Municipality of Sioux Lookout Waste Recycling Strategy

SIOUX LOOKOUT
Hub of the North

CIF
CONTINUOUS IMPROVEMENT FUND

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1 INTRODUCTION

The Waste Recycling Strategy as presented herein was initiated by the Municipality of Sioux Lookout in order to develop a plan to increase the efficiency and effectiveness of their recycling program, as well as to maximize the amount of recyclable material diverted from the Hidden Lake Landfill Site. Specifically, the purpose of the recycling strategy is to:

- Reduce the amount of recyclable material that enters the Hidden Lake Landfill – helping to extend the landfills life;
- Promote and encourage recycling within the Municipality.
- Consider implementing government initiatives, as well as entering government programs to assist with the cost of recycling.
- Encourage need and belief to maintain a pristine environment.

The Municipality of Sioux Lookout is responsible for managing its Municipal solid waste. The Hidden Lake Landfill site is operated and managed by the Municipality of Sioux Lookout and accepts non-hazardous residential, industrial, commercial and institutional solid waste. Obligations and responsibilities of the Municipality include:

- Weekly “pick-up” of residential waste throughout all areas of the Municipality.
- Maintaining a Blue Box/Blue Bag Recycling Program with residential pick-up throughout the Municipality.
- Additional waste management related functions at the Hidden Lake Landfill Site including:
    - Provision and maintenance of a scrap metals/white metal recycling program area. Scrap metal is stored in a segregated laydown area until it is removed from the site by a scrap metal recycler.
    - Provision and maintenance of a yard waste/clean wood waste collection area.
    - Maintenance of a storage area for tires. The Municipality is registered under the Ontario Tire Stewardship (OTS) as a collector for tires.
    - Maintenance of a storage area for electronics. The Municipality is registered under the Ontario Electronics Stewardship (OES) as an affiliate/collector for approved recyclable electronics.
    - Maintenance of a Municipal Hazardous or Special Waste (MHSW) storage facility. The Municipality is currently reviewing Stewardship Ontario’s MHSW program to determine if they would like to become registered collectors of hazardous materials.
    - Maintenance of vertical secondary containment Aboveground Storage Tank (AST) for waste oil.

- A design and operations plan to accept organic wastes for composting at the Hidden Lake Landfill Site has been completed and approved by the Ministry of the Environment. The Municipality is currently evaluating the economics of constructing and operating the compost area.

The Municipality of Sioux Lookout faces a number of waste management challenges, which this Waste Recycling Strategy will help address. In particular,

- Waste Diversion Ontario requires that Municipalities have a recycling plan in place before communities can receive funding and/or get an increase in funding.
- A successful waste recycling strategy can help extend the life of the Hidden Lake Landfill.
- The community has expressed interest in enhanced recycling facilities and operations.
- A proper strategy may identify potential areas for cost savings and operational efficiencies.
- A successful waste recycling strategy can avoid harmful contaminants from entering into the water table and the environment.
- To find feasible markets for all recyclable materials, i.e. glass.
- To help taxpayers in realizing the financial impact of recycling, in particular its effects on taxation.
- Addressing a lack of public interest in recycling.
- Educating the public on how to recycle and what products are accepted in our recycling operations.
- The lack of available recycling contractors, which limits competitive pricing.

This Waste Recycling Strategy was developed with input from:

- Mayor & Councilors
- Public and stakeholders
- Municipal Managers
- The Environment Committee
- Contracted services

The Continuous Investment Fund's *Guidebook for Creating a Municipal Waste Recycling Strategy was also used as a resource.*

2 OVERVIEW OF PLANNING PROCESS

The waste recycling strategy was prepared through the efforts of:

- The Public Works Department Staff
- A Public Survey

Various steps/actions have been taken in working towards the completion of the strategy. These steps include:

- The Economic Development Manager has explored potential available funding.
- The Environment Committee has been provided with an opportunity to review and provide input into the Waste Recycling Strategy.
- The Municipality has entered into agreements with Ontario Stewardship programs for recycling such as OES, OTS, and Blue Box Program. An agreement with Ontario Stewardship to become registered to handle MSHW in the future is also being investigated.
- A review of existing available information/data from previous years in order to assist in the development of the waste recycling strategy.
- Work with recycling contractor to categorize and keep track of collected recycled materials.

To ensure the public and local stakeholders were able to participate in the preparation of this waste recycling strategy the following public consultation activities were completed:

- A survey pertaining to recycling and the waste recycling strategy were available to be completed on-line during the summer of 2011. Hard copies of the survey were also available to be completed at the Seniors Center and Municipal Office. ;
- A request for input from concerned community members was issued via advertisements in local media outlets;
- Feedback was obtained from the municipal website;
- Staff received training and feed back in current landfill operations from SWANA (Solid Waste Association of North America);
- Obtained input from the Environment Committee;
- Obtained approval from Municipal Council
- Internet social networking sites

The next step in the process is to finalize the Waste Recycling Strategy and implement its recommendations.

3 STUDY AREA

The study area for this waste recycling strategy includes the following areas of the Municipality:

- Sioux Lookout;
- Hudson ,
- Alcona; and,
- Rural Municipal inhabited areas.

This waste recycling plan will address the following sectors:

- Single and multi-family residences;
- Small businesses;
- Small institutions (schools, daycares, recreational facilities, seniors homes); and,
- Large Institutions (hospitals).

4 PUBLIC CONSULATION PROCESS

The public consultation process followed in the development of this Waste Recycling Strategy consisted of the following activities (some activities are ongoing):

Stakeholders – Comments, suggestions, and ideas made by the General Public have been incorporated into this Waste Recycling Strategy.

Council Meetings – During council meetings the public discussed landfill and recycling issues with Mayor, Council, and Public Works Manager.

Website Feedback – There were/are updates on the Municipal webpage indicating the tipping fees at the landfill as well as the types of recyclable materials that are accepted.

Workshops – Public Works Staff has received SWANA training in landfill operations. Additional training on the handling of MHSW will be required.

Newspaper Notices – Regular newspaper notices keep the public informed on recycling pickup dates. Consultation has indicated that the general public requires additional information on our recycling practices and is currently being developed for distribution.

Social Networking – Members of the public may use social networking tools to discuss landfill and recycling issues.

Recycling Survey – A survey pertaining to recycling and the waste recycling strategy were available to be completed on-line during the summer of 2011. Hard copies of the survey were also available to be completed at the Seniors Center and Municipal Office.

Stakeholder groups included in the consultation included:

- Mayor and Council
- The Public – residents of the Municipality of Sioux Lookout
- Environment Committee
- Public Works Manager and Staff

In general, the response from the public and stakeholders was positive in that they expressed an interest in expanding and enhancing the recycling program currently offered by the Municipality.

5 STATED PROBLEM

Management of Municipal solid waste including the diversion of blue box materials is a key responsibility for all Municipal governments in Ontario. The factors that encourage or hinder Municipal Blue Box recycling endeavors can vary greatly and depend on a Municipality's size, geographic location, and population.

The key drivers that led to the development of this Waste Recycling Strategy include:

1. *Waste Diversion Ontario (WDO) Requirements* – WDO requires municipalities to have a recycling plan in place in order to access potential funding.

2. *Increasing the Disposal Capacity of the Hidden Lake Landfill* – A successful waste recycling strategy can help extend the lifetime of the Hidden Lake Landfill Site.

3. *Population Growth* – Population growth will lead to an increase of generated waste in our community. Increased recycling can help to mitigate population increases and increase the life of the landfill.

4. *Directives from Municipal Council* – Municipal Leadership has indicated that they would like to play a role in determining future steps in waste management in our community.

5. *Public Input* – Public input will impact some decisions by Council. However, based on the recycling survey and public feedback, the overall response indicates that the residents of Sioux Lookout are interested in enhancing the recycling program currently employed by the Municipality. Despite the positive feedback, additional public education in recycling is required.

6. *Improving Cost/Services Efficiencies* – Cost savings initiatives and services improvements are challenging and have begun at the Hidden Lake. For example, entering into agreements as collectors with Stewardship Ontario has permitted the Municipality to waive tipping fees associated with tires and e-waste.

7. *Restricting Factors* – The economic uncertainty of the market for recyclables has a significant impact on recycling in our community. Being remotely situated, along with the high cost associated with hauling recyclables may result in failure to recycle certain goods and instead have them landfilled (for example glass). Further, economic downturns

have demonstrated a loss in the demand for recyclable material. Current economic conditions have also presented financial challenges to municipalities in financing a successful recycling campaign, as well as created difficulties associated with finding markets who will accept recyclable material.

8. *Illegal Dumping*- Waste is being illegal dumped into our surrounding forests and polluting our environment. Increased enforcement, fines and education are required to combat the polluting of Crown lands. Our efforts must be supported to include all levels of government.

9. *Green Gas Emissions* – Council has introduced an idling policy for all Municipal vehicles to address and reduce green gas emissions. The Provincial government has set into play maximum emissions permitted by commercial vehicles and combined these limits towards the renewal of their registrations. However, education and support from the General Public must be acquired to reduce green gas emissions.

6 GOALS AND OBJECTIVES

This Waste Recycling Strategy has identified a number of goals and objectives for the Municipality of Sioux Lookout. These are indicated below:

1. To maximize the diversion of residential/municipal solid waste that enters the landfill through increased participation in the blue/box recycle program. The Municipality's goal is to increase diversion of municipal solid waste through the blue box program by 10-15%. Public education and commitment will increase solid waste diversion rates.

2. To maximize the capture rates of blue box materials through existing and future programs, with an overall goal of capturing 10% of residential solid waste through the blue box / blue bag program.

3. To attempt improve the cost effectiveness of recycling. Currently, our Municipality cannot improve upon the cost effectiveness of recycling due to our low volumes of collection and the extensive distances our recyclables must travel to reach depots. The limited number of contractors available to haul our recyclables also results in our Municipality paying premiums for removal.

4. To increase participation in the recycling program by ensuring that recycling services are available to all residents of Sioux Lookout. The overall goal is to attempt to raise participation in the Blue Box program to 75%.

5. To extend the lifetime of the Hidden Lake Landfill by 5 to 10 years through increased participation in the blue box diversion program. The Municipality is achieving this already through recycling as the footprint for waste is not increasing as fast as originally anticipated.

6. To manage our waste in our community and dispose of all local waste within Municipal boundaries. This is currently being addressed. Illegal dumping is also an issue that the Municipality, property owners (i.e. Crown land) and the General Public must address.

7. To consider entering into partnership with Stewardship Ontario's Household Hazardous and Special Wastes programs.

8. To continue to follow the guidelines and report to Stewardship Ontario the obligations required for collectors for tires (OTS) and e-waste (OES).

9. Continue to maintain a user pay system for municipal waste management (with the exception of residential recycling) in order to provide zero impact on taxation.

10. Encourage commercial recycling beyond its current levels.

This Waste Recycling Strategy has also identified a series of broader community goals to which it can contribute. These broader community goals are presented below:

1. To increase the sustainability of our community by practicing and promoting the 4-R's (Rethink, Reuse, Reduce, and Recycle).

2. To make our community a cleaner, greener place to live by encouraging the reduction of air and water pollution levels, planting trees, etc. through public education and physical activity.

3. To encourage a green economy through public education, community awareness events, school presentation and green job creation.

4. To reduce our emissions and carbon footprint with the reduction of municipal greenhouse gas emissions. This will be done through public education and encouraging the public to purchase cleaner products, more efficient vehicles, and outboard motors along with encouraging community members to walk, jog and paddle as opposed to using gas powered engines.

5. To enhance services by seeking additional programs to enter such as Stewardship Ontario's MHSW for recycling at our landfill.

~~6.~~ The Municipality has entered into agreements with Stewardship Ontario, with OES, OTS, and Blue Box. Tipping fees have now been waved for these items which in turn encourage residents to recycle them.

7. Encourage garage sales, curbside swaps, donations (i.e. toy library or Salvation Army) and pitch in events to recycle used items and keep them out of our landfill.

8. Encourage and support recycling lectures at our community schools. Educate children at an early age about the benefits of recycling. Teach them the correct methods of recycling.

7 CURRENT SOLID WASTE TRENDS, PRACTICES, AND SYSTEM FUTURE NEEDS

Community Characteristics

In 2006, the Municipality of Sioux Lookout had a population of 5183 (Statistics Canada 2006 Community Census Data). The Municipality is home to 1920 total households or dwellings. Of these, 1415 are single-family households and 505 are multi-family households. There are also an additional 160 seasonal dwellings, which are generally occupied during the months of May through September.

Current Waste Generation and Diversion

Currently, the Municipality of Sioux Lookout generates approximately 1638 tonnes of residential solid waste per year. Of this, 135.87 tonnes, or 3.04 percent, is diverted through the blue box program. Currently, the most common material recycled is papers (ONP, OMG, OCC, OBB and fine papers). We currently do not recycle glass as there is no market currently available in our area.

The table below summarizes the current waste generation and blue box diversion rates.

Residential Solid Waste Generated and Diverted through Blue Box		
Residential Waste Stream/Blue Box Material	**Tonnes**	**Percent of Total Waste**
Total waste generated	4464	100
Papers (ONP, OMG, OCC, OBB and fine papers)	67.93	1.52
Metals (aluminum, steel, mixed metal)	27.18	0.61
Plastics (containers, film, tubs and lids)	40.76	0.91
Glass	0.0	0.00
Total Blue Box material currently diverted	135.87	3.04

As the table below indicates, the Municipality of Sioux Lookout's current diversion rate is below average for its WDO municipal grouping.

Average Blue Box Diversion Rate (year)	
Municipality of Sioux Lookout	3.04%
Rural Collection North	20.29%

However, this strategy/report does not address components included in our waste collection which is diverted away from our landfill stream. Such items would include 20.47 tonnes of household hazardous materials, 147.30 tonnes of scrap metals, 17.72 tonnes of tires and 665.77 tonnes of dewatered sludge. These

items have been recycled or have found other uses, such as utilizing dewatered sludge for landfill cover. In actuality, if we included these items, our true waste diversion rate is 22.1%.

Potential Waste Diversion

To estimate the Municipality's current waste composition, the Municipality referenced the scale house records that are maintained at the Hidden Lake Landfill site. The attendant shelter/scale house is located at the initial access point to the landfill site. At this point, haul vehicles and contents are weighed, information is confirmed on hauled materials, users are directed to appropriate disposal areas, and tipping fee transactions are completed.

The weigh scale allows the attendant to both properly record the quantity of wastes received by the landfill facility, as well as to monitor quantities of other materials being hauled to and from the site.

A total of approximately 1,187.42 tonnes of blue box recyclable materials are available for diversion, of which approximately 1,051.55 tonnes are still currently in the waste stream. Estimates of blue box material available for diversion are listed in the table below.

Current and Potential Diversion			
Material	***Total Available in Waste Stream (tonnes/year)***	***Currently Recycled (tonnes/year)***	**Potential Increase *(tonnes/year)***
Papers (ONP, OMG, OCC, OBB and fine papers)	718.70	67.93	650.77
Metals (aluminum, steel, mixed metal)	93.74	27.18	66.56
Plastics (containers, film, tubs and lids)	249.98	40.76	209.22
Glass	124.99	0.0	124.99
Total	1187.42	135.87	1051.55

Diverting the blue box material remaining in the Municipality of Sioux Lookout's waste stream could raise its waste diversion rate to 26.6%.

Existing Programs and Services

Currently, the Municipality of Sioux Lookout has the following in place to manage residential solid waste:

- User Pay/Tipping Fees
- Garbage - $2.30/bag for residential or $101/tonne for commercial

Collection services of regular waste are provided to the residents using Municipal Collection, contracted services, private service, or public drop-off (at landfill). Recycling services are provided by contracted services and drop-off.

Disposal and recycling services are paid for primarily through user fees for waste disposal and the tax base and WDO grants for recycling. Once the recyclable materials have been collected it becomes our contractor's responsibility to ensure that these recyclables make it to market.

Upcoming important collection-related milestones that may affect how collection services are administered include:

- A review by the Municipality of the contracted recycling service in late 2011.

In 2010 the total net annual recycling costs for the Municipality of Sioux Lookout was $83,741. This amounts to $616.33 per tonne, or $16.16 per capita. As the table below shows, net annual recycling costs for the Municipality of Sioux Lookout are below average for its WDO municipal grouping. It should be noted that the cost for recycling will increase to ~$101,000 ($744 per tonne) due to full allocation of transporting recycles to Metro in Winnipeg.

Net Recycling Cost (per tonne per year)	
Municipality of Sioux Lookout	$616.33
Municipal Grouping: Rural Collection North	$508.83

Anticipated Future Waste Management Needs

Solid waste generated rates in the Municipality of Sioux Lookout are expected to grow over the next 10 year planning period. The Table below depicts the expected growth rates for solid waste generation and blue box material recovery (based on projected population growth rates).

Anticipated Future Solid Waste Generation Rates and Available Blue Box Material			
	Current Year	**Current Year + 5**	**Current Year + 10**
Population	5183	5849	6020
Total Waste (tonnes)	4,464	5,038	5,185
Blue Box Material Available (tonnes)	1,187	1,340	1,379

8 PLANNED RECYCLING SYSTEM

Overview of Planned Initiatives

The Municipality of Sioux Lookout reviewed a number of options for consideration in its Waste Recycling Strategy. The options were then scored based on a series of criteria, which included:

- Public Interest and Support
- Cost Effectiveness/Efficiency
- Availability of Public Information
- Public Education
- Municipal Activities

Once scored, the top ranking Waste Recycling Strategy options were organized into Priority Initiatives and Future Initiatives. The Table below presents the Priority Initiatives and Future Initiatives and their estimated costs. A review of these initiatives and their steps for implementation are reviewed on the following pages.

Priority and Future Initiatives		
Initiatives	**Implementation Costs**	**Operation Costs**
Priority Initiatives		
Implementation of Bag Limits	0	Covered in cost of education program
Provision of Free Blue Boxes	n/a	n/a
Reconsideration of Collection Frequency	Variable	variable
Training of Key Program Staff	n/a	2080 x $1/household
Enhancement of Recycling Depots	2080 x $3/household	2080 x $3/household

Future Initiatives		
Enhancing Public Education	2080 x $1/household	2080 x $1/household
Optimization of Collection Operations	variable	variable
Optimization of Processing Operations	variable	variable

Priority Initiatives

Initiative: Potential Implementation of Bag Limits

Overview:

Bag limits restrict/deter the number of bags of garbage a resident can dispose of per collection. This encourages residents to divert more recyclable materials in order not to exceed the bag limit.

Bag limits are a common practice of limiting how much waste, and specifically the number of garbage bags full of waste, will be accepted for collection. They are often employed with "user pay" systems, which will assign a cost per bag for collection for bags over the limit. Bag limits are a relatively simple means of encouraging residents to become more conscious of the amount of waste they generate to initiate a change in attitude and behavior about their waste generation habits.

Typical bag limit designs include:

- Strict bag limit imposed with no other options provided for placing additional waste at the curb. Once the bag limit set out is reached, any additional units of garbage are left at the curb by the collection crew.

- Partial Bag Limit allows residents to purchase special tags for excess garbage (also referred as a partial user pay system). Because residents are given an alternative approach to deal with excess garbage, it is not as critical to provide convenient waste diversion alternatives. However, residents will expect some level of waste diversion services to enable them to divert their waste and reduce the financial burden of paying for excess garbage. This approach is much more common among communities imposing bag limits of three bags or less.

- Hybrid system combines the features of the strict bag limit with the features of the partial bag limit. Typically in a hybrid system a community will

impose a strict bag limit but will distribute a set of free tags for residents to augment the bag limit.

Bag limit programs send a clear message to residents that it is no longer acceptable to produce unlimited amounts of garbage. However, they are usually coupled with significant convenient opportunities to divert waste.

Communities that impose bag limits of less than three per week, in general, experience a noticeable reduction in the amount of waste sent for disposal and an increase in recycling rates. There tends to be an inverse relationship between the number of bags permitted at the curb and the diversion and recycling rates achieved. The lower the bag limit the higher the diversion rate of waste from landfill and the recycling rate, as long as residents have access to convenient and comprehensive waste diversion opportunities. Curb side recycling is generally considered essential if a bag limit of three or less is to be contemplated. Introduction of additional diversion opportunities of kitchen organics further enhances bag limit impacts.

Bag limits can generally be administered without capital expense to the waste authority, and thus are generally regarded as a low-cost initiative.

Potential Implementation Proposed for Sioux Lookout:

1st bag for free
2nd bag - $5.00
All consecutive bags $5.00

Initiative: Provision of Free Blue Boxes

Overview:

Providing free blue boxes helps to ensure that residents have sufficient storage capacity for recyclables. While this is initially done at the roll out of the Blue Box program, many municipalities offer free boxes to new residents or residents moving into new homes. Some municipalities also offer one extra free box or bin for residents.

Provision of free blue boxes to households ensures ample household recycling capacity. This is usually done when programs are initiated and when additional materials are added and/or the program is re-promoted. Additional blue boxes require an additional capital outlay, however, the added capacity may not only increase capture and potentially lower unit operating costs, but the minimization of home-made curb side containers may yield longer-term ergonomic benefits to collection crews. Alternatively, residents, staff, and our recycling contractor have

indicated that blue bags are easier to work with when recycling due to the weather in our region, increased capacity (if required) and littering issues.

Implementation Strategy for Sioux Lookout:

The Public Works Department in conjunction with the Environment Committee proposes to hold public forums with residents to gather input, suggestions, and recommendations to be forwarded to Council for their information and consideration as a Waste Management Plan.

Initiative: Reconsideration of Collection Frequency

Overview:

The efficiency of curbside collection of recyclables is dependent on a number of factors, including the rural nature of the community, the types of recyclable materials included in the recycling program, and the type of equipment used to collect the recyclables.

Reduction in garbage collection frequency is a strategy made possible when diversion programs are able to divert large amounts of material, such as recycling and source separated organics programs. With significant diversion, a minor portion of material left for the garbage stream makes weekly collection obsolete, and the conversion to less frequent garbage collection, in turn, makes diversion programs more attractive even to program hold-outs. Reduction in garbage collection frequency has the added benefit of reducing garbage collection costs.

Municipalities with both organics and recycling programs may choose to reduce collection of garbage from weekly to bi-weekly. Advantages include reducing operating costs and encouraging additional diversion of recyclables and organics. Disadvantages include concerns over odour and space issues relating to storing garbage for two weeks, particularly among families with infants. Animals such as bears will also be attracted to the smell and may cause various issues with the resident on their property.

Implementation Strategy for Sioux Lookout:

Residential composting is easily conducted by residents while obtaining benefits from doing so and without creating additional financial burdens on ratepayers.

Commercial composting needs to be investigated in more detail as MOE requirements involve a large capital investment to construct such a facility. Further, subsequent operations maintenance costs must also be considered. In reality, implementing such a facility may result in greater costs to the users than being placed directly into the landfill.

Initiative: Training of Key Program Staff

Overview:

Well trained staff can lead to greater cost and time efficiencies and improves customer service. Knowledgeable staff will have a greater understanding of their municipal programs and can perform their responsibilities more effectively.

Municipalities need to ensure that management program personnel are adequately trained on position-related competencies and responsibilities. Training provides the skills needed to develop, manage, monitor, document and promote the numerous and complex components of a successful recycling program. Regardless of the size or type of municipal program, training acts as an enabler of performance, facilitating the achievement of objectives in a cost effective manner. Equally important to training is ensuring that structure, authority and responsibility are well established and understood.

Proper staffing and training leads to improved performance in all key program components, including both effectiveness and efficiency in the following areas:

- Resident participation and satisfaction
- Optimized program funding
- Staff time / costs
- Supplier / contractor relations
- Reduced need for management supervision
- Reduced need for Council time and attention
- Job satisfaction, motivation and morale among employees
- Process efficiencies
- Capacity to adopt new technologies and methods
- Knowledge of material markets and pricing, yielding higher revenues
- Innovation in business strategies and products
- Reduced employee turnover
- Enhanced municipal image
- Increased ability to attract and promote staff

Implementation Strategy for Sioux Lookout:

Staff has received training through SWANA. One staff is now a Certified Landfill Manager through the SWANA training program. Additional training is ongoing.

Initiative: Enhancement of Recycling Depots

Overview:

Where curbside collection programs are not feasible, recycling depots provide a relatively inexpensive means for municipalities to divert recyclable materials from disposal. Currently our recycling contractor must travel large distances in the rural to pick up small amounts of recyclables. By adding a few recycling depots the Municipality may be able to limit parts of the pickup routes for their recycling contractor...

Enhancements by providing recycling depots may include (but are not limited to):

- Providing satellite depots to improve public access and convenience.
- Eliminating contractor routes would promote less greenhouse gases being emitted into the environment.
- Depot could be set up in a fashion that residents can sort their recyclables into bins.

Implementation Strategy for Sioux Lookout:

The placement of additional recycling depots is being considered beyond their current location and type. Advantages of their use in rural setting are seen to be positive at this time but more investigation is required.

Future Initiatives

Initiative: **Enhancing Public Education**

Overview:

Public education and promotion programs are crucial for ensuring the success of local recycling programs. Well-designed programs can have impacts throughout the municipal recycling program, including participation, collection, processing, and marketing of materials.

Implementation Strategy for Sioux Lookout:

Plans are in place to draft up pamphlets and distribute to the residents of Sioux Lookout. The pamphlet will contain information regarding what recyclables we currently collect, how to process the recyclables, and the dates for picking up the recyclables.

Providing public education through the use of the local newspaper and in providing lectures in local schools, adjacent communities, and community organizations are positive avenues to get our message across.

Initiative: Optimization of Collection Operations

The purpose of optimizing collection operations is to collect more recyclables using fewer financial, capital and human resources. This requires critically assessing both collection and processing operations and making changes that reduce costs while at the same time increases capture of blue box material.

Implementation Strategy for Sioux Lookout:

Through the efforts of our current Contractor who has chosen to sort, bail and deliver recycles directly to market, they have created employment within our municipality, eliminated the need to double load and haul recycles (reduce greenhouse gas emissions) and by obtaining value for the recycles, they have provided the Municipality with direct savings towards our recycling program. This process is unique for northern Ontario and is conducted without assistance or funding by the government.

Initiative: Optimization of Processing Operations

Similar to optimization of collection operations, the purpose of optimizing processing operations is to process more blue box materials for least cost. Processing operations may be optimized either through upgrading or maximizing the use of existing processing equipment, or by partnering or contracting with processing facilities in other communities. Because processing and collection are directly linked, examination of one must be reviewed with the other.

Implementation Strategy for Sioux Lookout:

As stated above, our Contractor is attempting to introduce efficiencies; however hauling costs are costly in our remote area which limits what we can recycle. For instance, although we would prefer to recycle glass, their markets are limited, usually located far distances from our community and their associated weights results in exorbitant hauling rates that prevent us from recycling this product. This being said, we continue to entrust free enterprise to seek out new markets and methods which will permit the types of recycles collected to expand.

Initiative: Re-Use Center/Charities

Currently, the Municipality does not allow residents to pick through the landfill to recycle items. Liability and safety issues have always been a concern of the Municipality. Residents have identified a lot of quality items that are being thrown out and destroyed that could be recycled, reused, and taken out of the waste stream.

Implementation Strategy for Sioux Lookout:

Remove quality recyclables from the waste stream and devise a method on how to categorize and organize these items. Allocate recyclable items to charities. This may be a challenge to the Municipality.

Contingencies

Even the best planning can be delayed by a variety of foreseen and unforeseen circumstances. Predicting and including contingencies can help to ensure that these risks are managed for minimum delay. The table below identifies contingencies for possible planning delays.

Waste Recycling strategy Contingencies	
Risk	**Contingency**
Insufficient Funding/Revenues	• Initiate user fees • Explore and apply for other funding sources • Delay lower-priority initiatives • Increase proportion of municipal budget to solid waste management
Public opposition to planned recycling initiatives	• Improve public communications • Engage community members and stakeholders to discuss the initiatives of the recycling plan • Educate with literature
Lack of available staff	• Prioritize department municipal goals and objectives • Hire summer student to help with planning (may be available funding) • Expand training opportunities
Permit Requirements	• Identify permit requirements early on in the process • Establish a “permit requirements” checklist
Limited Markets	• Work with surrounding communities to develop a plan
Loss of current Recycle contractor	• Collect and haul product with Municipal forces and equipment. • Keep updated regarding depot locations and available markets

9 MONITORING AND REPORTING

The monitoring and reporting of the Municipality of Sioux Lookout's recycling program is considered a Blue Box program fundamental best practice and will be a key component of this Waste Recycling Strategy. Once implementation of the strategy begins, the performance of the Waste Recycling System will be monitored and measured against the baseline established for the current system. Once the results are measured, they will be reported to Council and the public.

The approach for monitoring the Municipality of Sioux Lookout's waste recycling program is outlined in the table below.

Recycling System Monitoring		
Monitoring Topic	**Monitoring Tool**	**Frequency**
Total Waste Generated (by type and weight)	Measuring of wastes at the waste disposal site (weigh scale records)	Each Load
Diversion Rates achieved (by type and by weight)	Formula: (Blue Box Materials + Other Diversions) / Total waste generated x 100%	Monthly
Waste disposed (by type ad weight)	Reconciliation of weigh scale tickets	Monthly
Program Participation	Customer survey; monitoring rates	Every 1 year to 3 years
Customer Satisfaction	Tracking calls and complaints received at the Municipal Office	On-going
Opportunities for Improvement	Customer survey; tracking calls / complaints received at the Municipal Office	On-going
Planning Activities	Council has implemented an Environmental Committee to assist with creating efficiencies in the manner in which we handle waste	On-going
Review of Recycling Plan	Periodic Review of the recycling plan to monitor and report on progress, to ensure that the selected initiatives are being implemented and to move forward with continuous improvement.	Annually

It must also be noted and reported our Contractor does conduct commercial recycling which is not included within the Municipal contract nor is it included as a component within this strategy or report. However our Contractor has reported they collect an average of 42.3 tonnes of commercial recycling every year. In addition, we are also aware a large grocery store which does generate much

packing material which they do recycle (i.e. return to sender) but their weight is not recorded or known.

Finally, the actions of incinerating garbage or depositing garbage on Crown land is a viable method to prolong the life of our landfill however, it is definitely not a preferred option. As such, we must implement a plan which addresses all wastes generated in our community and not just those which are accepted into our landfill.

10 CONCLUSION

Municipal Council has directed staff to implement a Waste Recycling Strategy for the good of the environment, our current community, and future residents. The importance of this Strategy will guide our municipality towards the implementation of an overall Waste Management Plan in order to ensure sustainability of our community & safeguard our pristine environment for generations to come. Through its development we can best monitor our successes & failures, continue to educate our residents and continually review our plan to make adjustments and introductions which will ensure a healthy community and planet.

Therefore, the intent of this Strategy is to work with Mayor and Council, the Environmental Committee, and the General Public to review the manner in which we handle waste within our community and develop a viable and dynamic plan to rethink, reduce, reuse and recycle while safeguarding our community for future generations.

APPENDIX 'A'

Waste Recycling Survey Results