

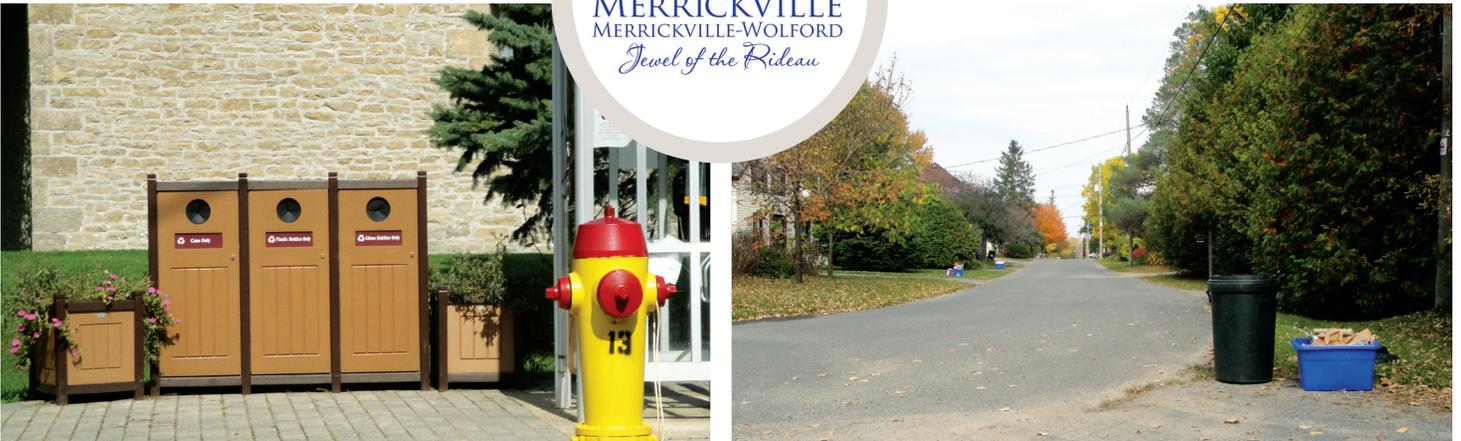
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Date: October 2011
Project No.: 60194058



VILLAGE OF MERRICKVILLE-WOLFORD

INTEGRATED WASTE MANAGEMENT PLAN AND WASTE RECYCLING STRATEGY



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1. Introduction

This Integrated Waste Management Plan (IWMP) and Waste Recycling Strategy (WRS) is a comprehensive assessment of the existing waste management programs in the Village of Merrickville-Wolford and a guide for changes and improvements. While many practices will remain unchanged, proposed initiatives will result in increased levels of service, efficiency, and stewardship. While some recommendations are immediate, others will guide the Municipality's decision making process over the next five to twenty years. This strategy is intended to be reviewed annually with formal updates every five years.

2. Overview of Planning Process

This Integrated Waste Management Plan and Waste Recycling Strategy was initiated by Municipal staff in June, 2011. The creative process has been guided by members of staff, with assistance from consultants from AECOM Canada Ltd. Targeted public consultation and stakeholder feedback has been incorporated in the strategy preparation.

This project has been delivered with the assistance of the Continuous Improvement Fund (CIF), a fund financed by Ontario municipalities and stewards of blue box waste in Ontario, as well as through the Municipality's general capital budget. Notwithstanding this support, the views expressed are the views of the project team, and Waste Diversion Ontario and Stewardship Ontario accept no responsibility for these views.

3. Study Objectives

The objective of the Integrated Waste Management Plan and Waste Recycling Strategy is to guide the Village of Merrickville-Wolford on how to optimize its waste management program, increase waste diversion rates, optimize operation of the waste disposal site, and to provide flexibility to take advantage of future opportunities to further reduce the municipality's total waste output.

Recommendations of the IWMP and WRS are to be:

- Environmentally sound
- Compliant with regulations
- Feasible and easy to implement
- Cost effective and affordable

This study process will evaluate current practices, establish feasible goals, and identify improvements to the efficiency and effectiveness of the Municipality's waste management program.

The recommendations made in the IWMP and WRS are intended to inform Municipal Council and staff, and to assist with future decision making processes, which will include planning, budgeting, and public participation.

4. Study Area

4.1 General

The primary focus of this study is the Village of Merrickville-Wolford and its waste management program. There are numerous components to this program, from curbside collection to landfill management to public education. All components are interrelated and need to be examined as such.

The Municipality does not receive service from other municipalities and is engaged in only one regional program - HHW collection is provided by the United Counties of Leeds and Grenville. This study will briefly investigate the possibility of entering into other partnerships with neighbouring municipalities.

Within the Village of Merrickville-Wolford there are two sectors, each with its own requirements for waste and recycling management. The two sectors are:

- urban area (Merrickville)
- rural area (Wolford)

4.2 Community Characteristics

The Village of Merrickville-Wolford's location on the Rideau Canal – a UNESCO World Heritage Site – attracts tourists and residents alike to the picturesque historic village and surrounding rural area. The village offers a wide variety of unique shops and businesses, while the rural ward of Wolford is experiencing exciting growth in the food sector as local producers introduce organic alternatives.

Population for the Village of Merrickville-Wolford is listed at 2,867 as of the 2006 Statistics Canada Census. The number of private dwellings is listed as 1,195. Historical data has shown steady growth for the past 15 years in the order of 0.4% to 1.7% per year. Recent rapid growth can be attributed to the Municipality's proximity to the City of Ottawa and recent construction of Highway 416; factors which could allow it to become a 'bedroom' community. For purposes of this report we have assumed an annual growth rate of 1.2% - i.e. continuation of the growth that occurred over the 15 years up to 2006.

5. Problem Statement

Management of municipal solid waste, including the diversion of blue box materials, is a key responsibility of municipal governments in Ontario. The factors that facilitate or hinder effective municipal waste management can vary greatly and depending on the size of the municipality, geographic location, and industrial or commercial activity.

The key drivers that led to the development of this Integrated Waste Management Plan and Waste Recycling Strategy include:

- Waste Diversion Ontario (WDO) Requirements – Municipalities are required to report information pertaining to their recycling program to WDO each year, including qualitative questions regarding the development and implementation of an up to date blue box recycling strategy. In future years, the portion of funding allotted to a given municipality will be increasingly dependent on the implementation of a waste recycling strategy.
- Regulatory Requirements – waste management is subject to a lengthy and complex list of statutes, regulations,
- Increasing Population and Demand – The Village of Merrickville-Wolford has seen steady population growth over the past decade and anticipates further growth in the future. A larger population will produce more waste and recyclables, waste management practices will need to keep pace with demands.
- Improved Efficiencies – The Village of Merrickville-Wolford has established various components of their waste management program allowing different services to operate independently of each other or possibly in conflict. This strategy will thoroughly review all of the components and their relationship to each other, and will lead to improved cost and service efficiencies.

Historically, waste management professionals have estimated municipal waste generation rates at 1.5 Kg/capita/day. (The definition of waste, used in this context, includes recyclables, compostables, re-usable material and garbage). Current waste generation rates are typically lower than historical rates – reduction being the first of the 3R's. However, allowing 1.5 Kg/capita/day establishes an upper limit for planning purposes.

Allowing that there were 2,867 residents in Merrickville-Wolford as of 2006, and allowing 1.2% growth, the Municipality will need to deal with 38,000 tonne of waste over the next 20 years. 38,000 tonne is the equivalent of one acre of waste piled eight stories high.

The problem statement can be summarized as follows:

“The Village of Merrickville-Wolford requires a strategy to effectively manage up to 38,000 tonne of waste over the next twenty years.”

6. Public Consultation Process

Public consultation and involvement are crucial to the success of any service strategy. This Integrated Waste Management Plan is meant to guide the Municipality's recycling and waste management policy over the next 20 years and will directly affect how waste management services are offered to residents. Ongoing consultation will help to establish which issues are most critical to residents and will ensure that these issues are addressed and that new ideas are considered.

Preparation of this report has included targeted consultation with specific individuals or groups with a high level of involvement with waste services in the Municipality, such as contract managers and potential service providers. This approach has provided valuable information while maintaining the scope of this exercise.

Public consultation has included direct communication with residents in the following manner:

- Newspaper advertisements advising of the ongoing planning; the availability of material on the Municipality's website; and notice of the public information session.
- Summary reports (brochures) were available on line, at the municipal office and at the information session.
- A draft report was available on line and for viewing at the municipal office and at the public library.
- A public information session was held at the Merrickville Community Center on October 27, 2011.

At every opportunity residents were invited to request information and to make comment. Eight written submissions were received. Based on comments received the issues of greatest concern for residents of Merrickville-Wolford are:

1. Curbside collection in Wolford – residents spoke both in favour and against this option.
2. Recycling of plastics – residents asked for a longer list of accepted materials.
3. Household Hazardous Waste – five respondents made observations on the adequacy of the current service. Collection of batteries was mentioned.
4. Three participants supported municipal sale of rear yard composters.
5. Installation of weigh scales and roll off bins at the waste site was generally supported, two respondents felt the money could be spent better elsewhere.
6. Participants were generally opposed to higher user fees and elimination of the free dump passes, although some would support a reduction in the number of free passes.
7. Enhanced public education/communication was mentioned several times.

Proposed initiatives contained in this report have been re-evaluated in light of the input received. In general, the comments were supportive of the initiatives contained in the draft report. Two additional initiatives have been added to this report:

- **Waste Bins at entrance to waste disposal site** – the provision of covered bins at the entrance to the waste disposal site would provide a better alternative, for small loads of waste, as compared to directing all traffic over the weigh scale and down to the active waste face. It would permit more accurate measurement of waste tonnages (weigh scales used at waste disposal sites are generally only accurate to within 80Kg); better safety for site users; and on slow days might eliminate the need to cover the waste face. Installation of waste bins at the entrance to Merrickville-Wolford Waste Disposal Site is an initiative that should be considered if weigh scales are installed.

- **Collection of recyclable batteries** – at one time the Village of Merrickville-Wolford collected expired batteries at the waste disposal site for proper disposal. This practice was discontinued when it was pointed out by Ministry of the Environment staff that the site was not licensed for the transfer of hazardous wastes. However a number of municipalities have found a way to collect rechargeable batteries for reuse. Merrickville-Wolford could establish a drop off point for rechargeable batteries at municipal facilities away from the waste site.
- **Sale of rear yard composters** – the municipality has offered rear yard composters for sale in the past, but the practice was discontinued. A number of respondents have recommended that composters be made available again. An initiative to stock a small number of composters (say 12) to gauge current demand could be considered.

As the Municipality moves forward; public consultation, education, and ongoing involvement will be critical to a successful waste management program. Communication with the public can be achieved through a variety of means, such as flyers, tax bill inserts, calendars, newspaper advertisements, and internet.

7. Definitions

While waste management is not a highly technical field, there are some industry-specific terms. As many of these terms are used throughout this report, a brief list of definitions is included in this section.

- **ICI Waste** is short form for industrial, commercial, and institutional waste. The total waste stream for most municipalities is a combination of ICI waste and residential waste.
- **Diversion** includes all waste which is not disposed of at a landfill, and results from practices such as backyard composting, material reuse, recycling, special processing, and reductions in personal waste generation.
- **E-waste** is discarded electrical and electronic materials such as televisions and computer parts that require special processing for removal of recyclable materials and disposal.
- **Household Hazardous Waste (HHW)** is material which would be toxic or damaging if it were to enter the environment. HHW is typically leftover cleaning supplies, paint, motor oil, batteries, and pharmaceuticals. HHW requires special processing for disposal.
- **Pay-As-You-Throw (PAYT)** is a specific type of user fee program where a fee is charged for every bag of garbage that is to be disposed of. PAYT programs are very effective in reducing waste generation rates and encouraging recycling.
- **Recyclables** are items which, after disposal, are processed and marketed for their raw material, such as aluminum, steel, and various types of plastic. Recyclables do not include reusable materials, such as reusable shopping bags, or hazardous materials which require special processing, such as paint or oil.
- **Blue Box Recyclables** are materials that are typically collected by blue box programs, but may also be collected by other means, such as in bins at the waste disposal site.
- **Source Separated Organics (SSO)** are household-generated waste organics, such as kitchen scraps and yard wastes, which are collected curbside, separate from regular garbage and recyclables. SSO typically include all organic matter, including meat, dairy, and bones, which would be inappropriate for composting in a back-yard composter. Industrial-scale SSO processing facilities use accelerated techniques to process this material.
- **Waste** includes all materials that an individual discards in day-to-day life. This is a broad term which includes, but is not limited to recyclables, compostables, re-usable material, and garbage.
- **Waste Disposal Site** is a municipal facility where garbage is permanently disposed of, usually buried. The term is often used interchangeably with landfill, although Waste Disposal Sites often include other facilities such as separate collection areas for recyclables.
- **Waste Generation Rate** is the total quantity of waste generated per capita per year.
- **Waste to Waste Disposal Site (Landfill)** is the portion of the waste stream that is permanently disposed of.

8. Relevant Legislation

Provincial legislation – laws, regulations, and guidelines, are the original driving force behind most waste management programs. Municipalities are required to provide certain services to their residents and are required to do so in a manner which protects the natural and social environment. That is not to say that municipalities would not provide these services in the absence of legislation from higher authorities, but it does provide a standard framework and support for a wide variety of initiatives and policies.

Environmental Protection Act

The Environmental Protection Act (EPA) provides the legislative framework for the establishment of waste management facilities. The establishment, operation, management, alteration, enlargement, and/or extension of waste management facilities in the Province of Ontario requires a Certificate of Approval under Part 5, Section 27 of the EPA.

Ontario Regulation 347

Ontario Regulation 347 (formerly Regulation 309) under the EPA is the primary regulation for controlling the handling, disposal, and management of hazardous and non-hazardous wastes in the Province. Under the regulation, wastes are classified into categories that stipulate handling requirements. The Regulations specify control measures for disposal facilities.

Ontario Regulation 232/98

Ontario Regulation 232/98 (O. Reg. 232/98) and its accompanying Guideline specify a comprehensive standard for landfill design, operation, monitoring, and closure. O. Reg. 232/98 came into effect on August 1, 1998 and applies to all new or expanding Waste Disposal Sites, or any site of greater than 40,000 m³. Ministry staff relies heavily on the Guidelines associated with this regulation when reviewing Certificate of Approval applications. New Certificates issued since 1998 have generally enforced compliance with this standard.

Ontario Regulation 101/94

Ontario Regulation 101/94 (O. Reg. 101/94) is also known as the 3Rs Regulation. It, and accompanying regulations, became law on March 3, 1994. The regulations are an integral part of Ontario's Waste Reduction Action Plan. The plan was aimed at reducing the amount of waste going to disposal by at least 50 per cent by the year 2000 compared to the base year of 1987. The objective was achieved through a strategy based on the 3Rs — reduction, reuse, and recycling.

The 3Rs Regulations were designed to ensure that industrial, commercial, and institutional (ICI) sectors, as well as municipalities, developed programs to reduce the amount of valuable resources going to disposal.

O. Reg. 101/94 requires specified municipalities to implement recycling programs, including collection of Blue Box wastes, home composting of organic wastes, and composting of leaf and yard waste. Municipalities with populations greater than 5,000 are required to establish blue box collection systems. These municipalities must also provide rear yard composters at cost or less, along with educational material. Municipalities of greater than 50,000 people must provide a central leaf and yard waste composting facility.

Bill 90, Waste Diversion Act

Bill 90, an Act to promote the reduction, reuse, and recycling of waste, was given Royal Assent on June 27, 2002. The Act created Waste Diversion Ontario (WDO), a non-crown corporation. WDO was established to develop, implement, and operate waste diversion programs for a wide range of materials. The Act empowers the Minister of the Environment to designate a material for which a waste diversion program is to be established.

Once the Minister has designated a material through a regulation under the Waste Diversion Act (WDA), the Minister asks Waste Diversion Ontario, working co-operatively with stewards, to develop a diversion program. The Minister has designated Blue Box Waste, Used Tires, Used Oil Material, Waste Electronic and Electrical Equipment, and Municipal Hazardous or Special Waste under the WDA.

Ontario Regulation 101/07

Ontario Regulation 101/07, the Waste Management Project Regulation made under the Environmental Assessment Act (EAA), makes it easier for municipalities to find viable solutions for managing waste. The regulation sets out the EAA requirements for waste diversion facilities. Expansion of small rural landfills by up to 100,000 cubic metres would require only an environmental screening process. Accompanying regulations under the Environmental Protection Act are intended to streamline the approval process for recycling certain materials.

Provincial Policy Statement, 2005

Section 1.6.8 of the Provincial Policy Statement on land-use planning, issued under the authority of Section 3 of the Planning Act, states that:

“Waste management systems need to be provided that are of an appropriate size and type to accommodate present and future requirements, and facilitate, encourage, and promote reduction, reuse, and recycling objectives. Waste management systems shall be located and designed in accordance with provincial legislation and standards.”

Bill 146

Bill 146, Organic Waste Diversion Act, was brought to the provincial legislature in December of 2010 and proposed that organic material be banned from landfills in Ontario. The bill received enough support to proceed to Committee for review.

Bill 146 does not provide any specifics or guidance on how municipalities are to comply. Currently, source separated organics (SSO) programs exist only in a handful of municipalities – mostly large cities – and the development of industrial-scale composting has been slow due to nuisance issues such as odour. If Bill 146 were to pass, it would likely require municipalities to provide curbside collection and processing of SSO.

Fisheries Act

The Fish Habitat Protection provisions of the federal Fisheries Act provide for the protection of fish habitat. The principle provision (section 35) states that no one may carry on any work or undertaking that results in the harmful alteration, disruption or destruction (HADD) of fish habitat, unless authorized to do so by the Minister of Fisheries and Oceans Canada.

Other provisions related to Fish Habitat Protection and Pollution Prevention are also worth noting, including those related to the prohibition of deleterious substances into fish-bearing waters (section 36). Municipalities have been charged under this provision for allowing landfill leachate to discharge into a watercourse.

Violations under the Fisheries Act can result in substantial fines and the risk of imprisonment. A violator may also be required to cover the costs of restoring the habitat and may be required to perform other court ordered remedies.

Environmental Assessment Act and Ontario Water Resources Act

Waste management facilities are subject to approval under the Environmental Assessment Act and the Ontario Water Resources Act. These Acts apply to proposals for new or expanded sites and do not typically apply to ongoing operations.

9. Current Practice and Future Needs

Preparation of an Integrated Waste Management Plan (IWMP) and Waste Recycling Strategy (WRS) begins with a thorough understanding of current practices. It is intended that this plan build on the strengths of current programs, which is different than starting from scratch. In this chapter we briefly document the Village of Merrickville-Wolford's current practice. A more detailed assessment of current practices is provided in Chapter 11.

9.1 Existing Programs and Services

9.1.1 Waste

The Village of Merrickville-Wolford provides curbside garbage collection to households and small commercial properties within Merrickville Ward. This service is contracted to a private firm. Only bagged waste is collected (with few exceptions), all bags must have an orange tag (\$1 per bag). Residents of Wolford Ward must make arrangements to deliver their wastes to the waste disposal site – bags disposed of by Wolford users must have a yellow tag (50 cents per bag). Residents of Merrickville Ward may also take their wastes to the disposal site, but they still need an orange tag.

Larger items must be delivered to the waste disposal site. The Municipality charges tipping fees based on the type of item disposed of or volume of load. The Municipality provides each household with two “clean up passes” per year, each of which permit three free loads of garbage to the waste site.

9.1.2 Diversion Programs

9.1.2.1 Blue Box

The Municipality provides curb side collection of blue box recyclables to residents of Merrickville Ward. Fibers are collected one week and containers the next. Recycling bins are provided at the waste disposal site, primarily for residents of Wolford Ward but all residents may use them. The Municipality contracts with a private firm for curb side collection of recyclables and for emptying the bins at the waste disposal site. The recyclables are hauled to Brockville for processing, the Municipality is not charged for processing of recyclables nor does it receive any revenue.

9.1.2.2 Electronic Waste

Electronic wastes (e-waste) are accepted at Merrickville-Wolford Waste Disposal Site for transfer and processing by a private firm. The Municipality has entered into an agreement with Ontario Electronic Stewardship who assist the Municipality with provision of this service.

9.1.2.3 Household Hazardous Waste

The Village of Merrickville-Wolford participates in a County wide initiative to collect and dispose of Household Hazardous Wastes. Household Hazardous waste days are scheduled for various locations throughout the Counties typically two times per year. Residents may drop off their wastes free of charge.

9.1.2.4 Organics

The Village of Merrickville-Wolford has no current programs for disposal of organic material – disposal of yard wastes at the waste disposal site was discontinued with the Ministry of Environment inspector pointed out that the site is not licensed for this program.

9.1.2.5 Tires

Tires are accepted at the Waste Disposal Site for free and are hauled by a registered contractor for processing. The Village of Merrickville-Wolford is registered with Ontario Tire Stewardship (OTS), an agency which funds municipal tire programs across the province.

9.1.2.6 Scrap Metal

Scrap metal, such as old furniture or bath tubs, is accepted at the Waste Disposal Site and is hauled by a private contractor for recycling. In 2010, Merrickville-Wolford diverted 46 tons of scrap metal at the Waste Disposal Site.

9.1.2.7 White Goods

White goods, such as stoves and washing machines, and refrigerators that have had the Freon removed, are accepted at the Waste Disposal Site and collected by a private contractor for processing.

The white goods diverted from the Waste Disposal Site are included in the 2010 diverted tons of scrap metal.

9.1.2.8 Reuse Center

The Municipality maintains a trailer at the waste disposal site where residents can put reusable materials that others can pick up free of charge. This has proven to be a very popular service.

9.1.3 Waste Disposal Site

The Village of Merrickville-Wolford operates a waste disposal site in Wolford Ward, just south of Merrickville, under license with the Ontario Ministry of the Environment. The Municipality recently updated the site's Certificate of Approval which has confirmed total site capacity of 650,000 cubic meters (of which 437,000 remains). The site can only receive wastes generated within the Municipality, the remaining capacity is sufficient to serve the Municipality's needs for over 50 years. It has to be noted, however, that available capacity is only one criterion for operation of a site – the site's environmental impacts must also remain within acceptable criteria.

The operation of the Merrickville-Wolford Waste Disposal Site is contracted to a private firm that is responsible for site works, including grading, compaction and covering. The site attendant is a municipal employee. Ministry of the Environment guidelines for Waste Disposal Site operations include that

- All waste must be covered at the end of each working day
- Cover material – typically a sandy, inert soil – should be placed in 6 inch layers
- Waste should be compacted regularly to discourage rainwater infiltration
- A site attendant must be present at all times when the site is open
- Accurate records of the quantity and type of waste and cover material received on site must be kept
- Groundwater and surface water monitoring on and adjacent to the landfill property is required
- An Annual Report, documenting all activities and monitoring results, must be submitted to the Ministry

The Municipality has retained BGC Engineering to carry out groundwater and surface water monitoring programs and to prepare the annual monitoring report. The Municipality has retained AECOM to co-ordinate consultant activities and to prepare the annual operating report.

9.1.4 Closed Waste Disposal Sites

The Municipality's Official Plan identifies two closed waste disposal sites in Wolford Ward, in addition to the single active site. The Municipality has appropriate controls in place to prevent inappropriate development adjacent to identified wasted disposal sites.

9.1.5 Administration

Merrickville-Wolford's waste management programs are supervised by the Municipality's Public Works Manager under the direction of the CAO/Clerk. Significant changes to waste management practices must be approved by Municipal Council.

9.1.6 Joint Initiatives

Joint initiatives are promoted by Waste Diversion Ontario as an efficient means to improve waste management services. The Village of Merrickville-Wolford participates in one joint initiative – the Counties wide Household Hazardous Waste collection program.

9.1.7 Promotion and Education

The Village of Merrickville-Wolford uses numerous opportunities to inform residents of the availability of and rules associated with waste management services, including:

- brochures available at the municipal office and at the waste disposal site
- newspaper advertisements, and
- occasional flyers such as "Council Notes"

9.2 Current Waste Generation and Diversion

Waste Diversion Ontario (WDO) has included the Village of Merrickville-Wolford with the municipal group “rural collection – south.” (A better fit, for two thirds of the Municipality, would be “rural depot – south,” however for this analysis the difference between the two categories is not significant.) According to WDO data, a municipality in the category “rural collection - south” would generate approximately 352 kilograms of waste per person per year from the residential sector. This equates to a total waste generation of 1,060 metric tons in 2010. This quantity includes all types of waste, whether diverted or not.

Merrickville-Wolford is not a good fit for “standardized” WDO numbers. While the Municipality keeps detailed site traffic records for their landfill, weigh scale tonnages are not available. Waste originating from the residential sector is not distinguishable from industrial, commercial, or institutional (ICI) waste. Since the total quantity of landfilled residential waste cannot be determined, a total waste diversion rate cannot be calculated. Based on the waste diversion practices that are in place, the rate can be expected to be between 30% and 40%.

Recycling records from 2010 indicate that a total of 209 metric tons of blue box recyclables were collected and transferred for processing, which equates to 20% of WDO’s estimated waste generation. Again, this diversion rate cannot be confirmed because the Municipality does not account for residential and commercial recycling separately.

9.3 Cost of Existing Service

The following table is compiled from financial data provided by the Municipality for 2010. Capital costs, reserve contributions and withdrawals have not been included.

Table 9.1 - Garbage and Recycling Operational Costs, 2010

	Garbage	Recycling
Expenses	\$ 239,363.72	\$ 23,146.20
Revenue	\$ (72,989.76)	\$ (7,384.52)
Net Cost	\$ 166,373.96	\$ 15,761.68
Tonnage	2830	209
Expenses / tonne	\$ 84.58	\$ 110.75
Revenue / tonne	\$ 25.79	\$ 35.33
Net Cost / tonne	\$ 58.79	\$ 75.41

A quick review of the above might indicate that garbage, at \$58.79 per tonne, is much less costly than recycling, at \$75.41 per tonne. However, it should be noted that garbage revenue is derived from residents through bag tag sales and tipping fees, where as recycling revenues come from outside sources – Waste Diversion Ontario obtains this revenue from manufactures and distributes it to municipalities to help fund blue box services. A better comparison, for taxpayers in the Municipality, is the total cost of garbage vs. the net cost of recycling - \$84.58 vs. \$75.41.

9.4 Anticipated Future Needs

The population of Merrickville-Wolford is expected to grow at an above-average rate as the City of Ottawa continues to expand. With increased population there will be increased waste production. However, it is expected that the gradual nature of the population increase will enable the Municipality to accommodate the increased demand on its waste management programs with only minor adjustments such as additional collection routes or larger bins.

Landfill capacity at the Municipality's Waste Disposal Site is expected to last at least another 50 years, longer if recycling practices improve and the diversion rate increases. In the event that the site becomes unavailable, the Municipality will need to make alternative disposal arrangements, likely with a private waste management firm. A switch away from the Municipality owned waste disposal site would make residential waste management more costly, making recycling or composting more advantageous now and in the future.

Increased interest in diversion, both from the general public and from oversight agencies such as WDO, will be a driving force for ongoing assessment and improvement of the Municipality's waste management program. As recycling and composting gain prominence in the public sphere and funding is increasingly allocated based on best management practices, waste diversion programs will gain a higher priority. This will affect the approach to new opportunities and services, as well as attitudes towards costs versus benefits. The public desire for more diversion initiatives, for example, has been the driving force behind Source Separated Organics programs that have been implemented in larger municipalities, and in some smaller municipalities such as the Town of Perth.

10. Goals and Objectives

10.1 Diversion Goals

10.1.1 Blue Box Diversion Rate

Waste Diversion Ontario (WDO) encourages municipalities to set goals for waste diversion through recycling programs. According to WDO, the average residential blue box diversion rate for municipalities of the size and location of the Village of Merrickville-Wolford is 21%, which is slightly better than the Municipality's recycling diversion rate in 2010.

A recycling diversion rate of 25% is proposed as a reasonable and attainable goal for the Municipality to achieve within 5 years. This is an increase of 5% over the current rate, and equates to an increase from 209 metric tonnes in 2010 to 260 metric tonnes in 2016. This goal equates to less than an additional half kilogram of recycling per household per week.

10.1.2 Total Waste Diversion Rate

The Province of Ontario has set a total waste diversion goal of 60%, although achieving this rate almost always requires a three-stream collection of waste, recycling, and source separated organics.

It is difficult to set a total diversion goal for the Village of Merrickville-Wolford since the current diversion rate is unknown. The Municipality's first priority should be to establish a system of measurement and accounting that will allow accurate diversion rates to be calculated for residential waste and ICI wastes (later in this report we will propose weigh scales at the waste disposal site and separate accounting for residential and commercial bag tags).

Considering the extent of diversion programs already in place in Merrickville-Wolford, and our experience with other municipalities, it is likely that the Village of Merrickville-Wolford is currently diverting between 30% and 40% of its residential waste stream. A total waste diversion goal of 50% is proposed as feasible and affordable.

10.2 Service Objective

The Village of Merrickville-Wolford provides waste management services to all its residents and is committed to maintaining the high level of service that its residents have come to expect.

Notwithstanding the above, this plan will propose changes to program delivery that may prove difficult for local residents. Implementation of higher user fees, for example, would be seen by some as a necessary step to encourage recycling, while others would see it as a tax grab. When implementing changes, the Municipality has to balance the interests of the Municipality, current and future residents, businesses, provincial policy, and the environment.

11. Proposed Initiatives

In this chapter the Municipality’s current waste management practices are further broken down and viable alternatives are assessed against the stated objectives of this Integrated Waste Management Plan and Waste Recycling Strategy – i.e. to optimize the waste management program, increase waste diversion rates, optimize operation of the waste disposal site, and to provide flexibility to take advantage of future opportunities to further reduce the municipality’s total waste output. Initiatives that will help the Village of Merrickville-Wolford meet achieve these objectives are proposed for the consideration of Merrickville-Wolford Council.

11.1 Curb Side Collection of Garbage and Recyclables

The Municipality currently offers curbside collection of garbage and recyclables in Merrickville Ward only. The service is contracted to a private firm, the cost of collection is offset through higher bag tag fees.

Residents of Wolford Ward must make arrangements for delivery of their waste to the waste disposal site. Many residents take on this chore themselves, others retain the services of a private firm to pick up and haul their wastes (the Municipality is aware of at least one firm that offers this service). Many residents of Wolford would be satisfied with the arrangements that they have made, and wary of any increased costs that they might incur for a municipally operated service.

Estimating the cost of curb side collection is difficult – costs are typically determined through competitive tenders. AECOM has observed a wide range in tendered rates based on the size of the municipality and the number of competitors available to take on the contract. An estimated cost has been developed based on fees that are paid by the Village of Merrickville-Wolford for curb side pickup in Merrickville.

To facilitate collection in rural areas, the Municipality would establish common collection points at the head of private lanes which are not suitable for travel by large trucks. Each collection point would be equipped with lidded bins to discourage animal scavenging. The capital cost of these bins might be shared between the Municipality and the residents served, and maintenance of the bins would be the responsibility of the residents. The cost to the Municipality (assumed at 50%) would be between \$400 and \$650, depending on the size of bin. Approximately 15 bins are required across the rural area of the Municipality.

The Municipality would also need to supply rural residents with blue boxes. The cost of blue boxes and lidded bins is shown below as Total Capital Cost.

Table 11.1 – Estimated Costs for Curb Side Pick Up in Wolford

Item	Cost
Curbside Collection Contract	\$153,000
Bag Tag Revenue	(\$46,000)
Net Cost	\$107,000
Capital Cost	\$12,500

For purposes of this analysis it is assumed that bag tag revenues in Wolford would increase to \$1 per bag. The net cost per household is estimated at \$146.

In addition to providing the residents of Wolford with a higher level of service, there are other advantages to curbside pickup. Most important, traffic at the waste disposal site would be reduced. This might facilitate reduced hours and less frequent covering of the site.

As an alternative curbside pickup throughout Wolford Ward, the Municipality could consider pickup in built up areas only. A policy that would permit residents to petition for curbside pickup could be established.

11.2 Recycling Processing

The Village of Merrickville-Wolford currently contracts with a private firm for pick up and haulage of blue box recyclables. The recyclables are hauled to Waste Management's facility in Brockville where they are accepted without cost. The Municipality receives no revenue for this material.

This current situation in Eastern Ontario appears to be as follows:

- If you are a large enough municipality, such as the Cities of Ottawa or Kingston, you can justify development of your own recyclables processing facility. With your own facility you have the ability to market your materials for maximum revenue, which helps to offset the cost of running the processing facility.
- Operation of a municipal recycling facility is not cost effective for smaller municipalities. Almost all small municipalities are dependent on privately run facilities to process their recyclables. These facilities do not pay for the material.

The current situation creates additional constraints in that small municipalities have limited control over what materials can be accepted in the blue box. Residents have expressed concern regarding limits to the types of plastics that will be picked up. The Village of Merrickville-Wolford might consider calling for proposals the next time they contract for curbside pickup services, and offer incentives to firms that provide a longer list of recyclables.

11.3 Composting

The Ontario Ministry of the Environment has significant requirements for licensing of composting facilities. The requirements to operate a leaf and yard waste composting facility are extensive, and include:

- monthly turning of windrows
- daily temperature monitoring during active composting phase
- minimum internal temperature requirements
- minimum 6 month curing process
- testing of completed compost for heavy metals
- record keeping including name and contact information of all recipients of the compost. Records must be kept for ten years.
- submission of an annual report detailing all composting activities, including quantities in and out of the site.

The Ministry's requirements are intended to ensure safe and environmentally sound procedures, particularly for commercial composting operations. Many municipalities (including Merrickville-Wolford) have found it cost effective to compost material at the waste disposal site for subsequent use as cover material. By keeping the material on site, the municipality avoids many of the ministry's requirements that are intended to safeguard the end user.

Merrickville-Wolford did compost yard waste for mixing with cover material in the past, but stopped when they were advised by Ministry staff that the waste site is not licensed for this operation. The Municipality should explore opportunities to restart this procedure.

Rear yard composters can help to reduce the volume of compostable materials that require disposal. Merrickville-Wolford has offered composters for sale to residents in the past, but not recently. The municipality might consider a pilot program to gauge the interest of residents in purchasing a new composter.

A number of larger municipalities in Eastern Ontario – Ottawa and Kingston for example – have initiated programs to collect compostable material at the curbside. This is referred to as source separated organics. Both the cities have contracted with private firms for processing of organic materials.

Diversion of organics from the waste stream is believed to be the only way for a municipality to achieve Ontario's target diversion rate of 60%. However, this industry is still in its infancy and costs are quite high. In the City of Kingston, for example, the source separated organics program costs approximately three times as much as the recycling or waste disposal program. The Village of Merrickville-Wolford may wish to consider implementation of a source separated organics programs in the future, however, at this time source separated organics is not considered affordable or easily implemented.

11.4 Household Hazardous Wastes

Public consultation undertaken as part of this review has identified disposal of household hazardous waste as an area where residents would like to see improvements. Collection of household hazardous waste is currently offered to Merrickville-Wolford residents by the United Counties of Leeds & Grenville, however, several participants have stated that this service is lacking.

Provision of household hazardous waste collection and transfer services is considered beyond the means of the Village of Merrickville-Wolford. In light of comments received, municipal staff should encourage the Counties to offer a more convenient service for residents of Merrickville-Wolford.

At one time the Municipality collected batteries at the waste disposal site for proper disposal elsewhere. This service was discontinued when Ministry of the Environment staff noted that it contravened the site's Certificate of Approval. The Municipality still collects rechargeable batteries and cell phones at the Municipal Office for pick up by a private firm.

The Village of Merrickville-Wolford could consider an initiative to make the collection of rechargeable batteries and cell phones at the municipal office available to all residents – this could be as simple as providing a bin for this purpose in the waiting area.

11.5 E-Waste

The Village of Merrickville-Wolford provides opportunities for residents to recycle e-waste at its waste disposal site. Residents can also take advantage of return services provided by large retailers such as Future Shop or Staples. The Municipality can do a better job of promoting this option to its residents.

The Municipality has recently registered with Ontario Electronic Stewardship – OES provides funding assistance for e-waste recycling services.

11.6 Freecycle

The Municipality operates a reuse center at the waste disposal site. This has become a popular destination for waste site users.

Reuse centers have been implemented in several municipalities, some have failed. The most common cause of failure is due to a lack of maintenance – the reuse center has to be cleared of unwanted material on a regular basis or it will become over-full and inaccessible. The Municipality's current practice of clearing out the reuse center on a regular basis should continue.

Several municipalities are encouraging residents to put reusable materials at the curb on a specific "give away days". This is an effort to reestablish the scavenging that occurred in the past when municipalities offered spring clean up days. This is another freecycle initiative that could be considered by Merrickville-Wolford.

11.7 Municipal Operations

The Village of Merrickville-Wolford should be seen as a leader in encouraging waste diversion. The Municipality currently recycles paper products from municipal operations. Old rechargeable batteries and cell phones are collected in the municipal office. Waste oil is collected for recycling from the works garage. The Municipality provides recycling bins next to waste bins at parks and playgrounds and decorative recycling bins are located in the downtown.

The Municipality should continue to seek opportunities to lead through example.

11.8 Management of Active Waste Disposal Site

The waste disposal site should be seen as an asset worthy of ongoing management and control.

The Village of Merrickville-Wolford was issued an updated Certificate of Approval for its waste disposal site on July 27, 2009. The new certificate confirms ample capacity to serve Municipality needs for the next fifty years. The Municipality should ensure that operation of the site, and monitoring of environmental impacts, is carried out in conformance with the new Certificate. Remedial action, when indicated by environmental monitoring results, should be expeditiously implemented so as not to give the Ministry reason to shut down the site.

11.9 Waste Disposal Site Operations

Merrickville-Wolford Waste Disposal Site has evolved to become more than just waste disposal. The Site is a transfer station for blue box recyclables, e-wastes, scrap metals and tires. The site includes a reuse center and may provide a yard waste compost facility in the future.

Further development of the site to provide opportunities for reuse and recycling of waste materials should be encouraged. The Municipality might consider renaming the site to Merrickville-Wolford Environmental Center to better reflect its current use.

Merrickville-Wolford should make every effort to get maximum benefit from its available waste disposal capacity. Two ongoing practices require particular attention;

1. Compaction of wastes is very important – municipalities with light compaction equipment can dispose of 500Kg of waste in a cubic meter, where as municipalities with heavy landfill compaction equipment routinely achieve greater than 750Kg per cubic meters. With good equipment the life a landfill can be extended by 50%.
2. Covering operations – current approvals require covering of wastes at the end of each operating day. Supplying and placing covering material is one of the largest expenses for an operating a landfill. Use of too much cover material is costly and consumes landfill capacity. The use of cover material should be carefully controlled. Reductions in the number of days a site is open can help to minimize the use of cover material.

Installation of weigh scales will be proposed, in the next chapter, as an option to assist in control of compaction and use of cover materials.

Eventually, the waste disposal site will be full and will require final grading and capping. Landfill site closure has been estimated as follows:

Table 11.2 – Estimated Costs for Waste Disposal Site Closure

Item	Quantity		Unit Price	Total
Litter Clean-up	10	hectare	\$2,000	\$20,000
Grading and Shaping	10	hectare	\$25,000	\$250,000
Cover Material	58,000	m ³	\$16	\$928,000
Top Soil and Seed	97,000	m ²	\$7	\$679,000
Subtotal				\$1,877,000
Engineering and Contingency				\$280,000
Total				\$2,157,000

The Village of Merrickville-Wolford maintains a reserve fund for this future liability. However, there is no need to defer this work until after the site is closed. It is a good environmental practice to cap portions of the site as final elevations are reached. There is currently a large area on the south slope that is ready for capping – capping and seeding this area would improve the appearance of the site, cut back on rainwater infiltrating the site and reduce the future liability at closure. A program to cap existing finished areas of the site and to schedule periodic cappings (say once every five to ten years) is proposed.

11.10 Waste Disposal Site Operations – Weigh Scales

The Village of Merrickville-Wolford is encouraged to install and operate weigh scales at their Waste Disposal Site. Weigh scales would provide the following benefits:

- **Staff and contractors would be able to better manage the ratio of cover material to waste.** Typically, the volume of cover material should not exceed 25% of the volume of waste, but without measurement there is no control to ensure that the site is not filling with cover material.
- **Staff and contractors would be better able to manage site compaction.** Compaction is a key component of site operations. The only way to accurately monitor compaction is to measure both the weight and volume of material being placed.
- **Staff would be better able to manage tipping fees.** The Municipality collected a total of \$20,899.00 in tipping fees over the 2010 calendar year. Fees are based on the size of vehicle that delivers the waste or the type of item being disposed of. Weigh scale measurements are a more fair method of assigning costs. Partial loads, for example, are not penalized. Weigh scale measurements would allow the Municipality to set rates that are competitive with rates charged by private operators.
- **Staff would be better able to monitor diversion programs.** Currently, the Municipality receives weight data for diversion programs such as blue box recycling and scrap metal removal. With accurate waste measurements the Town would be better able to monitor the effectiveness of diversion programs.
- **Staff would be better able to monitor residential and ICI wastes.** Accurate quantities are critical for reporting to funding authorities such as WDO. Currently, Merrickville-Wolford is unable to report an accurate waste diversion rate because there is no distinction between residential and commercial wastes.

Estimated costs for establishing and operating weigh scales at Merrickville-Wolford Waste Disposal Site are tabulated on the following page. Costs assume a modest installation (15m scales) with a small, heated operating booth. It is assumed that operation of the scales would require one additional full-time attendant – costs assume hours of operation that are currently in effect.

Table 11.3 – Estimated Cost for Weigh Scale Installation

Item	One-time Cost	Annually
Facility Construction	\$100,000	
Staff		\$50,000
Maintenance/Supplies		\$10,000
Total	\$100,000	\$60,000

11.11 Waste Bins at Entrance to Site

Currently, all users of the waste disposal site are required to convey wastes from the front of the site to the active waste face at the back. This has disadvantages in that residents risk damage to their vehicles - cutting tires on sharp rocks or metals for example. There could also be issues with resident safety.

If weigh scales are installed there will be issues with weighing small volumes of waste. Weigh scales of this size proposed are only accurate to within 80Kg - most small loads would weigh less than this.

The installation of waste bins at the entrance to Merrickville-Wolford Waste Disposal Site offers advantages over the current situation, but at a cost. Waste bins cost in the order of \$2,000 to \$4,000 and require heavy equipment to haul and dump at the waste face. The installation of waste bins is an initiative that should be considered if weigh scales are installed.

11.12 Waste Disposal Site Expansion

Merrickville-Wolford Waste Disposal Site has capacity to serve the Municipality for the next fifty years. No site expansions, or new sites, are envisioned as part of this plan.

11.13 Emerging Technologies

Municipal staff should continue to monitor emerging technologies in the region and the opportunities that may result. Staff should continue to work with organizations committed to improved waste management practices, such as Waste Diversion Ontario, Ontario Waste Management Organization, Municipal Engineering Association, Association of Ontario Municipalities, and the Solid Waste Association of North America (SWANA).

New technologies which could potentially be very beneficial to the Village of Merrickville-Wolford, such as bio-reactors or plasma-arc, are still in developmental stages and not yet financially, or practically, feasible. The status of new technologies should be re-evaluated annually as part of the Municipality's ongoing monitoring program.

11.14 User Fees / Funding

User fees have been identified as fair method for proportioning costs for municipal services to those residents who make the most use of them. User fees for waste collection and disposal services have the added benefit of promoting waste diversion.

The Village of Merrickville-Wolford currently requires user fees for most waste disposed of at its waste disposal site. User fees are charged as bag tag fees or tipping fees based on size of load. Bag tag revenue in 2010 amounted to approximately \$40,000 of which approximately \$20,000 was contributed by Merrickville residents (at \$1 per bag) and \$20,000 was contributed by Wolford residents (at 50 cents per bag). Tipping fee revenues generated another \$36,000. In total, user fees funded about 30% of waste collection and disposal services.

In general, municipalities are advised to maintain user fees similar to or higher than neighboring municipalities. This is to discourage residents of neighboring municipalities from disposing of their waste in your facilities. A review of municipalities in close proximity to Merrickville-Wolford indicates user fees of between \$1 and \$2 per bag.

Council should consider an increase in user fees to encourage diversion and to stay current with neighboring municipalities. There appears to be room to double the current bag tag fee.

The one exception to user fees is the issuance of “clean up passes.” Residents of Merrickville-Wolford are allowed to dispose of six free loads of garbage per year at the waste disposal site. This program is open to abuse – there is no means to confirm that all of the waste on a given load is from the residence that the pass was issued to. Municipal staff is aware of site users who have accumulated passes for more than six free loads.

Council should consider cutting back on the number of free loads allotted to each household. The typical allotment for neighboring municipalities is between zero and two.

11.15 Diversion Initiatives

In preparation of this plan the Village of Merrickville-Wolford has investigated a broad array of diversion initiatives. However, three initiatives that have been identified by Waste Diversion Ontario deserve particular attention. Research by Waste Diversion Ontario has concluded that the following diversion initiatives are most effective:

- pay-as-you-throw user fee program
- reduced frequency of garbage collection, and
- mandatory use of clear garbage bags

Merrickville-Wolford already has a pay-as-you-throw program in place. Increased fees are discussed in Section 11.12.

The frequency of garbage collection in Merrickville Ward is once per week. Once a week is considered the minimum requirement for summer collection, to avoid pest issues. Consideration could be given to bi-weekly collection in the winter. The concept of a lower level of service can apply to other waste policies as well – for example, the current practice of allowing six free loads of waste per household at the waste disposal site is counterproductive in terms of reducing waste and encouraging recycling. Reductions to the number of free passes is also discussed in Section 11.12.

The use of clear garbage bags has been successfully implemented by several municipalities in Eastern Ontario, but not without resistance. Residents will be concerned about privacy. The use of clear bags in Merrickville-Wolford is suggested as an initiative to be considered if diversion targets are not met by other means.

11.16 Joint Initiatives

The Village of Merrickville-Wolford currently participates in only one joint initiative - Household Hazardous Waste Days with the Counties. The Municipality should stay current with planning by neighbouring municipalities as there may be future opportunities to take advantage of economies of scale. For example, AECOM is aware of current efforts to make processing of recyclables more efficient. Source separated organics will be more affordable if a group of municipalities can band together to assure a processing facility an adequate quantity of material.

11.17 Public Involvement / Education

Promotion and education (P&E) is the single most important initiative a municipality can take to improve diversion and waste management program efficiency. The Village of Merrickville-Wolford should continue to make information on waste management programs readily available to its residents through advertising, brochures and mailings. The Municipality should consider enhancements to its web site to make this information available on line.

All promotional material – in print or on line – should be regularly reviewed for currency and clarity.

The Village of Merrickville-Wolford should consider a wide spread promotion and education campaign relating to the implementation of this Integrated Waste Management Plan and Waste Recycling Strategy. This campaign can begin with the public consultation program. A full P&E campaign can commence once Council has received this report and decided on a course of action.

In developing their P&E campaign, the Town should take advantage of additional resources from the Continuous Improvement Fund and Waste Diversion Ontario. CIF provides tools to create a customized P&E strategy, geared towards smaller municipalities. A campaign of this nature is expected to last for 6 months, depending on the chosen strategy. With a strategy in place, additional funding of up to \$5,000 is available for print materials and certain upgrades to recycling programs.

11.18 Waste Management Program Review

This Integrated Waste Management Plan and Waste Recycling Strategy will be presented to Council for information. It will also be submitted to the Continuous Improvement Fund for review and funding approval.

Municipal staff should review the status of implemented initiatives and recommendations on an annual basis, concurrent with regular annual reporting practices for the Merrickville-Wolford Waste Disposal Site and completion of the WDO Datacall. As part of this annual review, staff should prepare a brief report which would include information such as:

- Waste and recycling statistics from the previous year, including blue box and total diversion rate
- Comparison to the previous year and identification of any trends over several years
- Status of all proposed initiatives and progress toward implementation
- Obstacles encountered
- Identification of new opportunities
- Recommended changes

The Integrated Waste Management Plan and Waste Recycling Strategy should be thoroughly reviewed and updated every five years. The entire report need not be completely re-written, but the same research and review process undertaken in the development of this report should be followed. This review would consider changes to the Municipality's population and service demands, local and regional opportunities, effectiveness of initiatives, and the status of diversion activities across the province. All of these topics can change substantially in five years and it is important to ensure that these documents continue to be current, accurate, and relevant.

12. Conclusion

This Integrated Waste Management Plan and Waste Recycling Strategy has included a thorough review of the Village of Merrickville-Wolford's existing practices, opportunities, and constraints. For the most part, this plan has observed that the Municipality's current waste management practices are environmentally sound, compliant with regulations, and financially responsible. The number of suggested initiatives reflects the fact that the Municipality's current practices have evolved over time in response to changes to the waste management landscape.

Proposed initiatives that involve change to the Municipality's current waste management practices are summarized below. Initiatives are proposed to help the Municipality meet the following goals:

1. To increase diversion of blue box recyclables from 209 to 260 metric tonnes per year by 2016.
2. To increase diversion from waste disposal at landfill to 50%.

12.1 Proposed Initiatives

Initiatives that are proposed for Council Consideration are listed below:

1. **Curbside Collection of Garbage and Recyclables** – Council may wish to consider expanding curbside collection of garbage and recyclables to residents of Wolford Ward. The estimated cost of this service is \$1 per bag plus \$146 per household per year. As an alternative, Council may wish to implement a policy that would allow residents of built up areas in Wolford to petition for curbside pickup.
2. **Recycling Processing** – the Village of Merrickville-Wolford does not have the resources to operate its own municipal recycling facility and is therefore dependent on the private sector for this service. The current contractor does not accept all plastics. The Municipality should consider an incentive in future contracts to benefit firms that accept a longer list of recyclable materials.
3. **Composting** – the Village of Merrickville-Wolford should initiate discussions with the Ontario Ministry of the Environment towards re-establishing the yard waste composting facility at the waste disposal site. The Municipality should consider reinitiating the sale of rear yard composters. A pilot program of, say, 12 units to start would be a good way to gauge public interest.
4. **Household Hazardous Wastes** – Municipal staff should lobby the United Counties for a more convenient service for residents of Merrickville. The municipality could consider expansion of the current practice of collecting rechargeable batteries and cell phones at the municipal office to allow the general public to use this service as well.
5. **Freecycle** – the Municipality could consider promotion of a “give away day” – a day when residents to put useful objects at the curb for pick up by others.
6. **Municipal Operations** – the Village of Merrickville-Wolford has implemented many internal practices to encourage waste diversion, such as recycling of bond paper from the municipal office and recycling of used oil at the works garage. The Municipality should be seen to be a leader in waste diversion practices. The Municipality should seek opportunities to lead through example.

7. **Management of Waste Disposal Site** – the Municipality should adhere to all of the conditions listed on its recently issued Certificate of Approval. The Municipality should react promptly to issues arising from its environmental monitoring programs.
8. **Waste Disposal Site Operations** – the Municipality should consider renaming Merrickville-Wolford Waste Disposal Site to the Merrickville-Wolford Environmental Center to better reflect its current use as a transfer station for recyclables (blue box, e-waste, scrap metals and tires), a reuse center, and (potentially) a yard waste composting facility.

Waste disposal site operators should pay careful attention to compaction and covering operations to conserve waste disposal site capacity.

An immediate program to cap portions of the site (i.e. the south slope) that have reached final elevations is proposed, in conjunction with a program to cap finished areas once every five to ten years.

9. **Installation of Weigh Scales** – weigh scales at the waste disposal site would offer many benefits, including the ability to better monitor site usage, diversion, compaction and covering efforts; and to more fairly assess tipping fees. In conjunction with the installation of weigh scales the municipality should consider installing waste bins at the front of the site for small loads.
10. **User Fees** – increases in user fees are proposed to offset waste management costs and to encourage waste diversion. Doubling of bag tag fees is proposed as well as a review of tipping fees.
11. **Diversions Initiatives** – a reduction to the number of free passes at the landfill is proposed as a waste diversion initiative.
12. **Joint Initiatives** – Merrickville has successfully implemented a joint initiative with the United Counties to provide Household Hazardous Waste collection days. Staff should continue to seek joint initiatives that offer additional or higher levels of service at lower cost.
13. **Public Involvement/Education** – promotion and education (P&E) programs are essential, particularly for the introduction of new programs. The Municipality will need to undertake a P&E program as part of implementation of changes arising from this plan. The Municipality should consider enhancements to its web site as part of this program.
14. **Waste Management Program Review** – concurrent with its current practice of annual reporting for waste disposal site operations and reporting of recycling activities through the WDO data call, staff should prepare an annual status report on the implementation and success of diversion activities identified in this report. The Municipality should undertake a thorough review of waste management practices (i.e. an update of this report) once every five years.

12.2 Initiatives Considered but not Recommended

This plan has considered numerous waste management initiatives. The following is a partial list of initiatives considered but not currently recommended:

1. **Source Separated Organics (SSO)** – source separated organics programs have been implemented by larger centers (Ottawa, Kingston) in Eastern Ontario and by one smaller municipality (Perth). Implementation of a SSO program in Merrickville-Wolford is considered cost prohibitive at this time, but may be considered in the future if changes to collection and processing technologies result in lower costs.
2. **Clear Plastic Garbage Bags** – mandatory use of clear plastic garbage bags, and prohibitions on disposal of recyclables at the waste disposal site, have been successfully implemented by a number of municipalities in Eastern Ontario. The mandatory use of clear plastic bags in Merrickville-Wolford may be considered if diversion targets cannot be met through other means.
3. **Emerging Technologies** – numerous technologies, including plasma-arc and bio-reactor technologies, have been considered as part of this review but are not considered feasible or cost effective for Merrickville-Wolford at this time. Municipal staff should continue to stay abreast of new technologies for future consideration if conditions warrant.
4. **New or Expanded Waste Disposal Site** – Merrickville-Wolford's waste disposal site has sufficient approved capacity to serve the Municipality for the next fifty years. No expansion or development of new sites is envisioned as part of this plan.

Though not recommended at this time, the above initiatives could be implemented in the future if costs permit, or in response to changes to legislation, or if the Village of Merrickville-Wolford is unable to achieve acceptable waste diversion rates with current initiatives. Reconsideration of the above initiatives should be part of staff's annual review of this plan.

12.3 Summary

A listing of initiatives are proposed for consideration of Merrickville-Wolford Council that reflect the stated objectives of this Integrated Waste Management Plan and Waste Recycling Strategy – i.e. to optimize its waste management program, increase waste diversion rates, optimize operation of the waste disposal site, and to provide flexibility to take advantage of future opportunities to further reduce the municipality's total waste output.