Consultations identified the need for improved and expanded recycling options for gypsum and other **C&D waste** stream. Ottawa is experiencing a building and renovation boom, which is generating considerable C&D wastes. Other jurisdictions have had significant success diverting these materials from disposal. One Ottawa waste service provider reports diverting more than 75% of the C&D wastes it manages. Building on this success, other C&D wastes will be targeted for diversion.

Cities have distinct powers where construction and demolition waste is concerned, as they issue building permits and can require recycling and waste reduction plans as part of the building permitting process. Boulder, CO, San Jose, CA and others have implemented innovative approaches to C&D waste diversion, which will be described in the best practices section of this task.

Food waste constitutes a significant percentage of the IC&I waste stream originating from restaurants and hotels (up to 60% to 80% in some cases), even though it is only approximately 11% of the overall IC&I waste stream. Currently, the City is in the midst of identifying and procuring a preferred management approach to handle source separated organics (SSO). Depending on the vendor(s) chosen, it may be possible to expand the facility's capacity to manage additional SSO from the IC&I sector.

Electrical and electronic goods, particularly computers, were identified during the Phase One Consultations as an important target material for the *IC&I 3Rs Strategy*. While WEEE (waste electrical and electronic equipment) is not a large percentage of the IC&I waste stream, it is a material of concern to many generators because of its sometimes hazardous nature (e.g., rechargeable batteries, heavy metals in computers, etc.). Processing options are available but are expensive. Limited reuse opportunities are available through the Computers for Schools program. One local waste service provider indicated that it has run an e-waste program since 2004 and is hoping to expand it. The Ontario Government has carried out research for the purpose of developing a provincial e-waste plan, but timing of the plan and its implementation are unknown. Therefore, the Study Team will identify options to address these materials and review the policies in place in Ontario and elsewhere.

The development of IC&I waste diversion options will not be limited to specific material groups. For each material in the waste stream, the potential for it to be managed through reduction, reuse, recycling and composting/digestion will be identified. This is important, as the total quantities of materials available will help identify the scale of programs and/or facilities that will be necessary for their management. For this purpose, material types and options for their management will be refined to the extent that data permits.

In developing IC&I 3Rs options and examining their feasibility, the Study Team will review the range of policies, technologies, and approaches available, and how participation can be maximized.

4.2.3 Best Practices Profiles

The consultation program identified the need to profile best practices in IC&I and C&D waste management from other jurisdictions. These practices may fall under policy, regulation, operations, practice and/or procurement. Each will be profiled, and examined for their applicability in the City of Ottawa along with lessons learned during their implementation.

4.3 Evaluating the Options

Determining the feasibility of the options will be based on the input from the various stakeholders in the process, including the generators, service providers, PLC, City Councillors and the public. This broad based approach will ensure that all opinions are considered in the evaluation of the options identified under Section 4.2.

Each option will be documented as a separate initiative and will include the following elements:

- IC&I Waste Management Option Name
- IC&I Reduction, Reuse, Recycling or Composting Initiative
- IC&I Waste Management Option Description
- IC&I Materials Targeted
- IC&I Quantities Available
- Potential IC&I Quantities Diverted
- Remaining IC&I Quantities Requiring Management After Implementation (Residual)
- IC&I Collection Infrastructure Required and Available
- Processing Information Required and Available
- Markets for Products
- IC&I Policies/Regulations/By-laws – In Place/Needed (at each level of government)
- Capital and Operating Cost Estimates Required (at each level of government)
- Total Cost Estimates (Lifecycle)
- Implementation Timelines
- Roles and Responsibilities
- Description of Economic, Environment, and Social Implications

An example of an option (fictitious) is shown in Table 4.1.

The task of identifying and outlining all of the key elements as shown in Table 4.1 will be done concurrently in an iterative manner. Once an initial set of options has been developed, a second phase of discussions/meetings will be held with waste generators, service providers and the SAC to outline the approaches and obtain feedback. These meetings will serve to fine tune, as appropriate, each diversion option and to clarify definitions, infrastructure requirements, identify impacts, overall diversion potential, and to finalize roles and responsibilities. The objective of this approach is to build consensus wherever possible by bringing interested parties together to

consider both the challenges and the solutions. This should result in an achievable *IC&I 3Rs Strategy* (Section 4.4) with a higher probability of success over the longer term.

Table 4.1: Example IC&I Waste Management Options Sheet

IC&I Waste Management Option Description		Lead Agency: City of Ottawa	
IC&I Waste Management Option Name	Source Separated Organics from Restaurants		
Reduction, Reuse, Recycling or Composting Initiative?	Composting		
IC&I Waste Management Option Description	Food waste generated by restaurants in the BIAs of the City of Ottawa would be segregated from other wastes. The materials would be stored in separate 90 gallon rollout carts and set out for collection every other day. A separate, dedicated collection vehicle would pick up the carts and empty them, taking the materials to a composting facility. The food wastes would be blended with amendment materials and composted to generate a Class A compost for sale to end markets.		
IC&I Materials Targeted	Food waste	Soiled Paper	Diversion as a Percentage of Total Generated in ICI Sector
IC&I Quantities Available - tpy	30,000	3,000	
IC&I Potential Quantities Diverted - tpy	18,000	1,000	3.8%
IC&I Remaining Quantities - tpy	12,000	2,000	
Service Available in Public Sector	No		
Service Available in Private Sector	No		
IC&I Generator Infrastructure Required and Available	Rollout carts; separate storage area for food wastes - must be kept separate from unprepared foods and from other garbage.		
IC&I Collection Infrastructure Required and Available	Currently no service providers for the separate collection of food waste as there is no composting facility in close proximity to the generators. Service providers indicate that collection vehicles could be made available within 3 months if collection contracts can be developed in a timely manner. To get to end markets, transfer capacity is required		
IC&I Processing Infrastructure Required and Available	No local processing capacity available. Will be available by end of 2008. Processing capacity available in Quebec now.		
IC&I Policies/Regulations/By-laws – In place/Needed	No policies in place. Could ban organics from disposal similar to Nova Scotia. Need to define minimal size limits for ban, e.g., include fast food or not, just non-fast food dine in establishments.		
Markets for Products	Markets for Class A compost are well defined		
Capital and Operating Cost Estimates	Collection costs - \$100-\$200 per tonne Transfer costs - \$20-\$30 per tonne Processing costs - \$100-\$120 per tonne		
Costs for Identified Tonnages	Total for 19,000 tpy - \$4.18 million/yr - \$4.75 million/yr		
Implementation Timelines	By end of 2008		
Roles and Responsibilities	City to work with restaurant owners in BIA to help with implementation Private sector service providers to meet with City re: timing		
Social and Environmental Implications	People have to separate organics from other stream Extends life of current landfills Reduction of leachate generating materials in landfill Generation of Class A compost		

The City has indicated its interest in being a leader in the development of policies and practices in maximize IC&I waste diversion. The results of the City's Legal Services review, in regards to the scope and limitations of the City's powers over IC&I waste management, will be critical to the development of options for consideration.

With the additional feedback on constraints as provided by the IC&I waste generators and service providers, further meetings will be held with City staff to determine potential areas for leadership. The Phase One Consultation indicated a clear and potentially valuable role for the City as a facilitator of peer-to-peer learning and information sharing between IC&I generators in similar businesses (e.g., educational, health) with similar challenges. Another role could involve facilitating the reuse of materials in a waste exchange run by the City. Ultimately, the results of this exercise will be the identification of options that can be used to increase the City's influence and role in governing the management of, or providing services for, the management of IC&I wastes in Ottawa.

Incorporating the feedback from the various groups, the report on Tasks 3 and 4 will be prepared for review by the City. The combined report on the *Feasibility of Diverting Key IC&I Waste Streams* and the *Draft Discussion Paper on IC&I 3Rs Options* will be completed in draft form by April 30, 2007.

The results of the identification and evaluation of options will be presented at further consultations with key stakeholders, including the general public. All comments will be incorporated into the *Final Report on IC&I Waste Management Options*, including the *Report on Consultation*, which will clearly define all of the options available, the opportunities, and barriers to their implementation, and the relative projected effectiveness of the programs. The final report will be submitted to the City by June 30, 2007.

4.4 IC&I 3Rs Strategy

The *IC&I 3Rs Strategy* will bring together the results of the work completed up to the end of the consultation on the options into a single document that provides a succinct and self-explanatory draft policy document for consideration by Council, industry and the public. The two part report (Part 1: Strategy and Policy Document; Part 2: Phase 1 Implementation Plan) will at a minimum include:

- An outline of the current IC&I waste management stream (characterization and current waste management practices);
- A discussion of the background to the study;
- The study's goals and objectives;
- The IC&I materials and sectors being targeted by the strategy, diversion targets and timelines;
- An implementation strategy, including roles, responsibilities, costs and timing; and
- A monitoring plan to ensure the effectiveness of the strategy.

The strategy will strive to balance the results of the study work, consultative processes and other interests within the City such that the *IC&I 3Rs Strategy*:

- Represents a reasonable policy for the management of IC&I waste that does not depend solely on a significant legislative change at the provincial or federal level;
- Can be implemented, within any short or medium term constraints identified over the course of the study (long term constraints can be addressed and altered);
- Has the potential to be supported by several stakeholder groups; and
- Can be sustained over a long period of time.

It is proposed that the timing be adjusted such that the *Draft Strategy* be ready for public consultation by June 30, 2007. Considering that the Task 3 and 4 report will be completed by the end of June, the Study Team will add in the background information from Tasks 1 and 2 and complete the full *Draft IC&I 3Rs Strategy* by June 30, 2007. The project will be completed and the *Final IC&I 3Rs Strategy* will be available for presentation to Council in September (in accordance with the City Council motion).

4.5 Recommended Consultation Process

During Phase One Consultations on the Scoping Document, feedback was received from participants on how the consultation process for Phases Two and Three could be made more effective. Based upon the comments received, the following consultation process is recommended for implementation.

4.5.1 Phase Two Consultations

Overall, the objective for Phase Two Consultations is to focus on reviewing the options and building consensus. Three critical observations from our Phase One Consultations guide the proposed consultation strategy for Phases Two and Three.

1. In the August 23, 2006 City Council motion, Council provided clear direction – increase the diversion of IC&I waste. The expectation of Councillors and stakeholders is that the Study Team will review best practices, assess their feasibility and develop an action plan for implementation. The consultation sessions will be focused on completing these steps.
2. The *IC&I 3Rs Strategy* Study needs a clear goal. The goal of the *IC&I 3Rs Strategy* is to maximize waste reduction through effective policies and to increase IC&I sector waste diversion. To achieve this, interim targets and an ultimate target of 60% diversion are recommended, including an assessment of the practical and economic impacts. Options that will allow the City to reach various targets will be developed. The consultation will review specific actions required to achieve the different targets and goals.
3. Not all key stakeholders have participated equally. In some sectors, stakeholders have been involved in the consultations, but in other areas they are not yet engaged in the process. The *IC&I 3Rs Strategy* is likely to affect all IC&I generators in the City and therefore increased efforts are planned to provide opportunities for all stakeholders to participate.

Based on feedback from the Phase One Consultation, and the expertise of the Study Team, the Phase Two Consultations will be focused on four components:

1. Public Liaison Committee
2. Panel Discussions
3. Focus Groups
4. Online Survey for Small Businesses

4.5.2 Stakeholder Advisory Committee and Waste Diversion Scenarios

A small advisory committee will be created to assist with this project. Working with a small group of dedicated stakeholders (generators and NGOs) to review the options for achieving the diversion targets is recommended as it will provide an opportunity to obtain direct feedback from those most affected by the strategy.

It is recommended that a Stakeholder Advisory Committee (SAC) be created consisting of:

- **Two** representative from the communities abutting landfills;
- **Two** representatives from the staff of the City of Ottawa;
- **Two** waste service providers;
- **Two** representatives from the City of Ottawa Environmental Advisory Committee;
- **Two** representatives from the City of Ottawa Business Advisory Committee; and
- **Two** waste generators from the IC&I sector – ideally one each from the Educational Group or the Health Care Group; small businesses (as represented by a local BIA or Chamber of Commerce) and large businesses – hotel, retail or industry. Methods to include the construction and demolition, as well as the manufacturing sector will need to be addressed as part of the design process.

It is recommended that the Study Team facilitate the SAC process and that meeting notes and materials be made available to people associated with member groups.

The goal of the SAC will be to review potential diversion target and options for increasing IC&I diversion developed by the Study Team and to identify the barriers to implementing those options. This may also include reviewing the comments and opinions of IC&I waste generators and waste generators not participating directly in the SAC with service providers.

The SAC will also work with the Study Team to review the various waste reduction options. Once they have been reviewed and adjusted as required, the proposed options will then be considered by specific focus groups and will be presented to small businesses through an online survey. Feedback from these two processes will be shared with the SAC and the refined options will be included in the Draft *IC&I 3Rs Strategy*.

It is recommended that the SAC meet three times over the period from February to May 2007 (See Section 5 for schedule). The purpose of these meetings will be to review the 3Rs options.

Focus Groups

An optional component of the consultation plan will be the use of focus groups to evaluate IC&I waste diversion options for materials that account for at least two per cent of the total IC&I

waste to landfill. At the direction of City staff, a focus group will be formed to look at specific IC&I waste diversion options and to ensure that the impacts have been properly characterized and quantified. If additional research is required to further clarify the cost or feasibility of a particular option, the focus group will make this recommendation to the City. Some of the topics that could be put to focus groups include:

1. Contaminated Soils
2. Construction and Demolition Waste
3. Paper Waste
4. Organics

Feedback from the focus groups, to be held before the release of the Discussion Paper, will be used to modify the IC&I waste diversion options developed by the Study Team. The revised options will be reviewed by the SAC and the City and then integrated into the Draft IC&I Waste Diversion Strategy. See Section 5 for the proposed dates for the focus groups.

Online Survey

In Phase One Consultations, the Chambers of Commerce indicated that an online survey would be an effective means of obtaining input from their members. It is recommended that an online survey also be used to capture stakeholder opinions on options for IC&I 3Rs diversion. This will include determining their willingness to participate in specific initiatives and probing for more information on issues such as cost and convenience.

The survey would be distributed online through two or more Chambers of Commerce (COCs) and two or more Business Improvement Areas (BIAs). The Study Team will contact individual COCs and BIAs to gauge their interest and will agree to work with those that commit to actively promoting the survey to their members.

The survey will only be open to those COCs and BIAs selected to participate in the study to control the total survey population and allow analysis based on sample size. The survey itself will focus on specific 3Rs initiatives based on best practices identified by the Study Team and reviewed by City staff and the SAC. The purpose will be to obtain clear, specific input on a reasonable range of options that will require a change of behaviour and/or will have an impact on the cost (positive or negative) of managing waste.

The Study Team will develop the bilingual survey with assistance as required from consultants specializing in survey design. The survey will be hosted on a Jacques Whitford server and an effort will be made to contact all COCs and BIAs to advise them of the survey. A two week period could be provided for feedback. See Section 5 for the proposed dates for the completion of the survey.

Public Panel Discussions

The Phase One Consultations revealed that there are important issues that should be explored in some detail in a panel discussion. The target audience for these discussions would be City

Councillors, City Staff, waste generators, waste service providers and interested members of the public. Three issues that should be addressed as panel discussions are as follows.

1. IC&I Waste Reduction Policy Options
2. Tipping Fees and the Impact on Diversion
3. Alternative Technologies

There are two options for panel discussions.

1. A One Day Forum could be organized to cover a wide range of topics on waste management including the proposed panel discussion topics. This forum could address the Integrated Waste Management Master Plan, the residential component of local waste and options that exists to use technology options to manage parts of the residential and the IC&I waste stream such as organics.
2. A Series of Discussions could be organized to look only at the topics identified above. They could be held on the same day or on three separate days depending on the needs of the target audience.

Regardless of the option chosen, the panel discussions should be communicated effectively to ensure that all stakeholders are aware of them. In addition to traditional means of promotion, other organizations such as Chambers of Commerce, professional associations and community associations could be utilized to communicate to their members about these Panel Discussions thereby helping increase participation levels. See Section 5 for the proposed dates for public panel discussions.

4.5.3 Phase Three Consultations

By the time that the Draft IC&I Waste Management Strategy is published there will be a heightened sense of awareness about the initiative. The EAC pointed out that the City Council's August 23, 2006 motion on waste requested an "EA-like process" with "meaningful" public consultation with a minimum comment period of 30 days.

The Draft IC&I Waste Management Strategy will be posted on the City of Ottawa website for public review. The Study Team will send an email notification to all past participants and include a PDF copy of the document and details on providing feedback. A period of up to 60 days is available for feedback and comments.

5. Project Schedule, Public Consultation Phases and Deliverables

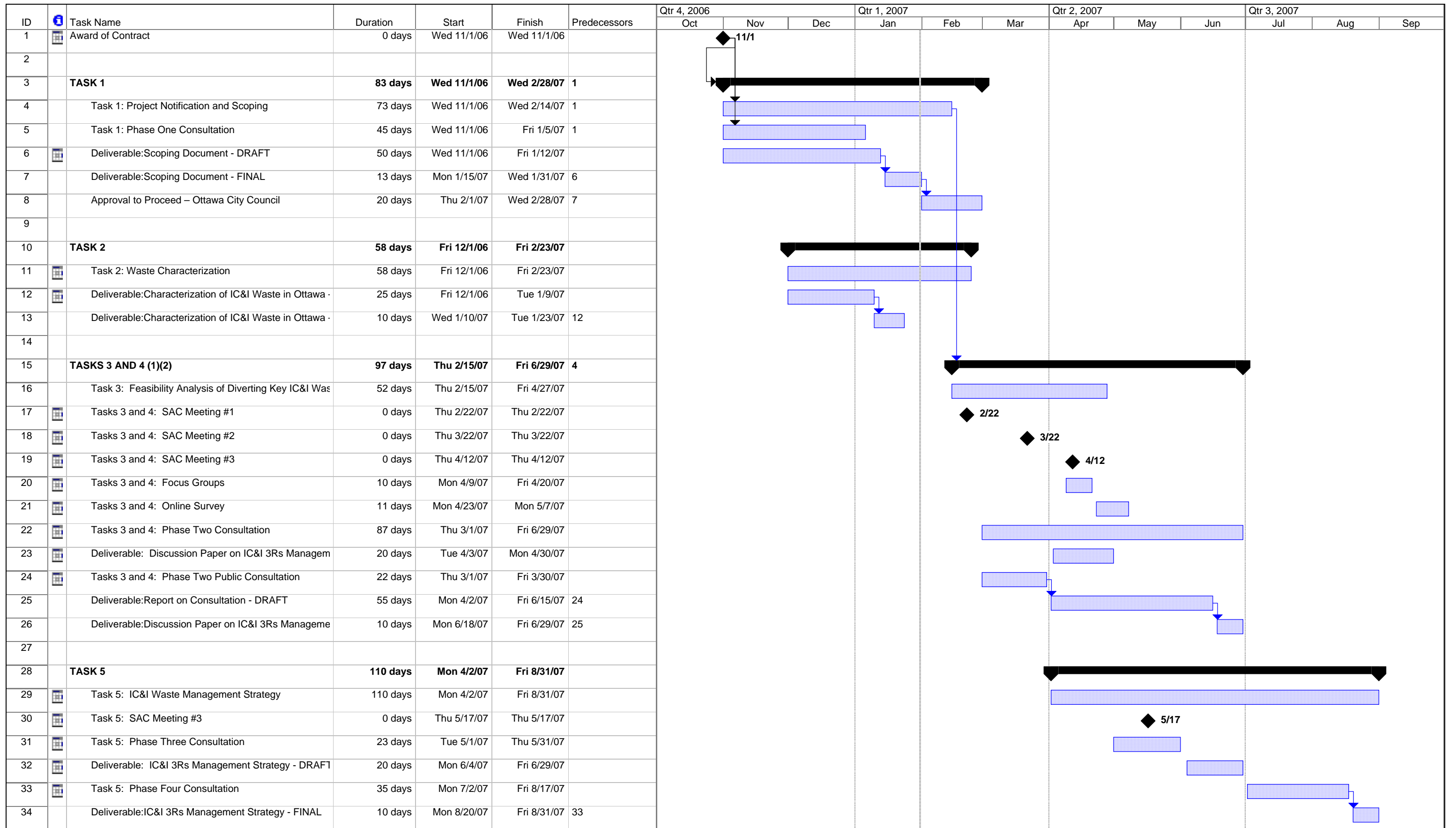
The project schedule, consultation phases and deliverables are outlined in detail in Table 5.1.

Table 5.1: Key Timelines and Deliverables

TASK 1	START	FINISH
Task 1: Project Notification and Scoping	November 1, 2006	February 14, 2007
Task 1: Phase One Consultation	November 1, 2006	December 15, 2006
Deliverable: <i>Scoping Document - DRAFT</i>		January 9, 2007
Deliverable: <i>Scoping Document - FINAL</i>		January 31, 2007
Approval to Proceed – Ottawa City Council		February 28, 2007
TASK 2	START	FINISH
Task 2: Waste Characterization	December 1, 2006	February 23, 2007
Deliverable: <i>Characterization of IC&I Waste in Ottawa – Current Situation - DRAFT</i>		February 9, 2007
Deliverable: <i>Characterization of IC&I Waste in Ottawa – Current Situation - FINAL</i>		February 23, 2007
TASKS 3 AND 4 (1)(2)	START	FINISH
Task 3: Feasibility Analysis of Diverting Key IC&I Waste Streams	February 14, 2007	April 27, 2007
Task 4: Define IC&I Waste Management Options		
Tasks 3 and 4: SAC Meeting #1	February 22, 2007	
Tasks 3 and 4: SAC Meeting #2	March 22, 2007	
Tasks 3 and 4: SAC Meeting #3	April 12, 2007	
Tasks 3 and 4: Focus Groups	April 9, 2007	April 20, 2007
Tasks 3 and 4: Online Survey	April 23, 2007	May 7, 2007
Tasks 3 and 4: Phase Two Consultation	March 1, 2007	June 29, 2007
Deliverable: Discussion Paper on IC&I 3Rs Management Options, including feasibility analysis - DRAFT		April 30, 2007
Tasks 3 and 4: Phase Two Public Consultation	March 1, 2007	March 30, 2007
Deliverable: Report on Consultation - DRAFT		June 15, 2007
Deliverable: Discussion Paper on IC&I 3Rs Management Options, including feasibility analysis and the Report on Consultation - FINAL		June 30, 2007

TASK 5	START	FINISH
Task 5: IC&I Waste Management Strategy	April 1, 2007	September 1, 2007
Task 5: SAC Meeting #3	May 17, 2007	
Task 5: Phase Three Consultation	May 1, 2007	May 31, 2007
Deliverable: IC&I 3Rs Management Strategy - DRAFT		June 30, 2007
Task 5: Phase Four Consultation	July 1, 2007	August 17, 2007
Deliverable: IC&I 3Rs Management Strategy - FINAL		September 1, 2007

- (1) Note that in the original Terms of Reference as released by the City of Ottawa, the two tasks were to be undertaken separately. The Study Team is recommending that the two tasks be undertaken concurrently and iteratively (see Section 4 of this report).
- (2) Note that in addition to formal public consultation, the Study Team is recommending the formation of a Stakeholder Advisory Committee that would meet twice over the course of completing Tasks 3 and 4.



Project: Project Schedule Jan 31
Date: Wed 1/31/07

Task Progress Summary External Tasks Deadline

 Split Milestone Project Summary External Milestone