
Appendix 1

Questions Template

Region -

1. Could you help me better understand the context in your region with regard to waste-resource management?

- How many landfills, compost facilities, and MRFs are there and who 'owns' and operates them?
- Does your region tend to plan as a region, or as smaller units in the region?
- How many regional coordinators are there in your region?
- In your region, who decides what, and who reports to whom? E.g., What does the region have control to decide and what does it not have control over?
- How many Incorporated towns have their own collection contracts in your region?
- Does your region hire the collection contracts for those communities outside incorporated towns?
- Who makes decisions about landfill, compost and MRF Planning and Operations in your region?
- What history or other context about your region do you think is essential for me to understand in order to effectively complete this project?

2. Could you help me better understand the your role as the regional coordinator?

- Who do you report to?
- What are you responsible for locally, regionally, and provincially?
- How do you interact with other fellow RCs, the Regional Chairs Committee, DivertNS, and NSE?
- Could you help me better understand the relationship between your role as regional coordinator and the individual municipalities?
- How is your position funded -who are the funders?

3. Could you help me understand the key your concerns and issues as a regional coordinator, and your main interest in carrying out this project?

- What is your region most worried about and why?
- What changes do you think your region would be most resistant to, and why?
- What changes do you think your region would be most supportive of, and why?
- Are you able to help me understand the Divert NS funding model and how that affects your work?

4. NSE has conducted numerous consultations over the past decade to update to their Waste-Resource Strategy.

- What do you think have been the biggest barriers to updating that strategy?
- What do you think are municipalities'/regions' biggest financial concerns about achieving NSE's waste diversion goals?

5. Part of this study is about seeking to find overlap and inefficiencies in the governance processes for solid waste management in Nova Scotia.

- What do you think the RC's or the muni's want me to understand about governance overlap or inefficiencies?
- What recommendations would you make to reduce governance overlap?
- E.g., overlap of authorities, overlap of decision-making, barriers to effective decision making.

6. Part of this study is conducting a best practices review.

- What do you think the RC's and muni's want me to understand about the best practices that they have already implemented?
- What opportunities for new best practices do you think should be considered if resources were available?

7. Is there anything else you think I should know to complete this work?

8. Is there anyone else you think I should talk to?

Appendix 2

Municipal Listing – Nova Scotia

Municipal Unit	Unit Type	Incorp Year	Incorp Date	Pop. 2016	Pop. 2011	change	area	pop density	County	Solid Waste Region	2nd Generation Landfills	MRFs
Cape Breton	Regional Municipality	1995	Tuesday, August 1, 1995	94,285	97,398	-3.2%	2,430.06	38.8/km ²	Cape Breton County	1		Green Island Recycling Ltd Inverness Material Recycling Facility
Inverness	County Municipality	1879	April 17, 1879	13,190	13,781	-4.3%	3,815.59	3.5/km ²	Inverness County	1		
Richmond	County Municipality	1879	April 17, 1879	8,458	8,812	-4.0%	1,243.72	6.8/km ²	Richmond County	1		
Port Hawkesbury	Town	1889	January 22, 1889	3,214	3,366	-4.5%	8.1	396.8/km ²	Richmond County	1		
Victoria	County Municipality	1879	April 17, 1879	6,552	6,597	-0.7%	2,854.01	2.3/km ²	Victoria County	1		Baddeck Enviro Depot and Municipal Recycling Facility
Antigonish	County Municipality	1879	April 17, 1879	14,584	14,692	-0.7%	1,450.27	10.1/km ²	Antigonish County	2		
Antigonish	Town	1889	January 9, 1889	4,364	4,524	-3.5%	5.01	871.1/km ²	Antigonish County	2		
Guysborough	District Municipality	1879	April 17, 1879	4,670	4,995	-6.5%	2,116.86	2.2/km ²	Guysborough County	2	Guysborough Waste Management Facility	
St. Mary's	District Municipality	1879	April 17, 1879	2,233	2,354	-5.1%	1,909.47	1.2/km ²	Guysborough County	2		
Mulgrave	Town	1923	Saturday, December 1, 1923	722	794	-9.1%	17.83	40.5/km ²	Guysborough County	2		
Pictou	County Municipality	1879	April 17, 1879	20,692	21,278	-2.8%	2,797.25	7.4/km ²	Pictou County	2		
New Glasgow	Town	1875	May 6, 1875	9,075	9,562	-5.1%	9.96	911.1/km ²	Pictou County	2		
Pictou	Town	1874	May 4, 1874	3,186	3,437	-7.3%	8.01	397.8/km ²	Pictou County	2		
Stellarton	Town	1889	October 22, 1889	4,208	4,485	-6.2%	8.99	468.1/km ²	Pictou County	2		
Trenton	Town	1911	Saturday, March 18, 1911	2,474	2,616	-5.4%	6.07	407.6/km ²	Pictou County	2		
Westville	Town	1894	August 20, 1894	3,628	3,798	-4.5%	14.23	255.0/km ²	Pictou County	2		
Colchester	County Municipality	1879	April 17, 1879	36,091	36,624	-1.5%	3,572.49	10.1/km ²	Colchester County	3	Colchester Balfill Facility	Municipality of the County of Colchester
Stewiacke	Town	1906	Thursday, August 30, 1906	1,373	1,438	-4.5%	17.62	77.9/km ²	Colchester County	3		
Truro	Town	1875	May 6, 1875	12,261	12,059	1.70%	34.49	355.5/km ²	Colchester County	3		
Cumberland	County Municipality	1879	April 17, 1879	19,402	20,485	-5.3%	4,255.04	4.6/km ²	Cumberland County	3	Cumberland Central Landfill	Cumberland Central Recycling Facility
Amherst	Town	1889	December 18, 1889	9,413	9,717	-3.1%	12.07	779.9/km ²	Cumberland County	3		
Oxford	Town	1904	Tuesday, April 19, 1904	1,190	1,151	3.40%	10.76	110.6/km ²	Cumberland County	3		
East Hants	District Municipality	1879	April 17, 1879	22,453	22,111	1.50%	1,786.56	12.6/km ²	East Hants County	3		
Halifax	Regional Municipality	1996	Monday, April 1, 1996	403,131	390,086	3.30%	5,490.35	73.4/km ²	Halifax	4	Otter Lake Waste Processing and Disposal Facility Kaizer Meadow Environmental	Miller Waste Systems, operators of the Halifax Regional MRF Valley Waste Recycling Facility (Scotia Recycling Ltd)
Annapolis	County Municipality	1879	April 17, 1879	18,252	18,526	-1.5%	3,178.21	5.7/km ²	Annapolis County	5		
Annapolis Royal	Town	1892	November 29, 1892	491	481	2.10%	2.04	240.7/km ²	Annapolis County	5		
Middleton	Town	1909	Monday, May 31, 1909	1,832	1,749	4.70%	5.57	328.9/km ²	Annapolis County	5		
Kings	County Municipality	1879	April 17, 1879	47,404	47,569	-0.3%	2,094.05	22.6/km ²	Kings County	5		
Berwick	Town	1923	May 25, 1923[15]	2,509	2,454	2.20%	6.58	381.3/km ²	Kings County	5		
Kentville	Town	1886	May 1, 1886	6,271	6,094	2.90%	17.26	363.3/km ²	Kings County	5		
Wolfville	Town	1893	March 4, 1893	4,195	4,269	-1.7%	6.46	649.4/km ²	Kings County	5		
Chester	District Municipality	1879	April 17, 1879	10,310	10,599	-2.7%	1,122.11	9.2/km ²	Lunenburg County	6	Kaizer Meadow Environmental Management Facility	
Lunenburg	District Municipality	1879	April 17, 1879	24,863	25,118	-1.0%	1,759.59	14.1/km ²	Lunenburg County	6		
Bridgewater	Town	1899	February 13, 1899	8,532	8,241	3.50%	13.63	626.0/km ²	Lunenburg County	6		
Lunenburg	Town	1888	October 29, 1888	2,263	2,313	-2.2%	4.04	560.1/km ²	Lunenburg County	6		
Mahone Bay	Town	1919	Monday, March 31, 1919	1,036	943	9.90%	3.12	332.1/km ²	Lunenburg County	6		
Queens	Regional Municipality	1996	Monday, April 1, 1996	10,307	10,917	-5.6%	2,392.63	4.3/km ²	Queens County	6	Region of Queens Waste Management Facility	Queens Solid Waste Facility
Barrington	District Municipality	1879	April 17, 1879	6,646	6,994	-5.0%	632.35	10.5/km ²	Shelburne County	6		
Shelburne	District Municipality	1879	April 17, 1879[8]	4,288	4,408	-2.7%	1,821.07	2.4/km ²	Shelburne County	6		
Clark's Harbour	Town	1919	Tuesday, March 4, 1919	758	820	-7.6%	2.81	269.8/km ²	Shelburne County	6		
Lockeport	Town	1907	Tuesday, February 26, 1907	531	588	-9.7%	2.33	227.9/km ²	Shelburne County	6		
Shelburne	Town	1907	April 4, 1907[16]	1,743	1,686	3.40%	8.84	197.2/km ²	Shelburne County	6		
West Hants	District Municipality	1879	April 17, 1879	15,368	15,324	0.30%	1,244.09	12.4/km ²	West Hants County	6	West Hants Waste Management Landfill	
Windsor	Town	1878	April 4, 1878	3,648	3,785	-3.6%	9.11	400.4/km ²	West Hants County	6		
Clare	District Municipality	1879	April 17, 1879	8,018	8,319	-3.6%	852.55	9.4/km ²	Digby County	7		
Digby	District Municipality	1879	April 17, 1879	7,107	7,463	-4.8%	1,657.33	4.3/km ²	Digby County	7		
Digby	Town	1890	December 18, 1890	2,060	2,152	-4.3%	3.15	654.0/km ²	Digby County	7		
Argyle	District Municipality	1879	April 17, 1879	7,899	8,252	-4.3%	1,528.17	5.2/km ²	Yarmouth County	7		
Yarmouth	District Municipality	1879	April 17, 1879[8]	9,845	10,105	-2.6%	586.65	16.8/km ²	Yarmouth County	7		
Yarmouth	Town	1890	August 6, 1890	6,518	6,761	-3.6%	10.57	616.7/km ²	Yarmouth County	7		Scotia Recycling Ltd
Total regional municipalities	3	—	—	507,723	498,401	1.90%	10,313.04	49.2/km²				
Total county municipalities	9	—	—	184,625	188,364	-2.0%	25,260.63	7.3/km²				
Total district municipalities	12	—	—	123,700	126,042	-1.9%	17,016.80	7.3/km²				
Total towns	26	—	—	97,495	99,283	-1.8%	248.65	392.1/km²				
Total municipalities	50	—	—	913,543	912,090	0.20%	52,839.12	17.3/km²				
Province of Nova Scotia	—	—	—	923,598	921,727	0.20%	52,942.27	17.45/km²				Pop growth for all of NS is .2 %

Sources
MRF location <https://novascotia.ca/nse/waste.facilities/facilities.recycling.php>
Landfill location <http://divertns.ca/assets/files/Guides/CandManagementGuide.compressed.pdf>

Muni information https://en.wikipedia.org/wiki/List_of_municipalities_in_Nova_Scotia

Appendix 3

Regional Chairs Committee ToR

Nova Scotia Solid Waste-Resource Management Regional Chairs Committee Terms of Reference

1 BACKGROUND

In 1996 the Solid Waste-Resource Management Regulations were approved in Nova Scotia. Among other things, the regulations created seven solid waste-resource management regions (hereafter referred to as **Regional Committees**). When the Regulations were approved, a Regional Committee of local elected officials was established in each region to oversee the preparation and implementation of the regional solid waste-resource management plans. **The Regional Chairs Committee** (hereafter referred to as the '**Committee**'), consisting of the Chairs of each of the Regional Committees, was established in 1998 to provide a communication channel for elected officials at the regional level (the municipalities) and the provincial level; Department of Municipal Affairs, the Union of Nova Scotia Municipalities (UNSM), Nova Scotia Environment (NSE) and Resource Recovery Fund Board (RRFB Nova Scotia).

2 ROLE

The **Regional Chairs Committee** provides an ongoing forum for the discussion of solid waste-resource management in Nova Scotia. The Committee provides a regular opportunity to meet and exchange information from a municipal/regional perspective in partnership with NSE and RRFB, Municipal Affairs and UNSM.

Each Regional Chair will liaison, report to and represent individual Regional Committees/Authorities.

3 RESPONSIBILITIES

To facilitate the ongoing delivery and sustainability of the Nova Scotia Solid Waste-Resource Management Strategy and Regulations;

Responsibilities of each Regional Chair includes but is not limited to:

- keeping Nova Scotia's municipal councils informed of emerging issues and information regarding solid waste-resource management;
- proactively working in partnership with NSE, RRFB Nova Scotia, UNSM and other provincial agencies and departments and the private sector;
- working towards the development and sustainability of effective and efficient municipal, provincial and private sector waste- resource management programs and services for the benefit of all Nova Scotians.

4 COMMITTEE OPERATIONS

The Regional Chairs Committee will function according to the following procedural and operational rules.

4.1 Membership and Voting

- .1 The members of the Regional Chairs Committee shall be the Chairs of the regional committees established in the each of seven waste-resource management regions which are defined by the Nova Scotia Solid Waste-Resource Management Regulations.
- .2 The Committee shall select from among its members a Chair, who shall preside at all meetings of the Committee, and a Vice-Chair every two years on alternating years.
- .3 As the Regional Chairs represent the Municipal Units in the Province that are geographically dispersed an executive committee shall be created to conduct urgent business when a regular meeting isn't scheduled or when a smaller representation is required. The executive committee derives its authority from the Regional Chairs Committee. The Committee will be comprised of the Chair, Vice Chair, Secretary and Treasurer
- .4 The Committee shall select from among its members a Secretary and Treasurer every two years on alternating years.
- .5 The Secretary shall record the proceedings at all meetings of the Committee and the Treasurer shall look after the financial needs of the Committee.
- .6 In the Chair's absence, illness or inability to act, the Vice-Chair shall assume all the duties and authority of the Chair.
- .7 Each regional committee may also send one of its members to meetings of the Regional Chairs Committee as an alternate member.
- .8 Each member has one vote; there shall be no more than one vote cast per region on any question which comes before the Committee.
- .9 The alternate member shall vote in the absence or incapacity of the member.
- .10 All those eligible to vote at any given time must vote on all questions before the Committee, except in the case of a declared conflict of interest.
- .11 All questions which come before the Committee shall be decided by a simple majority of votes cast.
- .12 In the event of a tie vote, a motion is defeated.

4.2 Meetings

- .1 The Committee shall hold quarterly meetings as a minimum or as determined by the Committee.
- .2 The Chair may call special meetings of the Committee at any time, subject to a seven-day notice requirement provided that such notice may be waived with approval of a majority of the members. The Chair shall call a special meeting of the Committee whenever requested to do so by a majority of the Committee members.
- .3 The Chair may recognize delegations or individuals and permit them an opportunity to speak subject to agreement by a majority of the voting members present.
- .4 Any member of the Committee may attend meetings of sub-committees.

4.3 Quorum and Rules of Order

- .1 The quorum at any meeting of the Regional Chairs Committee shall be five (5) voting members or alternates.
- .2 When there is no quorum thirty minutes after the time set for a Committee meeting, the Chair shall call the roll, record the names of the members present, adjourn the meeting, and call another meeting on the next available date.
- .3 The Chair shall rely upon rules of order in general use by municipal councils in Nova Scotia. The Chair shall decide all questions of order.

4.4 Observers and Non-Voting Participants

- .1 Representatives of NSE, RRFB Nova Scotia, Municipal Affairs and UNSM will attend Committee meetings.
- .2 Municipal staff supporting the various regional committees may attend meetings in an advisory capacity to the Committee.

4.5 Budget and Expenditures

- .1 Annual budget funding provided by RRFB Nova Scotia shall be used by the Committee to fund meeting and travel costs of the seven Committee members as per the Regional Chairs Expense Guidelines (attached).
- .2 Committee-related secretarial and treasurer expenses shall be eligible for reimbursement from the Committee's budget.
- .3 The Committee shall submit a budget to RRFB Nova Scotia for the upcoming fiscal year no later than December 31st of each year.
- .4 The Committee shall submit a year-end financial report to RRFB Nova Scotia no later than 30 days following the end of the fiscal year ending March 31.
- .5 Expenses incurred by the Committee in the course of carrying out its work shall be submitted to the Treasurer for payment in accordance with the Regional Chairs Expense Guidelines.
- .6 Committee-related expenses of alternate members (except when replacing the voting member) and staff advisors will be assumed by their own municipalities or regions.

4.6 Reporting

- .1 Members and alternates shall inform their regional committees about Committee activities in a timely fashion.
- .2 The Regional Chair is responsible to report to the Council representatives on each regional committee with the intent that each Council is informed about Regional Chairs Committee activities.
- .3 Members and alternates shall ensure that the approved minutes of each Regional Chairs Committee meeting are forwarded in a timely fashion to all municipal councils in their regions.

Regional Chairs Expense

Approved September 6, 2006

Stipend: \$150 per meeting

Mileage: \$0.4286 per Km (linked to Provincial Government rate April 1, 2006)

Meals: Actual costs with receipts

Without receipts;	Breakfast	\$6.00
	Lunch	\$12.00
	Dinner	\$20.00
	TOTAL	\$38.00

Linked to Provincial rate, September 2006

Parking: Actual costs with receipts

Taxis: Actual costs, receipts are only required for trips that exceed \$10.00.

Incidentals: \$5.00 per day (only applicable with an overnight stay)

Private Accommodation: \$25.00 per night (approved June 22, 2005)

Submitting Reports: Completed expense reports may be given to Gus Green, Treasurer, following the Regional Chairs meeting or may be forwarded to:

Gus Green, General Manager
Waste Check
P. O. Box 577
Yarmouth, NS
B5A 4B6

Phone: 742 4451
Fax: 742 4147
Email: gus@wastechek.ca

Appendix 4

Regional Coordinator Committee ToR

Nova Scotia Solid Waste-Resource Regional Coordinator Committee

TERMS OF REFERENCE

1. Background

In 1996 the Solid Waste-Resource Management Regulations were approved in Nova Scotia. Among other things, the regulations created seven solid waste-resource management regions. When the Regulations were approved, a Regional Committee of elected officials was established in each region to oversee the preparation and implementation of the regional solid waste-resource management plans. To provide staff level technical and administrative support to the Regional Committee a Regional Coordinator position, reporting to each Regional Committee, was also created. The **Resource Recovery Fund Board (RRFB) of Nova Scotia** provides a stipend annually to each region to offset some of the costs associated with the Regional Coordinator position. The Regional Coordinator also works in cooperation with staff in other regions, to facilitate consistency and cooperation among the regions in the achievement of provincial goals. The Regional Chairs Committee, consisting of the Chairs of the Regional Committees, was subsequently established, in 1998, to provide a communications channel for elected officials at the regional level (the municipalities) and the provincial level; **Nova Scotia Environment (NSE)** and the RRFB. The Regional Coordinators provide technical and administrative support to the Chairs Committee.

2. Roles

The **Regional Coordinator Committee** (hereafter referred to as the “**Committee**”) is a forum for the discussion of solid waste –resource management in Nova Scotia. The Committee provides a regular opportunity to meet and exchange information from a municipal/regional perspective in partnership with NSE and RRFB.

The Role of each **Regional Coordinator** is to liaison, report to individual Regional Committees/Authorities and provide staff level technical and administrative support to the Regional Chairs Committee

3. Responsibility

As Regional Coordinator, members of the Committee report to their respective Regional Committee/Authority or designate, as determined by the applicable regional structure respecting the guiding pillars of Education, Administration and Enforcement as they relate to solid waste-resource management;

Responsibilities include but are not limited to:

- Facilitate a communication channel for elected officials at the provincial and regional level
- Provide communication and input from a municipal/regional perspective to industry stewards and associations on provincial program administration, education and enforcement
- provide technical assistance on committees provincial in scope, as needed, and report back to the Committee on progress
- Works collaboratively with NSE and RRFB to develop and maintain solid waste-resource policy and programs (ex. Regional Education and Enforcement Contracts)

4. Committee Operations

.1 Membership and voting

- i. The Committee shall comprise of Regional Coordinators identified by each solid waste region in the Province of Nova Scotia. Others shall be invited to attend as required, from time-to-time.
- ii. The Committee shall select from among its members a Chair, who shall preside at all meetings of the Committee. The Chair is also responsible to ensure agendas and meeting minutes are circulated to members
- iii. The outgoing Committee Chair shall, by default, be appointed as Vice-Chair, who shall assume all duties and authority of the Chair in the Chair's absence
- iv. The Committee shall select from among its members a Secretary, who shall record and retain the official minutes of all meetings of the committee.
- v. The Secretary shall be responsible to ensure all records of the committee are dated and held in safe keeping, electronically, and transferred to any new secretary at time of election.
- vi. The Committee Chair and Secretary are voted in June for a term of two years.
- vii. The Committee shall create an Executive Committee comprised of the Chair, Vice Chair and Secretary.
- viii. The role of the Executive will be to act as a smaller working group on behalf of the Committee, to ensure movement of action items of the Committee. The Executive, in full or in part, will also represent the Committee at meetings where a smaller contingent is required (where applicable).
- ix. A request for a Regional Coordinator rep on a committee is to be brought to the membership, a call for members interested and should there be more than one individual, that a majority membership vote occur. The member shall be responsible to provide updates to the Committee.
- x. Any member of the Committee may attend meetings of Regional Coordinator sub-committees but must first advise the chair of said sub-committee, and may not vote or take part in any discussion in the sub-committee except with the permission of the majority of those sub-committee members present
- xi. Each Region shall be one vote. All those eligible to vote at any given time must vote on all questions before the Committee, except in the case of a declared conflict of interest
- xii. All questions which come before the Committee shall be decided by a simple majority of vote-of 4 (3 regions +1). In the event of a tie vote, a motion is defeated.

.2 Meetings

- i. The Committee shall meet every 4 – 6 weeks. Specific dates shall be determined by the Chair, at the preceding meeting
- ii. The Chair may call special meetings of the Committee at any time, subject to a seven day notice. The Chair shall call a special meeting of the Committee whenever requested to do so by a majority of the Committee members
- iii. The Chair may recognize delegations or individuals and permit them an opportunity to speak subject to agreement by a majority of the members present

.3 Quorum and rules of order

- i. Respecting the Committee is comprised of seven solid waste-resource regions a quorum at any meeting of the Committee shall be four (4) regions
- ii. When there is no quorum thirty minutes after the time set for a Committee meeting the Chair shall call the roll, record the names of the members present, adjourn the meeting, and call another meeting on the next available date
- iii. An information meeting may be held in the absence of a quorum

.4 Observers and non-voting participants

Unless otherwise requested by the Committee, representatives of NSE and RRFB and other stakeholders may be invited to attend Committee meetings to maintain dialogue among the partners

.5 Reporting and communications

- i. All committee members and alternates shall inform their regional chair, any regional committees and relevant staff committees about committee activities in a timely fashion.
- ii. The minutes, and any supplementary information, from each meeting are to be circulated by the secretary no less than three weeks after the meeting.
- iii. The meeting package, for scheduled meetings, are to be circulated by the Chair no less than one week prior to the meeting.

Approved in principal on:

APRIL 17,2015 by NS Regional Chairs

Appendix 5

UNSM Resolution on the Municipal Priorities Group

Resolution 8A

PROVINCIAL-MUNICIPAL SOLID WASTE WORKING GROUP (PASSED)

⇒ Halifax Regional Municipality

WHEREAS the Province of Nova Scotia is conducting a review of its solid waste regulations; and

WHEREAS municipalities are largely responsible for the operation of solid waste systems in Nova Scotia; and

WHEREAS any changes to regulations will have a significant impact on municipal operating costs; and

WHEREAS the Province has committed to consulting with municipalities on any proposed changes to regulations; and

WHEREAS an intergovernmental working group would allow for beneficial information sharing and input from all partners, and potentially set a benchmark for province-wide operating standards;

THEREFORE BE IT RESOLVED that the UNSM request that a working group be established through the NS Solid Waste Management Regional Chairs committee to inform the solid waste regulation review, with representatives from the NS Department of Environment; NS Municipal Affairs; municipal solid waste managers and directors; the NS Solid Waste Management Regional Coordinators; and UNSM; and that part of the mandate of this working group will be to seek additional provincial funding support.

BACKGROUND:

The NS Department of Environment is reviewing its solid waste regulations. As these regulations have a direct impact on municipal operations, the Minister of Municipal Affairs sent a letter to UNSM on July 10, providing 12 months' notice of potential financial impact on municipalities, as is required under the *Municipal Government Act*. As the review is still underway, the actual changes are not yet known. The Minister stated that the Department of Environment plans to consult with municipalities on proposed changes.

Solid waste is a significant item in HRM's annual operating budget (\$34 million in 2014-15). Provincial regulations are a major driver of solid waste costs for all municipalities. In order to work towards a coordinated and efficient approach to solid waste management services in Nova Scotia, the Nova Scotia Solid Waste Managers & Directors Committee (NSSWMD) has brought together municipal

solid waste managers and directors, representing 99% of Nova Scotian municipalities. HRM is represented on this committee.

The NSSWMD has proposed that a working group be formed to assist in evolving the solid waste regime based on identifying system wide efficiencies to support the Provincial revision of solid waste regulations.

The proposed group would include membership from:

- Department of Environment staff
- Municipal Affairs staff
- Representatives from solid waste managers and directors
- NS Solid Waste Resource Management Regional Chairs Committee
- UNSM

This working group would allow municipalities to participate directly in the review of solid waste regulations. It would also be an opportunity to set a benchmark for operating standards across Nova Scotia, and focus on ensuring both fiscal and environmental sustainability of solid waste operations. Given the significant impact this provincial review of regulations will have on municipalities, it is recommended that Council send the above resolution to UNSM's Annual Conference for endorsement.

Response from:
Department of Environment

RESPONSE:

A Provincial-Municipal Solid Waste Working Group was established by Solid Waste Resource Management Regional Chairs to provide input into the proposed regulatory framework. Nova Scotia Environment, along with the key stakeholders identified in UNSM Resolution 8A, have participated in the working group and support amendment of solid waste regulations.

Appendix 6

Municipal Priorities Group ToR

TERMS OF REFERENCE

1. Official Name

“Municipal-Provincial Solid Waste Resource Priorities Group” Hereafter referred to as the ‘Priorities Group’ or the ‘group’

2. Authority

This group is created as a sub-committee of Regional Chairs to discuss the next steps for the proposed changes of solid waste-resource regulations and stewardship programs being moved forward by Nova Scotia Environment. The group was created from a November 2014 UNSM resolution. (attached)

- 2.1. **Governance:** Decisions will be made by consensus. The group reports to Regional Chairs. This terms of reference, approved by Regional Chairs, shall guide the work of the Priorities Group and may be amended from time to time.
- 2.2. **Limitations:** The Priorities Group does not have final decision making authority

3. Representation

The Priorities Group will be comprised of representatives (#) from each of the following existing groups:

- **Regional Chairs (2)** – *a committee comprised of the elected chairs from each of the seven Solid Waste-Management Regions*
- **Nova Scotia Solid Waste Resource Regional Coordinators Committee (Regional Coordinators) (2)** – *each region has a regional coordinator and this group provides a regular opportunity to meet and exchange information from a municipal/regional perspective in partnership with NSE and RRFB*
- **Nova Scotia Solid Waste Managers & Directors Committee (NSSWMD) (2)** – *The Committee was created to ensure a coordinated approach to environmentally responsible and fiscally sustainable delivery of municipal integrated solid waste resource management services in NS*
- **Nova Scotia Environment (2)** – *regulator, developer and enforcer. Policy framework includes the Environment Act and subsequent regulations including the Solid Waste-Resource Management Regulations*
- **Resource Recovery Fund Board (2)** – *works with stakeholders to improve our environment, economy and quality of life by reducing, reusing, recycling and recovering resources*
- **Union of Nova Scotia Municipalities (UNSM) (1)** - *organization mandated to represent the Provincial interests of municipal governments across Nova Scotia.*
- **Municipal Affairs (1)** – *dedicated to working with municipalities to build healthy, vibrant, and safe communities throughout Nova Scotia*

Where appropriate, the Group may agree to invite others to present at or participate in specific meetings (e.g. such as industry reps).

TERMS OF REFERENCE

3.1. Executive Roles:

The Chair, Vice-Chair and Secretary will be chosen from among the representatives of the Priorities Group.

- Chair
 - o Call meetings
 - o Set the agenda
 - o Be the point person for communications on behalf of the working group
 - o Help keep the Priorities Group on task
 - o Maintain order through the consensus approach
 - o Organize sessions with outside observers/presenters.

- Vice-Chair
 - o Lead the meeting in the absence of the chair

- Secretary
 - o record and document the proceedings of each meeting
 - o email updates and notes to committee members
 - o Establish meeting spaces when required
 - o Assist in organizing sessions with outside observers/presenters

4. Term of the Priorities Group

- The Priorities Group will be active for an initial 12 months, beginning January 1 2015.
- By the end of December 2015, the Priorities Group will determine whether to extend the timeline.

5. Principles

- The Priorities Group will operate under the following principles
 - o Openness and transparency
 - o Partnership and collaboration
 - o Consensus building

6. Goals

- To generate improved understanding between municipal governments, provincial government and other stakeholders on the challenges and opportunities to potential regulation and stewardship program scenarios.
- Help guide the development of proposed stewardship programs that are reflective and responsive to both municipal and provincial government needs and interests.
- Help guide the development of proposed stewardship programs reflect what is in the best interests of all Nova Scotians over the needs/interests of any one committee/organization.

TERMS OF REFERENCE

7. Scope

The role of the Priorities Group shall be to:

- Focus on proposed changes to the Solid Waste-Resource Management Regulations;
- Provide a platform for dialogue/discussion between representatives of the group and with producer representatives (e.g. CSSA);
- Prioritize dialogue/discussion items respecting proposed changes with a first priority of EPR for PPP;
- Facilitate information sharing/gathering opportunities for the group via extending invitations to guest presenters/participants; and
- Collaboratively develop and bring forward recommendations respecting regulatory and stewardship program initiatives and/or changes for the benefit of all Nova Scotians.

Any activities beyond the scope above must be agreed upon by the representatives of the group.

8. Deliverables

- To be determined by the group as required, based on the priorities identified by the group and which align with provincial government initiatives respecting the Solid Waste-Resource Management Regulations.

9. Budget

- As this is a subcommittee of Regional Chairs, the operational budget will be the responsibility of Regional Chairs

10. Communications

Each member is responsible for representing the interests of their constituent committee/organization and the stakeholder group that they broadly represent.

It is each member's individual responsibility to provide communications, as agreed upon by the group, to their respective committee/organization

TERMS OF REFERENCE

PARTNERS: NOT PART OF THE ToR – Tagged on for Group benefit/Reference only

Regional Chairs:	Jim MacLeod
	John Kellegrew
Regional Coordinators:	Laurie Lewis
	Valda Walsh
Managers and Directors:	Matt Keliher
	Stephen Rayworth
NSE:	Bob Kenney
	Ashley David
RRFB:	Alanna McPhee
	Dale Lyon
UNSM:	Lyle Goldberg
Municipal Affairs:	Ahmad Shahwan

February 5, 2016

Appendix 7

Reference Documents

Solid Waste Diversion Proposals – Opportunities and Challenges



Solid Waste Diversion Proposals

Opportunities and Challenges

Bob Kenney

Nova Scotia Environment

June, 2015

Consultation Process

- 1996 - Original Strategy
- 1996 to 2007- Strategy Implementation
- 2008 to 2011 - Strategy Renewal Process
 - Our Path Forward
- **2014 – Full consultations on proposals**
 - May to October 2014 with 260 written submissions
 - Municipal and stakeholder sessions

Extended Producer Responsibility (EPR) Regulations

- Shifting cost of end-of-life products/packaging to producer, brand owner, consumer from municipal tax payer
 - Electronics, paint
 - Beverage containers, tires, used oil
- Strongly requested by municipalities across country
 - Regional Chairs, HRM/Sust. Comm., FCM
- Industry funds municipal and/or independent diversion programs
- Most models have been fully industry funded and controlled
 - Electronics, paint, other HHW, etc.

Solid Waste Diversion Proposals

- **Extended Producer Responsibility (EPR)**
 - Paper/packaging (PP) – blue bag
 - Household hazardous waste (HHW)
 - Batteries, mercury, propane cylinders, flammables, etc.
 - Mattresses, creosote timbers, flooring (carpeting)
- **Disposal bans**
 - Stewarded items, textiles and C&D debris
- **Other**
 - Off-the-road tires
 - Energy-from-waste
 - Beverage containers
 - Litter/illegal dumping/open burning

Municipal Input

- Seeking immediate financial support for solid waste
- Generally supportive of EPR
- Concern over fiscal impact
 - Those with landfills particularly concerned about lost disposal revenues
- Uncertainty over what Paper/Packaging model to choose
 - ‘Shared’ versus ‘full’

Business Input on EPR

- Big business generally not opposed
 - Seek minimized administrative burden and costs and
 - Expect control as they will pay (e.g. PPP model)
 - Or expect lower funding to municipalities
- Cdn Federation of Independent Business – opposed
- Cdn Taxpayer Federation opposes
 - Concerned about potential ‘tax increases’

Extensive Consultation

Big Picture Results

- Significant support for proposals overall
- Concern about the details
- Desire for more knowledge
- Demand to be involved in going forward (municipalities)

NSE Response

- **Understand fiscal impact on municipalities**
 - High level assessment of all NSE proposals
 - Current versus future
 - 5 municipalities, 4 with various facilities
 - Greatest concern from those with facilities
 - All benefit – \$125,000 to \$1.36 million/yr
- **Municipal involvement**
 - Regional Chairs subcommittee ‘Priorities Group’
 - 2 workshops, visits to CAO, visit to BC/Ont., Atl. Study, dialogue (MA/UNSM/Mun.), significant research
- **Working toward implementing/amending regulations**

PP EPR

- **PP EPR in Canada**
 - Ontario (02), Quebec (07), Manitoba (10), BC (13), Sask (14?), NS (15?)
- **Funding levels of 50 to 100%**
 - 50% = \$7 - \$8 million
 - 100% - \$14 to \$17 million
- **Funding levels versus industry/municipal control**
 - Municipality as service provider
 - First right of refusal for collection/education
 - Processing/marketing efficiencies
 - Includes apartment/condo recycling funding

Moving forward with EPR Regs

- Year 1 & 2 some hazardous waste (mercury, batteries, etc.)
- Year 3 Paper/packaging
- Year 4 other EPR
- Year 4 to 6 phase in of C&D bans
 - EPR funding first
- Municipal support is important to moving forward

Environmental Research and Education Foundation (EREF) Report

Analysis of MSW Landfill Tipping Fees

April 2018

The Environmental Research & Education Foundation (EREF) maintains a database of Municipal Solid Waste (MSW) landfills across the United States (EREF, 2017a). This database was used to draw a sample of active facilities for analysis of MSW landfill (MSWLF) tipping fees. Landfill owners were contacted and asked to provide gate rate information for MSW disposal, supplemented by current website information on fees. For the purpose of this report, the terms gate rate, tip fee, and tipping fee are used interchangeably to refer to the per-ton fee for hauled MSW loads.

In the 2018 study, MSW tip fee information was obtained from 397 landfills categorized as large, medium, or small based on accepted tonnage. Of the landfills providing gate rate information, approximately:

- 11% were large (i.e. accepting more than 390,000 tons/year),
- 48% were medium (i.e. accepting between 390,000 and 65,000 tons/year), and
- 41% were small (i.e. accepting less than 65,000 tons/year).

The small landfills reported an average of 26,746 tons/year, while medium landfills and large landfills accepted 163,932 tons/year and 763,056 tons/year, respectively.

Summary of 2018 MSW Landfill Tip Fees. MSWLF tip fee data were compiled by geographic region and basic statistical data were computed. For 2018, the national MSW landfill tip fee average was \$55.11/ton. Regional MSW tip fees ranged from \$34.80/ton in the South Central region to \$68.46/ton in the Pacific (Table 1). Ninety-two percent of landfills that provided 2017 gate rates also provided data in 2018.

Table 1. Average MSW Landfill Tip Fees, by region

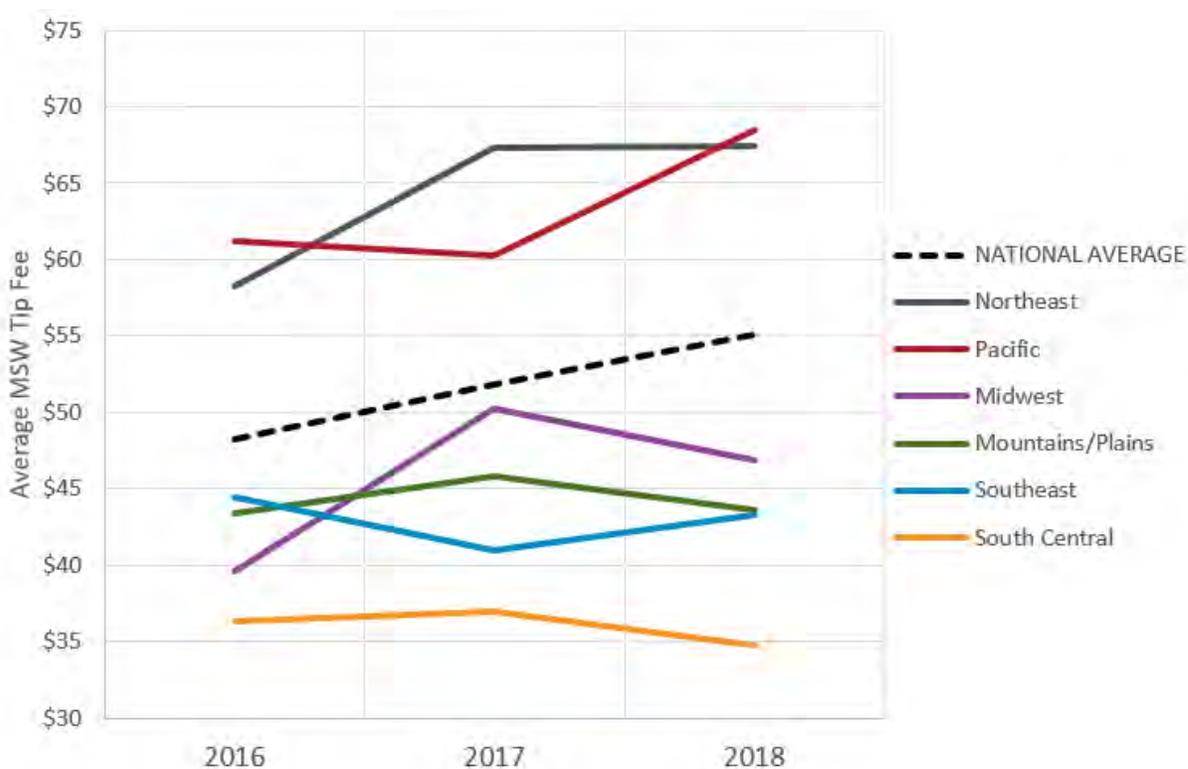
Region	Average Tipping Fee		
	2017	2018	Difference
Pacific (AK, AZ, CA, HI, ID, OR, WA)	\$60.20	\$68.46	+\$8.26
Northeast (CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, WV)	\$67.27	\$67.39	+\$0.12
Midwest (IL, IN, IA, KS, MI, MN, MO, NE, OH, WI)	\$50.27	\$46.89	-\$3.38
Mountains/Plains (CO, MT, ND, SD, UT, WY)	\$45.84	\$43.57	-\$2.27
Southeast (AL, FL, GA, KY, MS, NC, SC, TN)	\$41.01	\$43.32	+\$2.31
South Central (AR, LA, NM, OK, TX)	\$36.94	\$34.80	-\$2.14
National Average	\$51.82	\$55.11	+\$3.29

Based on previous EREF analysis (2017b), the national average tip fee increased 6.3% since 2017, from \$51.82 per ton to \$55.11 per ton (Table 1). Both the magnitude and direction of tip fee change varied on a regional basis. From 2017 to 2018, average tipping fee increased in two of the six regions (i.e. Pacific and Southeast), decreased in three regions (i.e. Midwest, Mountains/Plains, and South Central), and remained relatively flat in one (Northeast). The largest regional increase was in the Pacific region, where average tip fee increased by \$8.26 or +14%.

Three-year trends in average tip fee (Figure 1), show a steady average 7% increase nationally from 2016 through 2018. Large tip fee increases are observed in the Midwest (+18.3%), Northeast (+15.8%), and Pacific (+11.9%) regions over this period. A slight decrease in tip fee is seen in the South Central (-4.2%) and Southeast (-2.6%) regions. Tip fees remained relatively flat in the Mountains/Plains (0.4%).

Figure 1. Regional MSWLF Tipping Fees, 2016 through 2018

*Regions, and the states contained therein, are denoted in Table 1.



On a state-basis, MSWLF tipping fees vary substantially. Average state tipping fees range from \$24.75 (Mississippi, Southeast region) to \$151.19 (Alaska, Pacific region) per ton of MSW (Table 2). A tip fee is not provided for Connecticut, as no landfills actively accepting MSW could be identified.

Table 2. State and Regional Average Tip Fees, from April 2018 survey^{a,b}

Region/State	Average Tipping Fee^c
Pacific	\$68.46
<i>Alaska</i>	<i>\$151.19</i>
<i>Hawaii</i>	<i>\$96.33</i>
<i>Washington</i>	<i>\$83.44</i>
<i>Oregon</i>	<i>\$69.58</i>
<i>California</i>	<i>\$58.42</i>
<i>Nevada</i>	<i>\$46.00</i>
<i>Arizona</i>	<i>\$41.65</i>
<i>Idaho</i>	<i>\$37.65</i>
Northeast	\$67.39
<i>Massachusetts</i>	<i>\$95.00</i>
<i>Rhode Island</i>	<i>\$90.00</i>
<i>Delaware</i>	<i>\$85.00</i>
<i>New Jersey</i>	<i>\$81.96</i>
<i>New Hampshire</i>	<i>\$80.00</i>
<i>Maine</i>	<i>\$78.20</i>
<i>Pennsylvania</i>	<i>\$69.59</i>
<i>Maryland</i>	<i>\$68.28</i>
<i>New York</i>	<i>\$66.17</i>
<i>West Virginia</i>	<i>\$54.66</i>
<i>Virginia</i>	<i>\$53.48</i>
<i>Connecticut</i>	<i>N.A.</i>
<i>Vermont</i>	<i>N.R.</i>
Midwest	\$46.89
<i>Minnesota</i>	<i>\$61.67</i>
<i>Illinois</i>	<i>\$56.03</i>
<i>Missouri</i>	<i>\$54.37</i>
<i>Wisconsin</i>	<i>\$49.09</i>
<i>Iowa</i>	<i>\$48.28</i>
<i>Indiana</i>	<i>\$45.02</i>
<i>Ohio</i>	<i>\$44.49</i>
<i>Nebraska</i>	<i>\$40.22</i>
<i>Kansas</i>	<i>\$39.75</i>
<i>Michigan</i>	<i>\$37.81</i>
Mountains/Plains	\$43.57
<i>Wyoming</i>	<i>\$74.02</i>
<i>South Dakota</i>	<i>\$50.18</i>
<i>North Dakota</i>	<i>\$45.61</i>
<i>Colorado</i>	<i>\$41.36</i>
<i>Montana</i>	<i>\$32.06</i>
<i>Utah</i>	<i>\$30.19</i>
Southeast	\$43.32
<i>Florida</i>	<i>\$54.67</i>
<i>Tennessee</i>	<i>\$45.66</i>
<i>South Carolina</i>	<i>\$44.03</i>
<i>Georgia</i>	<i>\$43.80</i>
<i>North Carolina</i>	<i>\$43.23</i>
<i>Alabama</i>	<i>\$33.49</i>
<i>Kentucky</i>	<i>\$31.72</i>
<i>Mississippi</i>	<i>\$24.75</i>
South Central	\$34.80
<i>Texas</i>	<i>\$37.78</i>
<i>New Mexico</i>	<i>\$34.88</i>
<i>Oklahoma</i>	<i>\$34.81</i>
<i>Arkansas</i>	<i>\$30.41</i>
<i>Louisiana</i>	<i>\$29.21</i>
National Average	\$55.11

^aN.A– not applicable, no landfills actively accepting MSW were identified in the state.

^bN.R. – not reported, response rate did not meet threshold for publication.

^cRegional and national averages computed on a facility-basis, and therefore do not equal the average of the individual state averages reported herein.

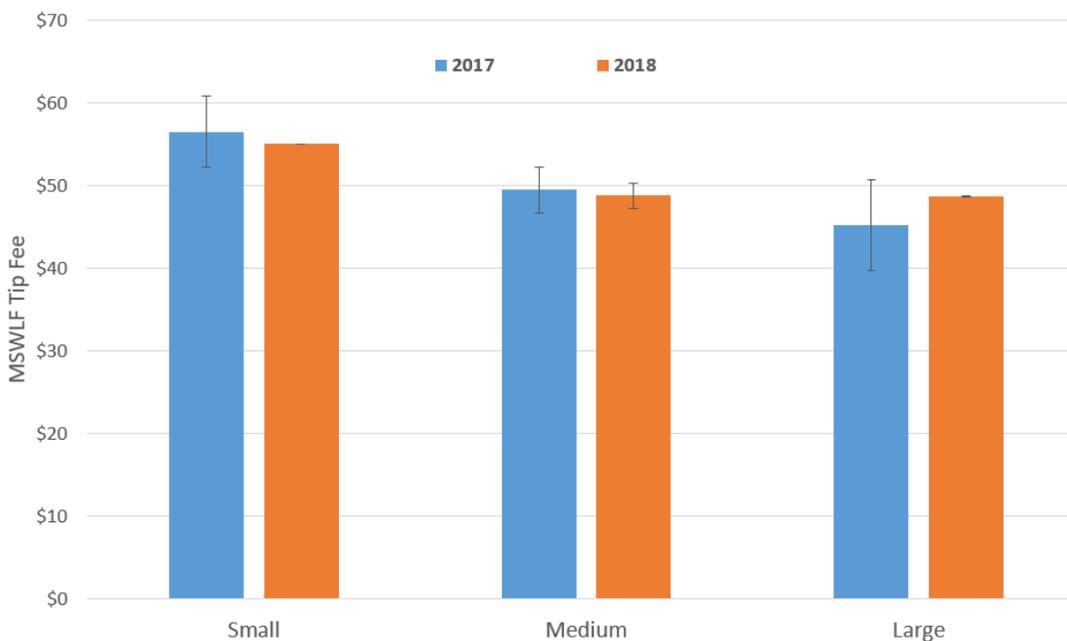
In 2018, MSW was managed via WTE (i.e. incineration with energy recovery) in 21 states, down from 22 states in 2017. States with active MSW WTE facilities had higher tipping fees than those without ($p < 0.05$). The average MSWLF tip fee was \$63.26/ton for states with WTE. In states without WTE, the average MSW tip fee was \$49.28/ton. Nationally, landfilling was 28% more expensive in WTE states, equivalent to \$13.98/ton higher. This relationship was also seen in the 2017 analysis, suggesting that MSW landfill fees continue to indicate, in part, if market conditions are suitable for the use of WTE for MSW management (EREF, 2017b).

Facility size

Average tipping fee was calculated for small, medium, and large landfills, based on annual tonnage accepted. Annual tonnage data was identified for 85% (347) of the landfills that reported tip fee data. Small landfills (i.e. those accepting <65,000 tpy) continue to have a noticeably higher average tipping fee than medium or large facilities (Figure 2). Small landfills had an average MSWLF tip fee of \$55.06 per ton in 2018. Medium landfills (i.e. those accepting between 65,000 and 390,000 tpy) and large (i.e. those accepting >390,000 tpy) had average tip fees of \$48.81 and \$48.73 per ton respectively. One explanation for this trend may be that as small, municipal landfills near capacity their tip fees increase due to scarcity. This was observed in Connecticut. Only 1 active MSWLF, which had limited remaining capacity, was identified in the 2017 tip fee study. That year, Connecticut had the highest tipping fee at \$200/ton (EREF, 2017b).

Figure 2. Average MSWLF Tipping Fee, by Landfill Size^a

^aRange shown is the 95% confidence interval.



References

Environmental Research & Education Foundation [EREF] (2017a) "MSW Management Facilities in the U.S.: 2010 & 2013". Retrieved from www.erefdn.org

Environmental Research & Education Foundation [EREF] (2017b) "Analysis of MSW Tipping Fees, April 2017" Retrieved from www.erefdn.org

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Questions regarding this content may be directed to the corresponding authors at IRP@erefdn.org

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For more information on EREF and the Data & Policy Program,

visit www.erefdn.org.

EcoCentre and Transfer Station Best Practices

Sonnevera Ecocentre and Transfer Station – Best Practices

Airdrie, Alberta

Population: 61,580

Description

The City of Airdrie's Eastside Recycle Depot is a staffed facility that accepts:

- Paper
- Cardboard and boxboard
- Metal (food containers)
- Plastic & plastic film
- Glass containers
- Electronics
- Light bulbs
- Electronics
- Household hazardous waste – paint, batteries, used motor oil, propane tanks etc.
- Styrofoam (no food Styrofoam)
- Cooking oil
- Textiles/clothing
- Coffee cup drink lids
- Beverage containers
- Books

In addition to the above materials, there is seasonal grass, leaves and branches collection from May 1 to September 30. Branches must be less than 1" in diameter and no longer than one metre.

The Eastside Recycle Depot started seasonal hours prior to 2010. Summer hours from May 1 to September 30 are Tuesday, Saturday and Sunday 9:00 am – 5:00 pm and Wednesday to Friday 9:00 am – 8:00 pm. During the winter months hours are Wednesday 9:00 am – 8:00 pm and Thursday to Sunday 9:00 am – 5:00 pm from October 1 to April 1.



City of Airdrie Eastside Recycling Depot

Single family and multi-family residents are permitted to use the Eastside Recycle Depot. Businesses are not permitted to use the site, however, the City of Airdrie suspects some smaller businesses are using the site in unmarked vehicles. The Depot also provides recycling options for neighboring acreage communities.

Staffing

The Eastside Recycle Depot has three full time staff and three part time staff that are used for weekend and holiday coverage.

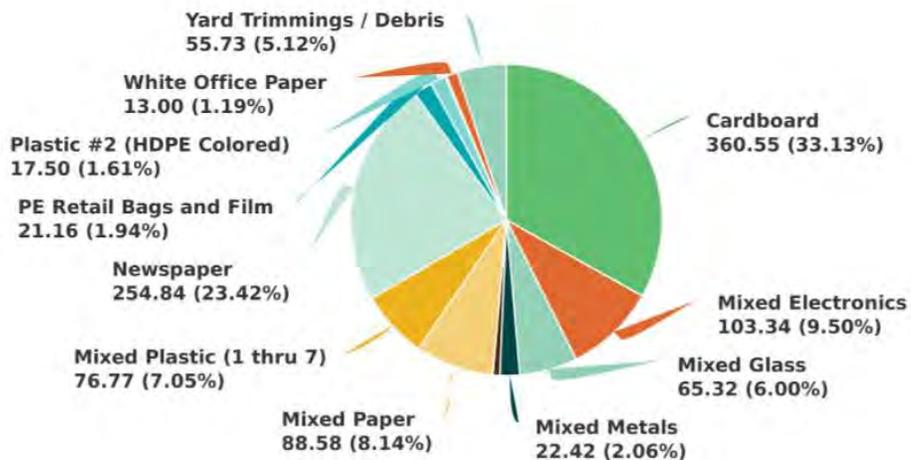
Financial

The Eastside Recycle Depot is 100% funded from utility fees. An Environmental Service Charge (fixed rate/per day \$0.18) is charged to residential homes and condominium (per unit) properties. This charge is for the use of recycling facilities, household hazardous waste collection, spring clean-up and other environmental programs. At the end of the year, if significant savings are noted, the money is transferred into a reserve fund for future projects or purchases (e.g., additional blue and green carts).

Quantitative Results/Tonnages

Saturdays and Sundays are the busiest days at the Eastside Recycle Depot. Prior to the introduction of curbside blue cart collection the week of April 3, 2017 the Depot averaged over 300 vehicles each Saturday and Sunday (sometimes over 400 on Saturdays) from January to April 2017. After the introduction of the curbside recycling program the average decreased to about 200-250 on Saturdays and 150-180 on Sundays.

2016 tonnage data for the Eastside Recycle Depot is provided below. It is noteworthy that some materials are not included in the data because they are measured in units and not by weight. These materials include: polystyrene, aerosols, paint, chemicals, beverage containers, bulbs, propane tanks and fire extinguishers.



City of Airdrie 2016 Material Diverted from Eastside Recycling Depot

Education/Communication

The City of Airdrie provides a Recycling Reference Sheet, as seen below, and a [Waste and Recycling Guide](#) for residents on their website.

Recycling Convenient. Responsible. Together. **Reference Sheet**

ORGANICS	CURBSIDE RECYCLING	CURBSIDE WASTE COLLECTION	EASTSIDE RECYCLE DEPOT	TRANSFER SITE
<p>All food waste: Fruit and vegetables, table scraps, meat, fish, dairy products, cooking oil and fat (cool, wipe with paper towel and place in green cart), bread, rice, pasta, bones, coffee grounds and filters, tea bags, eggshells, jams, jellies, baked dressings, baked goods, nuts, seeds, chips.</p> <p>Yard waste: Lawns, hedges, small plant branches less than 2.5 cm (1") in diameter and no longer than one metre, grass clippings.</p> <p>Food soiled paper: Table napkins, paper towels, paper plates, food food packaging such as hamburger wrappers, french fry boxes, paper bags, etc.</p> <p>Other: Pet fur, hair, feathers, wooden popsicle sticks, toothpicks and chopsticks.</p>	<p>Please all recycling in the sort boxes except shredded paper and plastic bags (recycle plastic).</p> <p>Paper: Newspaper, catalogues and magazines, mixed paper, flyers, envelopes, telephone books and soft cover books, empty paper coffee cups, fast food cups (un-waxed), cardboard, booklets, corrugated cardboard (Tetra Pak® juice/soy boxes, paper flour and sugar bags). Shredded paper must be placed inside a transparent plastic bag.</p> <p>Tin/aluminium food containers: Metal food and beverage containers, tin/aluminium cans, aluminium foil and aluminium foil plates, jar lids, refillable aluminium beverage containers.</p> <p>Plastics: Plastic containers with the recycling symbol(s) #1-7 including polystyrene foam (Styrofoam). Plastic bags and stretch plastic must all be bundled together within a single plastic bag for collection.</p> <p>Glass (whole or broken): Glass food containers, refillable glass beverage containers.</p>	<p>Accepted items: Pet waste, food Styrofoam, waxed cups, diapers, plastic coffee cup/sidewalk lids, plastic cutlery, straws, non-recyclable items.</p> <p>Bag limits: All waste bags must be no larger than 90 cm x 127 cm and weigh no more than 25 kg (55 lbs).</p> <p>Collection of only one bag of waste is included in your monthly utility waste management fee.</p> <p>Up to three additional bags can be set out for collection however they must have a \$3 money waste tag attached. Visit airdrie.ca for locations to purchase these.</p>	<p>Electronics: Televisions, computers and accessories, printers, scanners, fax machines, cellphones, small appliances.</p> <p>Household hazardous waste: Paint and paint cans, aerosols, household chemicals (must be securely contained in a clearly labeled container; only household quantities will be accepted), batteries, used engine oil and filters, antifreeze, propane tanks.</p> <p>Other: Light bulbs, Styrofoam (no food Styrofoam), cooking oil, tortillas, clothing, books, coffee cup/drink lids.</p> <p>Curbside recycling materials accepted here.</p>	<p>Recycling: Mattresses/box springs, fridges, freezers, tires, scrap wood (non-treated), asphalt shingles, drywall, concrete (a sack), scrap metal (large appliances), toilets.</p> <p>Landfill: Bagged or non-bagged residential waste, treated wood, household furniture.</p> <p>All loads must be secured. Fees apply, visit airdrie.ca for details.</p> <p style="text-align: center;">✗</p> <p>Not accepted: Hazardous or toxic material, animal carcasses, pesticides, herbicides, paint or other chemicals and/or their containers, clean fridges, small appliances.</p>

City of Airdrie Waste & Recycling
airdrie.ca | wasteandrecycling@airdrie.ca | 403.948.0246

City of Airdrie Recycling Reference Sheet

Additionally, the City provides further education through information sessions, store intercepts, radio and newspaper ads.

Lessons Learned

- Effective signage is important; found pictures on signs to be much more effective than solely words
- Safety is a big priority for the City of Airdrie; important to train staff on traffic direction and safety which includes keeping track of near misses on site. Airdrie has developed a site that is safe for traffic flow, as well as considers mobility access.
- Garbage cans used to be provided at the depots, but were recently removed to prevent residents from bringing their household waste to the site
- Evening hours are not popular with residents

Contact

Susan Grimm
Team Leader, Waste and Recycling Services
City of Airdrie
21 East Lake Hill
Airdrie, Alberta
T: (403) 948-8800 ext 6296
Susan.Grimm@airdrie.ca

Burnaby, British Columbia
Population: 232,760

Description

The Eco-Centre is a staffed, self-serve public facility where Burnaby residents can take larger volumes of materials accepted in the City's recycling program, waste for composting and toxic material. The Eco-Centre is open seven days a week (except holidays) from 8:00 am – 4:00 pm and accepts the following items.



Burnaby Eco-Centre Materials Accepted

Additionally, household paint, flammable liquids, gasoline and pesticides, used motor oil, oil filters, antifreeze, household batteries and used cooking oil are also accepted.

Residents can drop-off 100 kg of green waste per day free of charge (proof of residency required).

The Eco-Centre caters primarily to residents (single family and multi-family) but does accept the following materials from businesses: cardboard, mixed paper, hard bulky plastics and scrap metal. Business yard waste is also accepted for a fee.

Staffing

Two full time staff (40 hours per week with benefits) work at the Eco-Centre. The remainder are auxiliary staff (no benefits) that can work up to 40 hours per week. Ideally, need four staff working 40 hours a week from Monday – Friday and different staff to work on the weekend.

Financial

If residents drop-off more than 100kg of green waste per day, they are charged the full tipping rate of \$67/tonne.

Eco-Centre funding comes from the engineering/sanitation budget which is ultimately from general taxes. Material revenue (generally \$60,000- \$100,000 per year) offsets the budget.

Quantitative Results/Tonnages

It is estimated that 80% of Eco-Centre use is residential and 20% is from business.

Education/Communication

As the Eco-Centre has been around for 30 years and is well entrenched with the public, education is primarily through the City of Burnaby website.

The Eco Centre hosts an annual open house and provides school and international tours as requested.

Lessons Learned

- Strong demand for the Eco-Centre; looking at expanding hours from 8:00 am – 4:00 pm seven days a week to 8:00 am – 6:00 pm seven days a week. Public requested longer hours so they can drop off items after work.
- Build for future expansion in mind; wish there was more space at the Eco-Centre now
- Ensure clear signage and have staff walking around to assist public with placing material in the correct bin
- Have lots of cameras now; probably no place at Eco-Centre that does not have a camera; had problem with street people cutting fence surrounding Eco-Centre property and taking copper, aluminum and car batteries.
- Be aware that kitchen waste brings rodents and birds to site; can have 1,000 sea gulls flying around Eco-Centre and neighboring properties; they defecate on the public while recycling their materials and does not develop friends with neighbours; one neighbour was going to sue the City of Burnaby as the birds kept defecating all over their lumber yard. Tried pest control company but it did not work; tried electronic predator sounds, worked okay on the seagulls to begin with but crows are smart and had nothing to do with it, crows came back and seagulls followed. Now have someone walking around with a Harris Hawk Monday-Friday from 9:00 am-4:30 pm; Hawk scares off seagulls and crows.

Contact

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City of Burnaby
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Burnaby, British Columbia
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Robert.Potter@burnaby.ca

Cochrane, Alberta
Population: 25,900

Description

Cochrane's Eco-Centre is a staffed facility that is open Tuesday through Saturday from 10am to 6 pm and accepts the following items:

The Cochrane Eco Centre also accepts:

- **Book Exchange**
 - Trade your old but readable books for new ones.
- **Clothing**
 - Clothing
 - Blankets, towels, linen
 - ShoesAll items must be clean and gently used.
- **Bicycles**
 - Give that old bicycle a new home! Bicycles donated are free for the taking.
- **Food Waste**
 - Fruit & vegetable waste
 - Egg shells
 - Tea bags, coffee & filters
 - Pasta & bread
 - Meat bits & bones**No bags please.**
- **Foam & Expanded Polystyrene**
 - Clean white furniture and appliance packing foam
 - Packing foam peanuts (bagged)
 - Foam servingware: cups, plates, take out containers, meat trays, egg cartons
 - Styrofoam insulation (blue/pink)
 - No spray foam, textile or furniture foam
 - All foam must be clean of residue and free of tape/labels

Seasonal and additional waste diversion programs:

- **Pay-As-You-Throw Waste Disposal**

Bagged household waste can be disposed of for a small fee. **Must be contained in clear bags.**
- **Cooking Oil Recycling**

Grease and cooking oil are accepted for recycling. Please dispose of these oils in the tank labelled **Used Cooking Oil Only.**
- **Household Hazardous Waste (HHW) & Paint**

Household chemicals and paint are accepted for disposal throughout the year. Includes all aerosols & propane tanks.
- **Appliance Disposal**

Appliances (fridges, freezers, washers, dryers, ranges, dishwashers, microwaves, hot water tanks) are accepted for a fee at the Eco Centre.
- **Seasonal Clean-Up (Apr-Nov)**
 - Leaves and grass
 - Tree trimmings and branches (Maximum 6" diameter)
 - Pumpkins (November)
 - Christmas trees (January)**No commercial landscapers.**

Find out what the ECO CENTRE accepts



Cochrane Eco Centre
50 Griffin Industrial Point

Tue - Sat, 10am - 6pm
(closed Sun, Mon & all statutory holidays)

Waste & Recycling Hotline
403-851-2277
www.cochrane.ca/EcoCentre

Contact us

- www.cochrane.ca/EcoCentre
- www.facebook.com/CochraneEcoCentre
- Waste and Recycling Hotline: 403-851-2277





Cochrane Eco-Centre Materials Accepted

The Eco-Centre caters primarily to residents (single family and multi-family) but does also provide as an option to the commercial sector. Both the residential and commercial sectors pay \$5 on their monthly utility bills to support the Eco Centre.

Staffing

There are three full-time staff employed at the Eco Centre, with an additional three part-time staff that are normally called in to work Saturdays and other busier days.

Financial

Supporting revenues include recycling fees from the residential and commercial utility bills, as well as a contribution from Rocky View County and other smaller local municipal partners.

The largest expense for the Eco Centre is staff costs.

Materials such as metal, newspaper and cardboard continue to provide a revenue stream for the Eco Centre. Electronics also served as another significant source of revenue, due to the Alberta Electronics Recycling Program. Other materials such as glass, mixed plastics and organics have cost the Eco Centre to market from 2014 to 2016.

Quantitative Results/Tonnages

A user survey in July 2017 found the majority of Eco Centre users to be residents from Cochrane. Just over 70% of users were Town of Cochrane residents and 95% of the total users were from the residential sector. Businesses have access to the Eco Centre and contribute to funding the Centre through monthly utility fees.

Also, in the same 2017 user survey, it was identified that most Cochrane residents use the Eco Centre either weekly (26%), every two weeks (25%) or monthly (26%). Only 12% of users reported they use the Eco Centre once every couple of months and even fewer (6%) said they use the Eco Centre only once or twice per year.

Education/Communication

Information on the Eco Centre is featured on the Town of Cochrane's website, with additional information and updates featured on social media, including Twitter and Facebook, where an Eco Centre page exists with regular posts.

The Cochrane Eco Centre currently works with a number of Community-Based Social Marketing (CBSM) approaches to encourage increased use, including social media, distribution of educational materials, media, direct engagement at community events, and school programs.

Lessons Learned

- Strong demand for the Eco-Centre; looking at expanding hours to open earlier in the morning and have one day the Eco Centre stays open late to coincide with evening shopping in Cochrane.
- Conducting site user surveys helps with documentation and program develop to properly suit users needs.

Contact

Fabrizio Bertolo
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Town of Cochrane
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Cochrane, AB
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Edmonton, Alberta
Population: 812, 200

Description

Four Eco Stations (Ambleside, Coronation, Kennedale and Strathcona) located in Edmonton, two in the north, one in the south and one more centrally located, provide comprehensive drop-off facilities for household hazardous waste, large items and mixed waste (including construction scrap), electronics, appliances and scrap metal.

The newest location, Kennedale Eco Station (applied for LEED Gold Standard) opened in 2015 while Strathcona, Coronation and Ambleside opened in 1995, 2000 and 2009 respectively. These locations offer extended Summer and Winter hours; from April 3 – October 28, 2017 they are open Monday to Saturday 9:00 am to 6:30 pm and are closed on Sunday and holidays, and from October 29, 2017 to roughly March 31, 2018 they are open Tuesday to Saturday 9:00 am to 4:30 pm and are closed Sunday, Monday and holidays.

These facilities accept residential garbage and recyclables, however, this is on a limited basis as residents should use the City of Edmonton garbage and recycling collection service or drop off their recyclables at community facilities.



City of Edmonton Ambleside Eco Station

The Ambleside and Kennedale locations also provide reuse areas, opening in 2012 and 2015 respectively, where items (e.g., televisions, stereos, computer peripherals) deemed reusable are set out for a limited time for pickup.



City of Edmonton Ambleside Eco Station Reuse Area

Eco Stations do accept commercial waste, but vehicles must not exceed one tonne in weight and trailers must not exceed three metres (10 feet) in length.

Commercial hazardous waste and biomedical waste, expired medications, explosives, radioactive waste, munitions, fireworks or pressurized gases are not accepted.

Customers can take home free paint throughout the year with a maximum of four cans per visit and free mulch (seasonal program).

Quantitative Results/Tonnages

In 2015, 277,787 vehicles visited the four Edmonton Eco Stations, meanwhile in 2016, 287,299 vehicles visited the Eco Stations.

During 2016 the following materials were diverted from all four Edmonton Eco Stations:

- 9,200 litres used glycol
- 207,416 linear feet fluorescent blubs
- 1,447 1000L/750L waste paint
- 7,216 wet cell batteries
- 5,015 refillable propane cylinders
- 14,797 disposal propane cylinders
- 868 fire extinguishers
- 377,755 L used oil
- 17,521 used filters
- 34,523 plastic oil containers
- 15,853 mattresses & box springs
- 7,031 refrigerators/freezers
- 139 small engines
- 886,454 (32,769 kg) visual display devices
- 1,094,990 kg white goods
- 16,754 tires
- 1,666,076 kg scrap metal
- 69,350 kg aluminum
- 681,050 kg electronic appliances
- 347,241 kg computer components
- 644,360 kg lumber
- 1,214,540 kg yard waste
- 41,740 litres paint exchanged
- 6,146 paint aerosols exchanged
- 102,543 kg reuse

Additionally, 13,798,720 kg of refuse and 160,400 kg of eco-refuse (non-recyclables) were disposed at the landfill.

Staffing

Eco Stations are a staffed self-serve public facility. Each Eco Station has 20-25 employees of which 10-12 are full-time and 13-15 are full-time seasonal employees from April to October.

Financial

The Eco Station receives ongoing financial backing from material charges at the gate and revenue from recycled materials (e.g., scrap metal, oil, car batteries) which accounts for roughly one third of the funds

directed to Eco Stations. The remaining two thirds is from the Waste Services Fee charged on the utility bill; only a portion of this fee goes to Eco Stations.

HHW disposal is subsidized by the Provincial Government.

Eco Station material rates are listed below.

City of Edmonton 2017 Eco Station Material Fees

Material	Rate
Clean recyclables (newspaper, metal cans etc.)	No charge
Household hazardous waste (paint, motor oil etc.)	No charge
Computer monitors and televisions (maximum 20 monitors per visit)	No charge
Electrical appliances & scrap metal	No charge
Tires	No charge
Small items (chairs or comparable volume)	\$8 each
Large items (mattress, box spring, sofa or comparable volume)	\$12 each
Items requiring CFC removal (fridge, freezer etc.)	\$12 each

Loose waste and mixed loads are also accepted for brush and tree trimmings, garden waste, soils/gravels, fencing, lumber, concrete pieces, wood/vinyl siding, shingles, windows and fencing at the rates listed below.

City of Edmonton Eco Station 2017 Loose Waste and Mixed Load Rates

Truck Size	Rate (2017)
Partial half-tonne truck	\$28/load
Level half-tonne truck	\$38/load
Heaping half-tonne truck	\$48/load
Cube van or utility trailer load	Subject to viewing by Eco Station attendant ¹

¹Eco Station attendants have the final say about acceptability of the items and the charge that will be applied to each load

The maximum vehicle size allowed at Eco Stations is one tonne and trailer length is three meters.

Education/Communication

Detailed [Eco Station](#) information is provided on the City of Edmonton website. The Turn Them In - What Goes Where flyer is available to assist customers with determining what is accepted at Eco Stations versus recycling and garbage. Additional support is also available via a telephone hotline (T: (780) 442-5311) and e-mail (wasteman@edmonton.ca)



City of Edmonton Turn Them In Brochure

Eco Station education is incorporated into the compulsory Grade 4 waste management unit in the Edmonton school system and student tours are available to complement this unit.

Additionally, EcoStation advertisements as seen below can be found to promote the program along with social media (Twitter and Facebook) .



City of Edmonton Eco Station Advertisement

The City of Edmonton's Eco Station Program was awarded the 2016 Gold Excellence Award for Special Waste Management by the Solid Waste Association of North America.

Lessons Learned

- We are a disposable society, don't be surprised by the variety and volume of materials that get dropped-off
- Finding material processors is key; spend the time to build relationships with processors
- Public education at home is imperative, build on this with Eco Station education
- Ambleside was the first Eco Station that the City of Edmonton built from the ground up; ensure that the facility is streamlined and as simple as possible for public to understand (including clear signage)
- Ensure that Eco Station is inviting to the public (e.g., clean and roads are drivable)
- Don't try and set up everything at once; take the time to do it right
- Recycling is a business; it relies heavily on government programs and outside businesses

Contact

Andy Garrod
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City of Edmonton
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Edmonton, Alberta
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Edson, Alberta
Population: 8,410

Description

The Edson and District Recycling Depot accept the following items:

- All plastic containers
- All plastic bags
- Office paper
- Low grade paper
- Newspaper
- Magazines
- Old corrugated cardboard
- Clear glass
- Tin cans
- Computers, electronics and accessories
- Aerosol paint containers and paint cans
- Printer cartridges
- Batteries
- Household aerosol cans
- Refundable containers
- Yard waste (leaves, grass, garden waste, May – September)
- Fluorescent light bulbs
- Used oil, oil filters and jugs



Town of Edson and District Recycling Depot

The Recycling Depot is staffed Monday to Saturday from 9:00 am to 5:00 pm with 24 hour public drop-off at most bins for residents and businesses.

The Recycling Depot also has a Take It or Leave It facility that's open Wednesday, Friday and Saturday from 12:00 pm – 4:30 pm and Thursday evening from 4:00 pm to 7:00 pm.



Town of Edson Take It or Leave It

This facility is open to Edson and Yellowhead County residents and businesses.

Staffing

Seven full time equivalent Recycling Depot positions are shared between 22 employees. This includes three full time employees (40 hours per week), one position that is 80% education tasks and another position that is 40% office duties. The remaining hours are shared between 17 casual employees with hours that vary between four and sixteen hours per week.

Financial

The Town of Edson has a cost share relationship with Yellowhead County for the Edson and District Recycling Depot. The Town of Edson pays 65% of the operation budget while Yellowhead County pays 35%. Capital costs are shared at 50% each.

The Edson and District Recycling Depot presents the Town of Edson with an annual budget that is paid by quarterly installments from the Town of Edson General Fund. The Town of Edson then bills Yellowhead County for their portion of the Recycling Depot budget.

Commercial businesses that bring in contaminated plastic drums are typically charged \$20-\$100 for disposal service.

Quantitative Results/Tonnages

It is estimated that paper, glass and plastic bins have roughly 90% residential and 10% business use while the cardboard bin is roughly 90% business and 10% residential use.

In 2016, 2006 tonnes of material was diverted from the Edson and District Recycling Depot. This includes:

- Corrugated cardboard – 1156 T
- Mixed paper – 334 T
- Newspaper – 129 T
- Office paper – 91 T
- Magazines – 24 T
- Glass – 30 T
- Plastic – 168 T
- Tin – 24 T
- Computers – 50 T

Education/Communication

When new residents arrive in Edson they receive a Welcome Wagon package that includes a certificate for a recycling bin that they can pick up at the Recycling Depot. Brochures are also available for residents and businesses along with information on the Town of Edson and West Yellowhead Recycles websites and Facebook.



Printed on unbleached 100% post-consumer paper.

Please sort recyclables into the following categories:

- 1. All Plastic Containers**
Rinsed containers & bottles.
- 2. All Plastic Bags**
All plastic bags including grocery & shopping bags that are not soiled.
- 3. Office Paper**
Any colour, bond, photocopy, NCR, fax, telephone message notes. Post-it notes or loose leaf papers, file folders, envelopes, utility bills and receipts. Paper clips and staples are OK. Shredded office paper, preferably bagged.
- 4. Low Grade Paper**
Construction paper, brown paper bags, blueprints, paper egg cartons, carbon paper, sugar flour & pet food bags.
- 5. Newspaper**
This includes all newspaper, TV guides, comics, flyers, inserts & auto traders.
- 6. Magazines**
All glossy magazines, catalogues, flyers etc.
- 7. Old Corrugated Cardboard**
Please flatten all boxes. Staples, tape or a little paper is OK.
- 8. Clear Glass**
Clear glass jars, containers, window pane glass etc. Lids must have labels (low grade paper) and lids (tin or plastic) removed. Broken and white glass is acceptable. NCR auto glass, coloured glass, ceramics or china.
- 9. Tin Cans**
All tin, steel or aluminum cans, labels removed (low grade paper), rinsed and flattened. Tin foil is acceptable.
- 10. Computers, Electronics & Accessories**
Disposing personal computers (PCs), servers & monitors), printers, cables, laptops and all sizes of TVs.
- 11. Aerosol Paint Containers & Paint Cans**
Paint aerosol containers, paint and paint cans. Container sizes from 100ml to 24L.
- 12. Printer Cartridges**
Ink jet & laser printer cartridges, e.g. Canon, HP, IBM, Xerox & many more.
- 13. Batteries**
Car, truck, rechargeable & alkaline batteries.
- 14. Household Aerosol Cans**
Household aerosol cans, fire extinguishers & small green propane tanks.
- 15. Refundable Containers**
Pop, juice, milk, beer, water etc.
- 16. Compost (Seasonal May-September)**
Recycle your yard waste. Bin for grass, leaves & vegetable garden waste. NCR: Bags, containers, kitchen or food waste or large branches/trees.
- 17. Fluorescent Light Bulbs**
All sizes of fluorescent tubes compact & high intensity discharge bulbs. Drop off during business hours only please as these contain toxic heavy metals.
- 18. Used Oil, Oil Filters & Oil Jugs**
This includes five gallon oil pails.

For more information ...

Edson Regional Recycling Depot 780.723.4002
 Edson Bottle Depot 780.723.3501
 Edson Landfill 780.723-6476
 Edson Thrift Shop 780.723.4545
 www.westyellowheadrecycles.com

Alberta Recycle Information:
 1.800.463.6326



Conservation Facts

- ▶ Plastic milk jugs are made of the highest grade of plastic.
- ▶ Recycled milk jugs can be made into fleece material, carpeting & other plastic containers
- ▶ Recycling beverage containers is estimated to conserve more than 189,000 barrels of crude oil per year - a savings of \$6.5 million a year!
- ▶ There are more than 1,500,000,000 beverage containers (excluding milk) sold in Alberta.
- ▶ A dripping faucet leaking one drop per second can amount to 25 litres per day or 10,000 litres per year. That's enough water to wash more than 65 loads of laundry!
- ▶ The toilet is the biggest water user in a home, usually accounting for up to 43% of total household use. New 'low-flow' toilets use between 50 to 80% less water.
- ▶ The potential exists to recycle 50% or more of the average family's garbage.
- ▶ Make your own window cleaner. Mix 60 ml of vinegar with 250 ml of water & store in a spray bottle.

Town of Edson and District Recycling Depot Education Brochure

The Recycling Depot has a strong presence with local schools. It provides a Let's Talk Trash presentation and tours, typically in the Spring and Fall, that provides information to roughly 1,000 Grade 4 students each year. Additionally, the Recycling Depot collects beverage containers weekly from schools and provides the return fees back to the school.

The Recycling Depot also provides education through the Senior Day program. The first Wednesday of the month seniors are invited to bring their recyclables to the Recycling Depot and stay for lunch. Staff sorts the materials and ensure they are placed in the correct bin. In December a Christmas themed lunch is provided along with photos with Santa.

Lessons Learned

- Know who, what and why you are; have a solid mandate, philosophy and five year plan to guide you
- You are not alone; do not reinvent the wheel, borrow from others (e.g., municipalities, Recycling Council of Alberta)
- Embrace change; there are no road blocks only challenges, think outside the box, change is inevitable
- Community involvement; foster community involvement (e.g., local government, industry, community groups, schools, public)
- Have fun; expect the unexpected

Contact

Anne Auriat
Recycling Depot Manager
Edson and District Recycling Society
5237 – 1 Avenue
Edson, Alberta
T: (780) 723-1603
edsonrecycle@telus.net

Grande Prairie, Alberta
Population: 63,170

Description

The Eco Centre (owned and operated by Aquatera) is the largest recycling depot for both residents and business customers in Grande Prairie. It is open Monday to Saturday 9:00 am – 5:00 pm during the summer (April 1 to October 31) and Monday to Saturday from 10:00 am – 5:00 pm during the winter (November 1 to March 31). The Eco Centre accepts the following materials:

- Paper, boxboard and cardboard
- Metal cans
- Hard plastic #1-#7
- Shredded and packing paper
- Bottle donations
- Plastic, tin and aluminum - bags, shrink wrap, bubble wrap, containers
- Styrofoam – clean #6 PS only (no tape or labels)
- Household hazardous waste – residential only
- Paints/stains – full or partially full cans. Limit of 10 x 20L pails
- Fluorescent bulbs – no broken bulbs
- Automotive – used motor oil, plastic oil containers, vehicle batteries, tires (no rims and maximum of four)
- Electronics – no broken glass
- Rechargeable batteries and alkaline batteries
- Cellphones and batteries
- Propane bottles
- Cooking oil

Used oil, paint and hazardous waste are not accepted from businesses.

The Aquatera Eco Centre received the Alberta Recycling Site of the Year Award by the Alberta Recycling Management Authority in 2014.

Staffing

The Eco Centre has two full time staff (40 hours per week) and two part-time staff (48 hours every two weeks). Additionally, there is one casual staff member that works on Saturday and an administrative assistant that works 40% of the time for the Eco Centre. Staff at the Eco Centre is unionized.

Financial

Aquatera is a private business and the Eco Centre is a line item on the company budget. Effective March 1, 2017, residential customers are charged \$10.18 and non-residential customers \$14.19 per month for on their utility bill for the Recycling Program. A portion of this fee covers Eco Centre costs along with provincial incentive programs such as paint and electronics recycling.

Quantitative Results/Tonnages

In 2016, the Eco Centre collected the following:

- 5,457 pounds of alkaline and cell phone batteries
- 20, 627 pounds (net weight) of Styrofoam
- 40,338 pounds of car batteries
- 119,192 feet of florescent bulbs
- 2,950 pounds of ink cartridges
- 1,761 one pound propane canisters
- 562 five to thirty pound propane bottles
- 36,796 litres of used car oil
- 166,868 kg of electronics

Education/Communication

Aquatera participates in events and trade shows to educate residents and businesses. They also provide strategic messaging through social media (Facebook), radio ads and billboards. The Aquatera website is another method used for education along with flyers and an Eco-Centre [video](#) found on YouTube.



Aquatera Recycling, Eco Centre, or Garbage Brochure

Lessons Learned

- There are no garbage cans on site at the Eco Centre; good learning tool for residents and businesses
- Paint exchange is a highly sought after initiative
- Be strategic with communication; provide specific details about what is to be collected
- A lot of businesses have the intention to recycle but the application does not always happen
- Set up proper area for electronics
- Consider limiting the number of oil pails accepted per day; people sneak other liquids in oil pails; if a small number of containers are allowed its easier for staff to ensure that the pail are actually oil
- Ensure that all containers filled with liquid are labelled; preferably in original containers, but labelled so staff know what is in the container

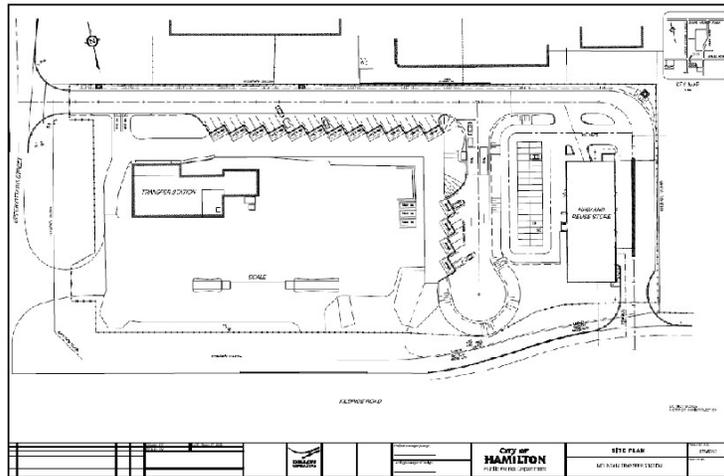
Contact

Sarah Kaut
 Assistant Landfill Manager
 Aquatera
 11101 – 104 Avenue
 Grande Prairie, Alberta
 T: (780) 830-7056
skaut@aquatera.ca

Hamilton, Ontario
Population: 519,950

Description

Three Community Recycling Centres (CRCs) are located in Hamilton; Hamilton Mountain, Dundas and East Hamilton which opened in 2005, 2007 and 2009 respectively. All locations were built on existing transfers stations from 1979 and 1980, and are open Monday to Saturday from 8:00 am to 6:00 pm and closed on Sunday and holidays. A site map for the Hamilton Mountain CRC is below.



City of Hamilton Site Plan for Hamilton Mountain Community Recycling Centre

The CRCs are strictly for residential use. Businesses can divert materials but must go to the transfer station that is located next door and pay for this service.

The CRCs accept the following materials in four yard bins:

- Recyclable paper and containers
- Polystyrene
- Garbage
- Wood (2x4's and 2x2's without any nails, screws, paint or stain, logs no more than 30 cm in diameter and 1.2 m long. No arborite counter tops, doors, laminated wood, painted wood, paneling, press-board, pressure treated wood, railways toes and wood with nails or screws)
- Asphalt shingles
- Furniture
- Household hazardous waste^{1,2} (e.g., light bulbs, paint, batteries)
- Yard waste
- Appliances (most small appliances with a cord)
- Scrap metal
- Electronics (speakers in wood cases are not accepted)
- Tires (rims must be removed, four per day drop off allowed)

¹Maximum allowed per visit: 40 kg of hazardous waste, 40 L of liquid hazardous waste, eight fluorescent tubes and one mercury thermostat.

²Household hazardous waste not allowed at the CRC include: asbestos; bio hazardous waste/biochemical wastes; ammunition, explosives or fireworks; radioactive waste.

For a complete list of materials accepted at the CRC please visit the [City of Hamilton CRC webpage](#).

A bulky rigid plastic recycling pilot took place at the Hamilton Mountain CRC for a limited time in 2014. This location accepted large plastic toys, buckets and pails, crates and trays, garbage cans, laundry

baskets, lawn furniture, pet carriers, pots, playhouses, totes and tool cases, and recycling bins. In 2015, rigid plastic bins were added to all CRCs.

Commercial vehicles may complete an affidavit (obtained at the CRC or transfer station) that permits the commercial vehicle one trip per month as a non-commercial vehicle, provided waste is from the operator's own residence.

Each CRC has a reuse shed where paint cans are stored for reuse. These sheds are open from the Spring to the Fall and residents can take home up to four cans of paint/varnish/stain for free per day. Other items found at the reuse shed include:

- Paint (all types)
- Paint thinners and turpentine
- Wood preservatives
- Wood stains and finishes (e.g., varnish)
- Plant food and fertilizer
- Adhesives
- Lawn care products (no pesticides)
- Drywall compounds
- Unopened containers of motor oil
- Dry, empty fuel jerry jars
- Household cleaners
- Car wax and cleaners

Additionally, a Reuse Store, operated by Community Living Hamilton, is located at the Hamilton Mountain CRC. Bicycles, cribs, car seats and mattresses are not accepted.

BFI has the current contract to run the CRCs for the City of Hamilton until 2020. The City pays BFI a fixed monthly cost along with variable costs based on garbage tonnage loaded and transferred, leaf and yard waste tonnage loaded and transferred and a tipping fee for recyclable materials.

The current contract states that the City of Hamilton is responsible for the scales, scale houses and structural repairs while BFI looks after the general maintenance (e.g., painting, floor repairs, asphalt pavement, door lock repairs, fire extinguishers, and bills for water, gas and electricity).

Staffing

Each CRC has five full time employees (40 hours per week). On Saturday, between one and seven students typically work at each CRC to provide relief for full time staff.

Financial

The City of Hamilton paid for the initial CRC buildings through capital expenditures and monies received by millennium funding for capital infrastructure. The CRCs operations are paid for through the City's operating budget which is tax based. Any revenues from the CRCs (e.g., garbage and shingle fees and materials sales) are projected in the operations budget and used to offset this budget. The current CRC fees are listed below.

City of Hamilton Residential and Business Recycling and Waste CRC/Transfer Station 2017 Drop-off Fees

Item	Amount	Residential Fees CRCs	Business Fees Transfer Stations
Garbage	First 100 kg (220 lbs)	\$8.50	\$11.75
	Each additional 100 kg (220 lbs)	\$11.75	\$11.75
Shingles	First 100 kg (220 lbs)	\$8.50	\$11.75
	Each additional 100 kg (220 lbs)	\$11.75	\$11.75
Recycling (separated)	Every 100 kg (220 lbs)	Free*	\$11.75

Item	Amount	Residential Fees CRCs	Business Fees Transfer Stations
Leaf & Yard Waste (separated)	Every 100 kg (220 lbs)	Free*	\$11.75
Scrap Metal	Every 100 kg (220 lbs)	Free*	\$11.75

*If a load is mixed with garbage, the whole load will be charged based on garbage rates

Quantitative Results/Tonnages

During 2016, 5,934 tonnes of recyclables (electronics, plastics, scrap metal, shingles, tires, white goods, wood and cardboard) and 15,540 tonnes of yard waste were diverted from landfill by all three CRCs. Additionally, 124,923 tonnes of garbage was sent to transfer stations from all CRCs.

Education/Communication

CRC education is primarily through the [City of Hamilton website](#), info@hamilton.ca, and social media which focuses on HHW, tires and electronics. Additionally, there is a [Hamilton Mountain CRC video](#) that tours the facility on the City website.

A You Tube [CRC video](#) is also available.

Lessons Learned

- Residents tend not to read the signs; clear signage is needed
- Ensure room for expansion when developing a new facility; extra space for 4-5 recycling containers and 2-3 garbage containers is ideal
- Have several containers under a roof for protection is helpful (e.g., drywall)

Contact

Chris Ridgewell
Waste Processing Contract Coordinator - Environmental Services Division
City of Hamilton – Public Works
77 James Street North
Hamilton, Ontario
T: (905) 546-2424 ext 3915
chris.ridgewell@hamilton.ca

Okotoks, Alberta
Population: 22,880

Description

The Eco Centre is open on Tuesday, Wednesday and Friday 10:00 am – 5:00 pm, Thursday 10:00 am – 8:00 pm and Saturday 8:00 am – 5:00 pm for residents and businesses. On Sunday and Monday it is closed. This facility accepts:

- Paper and cardboard
- Plastic jugs, bottles, packaging and food containers
- Metal food cans and foil
- Glass bottles and jars
- Beverage containers
- Batteries (alkaline and rechargeable, car batteries)
- Packaging styrofoam
- Electronics
- Paint and aerosols
- Empty motor oil containers
- Household hazardous waste
- Cooking oil
- Printer and toner cartridges
- Tassimo and Keurig coffee products
- Clothing, foot wear and household linens
- Fluorescent light bulbs
- Grass and leaves (seasonal)

A small book exchange is also available.



Town of Okotoks Eco Centre

Staffing

The Eco Centre has three full time employees and two part-time employees (16-20 hours a week). Additionally, there is one employee at ¾ time that looks after cart management and one employee at ¼ time that provides technical assistance.

Financial

The Town of Okotoks Eco Centre has a cost share arrangement with the Municipal District of Foothills. The Municipal District contributes 21% of the Eco Centre annual budget and in turn Municipal District residents and businesses can drop-off material at this facility. Additionally, Town of Okotoks residents and businesses contribute \$5.25 monthly to the Eco Centre. For residents this fee is included in the waste management fee, while multi-family and businesses customers have a specific line item on their bill.

Quantitative Results/Tonnages

Recent garbage disposal and diversion tonnages for the Town of Okotoks are found below.

**Town of Okotoks Garbage Disposed and Organics and Recycling Diverted –
October 2015 to October 2017**

Year	Garbage Disposed*	Organics and Recycling Diverted*
October 20, 2015 – October 19, 2016	7131 T	3240 T
October 20, 2016 – October 19, 2017	7107 T	4344 T

*Includes residential curbside collection and Eco Centre collection

From January to August 2017, 6.5 tonnes of clothing and 1.5 tonnes of Styrofoam were diverted from landfill at the Eco Centre.

An online customer service survey took place in June and July 2017 that was promoted via the Town of Okotoks website and Eco Centre staff engaged residents via ipads when users visited the Eco Centre. Results include:

- 500 respondents
- 51% live in Okotoks; 49% live outside Okotoks (MD Foothills and a few from Calgary)
- 64% use Eco Centre exclusively (MD Foothills)
- 54% use the Eco Centre weekly even though they have carts at home
- 29% taking organics to Eco Centre (multifamily collection starts January 2018)
- 84% single family, 13% multifamily, 3% business users at the time of this survey

Education/Communication

Targeted communication pieces are released via newspaper articles, radio station interviews and social media. The Town of Okotoks website also provides program education. In mid-2016 a significant education campaign took place when house hold hazardous waste collection was transferred to the Eco Centre from fire stations.

Lessons Learned

- Tracked hours open; recommendation into council to evaluate effectiveness of keeping the Eco Centre open on Thursday from 5:00 pm – 8:00 pm
- 49% decrease in grass and leaves at the Eco Centre since the introduction of residential organics curbside collection in October 2016; could actually be a significantly larger decrease but green cart program is 120L carts; anticipate that residents still use the Eco Centre as green cart does not accommodate all of the residential yard waste
- Ensure that staff is engaged and knowledgeable
- Book exchange is a highlight for users
- Having indoor collection is beneficial; more inviting for users and materials are protected

Contact

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Region of Peel, Ontario
Population: 1,296,810

Description

The first Long Term Waste Management Strategy from 1997 endorsed the concept of a Community Recycling Centre (CRC) network as a means of reaching the waste diversion goal of 70% by 2016. This network was designed to service 97% of Peel residents within a 10 minute drive and includes key growth areas identified via population projections. A customer satisfaction survey and postal code survey from 2009 indicated that the majority of CRC users are from within the anticipated 10 minute drive.

The Region of Peel currently has six CRCs, two in Brampton, two in Caledon and two in Mississauga that are open to residents (single-family and multi-family) and small businesses. Locations and hours of operation for Battleford, Bolton, Brampton, Caledon, Fewster and Heart Lake (newest CRC opened 2014) CRCs are listed below.

Region of Peel Community Recycling Centre Location and Hours

Location	Address	Hours
Battleford	2255 Battleford Road Mississauga, ON L5N 8P6	Daily 8:30 am – 4:30 pm Extended hours Mon-Thurs to 8:00 pm May to October
Bolton	109 Industrial Road Bolton, ON L7E 1K5	Tue-Sat 8:30 am – 4:30 pm Closed Sun and Mon
Brampton	395 Chrysler Drive Brampton, ON L6S 6G3	Daily 8:30 am – 4:30 pm Extended hours Mon-Thurs to 8:00 pm May to October Reuse Store closed Sundays
Caledon	1795 Quarry Drive Caledon, ON L7K 1R9	Mon – Sat 8:30 am – 4:30 pm Closed Sunday
Fewster	1126 Fewster Drive Mississauga, ON L4W 2A4	Daily 8:30 am – 4:30 pm Extended hours on Thursday to 8:00 pm May to October
Heart Lake	420 Railside Drive Brampton, ON L7A 1L1	Daily 8:30 am – 4:30 pm Extended hours on Thursday to 8:00 pm May to October

The Heart Lake (NW Brampton) CRC is the first CRC operated by a contractor. The other five CRCs are operated by Region of Peel staff.

CRCs, see photos below, provide the following services:

- Public drop-off area for recyclable and non-recyclable materials
- Household hazardous waste drop-off area
- Reusable goods drop-off
- Pre-approved Business Hazardous Waste program at designated CRCs
- Reusable Goods stores at Brampton and Bolton CRCs



Region of Peel Battleford, Bolton, Brampton, Caledon and Fewster CRCs

All accepted materials/waste must be properly secured and sorted before entering the CRCs, it must also originate in Peel. Proof is required:

- Residents – identification with a current Peel address (e.g., driver's license and a tax or utility bill)
- Small businesses – an original signed letter on company letterhead
- Contractors – a signed contract or work order with a Peel address referencing the vehicle

For more [CRC drop-off guidelines](#) visit the Region of Peel website.

Recyclable materials accepted at CRCs include:

No Fee

- Blue box recycling items¹
- Residential yard waste (Boulton and Caledon CRCs only)
- Large metal appliances (white goods) and fixtures
- Scrap metal (max 8ft in length)
- Tires (passenger car and light truck tires)
- Select electronics²
- Shredded paper

Fees Apply

- Construction, renovation and demolition material (insulation must be double bagged). Asbestos is not accepted
- Scrap wood – maximum 1.2m (4ft) in length
- Drywall
- Shingles
- Clean fill (soil, sod, topsoil, clay and sand)
- Rubble (brick, concrete, asphalt, ceramic tile, porcelain)
- Garbage

¹milk cartons and juice boxes, aluminum cans, glass and plastic bottles (place caps in garbage), paper bags and non-reusable plastic bags (multiple plastic bags in one tied plastic bag only), cardboard food holders, polystyrene foam packaging, aluminum plates and trays, plastic tubs and lids, notebook paper (not shredded)

²computers and peripherals, monitors, televisions, printing devices, telephones, cell phones, PDAs, pagers, audio and video players, cameras, equalizers, (pre)amplifiers, radios, receivers/speakers/tuners, turntables, video game systems and accessories, players/projectors and video recorders

Peel's CRCs also accept residential household hazardous waste free of charge with a 80L limit per day for the following:

- Acids and bases
- Adhesives (all types)
- Aerosol cans (full or partially full)
- Antifreeze
- Brake and transmission fluid
- Chlorine
- Cleaners and detergent
- Fertilizers and pesticides
- Fire extinguishers
- Fuels (gas, kerosene etc)
- Pool chemicals
- Medication and pharmaceutical products
- Motor oil and filters
- Paints/stains and solvents
- Photographic chemicals

Other household hazardous waste accepted includes:

- Batteries (all types, including lead acid)
- Cooking oil
- Fluorescent light bulbs/tubes and ballasts (remove from fixture, maximum 40 bulbs per day)
- Mercury thermometers/thermostats
- Propane/helium cylinders – limit 5 per day, maximum 1 kg
- Syringes/needled/lancets (only in biohazard container; pick-up and drop-off containers at any CRC free of charge)
- Pharmaceuticals

CRCs take household garbage; clean fill (e.g., soil, sod, topsoil, clay, sand); construction, renovation and demolition material (insulation must be double bagged) with no asbestos; and rubble (e.g., brick, concrete, asphalt, ceramic tile, porcelain).

Items not accepted at the CRCs are:

- Asbestos
- Biomedical waste (e.g., items soiled with bodily fluids)
- Flares, fireworks and ammunition
- Food waste (green bin material)
- Heavy truck and tractor trailer tires
- PCB-contaminated waste
- Tires from businesses and heavy equipment
- Hazardous waste from businesses (businesses that generate small quantities of hazardous waste may apply to dispose of it at select CRCs)
- Hazardous waste from industrial, commercial and institutional sector

The Region of Peel operates reusable goods drop-off areas, exchanges and/or retail stores at CRCs. Donated items are resold at moderate prices at the Bolton and Brampton CRCs while residents are welcome to pick-up items, free of charge, at the Caledon CRC. Battleford, Fewster and Heart Lake CRCs provide drop-off only for reusable materials.

Items accepted for reuse include:

- Accessories
- Antiques and collectibles
- Books and media
- Building materials
- Dimensional lumber
- Doors and windows
- Eyeglasses
- Furniture (excludes Heart Lake CRC)
- Gently used clothing
- Home furnishings
- Household items
- Housewares
- Plumbing fixtures
- Power equipment
- Shoes
- Sports equipment
- Tools and shop equipment
- Toys
- Small appliances (working condition)

Items not accepted for reuse are:

- Products that don't meet current safety standards, including recalled items
- Baby items (e.g., crib, cradle, car seat, stroller, baby gate, playpen and baby walker)
- Toys for children under 3 year if age
- Recyclable materials (e.g., newspaper, office paper, cardboard and plastics)
- Large appliances (e.g., refrigerator, freezer, stove/oven, washer/dryer, furnace, water heater)
- Food products
- Used personal care items
- Mattresses
- Chemical products
- Propane tanks and cylinders
- Automotive products (e.g., tires, auto parts, batteries, oil, antifreeze)
- Building materials (e.g., plumbing fixtures, carpeting, floor padding)
- Broken furniture, damaged upholstery, bunk beds or other items in need of repair or assembly (e.g., water beds, modular office system/dividers)
- Lawn darts, helmets and face protectors
- Weapons of any sort

Salvation Army picks up reusable materials dropped-off at Battleford, Brampton and Fewster CRCs. Caledon Community Services staffs the drop-off and store at the Bolton CRC while Region of Peel Waste Operations staff operates the Caledon CRC drop-off and the contractor at Heart Lake subcontracts to Salvation Army.

CRCs also sell numerous items, as listed below, at all locations.

Region of Peel Items Available for Purchase at all CRCs

Item	Cost
Backyard composter	\$22
Bulk compost	\$35/tonne or 3.5¢/kg
Garbage tags	\$5/sheet of five tags
Rain barrels	\$50

Free confidential paper (e.g., taxes, bills, income statements and personal information) shredding events take place on designated days in May/June and September/October 2017 at CRCs. There is no limit to how much paper can be shredded.

The Region of Peel anticipates the implementation of a 'chemical cab' service in 2018 to collect household hazardous waste from multi-family residents. The waste would be transported to CRCs for processing.

Staffing

Staffing varies from five to twelve (e.g., platform staff, HHW staff, scale staff, reuse staff, administration staff, technical analytics staff, supervisory staff, foreman) at each CRC with busier sites having more staff.

Part-time staff are 17.5 -35 (non-bargaining) or 16–40 (bargaining) hours per week. Typically, there are more part-time staff on the weekends.

Financial

Original 1999 capital cost estimates were \$5.5 M per site on average as a green field project. The Bolton and Caledon CRCs were built on Regional property, the Fewster CRC property was purchased by the Region and Battleford and Brampton CRC sites are leased from the respective municipalities. Battleford and Heart Lake CRCs were built on green field space.

The design of the CRCs is fairly standard, with design changes made at each site as required based on operational needs, site limitations or permit requirements.

Current operational costs are approximately \$1.5 M per site on average, but the net is approximately \$1 M after revenues. See table below for more details.

Region of Peel Estimated CRC Capital and Operational Costs

	Battleford	Bolton	Brampton	Caledon	Fewster	Heart Lake
Year Completed	2004	1997 ¹	2002	2007 ¹	2008	2014
Capital Cost ²	\$7.2 M	\$2 M	\$6.1 M	\$3.5 M	\$10.8 M	\$9.5 M
Operational Cost	\$3 M	\$1.2 M	\$3 M	\$950,000	\$2 M	\$1.5 M
Approx. Lot Area	10,150 m ²	10,400 m ²	20,430 m ²	24,469 m ²	32,393 m ²	24,000 m ³

¹Year of upgrade

²Capital costs for each of the facilities was dependent on a number of factors including: need to purchase a site or use an existing municipal site, extent of services offered (e.g., reuse drop-off versus store, site design (e.g., offices versus platform, site equipment (e.g., 40 yard bins versus Transtors)

Tipping fees collected at CRCs are weight based as seen in the table below. These fees along with revenue from the partial subsidy of HHW, tires and electronics provincial EPR programs and a portion of residential and business property taxes all contribute to financing the CRCs.

Region of Peel CRC 2017 Tipping Fee Schedule

Weight of Load ¹	Drop-off Fee ²
Up to and including 50 kg (110 lbs)	\$5 flat rate
Greater than 50 kg (110 lbs)	10¢ per kg

¹Maximum load weight of 750 kg (1653 lbs); weight of load is calculated in increments of 5 kg and payment is rounded to the nearest dollar

²For construction and demolition (drywall, shingles, rubble), garbage, hard plastics and yard waste

Note: Vehicles and/or trailers containing only items accepted free of charge are considered to have dedicated loads. Vehicles and/or trailers with both items accepted free of charge and items subject to drop-off fees are considered to have mixed loads. The entire weight of a mixed load is subject to drop-off fees.

At this time, residents are not charged for appliances and businesses are not charged for hazardous waste dropped-off at CRCs

Quantitative Results/Tonnages

In 2016, the six CRCs diverted 45,361 tonnes and accounted for 9% of the Region's diversion rate.

Education/Communication

The Region of Peel promotes CRC education via their website, brochures (e.g., CRCs, HHW, sharps, e-waste) and quarterly advertisements in local newspapers (e.g., Mississauga, Brampton). Additionally, mobile signs and display booths at public events provide information to residents and small businesses.

Items for Purchase

Item	Price*
Find at Map AREA #4 , the Scale House:	
Backyard Composter	\$19.47 + HST
Garbage Bags	\$5 / sheet of 5 bags
Kitchen Containers	\$5 + HST
Rain Barrels	\$44.28 + HST
Find at Map AREA #5 , the Waste and Recycling Platform:	
Compost	\$35 / tonne (3.5 cu m/tp) + HST

* Prices subject to change. All items available while supplies last.

Compost

Compost is seasonally available for purchase at the CRCs. Please bring your own containers.

Peel Compost is produced from organic materials that include kitchen waste, garden waste, leaves and branches.



Packing Tips

(see reverse side for Areas)

Recommended order to pack your vehicle:
Load "first in, last out"

First: Chargeable items (Area #3)
Second: Non-Chargeable items (Area #3)
Third: Household Hazardous Waste (Area #2)
Last: Reusable goods for donation (Area #1)

- Pre-sort your load and pack similar materials together.
- Separate chargeable and non-chargeable items.
- Remove all fluids (e.g. oil, air) from gas-powered equipment, such as lawn mowers.

Drop-off Tips

- Bring your ID: proof of Peel residency is required.
- Avoid line-ups: drop off during weekdays or the May to October extended hours.
- Bring a full load: avoid making multiple trips with smaller loads in order to save time and disposal fees.
- Declare your load: tell the Scale House attendant what kind of materials you are dropping off.
- By-pass the exit line: if you are only dropping off a dedicated load of non-chargeable items, ask the Waste and Recycling Platform (Map Area #3) attendant for a token to exit quicker.

For more information on Region of Peel, waste management services, check peelregion.ca/waste



Heart Lake Community Recycling Centre

420 Railside Dr., Brampton

Hours

Daily: 8:30 a.m. – 4:30 p.m.
Extended hours: Thurs. to 8 p.m. (May through October)
*All CRCs are closed on statutory holidays



Area #1:

Reusable Goods for Donation

Drop off reusable goods in good condition at The Salvation Army Donor Welcome Centres.

Acceptable items:

- Books and media
- Eye glasses
- Furniture
- Gently used clothes and shoes
- Household items
- Textiles
- Tools and shop equipment
- Toys
- Small appliances (in working condition)
- Sports equipment

Donations are accepted at the discretion of the operator. Items that are unacceptable, or are in poor condition, will not be accepted for donation. A drop-off fee may apply to them.

420 Railside Dr., Brampton



Area #2:

Household Hazardous Waste

Drop off your Household Hazardous Waste (HHW) for FREE.

Acceptable items:

- Cleaners and detergents
- Cooking oil
- Batteries (all types)
- Fertilizers and pesticides
- Fluorescent lights and ballasts (40 bulbs per day, removed from fixture)
- Mercury
- Motor oil and filters
- Medication
- Paint and stains
- Propane tanks (max 5 per day, max. 18 kg/40 lbs.)
- Pool chemicals

Limits:

- 80 L (20 gal) per day on HHW items
- 30 L (8 gal) is maximum container size accepted

Unacceptable items:

- Ammunition
- Asbestos
- Explosives, fireworks and flares
- Home medical waste (except sharps)
- PCB contaminated waste

Business Hazardous Waste (BHW) Program

- Businesses must be approved for the BHW Program before they can make a drop-off.

For a complete list of acceptable HHW items, and BHW details, visit peelregion.ca/waste

Sharps Program

- Pick up a FREE biohazard container from HHW.
- Discard sharps – needles, syringes, and lancets in a biohazard container.
- Return the container for FREE disposal and get a FREE replacement container.

Area #3:

Waste and Recycling Platform

Load Weight	Drop-off Fee*
Up to, and including, 50 kg (110 lbs.)	\$5 flat rate
Greater than 50 kg (110 lbs.)	10 cents per kg

Payment method: cash, debit, Visa, Mastercard
* Drop-off fees subject to change.

Chargeable items:

- Asphalt
- Carpet and underlay
- Clean fill (soil, sand, topsoil and sand)
- Construction, renovation and demolition material
- Drywall
- Garbage
- Hard plastic (toys, lawn furniture)
- Mixed loads (a mix of chargeable and non-chargeable items)
- Pressure treated lumber (max. 1.2 m (4 ft) long)
- Rubble (brick, concrete, rocks, ceramic tiles, and porcelain)
- Scrap wood (max. 1.2 m (4 ft) long)
- Shingles
- Yard waste

Non-chargeable items:

- Blue cart materials
- Large metal appliances
- Tires: car or light truck
- Select electronics (lens computer, hard drive fixed)
- Scrap metal (max. 2.4 m (8 ft) long)
- Shredded paper (in paper bag)

Only dedicated loads of non-chargeable items are accepted FREE of charge.

Unacceptable items:

- Asbestos
- Heavy truck, tractor and heavy equipment tires

Region of Peel Heart Lake Community Recycling Centre Brochure

Lessons Learned

- Fewster's CRC location is not desirable (it is surrounded by auto body shops & the traffic congestion on the road is horrible making it not attractive to residents) and was a decision based on existing permitting versus the original planned location (based on population, access, etc.). However, it has a long queuing area on site and the Region of Peel has implemented a couple of programs that drive small businesses to the site. The residents who use it are happy as there are usually no long queues so they are in and out quickly.

- Battleford and Brampton CRCs are close to major roads but do not have a long queuing area on site. Vehicles using the facility often are lined up on the road waiting to get on site especially on the weekends.
- The ability to be modular (or redesigned based on future influences such as EPR materials being added to what is accepted at the CRC) should be considered. Adding select electronics and tires to the EPR program in Ontario resulted in creative operational changes (e.g., dedicated loads, token bypasses). This assists especially tight sites (e.g., Battleford) where there may not be room to add bins based on material coming on stream (e.g., EPR materials)
- Customer Satisfaction Surveys (Regional as well as within Waste Management Division) have shown consistently high approval of staff (friendly, helpful, etc.). Peel discovered that you can't please everyone when it comes to tipping fees and hours of operation, for instance, one respondent replied that we should be open 24 hours/365 days of the year but would only use the facility once per year. The 2009 survey had only ten per cent of respondents supporting the tipping fee. The rest of the respondents wanted to see cheaper fees, fees driven by market or material (e.g., yard waste, metal, dirt, garbage or anything that is recyclable/compostable), or differentiated by source (e.g., there should be cheaper fees for contractors, for those doing home renovations), free tipping (e.g., schools), annual and/or regular free days, and fees specific to vehicle type or size. The Region has found that extending the hours of operation has only resulted in the early birds coming an hour earlier and still having the back-up in the middle of the day especially on weekends (when it's mostly residents and small businesses). Differentiated tip fees are a possibility but would probably add time on to processing and there have been negative comments related to that in the survey responses. Until now The Region of Peel prefers to weigh the loads and apply a set tipping fee. They believe that flat fees are too subjective and end up in arguments, inappropriate language, complaints to politicians, etc.
- If you can afford it – cover the site. This provides much better working conditions for staff and for users when they unload their materials, as well as keeping some materials dry and more marketable (e.g., mattresses).
- Installed cameras for safety and liability reasons which took many years to accomplish.
- Staff is highly educated (HHW operators) and trained (Regional and provincial programs). This is very important when you consider the materials collected and transported at/on/from the site.
- Sites are signed but many people do not read signs. Some signage has actually become more (or all) graphic as we have a large population that do not speak or understand English. Some materials have been translated but not anything related to CRCs.

Contact

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Spruce Grove, Alberta
Population: 34,070

Description

The Eco Centre at 50 Diamond Avenue (open Tuesday to Saturday, 10:00 am – 6:00 pm; closed Sunday, Monday and holidays) accepts all blue bag recyclables (mixed paper, newspaper, boxboard, plastic containers #1-7, clear glass jars), cardboard, organic waste, tires, and electronics for no charge. Wood and construction material (e.g., drywall, shingles) are accepted for a fee. Household hazardous waste is also accepted along with propane tanks, white goods and excess garbage.

The busiest days of the week are Saturday and Tuesday. In January 2018 Eco Centre hours will change to Monday to Saturday 10:00 am – 5:30 pm.

The City of Spruce Grove does not define who is allowed to use the Eco Centre, however, residents are strongly encouraged to use the facility. Some small businesses use the facility as well.

At this time the Eco Centre has run out of space. Originally, the Eco Centre was to move to a larger site in 2018, these plans have changed and the anticipated move is planned for 2020.

Staffing

Two full time staff (four, ten hours days) and one half-time staff (20 hours) work at the Eco Centre.

Financial

The general tax base along with garbage and mixed construction and demolition drop-off fees listed below, and revenue from materials (e.g., household hazardous waste, electronics) all contribute to Eco Centre funding.

City of Spruce Grove Eco Centre Rates

Size	Rate (2017)
Bagged garbage (up to four bags)	\$2.75/bag
Small item (e.g., chair)	\$5-10/item
Large item (e.g., sofa)	\$12-21/item
Truck or trailer load: 1 m ³ , ½ level truck box	\$17/m ³
2 m ³ , level box truck	\$34/m ³
3 m ³ , heaping truck box	\$51/m ³
Mixed construction and demolition	\$30/m ³
Propane tanks	\$1.75 per tank less than 20lbs \$3.50 per tank 20 lbs or more
White goods requiring CFC removal	\$16 per appliance

There is no cost-share arrangement with Stony Plain and Parkland County at this time.

Quantitative Results/Tonnages

In 2016, 28,472 users dropped-off items at the Eco Centre. A significant number of Spruce Grove multi-family residents use the Eco Centre as curbside recycling collection is not available. It is noted that residents from Stony Plain and Parkland County use the Eco Centre.

During 2016 the following materials were diverted at the Eco Centre:

- 119 tonnes blue bag materials (e.g., glass jars, metal cans, mixed paper, shredded paper, plastic containers, deposit items)
- 98 tonnes cardboard
- 217 tonnes metal
- 284 tonnes organics
- 427 tonnes mixed construction and demolition
- 84 tonnes electronics

Additionally, 353 tonnes of garbage was collected at the Eco Centre in 2016.

Education/Communication

One-on-one education from Eco Centre attendants is the primary form of education followed by the City of Spruce Grove website.

When Eco Centre changes or events take place (e.g., change of Eco Centre hours on January 2018) the Communications Department develops signage and promotes the change via Twitter and the weekly local paper.

Lessons Learned

- Ensure that the Eco Centre has room to grow
- Have one staff member walking around the site at all times to help educate users
- Users have difficulty reading; consider using symbols (e.g., Parkland County)

Contact

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Strathcona County, Alberta
Population: 98,040

Description

The Broadview Enviroservice Station accepts a wide variety of items including:

Sorted:

- Mixed paper
- Corrugated cardboard
- Plastic – containers, bags and film, flower pots, utensils Styrofoam (egg cartons, clean meat trays, plates and cups, takeout containers)
- Metal – cans, pie plates
- Glass – jars
- Brush and yard waste
- Clothing
- Clean tires
- Household hazardous waste
- Paint
- Motor oil
- Electronics
- Appliances

The Enviroservice station provides seasonal hours. From mid-April to mid-October it is open on Monday to Wednesday and Friday 8:00 am – 8:00 pm, Thursday 8:00 am – 9:00 pm and on Saturday and Sunday 8:00 am – 6:00 pm. Over the winter from mid-October to mid-April the hours are Monday to Wednesday and Friday 9:00 am – 6:00 pm, Thursday 9:00 am – 8:00 pm and Saturday and Sunday 9:00 am – 6:00 pm.



Strathcona County Broadview Enviroservice Station

The Enviroservice station also hosts the "HodgePodge Lodge" which is a reuse store open during the summer months.



Strathcona County Broadview Enviroservice Station HodgePodge Lodge (Reuse Store)

Although Strathcona County consists of mainly single family homes, both businesses and multi-family use the Enviroservice station as well. It is common for small businesses to bring cube vans or trailers full of cardboard and plastics for recycling. Businesses are also permitted to drop off paint, electronics and oil, however, Strathcona County requests only small quantities for the site to be managed properly and efficiently. Businesses are not permitted to drop of household hazardous waste.

Staffing

The Envirooservice station has two full time staff and three casual staff. It is noted that the three casual staff work a full 40 hour week most of the time. Realistically, there are five full time staff, but for budgeting purposes, it is defined as two full time and three casual.

Financial

The Enviroservice station and all other Community Recycling Services are entirely tax supported. Any revenue from the EnviroService Station goes back to taxes.

Quantitative Results/Tonnages

During the 2016 Enviroservice season the following items were diverted:

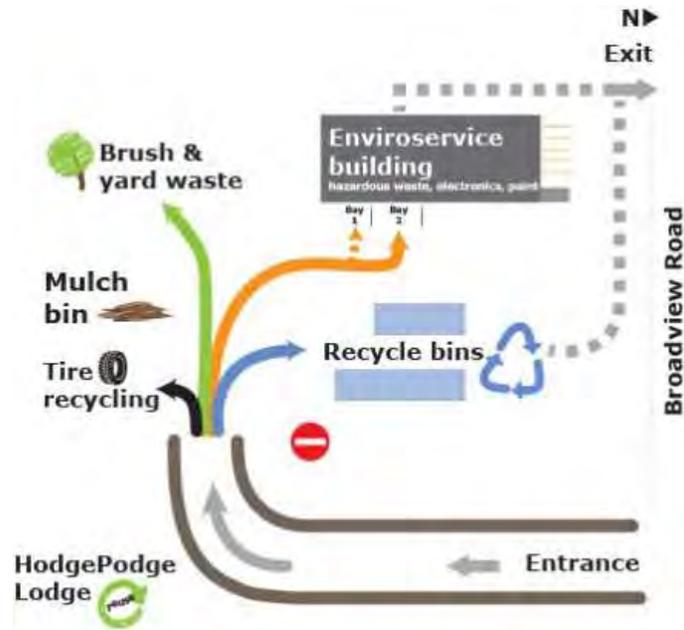
- 143 metric tonnes electronics
- 90,103 litres used oil
- 10,848 passenger tires
- 243 metric tonnes of liquid and aerosols
- 1,094 barbeque propane tanks

Saturday and Sunday are the busiest days for the Enviroservice station, with an estimated 20% more traffic than other days of the week. Typically, the busiest time on Saturday is 12:00 pm – 4:00 pm, after 4:00 pm usage decreases significantly. On Sunday, usage decreases significantly after 3:00 pm.

A significant decrease in usage is noted during the winter months when compared to the summer months. The reduced hours over the winter accounts for the decreased usage but also provides a safer environment for staff as they are not working in the dark.

Education/Communication

Education is primarily through the free [Green Routine App](#) that sends out notifications. Information can also be found on the Strathcona County website (e.g., map below), newspaper ads and by word-of-mouth.



Strathcona County Broadview Enviroservice Station Site Map

Lessons Learned

Transition to the Enviroservice Station, brought numerous successes:

- Introduction of compactors and the use of a grinder for managing brush/yard waste
- Moved away from event style collection to a permanent collection building
- Volumes grew and the number of users quadrupled due to the convenience of the new site which led to additional operating hours and staff. With increased residential expectations, more residents are visiting more frequently and expect quick and efficient service.

Contact

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Orange County, NC

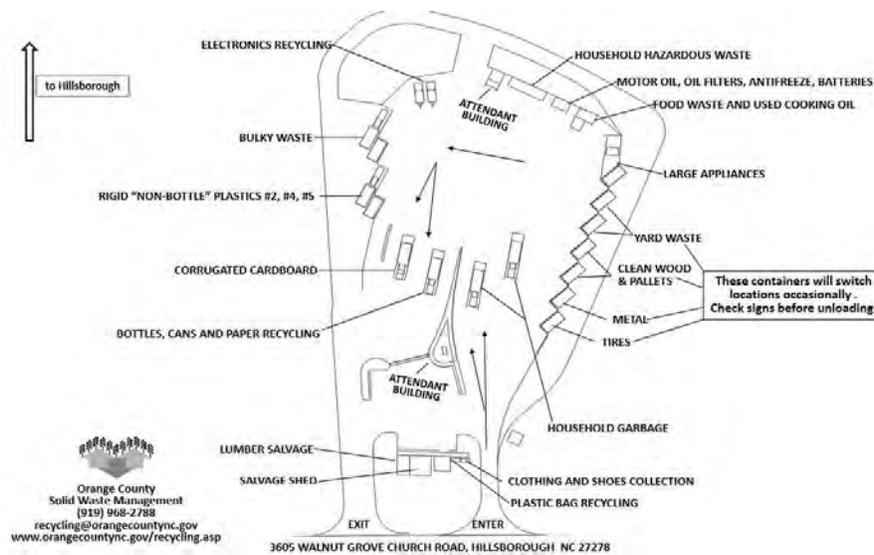
Description

Orange County, NC has five Solid Waste Convenience Centers (SWCC) at Bradshaw Quarry Road, Ferguson Road, High Rock Road, Millhouse Road (temporary Center) and Walnut Grove Church Road that accept a wide variety of materials from residents. Loads are limited to one car or pick-up truck per weekday or weekend.

Staffed SWCC opened in 1993, these facilities are strictly residential, no business materials are allowed.

The Eubanks Road SWCC is closed for renovations. In January 2018, this Center is anticipated to open and will accept the same materials as Walnut Grove Church Road.

Walnut Grove Church Road SWCC, see site map below, accepts the most diverse type of items. It is open Monday, Tuesday, Thursday and Friday 7:00 am – 6:00 pm, on Saturday 7:00 am – 5:00 pm and Sunday 1:00 pm – 6:00 pm. The SWCC is closed on Wednesday.



Orange County Walnut Grove Church Road SWCC Site Map

Materials accepted include:

- Paper
- Bottles and cans
- Cardboard
- Rigid plastic #2, #4, 5# (tubs, cups, buckets, non-battery operated toys)
- Plastic bags
- Food waste
- Yard waste
- Electronics
- Household hazardous waste
- Cooking oil
- Scrap metal
- Clean wood and pallets
- Lumber salvage
- Tires
- Large appliances
- Motor oil, oil filters, antifreeze
- Batteries
- Household garbage
- Bulky waste (no mattresses or box springs)
- Clothing and shoes
- Salvage shed (no clothing, carpet, yard sale remnants, broken furniture or trash items, visits limited to 10 min)

Orange County collects large non-bottle rigid plastics such as plastic playground slides, kiddie pools or large plastic drums (both ends removed) at Bradshaw Quarry Road, Ferguson Road, High Rock Road and Walnut Grove Church Road SWCC in open box containers. Small rigid plastics are accepted at these

locations and Millhouse Road Center, and at four 24-hour recycling drop-off sites located throughout Orange County in the purple bins viewed below.



Orange County Rigid Plastic Container

Rigid plastics are considered to be #2 HDPE, #4 LDPE and #5 PP non-bottle plastics and include the following items (see below): plastic buckets, cups and tubs, drums (empty), flower pots (larger than one pint), nursery trays rigid, not soft bubble packs), lawn furniture (no PVC #3, laundry baskets, dish drainers, garbage cans, recycling bins, milk crates, soda crates, pet carriers, stadium cups, plastic toys, all totes and tote lids.



Orange County Accepted Rigid Plastics

Rigid plastics must be empty, clean, free of dirt and food residue. When possible, metal screws, axles (wagons, "Big Wheels") and bucket handles should be removed.

Starting on January 2018, mattresses will be accepted at Walnut Grove Church Road and Eubanks Road SWCC.

Detailed [Solid Waste Convenience Center Policies and Procedures](#) are found on the Orange County website.

Staffing

The Walnut Grove Church Road SWCC has the equivalent of 2 ½ full time staff for Monday, Tuesday, Thursday and Friday. Over the weekend more staff works as needed. During the growing season (spring-fall), additional staff is required to assist with yard waste. Permanent and temporary staff work at this facility.

Financial

Each habitable residence, apartment, business or non-profit is levied an annual fee to assist with the operational costs of County recycling programs. For fiscal year 2017-2018 the annual fee is \$128. This fee supports about 35% of the SWCC operating costs, while the remainder comes from the General Fund. Additionally, material revenue is used to offset the budget.

Quantitative Results/Tonnages

Automatic gate counters are used to determine how many vehicles enter the Walnut Grove Church Road SWCC. During the 2016-2017 fiscal year (July 1, 2016 to June 30, 2017) 149,922 vehicles used this facility.

For the 2016-2017 fiscal year, the following materials were diverted from landfill by all five SWCC:

- Metal – 644 tons
- Tires – 60 tons
- White Goods – 254 tons
- Wood – 153 tons
- Yard Waste – 862 tons

Education/Communication

As SWCC were introduced in 1993, facility procedures are well entrenched in residents, as such the Orange County website is the primary form of education. The website has a [Walnut Grove Church Road brochure](#) online.

When new programs or materials are accepted at the SWCC then banners, signage, handouts, and newspaper and radio advertisements are used to promote the initiative. Additionally, Orange County publishes the Watching Our Wasteline newsletter twice a year and provides social media outreach on the [Orange County Solid Waste Management Facebook page](#) to keep residents informed.

Lessons Learned

- Orange County is working towards hiring only permanent staff (can be 20, 25, 35 and 40 hours per week) as they have more pride and ownership for their positions than temporary staff
- Ensure that staff has enough time to learn about new program or material being accepted
- Have not had any injuries, but are modifying compactors to run only 70 seconds at a time as a safety precaution
- Reuse shed is a popular program
- Security cameras assist greatly with ensuring that the correct material is placed in the correct bin; will send letter with photo of resident placing material into incorrect bin to the resident

Contact

Terry Case Thomas
Solid Waste Collection Manager
Orange County
1207 Eubanks Road
Chapel Hill, North Carolina
T: (919) 968-2885
tthomas@orangecountync.gov

Appendix 8

Community Profiles

Community Profiles

This section contains community profiles, which are solid waste resumes of each community in Nova Scotia. The purpose of the profile is to summarize key features, and system considerations that introduce the type of information that will be available in Section 4 - Financial Modeling.

These community profiles have been created based on information provided by each community

A User's Guide

The following pages provide information about each community in the different regions in Nova Scotia. This section was created to guide the reader through the profile layout and to explain the intent of each part of the community profile.

1 Community Data

Community data are summarized in this box. The data includes population, total households, community area, median age of residents and percent (%) ethnic diversity. There is also a map that illustrates where the region is located in Nova Scotia. This section aims to give the reader a brief overview of the community and its population.

2 Community Overview

The community overview provides information about geographic location, community qualities, its economy and demographics. This overview is intended to provide an understanding of the community's characteristics which may dictate the community's need or desire for change and the tools required to implement change.

3 Solid Waste Management Program Summary

Tables are used to summarize the waste services provided which includes garbage, recyclables and organics (yard waste and/or food waste). The information includes residential curbside and multi-family and ICI collection, as well as residential self-haul.

4 Solid Waste System Summary

This section provides insight into the community's solid waste management system.

5 Waste Management System Diagram

A flow diagram illustrates the solid waste management system. Shading is used to identify the various aspects of the solid waste system that are controlled or managed by the subject community. It also identifies other parts of the solid waste management system that are controlled by the private sector or other public sector entities.

6 Solid Waste Facilities

Solid waste facilities in the community are summarized in a table and plotted on a map. The facilities identified include landfills, material recovery facilities (MRF), transfer stations, recycling depots, landfill gas recovery facilities and energy-from-waste (EFW) facilities.

7 Public Education and Outreach Programs

This section highlights various public education and outreach programs provided by each community.

8 Challenges and Future Plans

Challenges and Future Plans focuses on cause and action in each community.

REGION 3

1.1 Town of Amherst

Community Data



1

Population:	9,413	Area:	1,207 ha
Households:	22,230	Median Age:	47.7
Population Changes:	-3.1% (2011-2016)	Mother Tongue:*	1.4%

* Other Than English or French:



The Town of Amherst is located in Cumberland County, Nova Scotia, Canada, at the northeast end of the Cumberland Basin, an arm of the Bay of Fundy. Amherst is strategically situated on the eastern boundary of the Tantramar Marshes, 3 km east of the interprovincial border with New Brunswick and 65 km southeast of the City of Moncton. It is 60 km southwest of the Confederation Bridge to Prince Edward Island. Amherst is the largest population centre in Cumberland County.

The original Town of Amherst was established in 1764, 2 miles west of its present location following the Expulsion of the Acadians. New England settlers were invited to settle many communities along the shores of the Bay of Fundy. One of these settlements grew to become the Town of Amherst. A grist mill and tannery were built over a mile to the east of the settlement. The community gradually moved closer to them so that by 1850 Amherst was located where you find it today.

In 1908 the manufacturing output of Amherst's industries was not exceeded by any centre in the Maritime Provinces, and the term "Busy Amherst" was well deserved. Many of the fine old buildings along Victoria Street are considered industrial artifacts because they were constructed during a period of tremendous industry growth. Local contractors employed local craftsmen, who used local materials. Notice the emphasis on sandstone and brick, both locally produced and delightful detail which reflects the skilled craftsmanship prevalent in the 19th century.

While much has changed over the years, the Town of Amherst remains the retail and industrial centre of Cumberland County and the southeastern part of New Brunswick.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	728	6	29	1,168	N/A
Tonnes collected per household	0.23	No Data	0.0090	0.3672	N/A
Collection method	Manual	Manual	Manual	Manual	N/A
Collection frequency	Bi-weekly	Bi-weekly	Bi-weekly	Bi-weekly	N/A
Container limit (#)	4	Unlimited	Unlimited	1	N/A
Container size (max L)	60	60	40	175.05	N/A

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	2,544	N/A	N/A	No Data	877
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	No Data	No Data	No Data	No Data	No Data
Collection charge mechanism	No Data	No Data	No Data	No Data	No Data
Container size (cubic yards)	No Data	No Data	No Data	No Data	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	105	No Data	52	12	26	No Data	105
Tonnes accepted per capita	0.0111	No Data	0.0056	0.0013	0.0028	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	\$175.00	No Data	No Data	\$75.00	\$35.00	No Data	\$60.00
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

4

Solid Waste System Summary

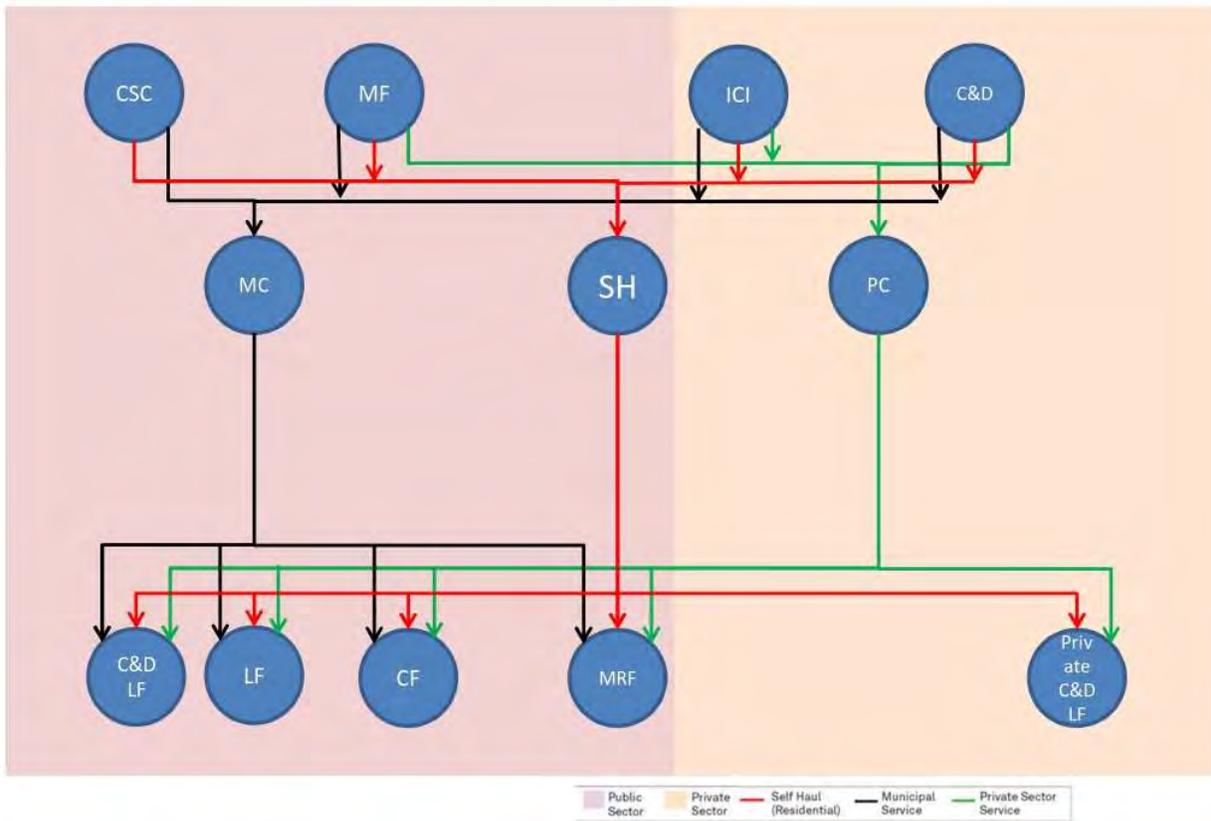
The Town’s contracted hauler collects materials from the residential sector only. Amherst provides bi-weekly collection of residual waste and organics one week, with recyclables collected the following week. The Town allows up to ten (10) bags of leaf and yard waste, in addition to the green cart, with organics collection. Special collection is conducted each spring which collects bulky waste, white goods and Construction and Demolition (C&D) materials (eliminated in 2018). The residential sector includes apartment buildings with three (3) or less units in them.

The Town funds its residential solid waste program through a uniform charge of \$165 per household per year. This uniform charge covers curbside collection costs and tipping fees paid to the Cumberland Joint Services Management Authority (CJSMA). CJSMA is a Board Authority made up of the three (3) municipal units in Cumberland County, of which the Town of Amherst appoints two (2) elected officials to serve on the six-member CJSMA Board.

The Industrial, Commercial and Institutional (ICI) sector of the Town is responsible for the disposal of the waste they generate by contracting private haulers for disposal. This sector includes apartment buildings with four (4) or more units.

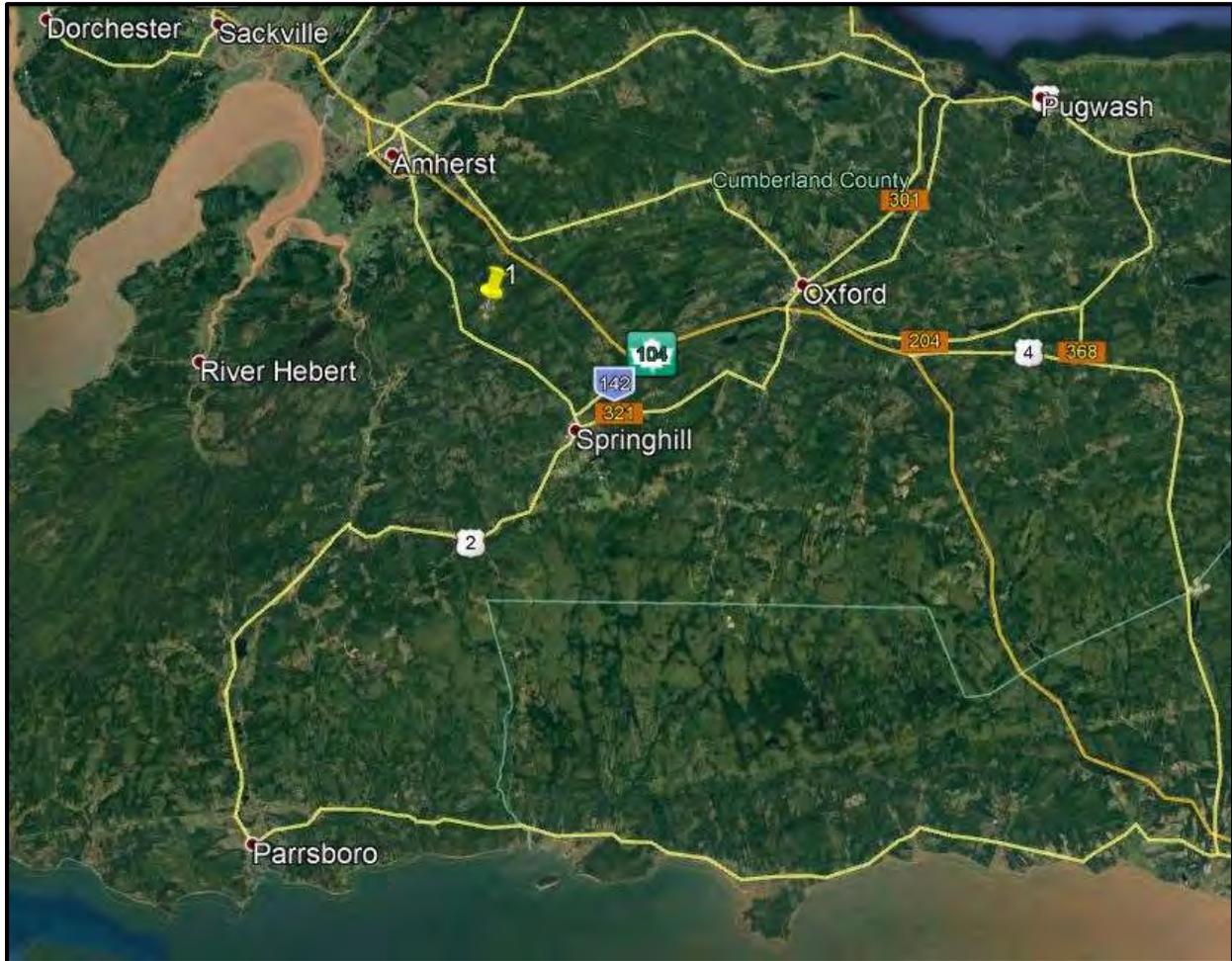
All waste material from both sectors is transported directly to the Cumberland Central Landfill (CCL) Site located 13 km from the Amherst border. The CCL is operated by CJSMA. Facilities at the CCL include a Material Recycling Facility (burned September 2017), second generation landfill, compost facility, C&D landfill, and an asbestos disposal site. The CCL site also receives leaf and yard waste and scrap metals.

5



A flow diagram illustrates the solid waste management system. Shading is used to identify the various aspects of the solid waste system that are controlled or managed by the subject community. It also identifies other parts of the solid waste management system that are controlled by the private sector or other public sector entities.

Solid waste facilities in the community are summarized in a table and plotted on a map. The facilities identified include landfills, material recovery facilities (MRF), transfer stations, recycling depots, landfill gas recovery facilities and energy-from-waste (EFW) facilities.



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	△	Accepts garbage and C&D waste	Little Forks Municipal Landfill 2052 Little Forks Rd. Nappan, NS
1	CF	△	Accepts organics	Little Forks Municipal Landfill 2052 Little Forks Rd. Nappan, NS
1	MRF	△	Accepts recyclables	Little Forks Municipal Landfill 2052 Little Forks Rd. Nappan, NS

6

Public Education and Outreach Programs

The CJSMA also provides public education to Amherst’s residential and business sectors based on the Town’s solid waste program and by-law.

7

Public education programs include:

- a) Annual collection calendars
- b) Spring and fall solid waste newsletters
- c) Website with on-line searches “What goes where” database
- d) Social media, newspaper and radio ads
- e) Solid waste app with customizable collection reminders
- f) Public/private information sessions

8

Challenges and Future Considerations

In Nova Scotia, solid waste is regulated by the Province, but solid waste service delivery is performed by municipalities. Challenges can arise when the regulator revises solid waste related regulations. Rising solid waste related costs also pose a challenge. CJSMA is challenged to provide the infrastructure needed to maintain facilities/services on shrinking populations/decreasing volumes. The Town funds its residential solid waste program through a uniform charge of \$165 per household per year. This fee will increase to \$175 per household for 2018/2019.

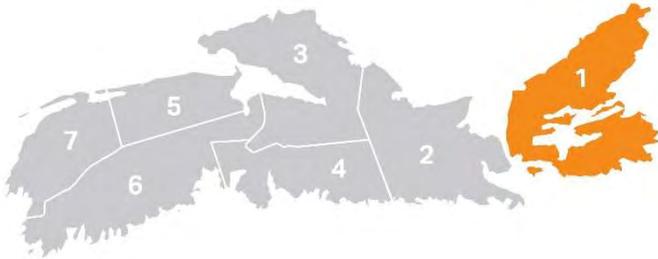
Solid Waste Management Flow Chart Legend	
CSC	Curbside Customer
MF	Multi-family Customer
ICI	Industrial, Commercial and Institutional
C&D	Construction and Demolition
SH	Self-haul
MC	Municipal Collection
PC	Private Collection
TS	Transfer Station (includes SH recycling depots)
LF	Landfill
PLF	Private Landfill
CF	Composting Facility
MRF	Materials Recovery Facility
WTE	Thermal Waste to Energy Facility
Ⓢ	Private
△	City, Municipality or Region
©	Contracted

Region 1

Region 1

1.1 Inverness County

Community Data



Population:	17,240	Area:	9061 ha
Households:	9,876	Median Age:	50.6
Population Changes:	9,876	Mother Tongue*	4.9%

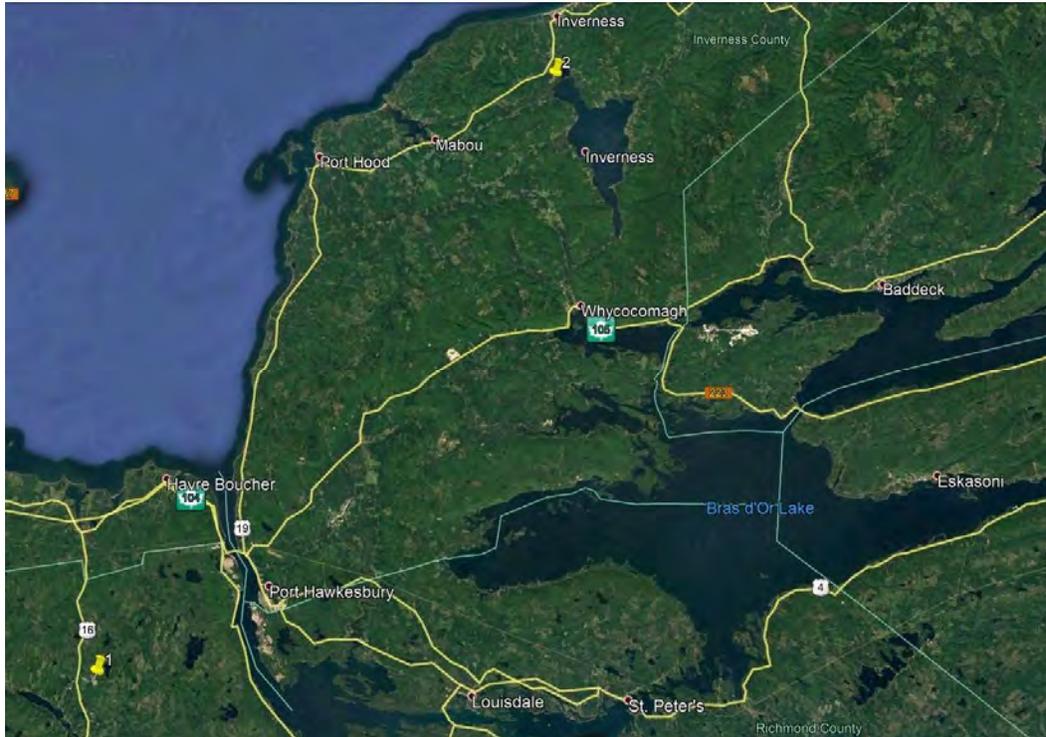
** Other Than English or French:*



Inverness County comprises the entire western coastline of Cape Breton Island, including Cabot Trail and reaches inland as far as Bras d'Or Lakes.

Solid Waste System Summary

Collection is hauled by Municipal trucks for residential and ICI private contract.



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill (Region 2a)	△	Accepts garbage	Guysborough, Landfill Site, 151 Waste Management Road, Boylston NS
2	MRF	△	Recyclables Processing Facility	Inverness Material Recycling Facility, 15109 Highway 19, Strathlorne NS
2	TS & CF	△	Accepts garbage, recyclables and organics	Kenloch Transfer Station, 420 West Lake Ainslie Rd., Kenloch NS

Public Education and Outreach Programs

No information provided.

Challenges and Future Considerations

Municipal bylaw introduced to ban black garbage bags and move to clear bag and possible residential organics program.

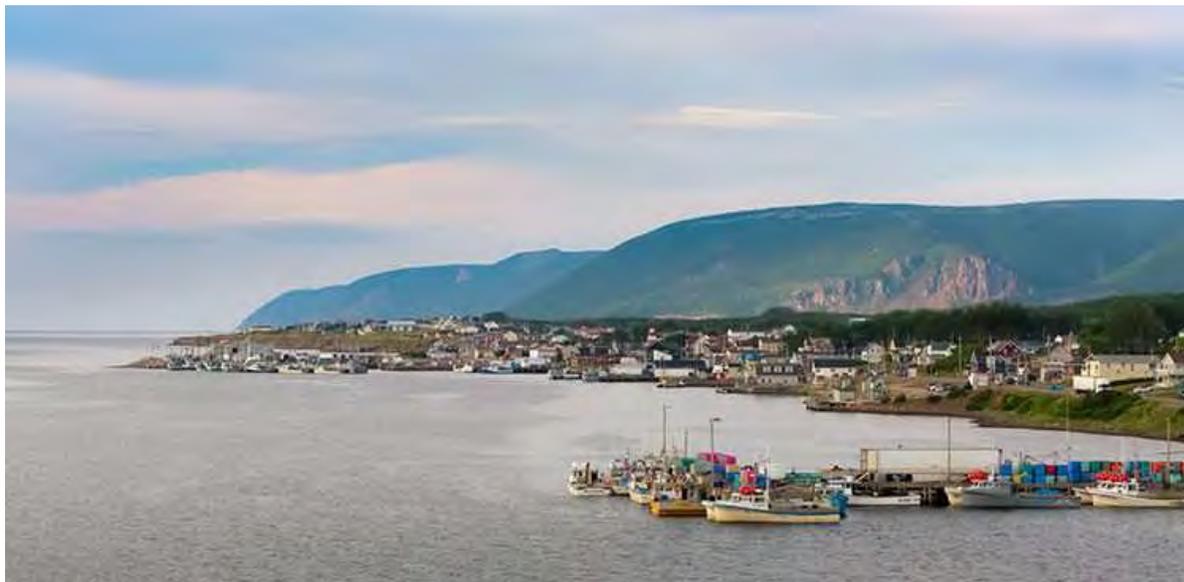
1.2 Town of Port Hawkesbury

Community Data



Population:	3,214	Area:	810 ha
Households:	1,300	Median Age:	46.3
Population Changes:	-4.7% (2011-2016)	Mother Tongue:	2.2%

** Other Than English or French:*



Port Hawkesbury is a Town located on the southwestern end of Cape Breton Island, on the north shore of the Strait of Canso in the Canadian province of Nova Scotia. The Town was originally named Ship Harbour (after the harbour which it is located) and is largely a service centre for western Cape Breton Island. Many of its residents work in large industries in an industrial park located in the adjacent community of Point Tupper, Richmond County.

Port Hawkesbury is a major service centre, located on the beautiful Strait of Canso, and offers a unique blend of economic, cultural and lifestyle opportunities to those living and visiting the area.

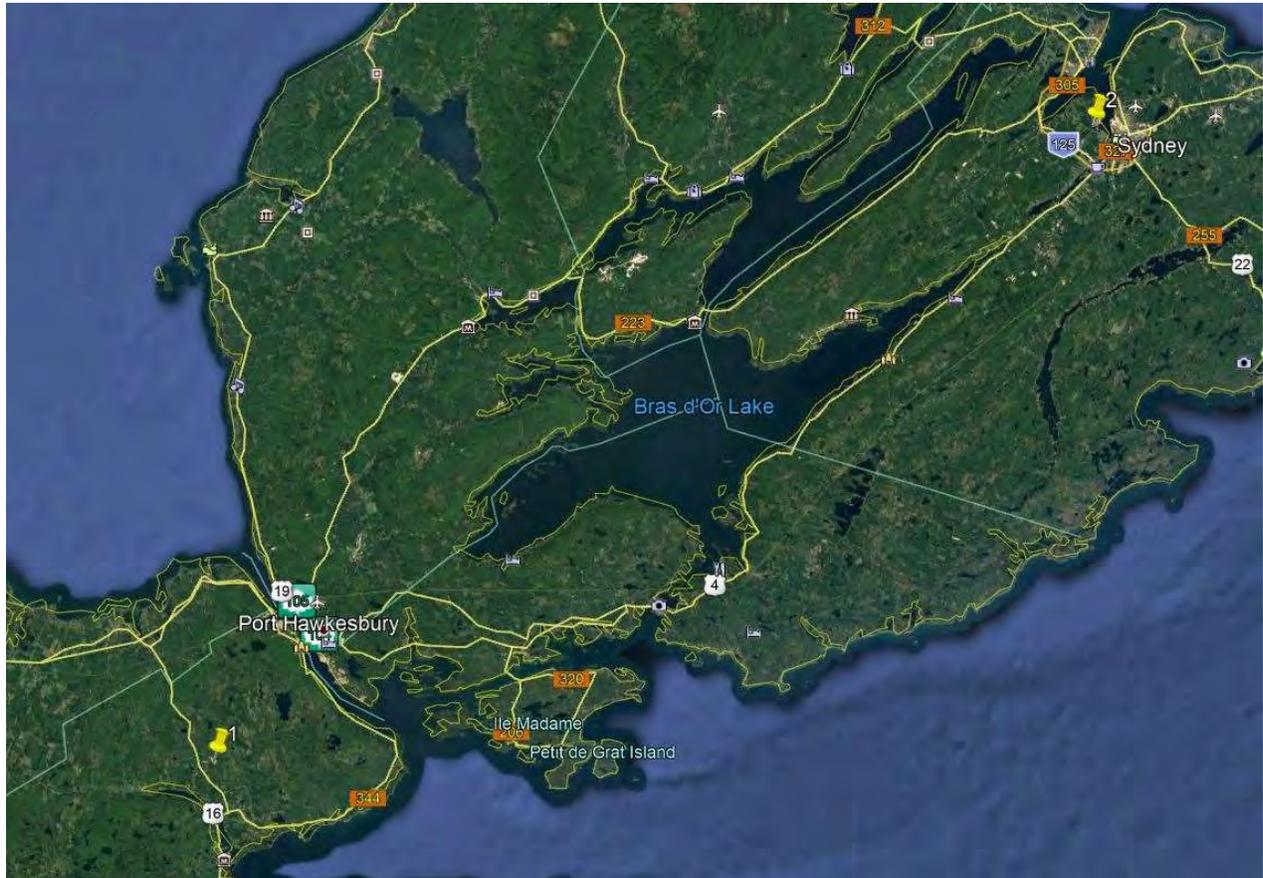
RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	No Data	N/A	N/A	N/A	N/A
Tonnes collected per household	N/A	N/A	N/A	N/A	N/A
Collection method	No Data	No Data	N/A	N/A	N/A
Collection frequency	No Data	No Data	N/A	N/A	N/A
Container limit (#)	No Data	No Data	N/A	N/A	N/A
Container size (max L)	No Data	No Data	N/A	N/A	N/A

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	N/A	N/A	N/A	No Data	No Data
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	No Data	No Data	No Data	No Data	No Data
Collection charge mechanism	No Data	No Data	No Data	No Data	No Data
Container size (cubic yards)	No Data	No Data	No Data	No Data	No Data

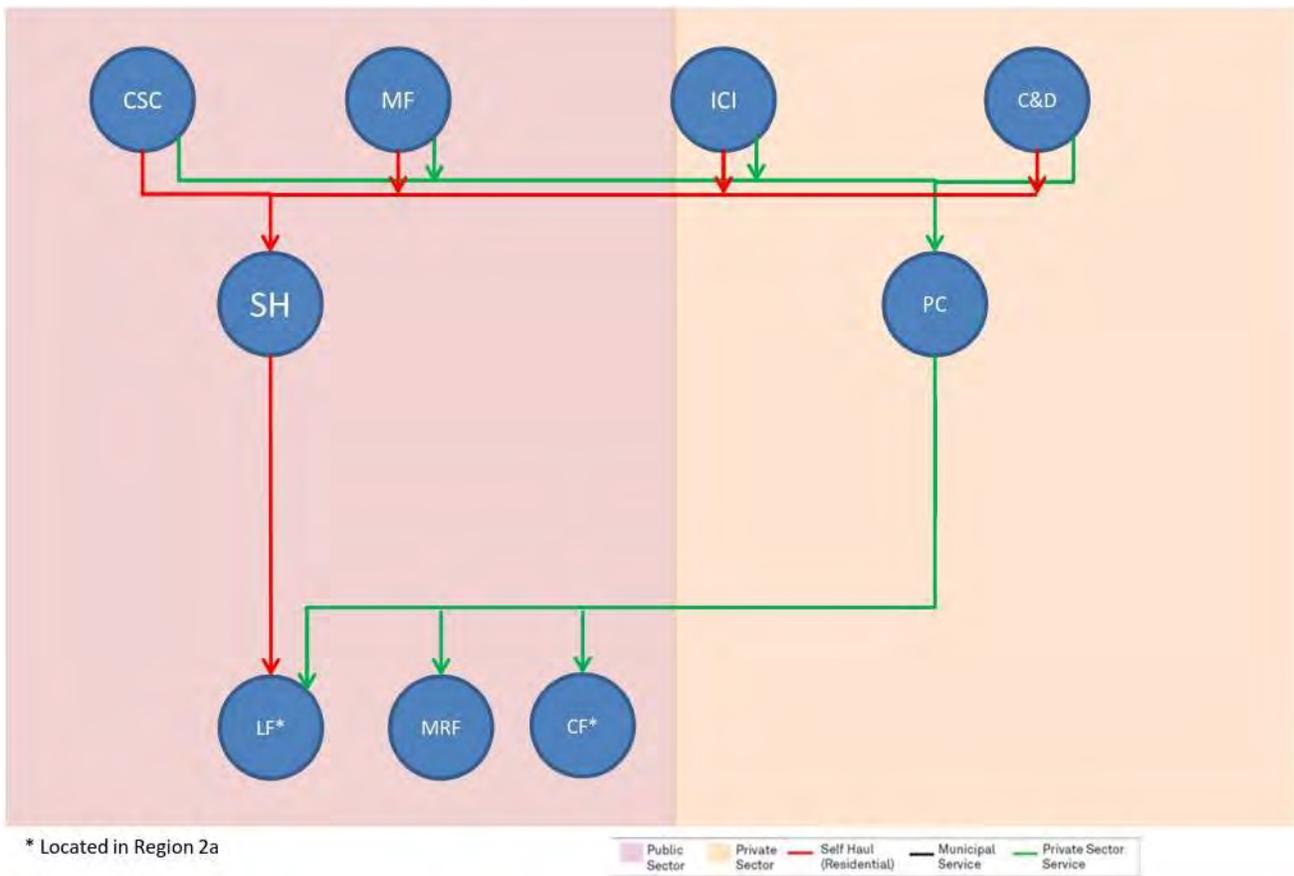
RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (L&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

Municipal collection is contracted out by the Town on a weekly basis. Garbage and blue bags (paper and recyclables) are collected. Garbage is transported to the Guysborough Waste Management Facility and recyclables are transported to a private facility.



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill (Region 2a)	△	Accepts garbage	Guysborough, Landfill Site, 151 Waste Management Road, Boylston NS
1	CF	△	Accepts Organics	Guysborough, Landfill Site, 151 Waste Management Road, Boylston NS
2	MRF	△	Recyclables Processing Facility	CBRM Recycling Facility, 345 Gulf Crescent Dr., Sydport Ind. Park, Sydney NS



Public Education and Outreach Programs

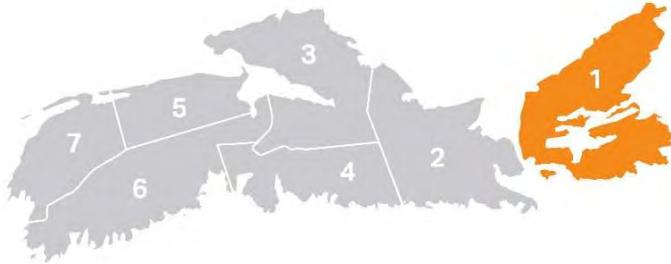
No information provided.

Challenges and Future Considerations

The Town will be implementing a curbside residential organics program in 2019.

1.3 Cape Breton Regional Municipality

Community Data



Population:	94,285	Area:	243,006 ha
Households:	41,680	Median Age:	50.0
Population Changes:	-3.2% (2011-2016)	Mother Tongue:	1.7%

** Other Than English or French:*



Cape Breton Regional Municipality, often referred to as simply CBRM, is Nova Scotia's second largest municipality and the economic heart of Cape Breton Island. As of 2016, the municipality has a population of 94,285. The municipality was created in 1995 through the amalgamation of eight municipalities located in Cape Breton County. The municipalities from which the CBRM was created included the Municipality of the County of Cape Breton, the City of Sydney, the Towns of Glace Bay, Sydney Mines, New Waterford, North Sydney, Dominion and Louisbourg.

The Cape Breton Regional Municipality is governed by Cape Breton Regional Council, which is composed of a mayor elected at-large and 12 councillors each elected to represent a separate district. Regional Council is responsible for all facets of the municipal government, including police, fire, library, transit, and water.

CBRM is home to over three quarters of the population of Cape Breton Island and has continued economic strength in its fishing and forestry primary sectors and in services (trade, transportation and warehousing, business and other support services), education, health care, and accommodation & food. The region is home to a significant concentration of government services, social enterprise and private sector companies, including the Canadian Coast Guard College, Cape Breton University, NSCC Marconi campus, and New Dawn Enterprises. The rural areas of the municipality continue to host resource industries such as agriculture, fishing, mining, and forestry.

The recently developed Port of Sydney now welcomes thousands of cruise ship visitors a year and plays a vital role in CBRM's economy. Although the Trans-Canada Highway ends in North Sydney, the Marine Atlantic ferries are in operation to connect the Province of Nova Scotia with the Province of Newfoundland. The ferry service operates out of North Sydney, Channel-Port aux Basques Newfoundland and Argentia Newfoundland, where the highway starts again.

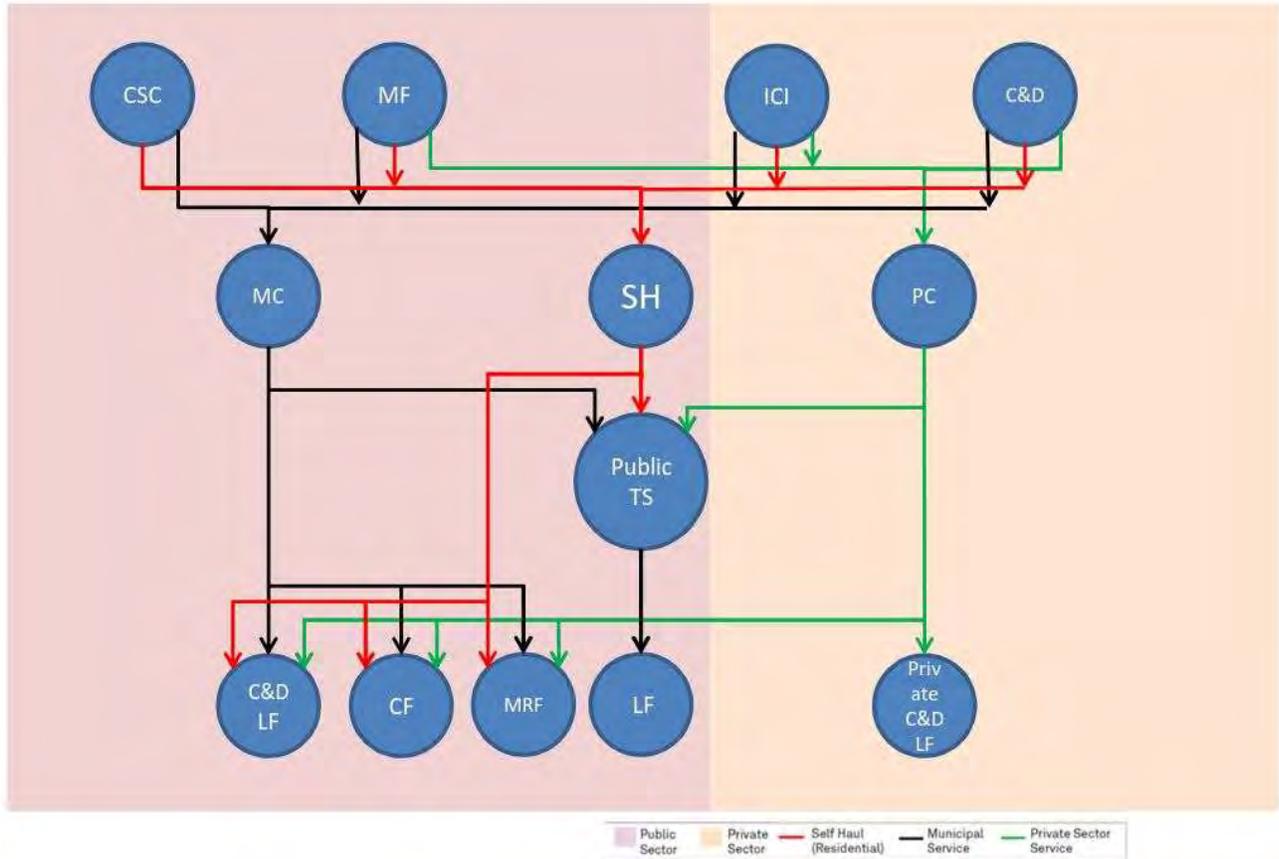
RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Commingled organics
Tonnes collected	17,685	0	N/A	N/A	6,720.90
Tonnes collected per household	0	No Data	N/A	N/A	0.14
Collection method	Manual	Manual	N/A	N/A	Automated
Collection frequency	Weekly	Bi-weekly	N/A	N/A	Weekly
Container limit (#)	5	Unlimited	N/A	N/A	1
Container size (max L)	N/A	Unlimited	N/A	N/A	125 litre cart

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	No Data	No Data	No Data	0	No Data
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	No Data	No Data	No Data	No Data	No Data
Collection charge mechanism	No Data	No Data	No Data	No Data	No Data
Container size (cubic yards)	No Data	No Data	No Data	No Data	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&I)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	6,526	0	2,164	80	1,074	29	0
Tonnes accepted per capita	0.0661	0.0000	0.0219	0.0008	0.0109	0.0003	0.0000
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Minimum charge (\$)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Solid Waste System Summary

The Solid Waste Department oversees Solid Waste Management in the Cape Breton Regional Municipality. The department is responsible for collecting, managing, processing, disposing and/or shipping solid waste generated by the Residential, Industrial, Commercial and Institutional (ICI) sectors. Tipping fees are assigned to commercial haulers and the ICI sector bringing waste to our Waste Management Facility, Compost Facility and Construction and Demolition Site. No tipping fees are charged to commercial haulers and the ICI sector to take recyclables to our Materials Recovery Facility.



Curbside collection is only provided to properties eligible for curbside collection across CBRM. Collection is carried out by municipal collectors and contractors Tuesday to Saturday across the municipality. The department also provides an annual heavy garbage collection usually scheduled during the Spring each year. This annual program is subject to budget approval.

Garbage and Green Cart Collection is provided once a week on an area's designated collection day. Blue Bag collection follows a Bi-weekly schedule. An area's blue bag collection is scheduled on an area's designated collection day every second week.

Collection is carried out using Dual Stream side load collection vehicles and/or Dual Stream rear load collection vehicles.

CBRM Solid Waste does not service the ICI sector and multi-family units larger than 6 units for curbside collection. The ICI sector and large multi-unit structures are responsible for their waste collection.

CBRM's two aboriginal communities do not receive/provide curbside collection services from CBRM municipal collectors and contractors.



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	△	Accepts garbage and C&D waste	CBRM C&D Landfill, Grand Lake Road, Sydney NS
1	CF	△	Accept Organics	CBRM Compost Facility, 145 Sydney Port Access Road (Spar Road), Sydney NS
2	Landfill (Region 2a)	△	Accepts garbage	Guysborough Landfill Site, 151 Waste Management Road, Boylston NS
3	Landfill	⊙	Accept C&D waste	Paul MacDonald Trucking, 1120 Birch Grove Rd, CBRM
4	MRF	△	Accept Recyclables	CBRM Recycling Facility, 345 Gulf Crescent Dr., Sydport Ind. Park, Sydney

CBRM Solid Waste owns a Materials Recovery Facility and A Residential Household Special Waste Depot. These sites are operated by a private contractor on behalf of the department. The operators are responsible for processing and marketing these materials. They are also responsible for the proper storage and disposal of HSW materials.

CBRM owns and operates the municipalities Waste Management Site. This site houses the municipalities Metal Drop Off site, Leaf and Yard Drop Off site, Construction and Demolition Landfill and Public Drop Off area. There is no charge for resident's customers to bring their waste to the Waste Management Site. However, commercial sector is required to pay set tipping fees.

The Solid Waste Department also operates three additional seasonal Leaf and Yard Drop Off sites located in three communities in CBRM. These depots are open one day a week between mid-May and Mid November. No tipping fees are charged at these three drop off sites. The Municipal Compost Facility is also located at the Waste Management Site and is owned by the municipality and operated by municipal staff. Tipping fees are charged to commercial customers and haulers only.

CBRM also owns and operates one Mixed Waste Transfer Station. The Mixed Waste Transfer Station is operated by Municipal Staff. Only Residential municipal waste collectors/contractors and Commercial Haulers are permitted to use this site for disposal. The general public is not permitted to bring waste to this site. The general public and small commercial businesses who dispose of their own waste must rely on the Public Drop Off bins set up for waste disposal at the Waste Management Site. The Transfer Station services CBRM residential and commercial sector and two Aboriginal Communities located in CBRM (Eskasoni & Memberetou). Waste received at the transfer station is processed and shipped to a second generation landfill site located in Guysborough County. The municipality has been shipping our mixed waste to this site since 2006.

Public Education and Outreach Programs

The CBRM Solid Waste Department provides education and outreach to residents and the commercial sector. The Educational Programs offered by the Solid Waste Department included:

Outreach Tools:

Solid Waste Management Hotline: The solid waste department operates a hotline which allows our residential and ICI sector the opportunity to contact the department with solid waste questions. The two educators who operate the line respond to inquiries regarding collection complaints, disposal questions and other inquiries related to solid waste management in CBRM. The phone line is set up so our department is able to compile data on number of calls received, number of calls responded to, number of calls received by voice mail, etc.

Solid Waste Management Data Base: the solid waste department also has a solid waste management database that is used to record and document all inquiries that are received by the solid waste department.

Social Media: the Solid Waste Department utilizes the CBRM Facebook, Twitter Account and U-Tube Channel to communicate important waste management information to the public. All outreach communicated using social media tools is tracked and documents. Information often communicated on social media would include: curbside collection updates/reminders, holiday information, collection delays, collection reminders, Operation of Collection Vehicles, etc.

Annual Curbside Collection Calendar and Waste Separation Guide: The Solid Waste Department produces an annual Curbside Collection Calendar and Waste Separation Guide that is provided to residents. The Guide is updated each year to reflect important waste management/curbside collection information residents may require to participate in our municipal program.

CBRM Website: The solid waste department has our own section of the municipal website that is used to provide Waste Management Information, Programs and Services Offered, etc.

Curbside Collection Compliance Tags/ Program Specific Tags: place on residential curbside materials when compliance issues are noticed by municipal collector. The compliance tags we have include: Garbage, Blue Bag, and Green Cart. We also have program specific tags that are used during CBRM's Heavy Garbage Collection and to identify homes that may have received a medical exemption.

Information Sessions, Outreach Displays: the solid waste department has Waste Reduction Educators available to provide presentations to schools, small groups, community groups, large and small businesses, college, university, trade schools and other post-secondary educational institutions.

Site Tours: when requested, staff will conduct site tours with individuals and groups. The Waste Management Program offered at Cape Breton University through the Public Health Program has incorporated site tours into their course curriculum. Site tours with this course have been in place since 2005.

Visual Waste Assessments: is a service that we offer and provide our ICI sector to assist them their sectors waste management program.

Litter Cleanup Program: The solid waste department provides assistance to any community group, business or individual that would like to complete a litter cleanup in CBRM. The assistance provided includes: clear garbage bags, gloves, waste removal assistance (if required) tipping fee exemptions (if required).

The solid waste department also partners with ACAP Cape Breton each summer to operate the Trashformer Program. This is an annual litter cleanup team that carries out litter cleanups Monday to Friday between Late-May and Mid-August each Summer. The trashformers are responsible for removing litter Monday to Friday during the duration of this program.

Illegal Dumping Enforcement Program: the solid waste department has also forged a partnership with the Cape Breton Regional Police Service. The department has a dedicated police officer on staff the responds to all dumping complaints received from the public. Cleanup of sites, issuing warnings and/or issuing charges are an important component of this enforcement program.

Residential House Hold Special Waste Depot: CBRM Solid Waste operates a Residential Household Special Waste Depot year round Monday to Saturday. This drop off site is available free of charge to CBRM residents.

Compost Giveaways: the Solid Waste Department will allow the public to visit the site to receive compost. This is offered by request only.

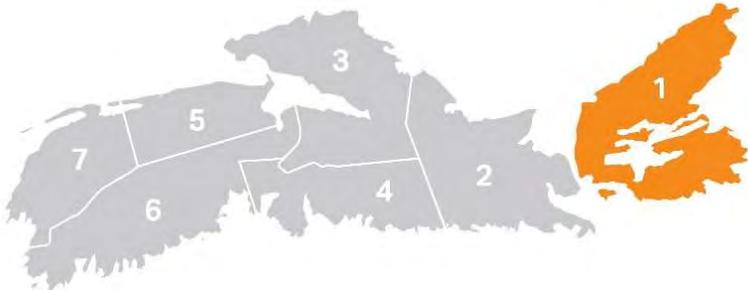
Challenges and Future Considerations

CBRM solid waste department must provide the solid waste infrastructure needed to maintain facilities and services offered by this department. This can be challenging with increased costs associated with our operations, declining populations, packaging issues and changes to regulations.

Regulations are set by the provincial government but must be adopted and delivered by municipal units. This can be challenging when regulations are changed or updated.

1.4 Richmond County

Community Data



Population:	8,964	Area:	124,933 ha
Households:	3,985	Median Age:	52.7
Population Changes:	-3.5% (2011-2016)	Mother Tongue:	4.1%

* Other Than English or French:

No information provided.

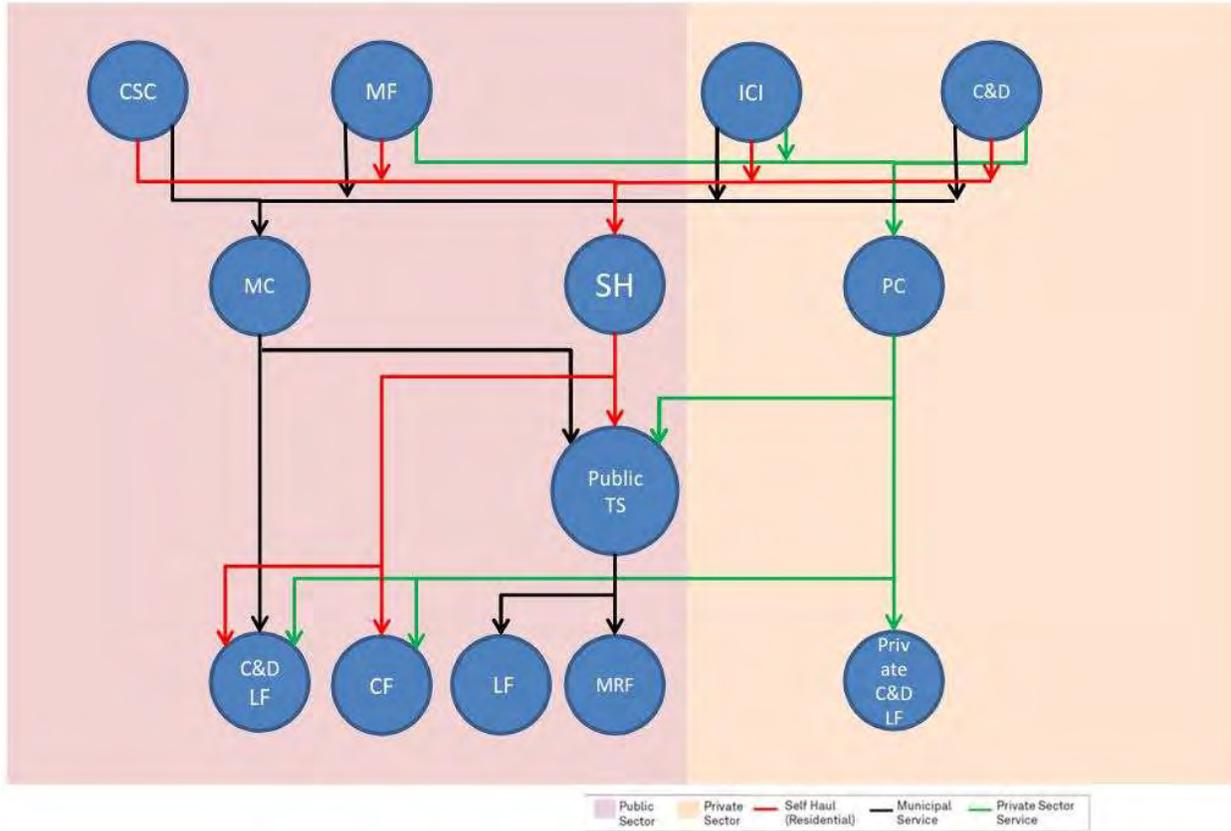
RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	1,189	580	N/A	N/A	N/A
Tonnes collected per household	0	No Data	N/A	N/A	N/A
Collection method	Manual	Manual	N/A	N/A	N/A
Collection frequency	Weekly	Weekly	N/A	N/A	N/A
Container limit (#)	3	6	N/A	N/A	N/A
Container size (max L)	900	900	N/A	N/A	N/A

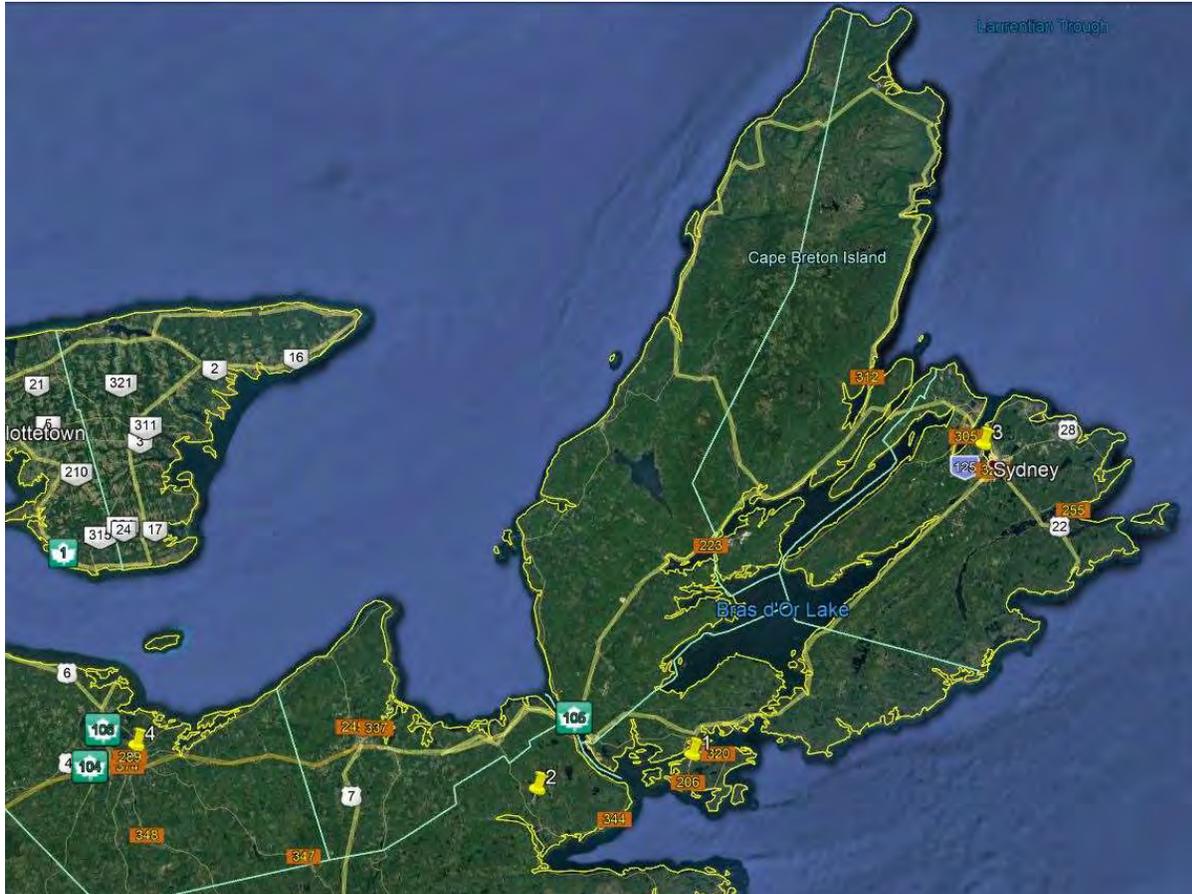
MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	No Data	No Data	No Data	No Data	No Data
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	Weekly	No Data	No Data	No Data	No Data
Collection charge mechanism	Property tax	No Data	No Data	No Data	No Data
Container size (cubic yards)	No Data	No Data	No Data	No Data	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Dlitter)	Contaminated soil
Tonnes accepted	1,351	215	362	19	No Data	No Data	No Data
Tonnes accepted per capita	0.1507	0.0240	0.0404	0.0021	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	\$85.00	\$0.00	\$25.00	\$40.00	\$40.00	No Data
Minimum charge (\$)	\$25.00	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

No information provided.





Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	TS	△	Accepts garbage and Recyclables	Richmond Transfer Station, 634 NS-206, West Arichat, NS
1	C&D Landfill	△	Accepts C&D waste	Richmond C&D Landfill, 634 NS-206, West Arichat, NS B0E 3J0
1	CF	△	Accepts Organics	Richmond Compost Facility, 634 NS-206, West Arichat, NS
2	Landfill	△	Accepts garbage	Guysborough Landfill Site, 151 Waste Management Rd, Boylston NS
3	MRF	△	Accepts Recyclables	CBRM Recycling Facility, 345 Gulf Crescent Dr., Sydport Ind. Park, Sydney NS
4	C&D Landfill	⊙	Accepts C&D and ICI	Marinus Verhagen C&D Disposal Site, Off TCH at Exit 25, Pictou County

Public Education and Outreach Programs

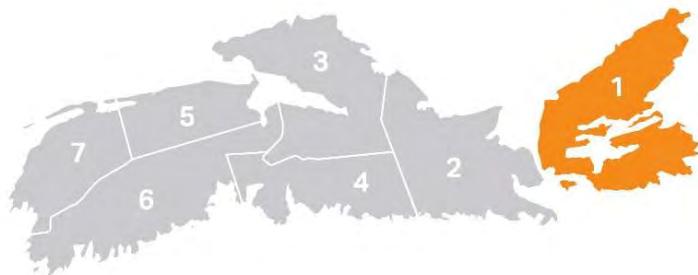
No information provided.

Challenges and Future Considerations

No information provided.

1.5 Victoria County

Community Data



Population:	7,089	Area:	285,774 ha
Households:	3,105	Median Age:	51.7
Population Changes:	-0.4% (2011-2016)	Mother Tongue:	5.6%

* Other Than English or French:

No information provided.

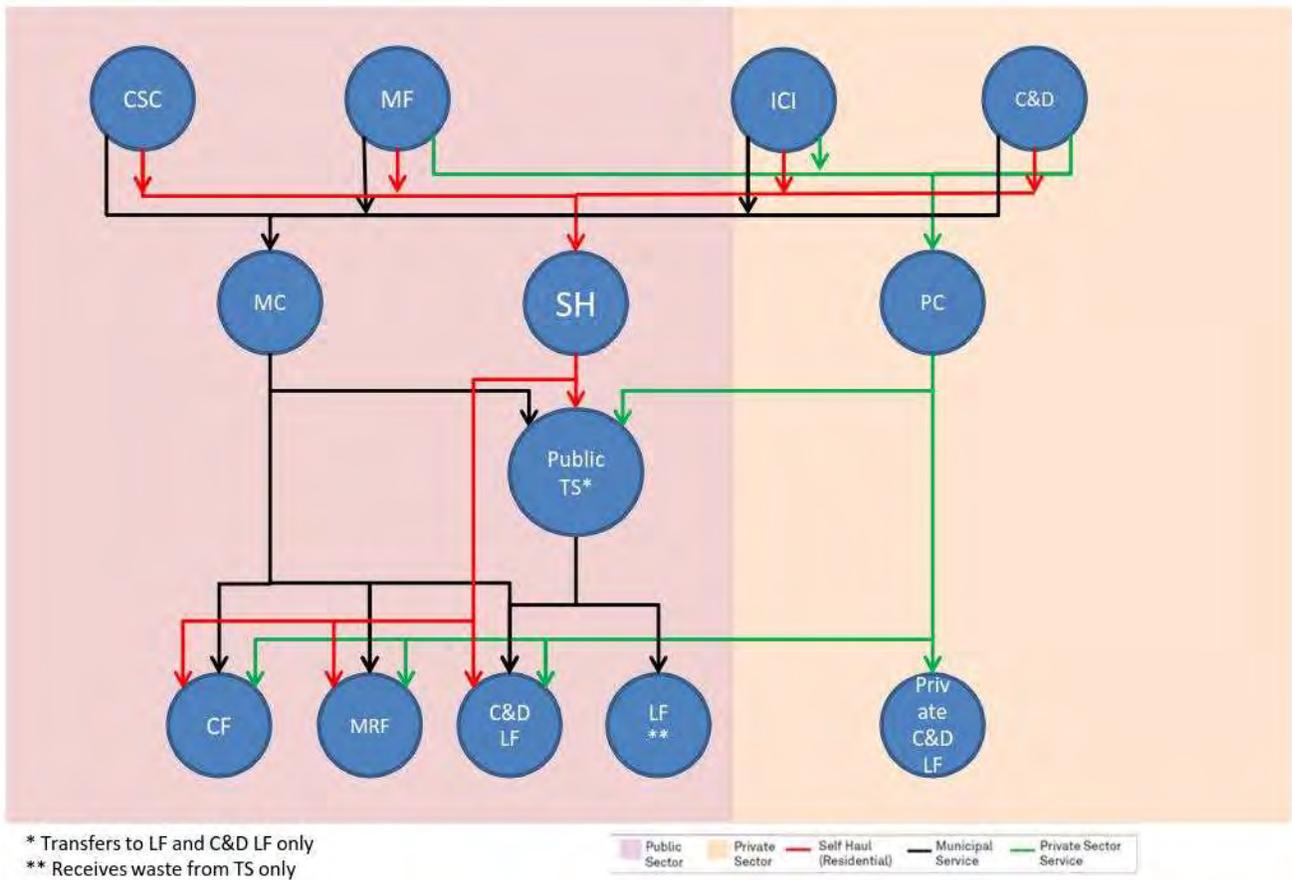
RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Or mingled organics
Tonnes collected	939	267	N/A	65	N/A
Tonnes collected per household	0	No Data	N/A	0.0208	N/A
Collection method	Manual	Manual	N/A	Manual	N/A
Collection frequency	Weekly	Weekly	N/A	Weekly	N/A
Container limit (#)	5	No Data	N/A	No Data	N/A
Container size (max L)	N/A	No Data	N/A	No Data	N/A

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	No Data	No Data	No Data	0	No Data
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	No Data	No Data	No Data	No Data	No Data
Collection charge mechanism	No Data	No Data	No Data	No Data	No Data
Container size (cubic yards)	No Data	No Data	No Data	No Data	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (L&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	2,207	68	552	132	N/D	N/D	No Data
Tonnes accepted per capita	0.3113	0.0096	0.0779	0.0186	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

No information provided.





Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	TS	△	Accepts garbage	Victoria County Transfer Station, 440 Old Margaree Rd., Baddeck NS
1	C&D Landfill	△	Accepts C&D waste	Baddeck Waste Management Facility, 440 Old Margaree Rd., Baddeck NS
1	CF	△	Accepts Organics	Baddeck Composting Facility, 440 Old Margaree Rd., Baddeck, NS
1	MRF	△	Accepts Recyclables	Baddeck Enviro Depot and Municipal Recycling Facility, 440 Old Margaree Rd., Baddeck NS
2	TS	△	Accepts C&D Waste	Dingwall Transfer Station, 99 Dump Rd., Cape North, Victoria County
3	Landfill	△	Accepts garbage	Guysborough Landfill Site, 151 Waste Management Rd, Boylston NS
4	Landfill	Ⓢ	Accepts C&D Waste	Marinus Verhagen C&D Disposal, TCH Exit 25, Pictou County

Public Education and Outreach Programs

No information provided.

Challenges and Future Considerations

No information provided.

Region 2

REGION 2

2.1 County of Antigonish

Community Data



Population:	14,584	Area:	145,027 ha
Households:	7,112	Median Age:	45.2
Population Changes:	-0.7% (2011-2016)	Mother Tongue:	3.3%

* Other Than English or French:



The Municipality of the County of Antigonish is situated on the Northumberland Strait. Together the municipality and the town of Antigonish are the service center for North Eastern Nova Scotia. According to Stats Canada, the Municipality of the County of Antigonish recorded a population of 14,584 living in 6,001 of its 7,112 total private dwellings in the 2016 Census of Population, a change of -0.7% from its 2011 population of 14,692. With a land area of 1,450.27 km² (145,027ha), it had a population density of 10.1/km² in 2016. Farming and fishing industries are successful in the area. People from the area are employed by institutions such as St Francis Xavier University, St. Martha's Regional Hospital and Bethany Center, others by construction and forestry contractors, and a mix of other businesses.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Commingled organics
Tonnes collected	1,614.53	621.44	N/A	N/A	733.74
Tonnes collected per household	0.259	0.10	N/A	N/A	0.12
Collection method	Manual	Manual	N/A	N/A	Manual
Collection frequency	Weekly	Bi-weekly	N/A	N/A	Weekly
Container limit (#)	Unlimited	Unlimited	N/A	N/A	1
Container size (max L)	78	78	N/A	N/A	45

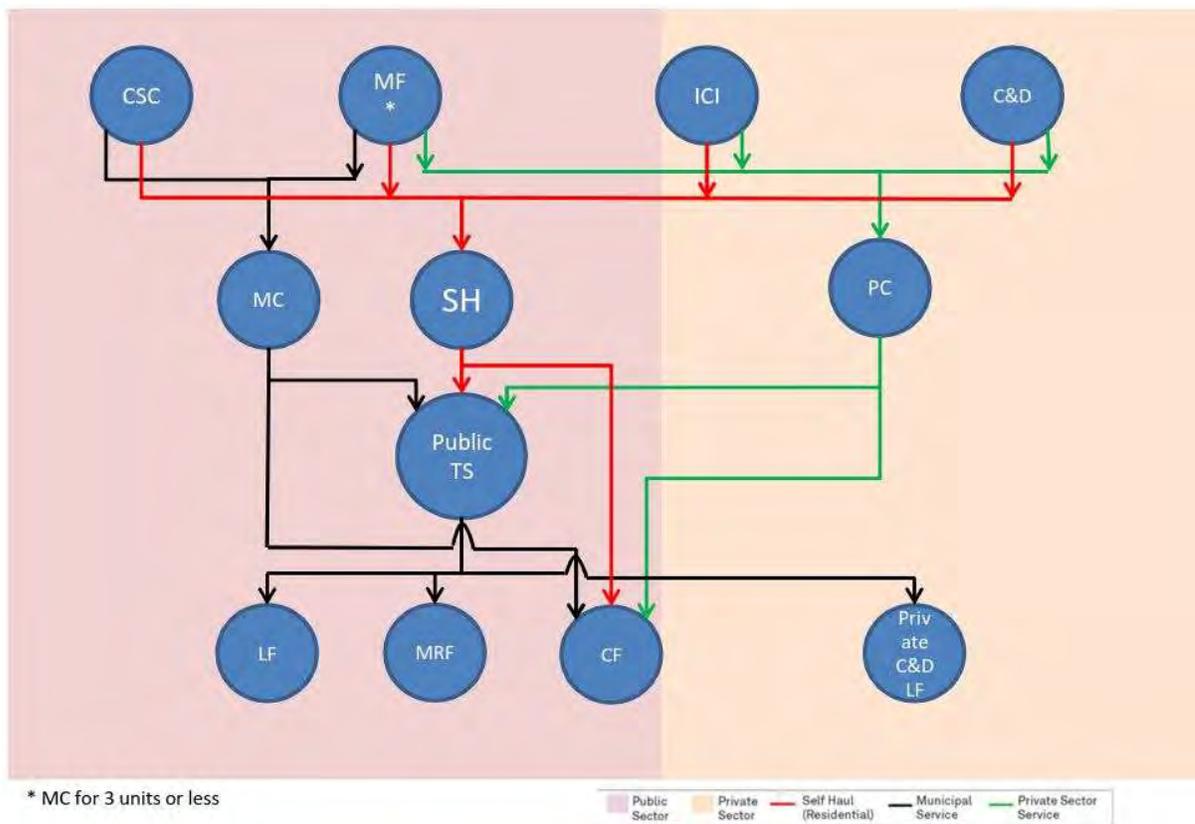
MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	No Data	No Data	N/A	No Data	No Data
Collected tonnes per serviced unit	No Data	No Data	N/A	No Data	No Data
Collection frequency	No Data	No Data	N/A	No Data	No Data
Collection charge mechanism	No Data	No Data	N/A	No Data	No Data
Container size (cubic yards)	No Data	No Data	N/A	No Data	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	492	0	41	0	0	0	No Data
Tonnes accepted per capita	0.0329	0.0000	0.0027	0.0000	0.0000	0.0000	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	\$100.00	\$45.00	\$55.00	\$55.00	\$55.00	\$0.00	\$100.00
Minimum charge (\$)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$100.00

Solid Waste System Summary

The County of Antigonish owns and operates the collection vehicles used throughout the municipality for residential collection. There are 10 residential waste collection routes. Garbage and organics are collected weekly; recycling is collected every other week throughout the year. Residential bulky waste is collected as a special pick up in the Spring.

The municipality also operates a Solid Waste Resource Management Facility at 1356 Beech Hill Rd, Beech Hill. Businesses contract with a waste collection company or self-haul into this facility. Residents also self-haul or contract with a private company to deliver items to the Beech Hill Waste Resource Management Facility. This is necessary for construction and demolition debris, also for bulky household waste outside of Spring collection and to dispose of auto parts. Also, onsite there is a coverall building that is part of the organics program. The food waste collected from county collection and delivered to the site by others is mixed in this building with wood and leaf and yard waste chips.



At the Waste Resource Management Facility there is a self-haul drop-off location for propane tanks, e-waste included in the EPRA program, paint and mercury containing items. Household Hazardous Waste is collected from residents at a special event at Antigonish Market Square over 2 days (a Friday and Saturday).

The site is open Monday to Friday from 8AM to 4:30PM; Saturday from 8AM to noon and closed all Holidays.

The municipality has three waste collection vehicles on the road each day. Two of the trucks are split to hold organics and garbage. The other truck is used for recycling. Each week, five of the 10 routes receive garbage, organics and recycling collection, the other five routes will receive garbage and organics collection. All three vehicles deliver to the Beech Hill Waste Resource Management Facility. At this location there are two transfer station buildings and a coverall building for organics composting.

The trucks are unloaded onto the floor tipping areas of the appropriate building. The recycling will be emptied into the recycling transfer building, the garbage into the garbage transfer building and the organics to the coverall composting operation. In the garbage transfer building, garbage is loaded into a 53-foot trailer, which is delivered, when full, by Eastern Sanitation to the Guysborough Waste Management Facility. The 53-foot trailer in the recycling transfer building is split in half. One end is loaded with blue bag one (paper) recyclables and cardboard, the other end is loaded with blue bag two (containers and other) recyclables. This trailer is hauled to the Colchester MRF by Eastern Sanitation Limited. Program tires, paint, items containing mercury and e-waste can be dropped off in the recycling transfer building to the appropriate location.

In the yard, there are labeled roll-off containers for public use. There are bins for sorted construction and demolition waste to avoid public access to the C&D piles and to keep the public away from the municipal and private collection vehicles that need direct access to the transfer buildings.

Public Education and Outreach Programs

Eastern Region Solid Waste Management (ERSWM), Region 2a, Regional Coordinator/Educator and Compliance Officer provides Waste Management Program Education and Compliance support for the municipality and all of Region 2a. Information is also shared through the quarterly newsletter that is mailed to all properties. Information on the waste management program is also available on the Municipality of the County of Antigonish website (<https://www.antigonishcounty.ns.ca/category/publicworks/>), as well as the Eastern Region Solid Waste Management Committee website (<https://www.erswm.ca/waste-collection-calendar-waste-sorting-wizard/>) and through the Antigonish & Guysborough Counties Waste Info Facebook page.

Each of these locations also have a link to the online portal that is maintained by ERSWM with waste collection schedules and a waste sorting wizard for the municipality.

Through the education contract, ERSWM is available to provide face to face education with the schools, businesses and community. The ERSWM Compliance Officer has inspected bags curbside and loads of solid waste and recycling received at facilities. Follow-up reports are prepared and visits when necessary. Reports of illegal dumping in the municipality are also made to the ERSWM Compliance Officer. The municipality also responds to calls and questions from the public related to solid waste and illegal dumping. The collection calendar direct calls related to collection to the Municipality of the County of Antigonish Administration.



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	△	Accepts garbage and HHW	Guysborough Landfill Site, 151 Waste Management Rd., Boylston NS
1	TS & CF	△	Accepts waste, recyclables, ICI, C&D, and organics	Beech Hill Municipal Solid Waste Transfer Station, 1358 Beech Hill Rd, Beech Hill NS
2	MRF	△	Recyclables Processing Facility	Colchester Recycling Facility, 185 Mingo Rd., Kemptown NS
3	C&D Landfill	⊙	Accepts C&D waste	Marinus Verhagen C&D Disposal Site, TCH Exit 25, Pictou County

Challenges and Future Considerations

There is strong support for diversion, but it becomes more challenging to afford as the costs continue to rise. More needs to be done to impact change in product packaging that reduces impact and need for diversion. Local markets for sorted construction and demolition (C&D) waste are necessary to improve C&D diversion. Other considerations involve the apartments and commercial properties that currently do not have access to residential collection. Compliance is most challenging with these properties. Any assistance to identify a provincial compliance plan that includes mandatory hauler involvement would be helpful.

2.2 Municipality of the District of Guysborough

Community Data



Population:	4,670	Area:	211,6869 ha
Households:	3,196	Median Age:	56.5
Population Changes:	-6.5% (2011-2016)	Mother Tongue*	1.5%

* Other Than English or French:



The Municipality of the District of Guysborough covers an area of 2,116.9 square kilometers at the north-east corner of mainland Nova Scotia. It borders Antigonish County to the North, the Strait of Canso to the East, the Atlantic Ocean to the south and southeast, and the St. Mary's municipal district (also part of Guysborough County) to the west.

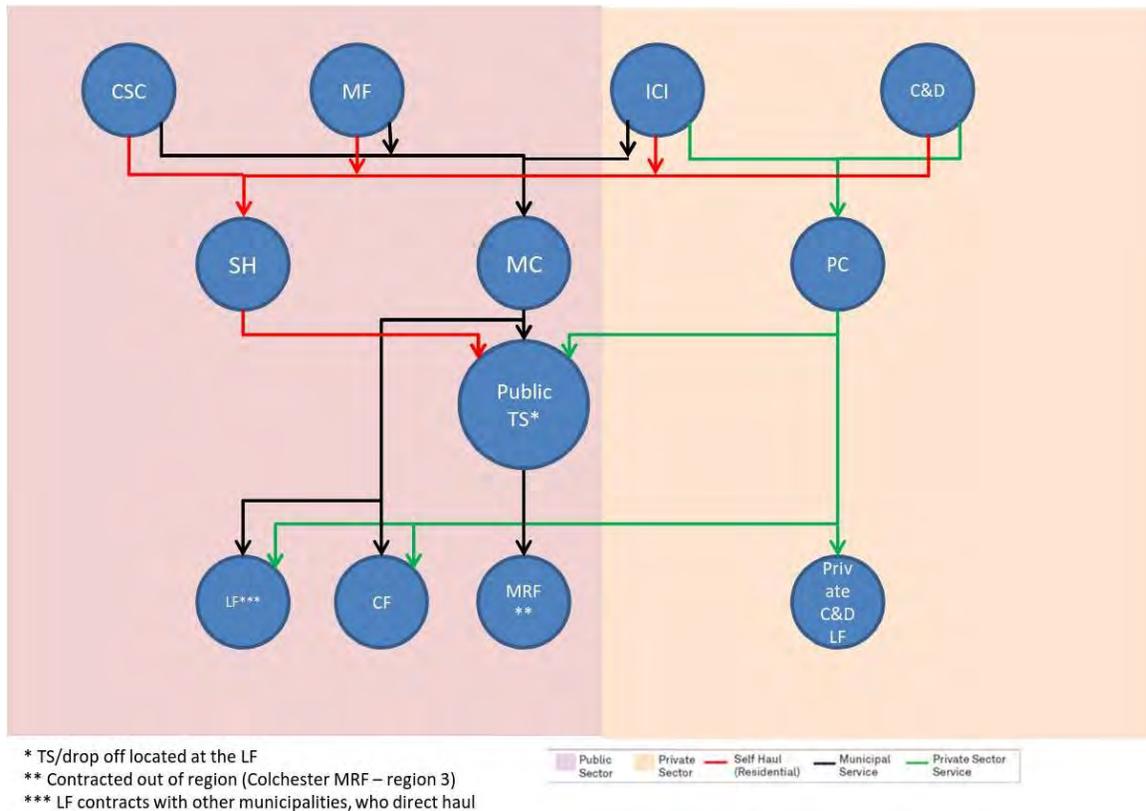
The District's area includes 23,953 hectares of protected land, 11.3 per cent of the District's total land mass. In preparation for residential growth and economic development, the Municipality undertook an extensive land use planning process. Three (3) areas have been designated for industrial activity. Land-use plans were developed for all eight (8) districts based upon extensive community consultation; including Canso added to the land use plane in 2013.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Flammable liquids	Commingled organics
Tonnes collected	709	219.84	No Data	No Data	302.45
Tonnes collected per household	0.31	0.096	No Data	No Data	0.1322
Collection method	Manual	Manual	No Data	No Data	Semi-automated
Collection frequency	Bi-weekly	Bi-weekly	No Data	No Data	Weekly
Container limit (#)	8	8	No Data	No Data	1
Container size (max L)	78	78	No Data	No Data	80

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	No Data	No Data	No Data	No Data	No Data
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	Bi-weekly	No Data	No Data	Bi-weekly	No Data
Collection charge mechanism	Property tax	No Data	No Data	Property tax	No Data
Container size (cubic yards)	78L Clear bags	No Data	No Data	max 78 L bags	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Flammable liquids	Clean wood waste (C&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	318	15	104	3	67	104	N/A
Tonnes accepted per capita	0.0681	0.0032	0.0222	0.0006	0.0144	0.0222	N/A
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Minimum charge (\$)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Solid Waste System Summary



The Municipality of the District of Guysborough provides a full range of waste management services to over 3,200 residential, multi-family and commercial units. All dwellings within the Region receive the same level of service regardless of size excluding industrial properties. Any excess materials must be managed commercially or brought to the municipally owned and operated Guysborough Waste Management Facility (GWMF). The Municipality owns and operates two (2) two-stream split collection vehicles. Blue bags for paper, oil containers, other recyclables, bundles cardboard and E-waste are collected every other week, alternating with a clear bag program for garbage collection. Bulky waste items, a maximum of 4 items, not exceeding 200 pounds, are collected the last collection day each month.

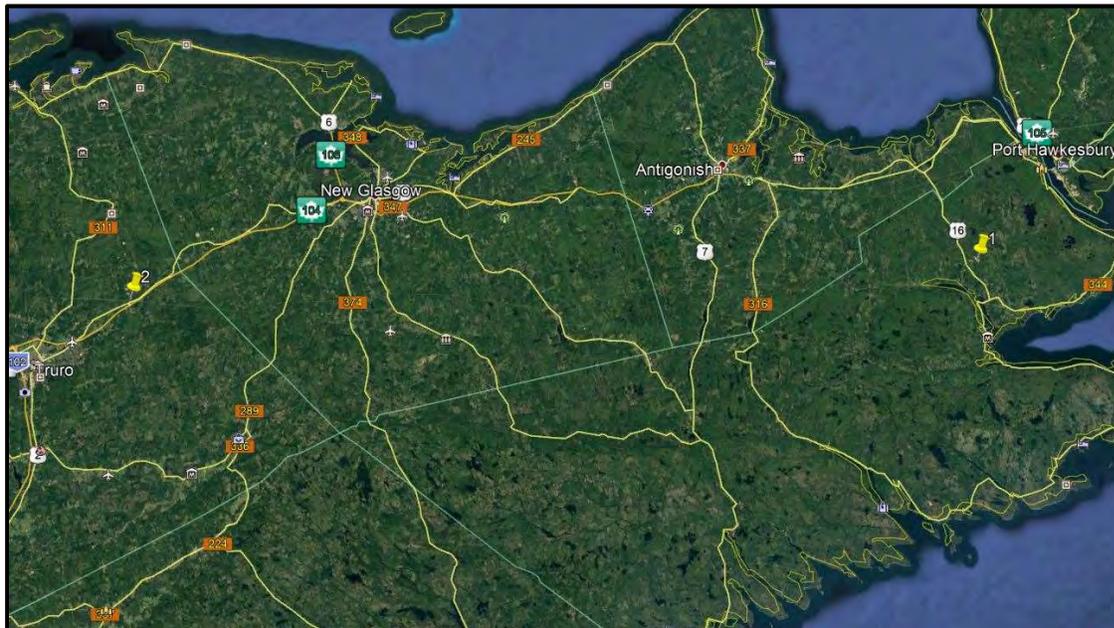
The GWMF accepts all residential types of solid waste which includes garbage, recyclables, compostable organics, HHW and C&D materials. At this location, the Municipality operates a second generation (double lined) landfill designed to hold 70,000 mT per year, a recycling transfer station, a Household Hazardous Waste building. Also on site is an open windrow composting operation, a C&D diverted materials area for clean wood/brush, mixed wood, asphalt shingles, white goods/metals and a tire drop off location. Cardboard and bagged recyclable paper and other bagged recyclables are transferred to the Colchester Material Recovery Facility. The building is also the drop-off location for E-Waste included in the EPRA program. It is prepared for shipment from the space. Residential and commercial properties do not pay any tipping fees for waste items delivered to the Facility. Private sector users pay tipping fees, which vary by waste stream.

Sixteen (16) municipalities located in Cape Breton, Inverness, Richmond, Victoria, Guysborough, Antigonish and Pictou Counties have had twenty-year landfill agreements with the Municipality of the District of Guysborough due to provincial mandates for second generation landfills. The County of Antigonish, Pictou County Solid Waste Management, Inverness, Richmond, Victoria, and Cape Breton transfer comingled, residential and ICI wastes to the landfill by trailer to the Guysborough Landfill. The Town of Antigonish, District

of St Mary's, Town of Port Hawkesbury, and the Town of Mulgrave direct haul to the Guysborough Landfill from the collection route.

The District of Guysborough also own and operate their collection vehicles. They also provide collection to the Town of Mulgrave one day per week.

The private sector is contracted by individual businesses to provide collection beyond the municipal curbside program. All recyclables are processed by Colchester Material Recovery Facility in Kemptown. Organics collected in Guysborough, Town of Antigonish, Town of Mulgrave, Town of Port Hawkesbury (commercial) and District of St Mary's are processed onsite.



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	△	Accepts garbage and C&D	Guysborough Landfill Site, 151 Waste Management Rd, Boylston, NS
1	TS	△	Accepts waste, recyclables and organics	Guysborough County Recycling Transfer Station, 151 Waste Management Rd, Boylston, NS
1	CF	△	Accepts Organics	Guysborough Composting Facility, 151 Waste Management Rd, Boylston, NS
2	MRF	△	Recyclables Processing Facility	Colchester Recycling Facility, 185 Mingo Rd. Kempton, NS
3	C&D Landfill	Ⓢ	Accepts C&D waste	Marinus Verhagen C&D Disposal, TCH Exit 25, Pictou County NS

Public Education and Outreach Programs

In 2017, the Municipality of the District of Guysborough's public education and outreach programs included the following:

- a) **Community Events** – Events are hosted by the Municipality of the District of Guysborough at the GWMF by the Eastern Region Solid Waste Management (ERSWM). ERSWM provides Waste Management Program education and compliance support for the Municipality and all of Region 2a. An online portal is maintained with waste collection schedules and a waste sorting wizard for the Municipality. Information is also updated quarterly for the municipal newsletter that is mailed to all residents and businesses in the Municipality. Through the education contract, ERSWM is available to provide face to face education with schools, businesses and the community.
- b) **Educational Programs** - The waste diversion/compost facility operator at the Guysborough Waste Management Facility works closely with school green teams and community garden clubs to promote the use and value of compost materials. The school green team has held a harvest feast the last number of years using produce harvested from their garden that was grown using compost produced at the Guysborough Waste Management Facility. Tours of the GWMF are provided to educate the public on the facilities programs. The GWMF and Municipality also have a community liaison committee that meets to discuss monitoring results, proposed site changes and to approve green fund applications. The green fund is a program supported by a small (\$0.20 per tonne) fee that is paid from every tonne of garbage that is landfilled at the site. The program is application based to provide funding to assist with activities or projects within the Municipality which are intended to increase diversion, improve the environment, or enhance the natural area.

Challenges and Future Considerations

Given the size of the Municipality and the capacity of the landfill, the Municipality has been able to maintain a reasonable tipping fee for its' clients while creating revenue. The waste agreements with these clients are for 20 years (2006-2026); soon these agreements will be open to negotiation.

The Municipality supports EPR programs and continues to encourage opportunities and innovative solutions for waste diversion.

There are no private C&D sites located within the Municipality. Most of the C&D waste stream is hauled to private sites located outside of the Municipality where management is unknown. The clean wood waste that is received at the GWMG is chipped to be used for the on-site composting operations. Mixed wood is also chipped and used on-site as a source of alternative daily cover for the landfill. Asphalt shingles are used onsite for base material for large stockpiles of C&D materials, tires, etc. There are many C&D projects occurring in the Municipality which impact diversion credits when the waste material is not sorted for diversion, but without local markets that are reasonable, often landfill is the best financial option. C&D waste when landfilled in the Municipality, goes into the second-generation landfill. If more C&D diversion is expected in the future, closer, reasonable markets would need to be developed first.

2.3 Municipality of the District of St. Mary's

Community Data



Population:	2,233	Area:	191,947 ha
Households:	1,042	Median Age:	54.7
Population Changes:	-5.1% (2011-2016)	Mother Tongue:*	2.1%

* Other Than English or French:



The District of St Mary's is a municipality that occupies the western half of Guysborough County. The natural landscape includes farmlands and seaside fishing communities. St Mary's borders Halifax to the west, the county of Pictou to the north, also the county of Antigonish and the district of Guysborough to the east. According to the results from Stats Can 2016 survey, the District of St Mary's had a population of 2,233 living in 1,042 of its 1,667 total private dwellings, a change of -5.1% from its 2011 population of 2,354. The district covers a land area of 1,909.47 km² (190,947 hectares) and has a sparse population density of 1.2/km². The median income for this year was just under 36 thousand dollars.

St Mary's River is historically known for salmon and is home to the Historic Sherbrooke Village museum. The community of Sherbrooke and places along highway 7 from Halifax to Antigonish, to Port Bickerton and surrounding communities come alive with tourists during the season. Sherbrooke Village is a main attraction.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Commingled organic
Tonnes collected	479.44	110.36	N/A	N/A	N/A
Tonnes collected per household	0.249	0.057	N/A	N/A	N/A
Collection method	Manual	Manual	N/A	N/A	N/A
Collection frequency	Bi-weekly	Bi-weekly	N/A	N/A	N/A
Container limit (#)	8	No Limit	N/A	N/A	N/A
Container size (max L)	78	78	N/A	N/A	N/A

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	No Data	No Data	0	No Data	N/A
Collected tonnes per serviced unit	No Data	No Data	0	No Data	N/A
Collection frequency	Bi-weekly	No Data	0	Bi-weekly	N/A (No collection)
Collection charge mechanism	Utility fees & Property tax	No Data	0	Utility fees & Property tax	Other - please describe
Container size (cubic yards)	78L Clear bags	No Data	0	max 78 L bags	N/A (No collection)

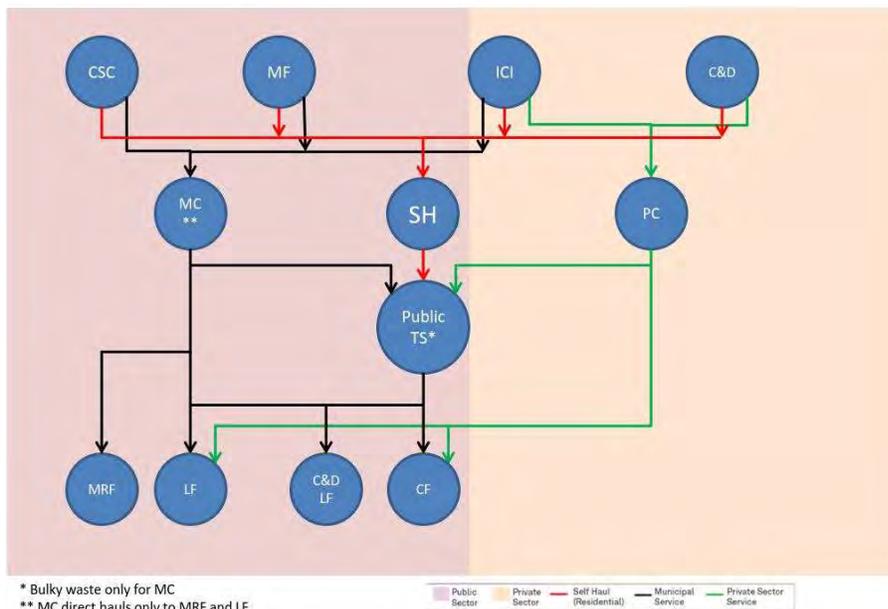
RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	N/D	N/A	19	0	0	0	N/A
Tonnes accepted per capita	N/D	N/A	0.0089	0.0000	0	0	N/A
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	N/A	N/A	\$55.00	\$55.00	\$0.00	\$0.00	N/A
Minimum charge (\$)	\$2.00	N/A	\$0.00	\$0.00	\$0.00	\$0.00	N/A

Solid Waste System Summary

The Municipality of the District of St Mary’s owns and operates a waste management site where they accept: construction and demolition (C&D) materials with a separate pile for white goods and other metals. There is also a permanent household hazardous waste building, and an official drop-off location for program electronics, paint and mercury containing items. Roll off containers are used to transfer organics and another for clear bag garbage (tipping fee \$2/bag) and bulky waste (\$5 per larger item like a couch and \$2.50 for small). The residential curbside collection contract is with Eastern Shore Cartage. Garbage collected by Eastern Shore Cartage is hauled direct to the Guysborough Waste Management Facility, recycling collected is delivered direct to the Colchester MRF in Kemptown. The roll-off containers on-site are delivered to the Guysborough Waste Management Facility as necessary. A special approval is requested as necessary to landfill C&D at the Gegogan location.

The District of St Mary’s has a waste collection contract with Eastern Shore Cartage based from Sheet Harbour, NS. There are 3 residential waste collection routes, Tuesday, Wednesday and Thursday. Garbage is collected weekly for the months of June, July, August and September; every other week for the remainder of the year alternating with recycling. The contractor will collect 8 bags of garbage when on a bi-weekly rotation. When it’s weekly garbage collection, 4 bags are the limit. One bulky item will be collected by the contractor every other garbage week. Recycling in bags is unlimited throughout the district and is collected from residents, multifamily and ICI. This doesn’t include cardboard from ICI. The contractor will collect cardboard for the ICI sector for an additional fee. Organics are not collected from curbside in the municipality through the residential collection contract. Residents are encouraged to backyard compost.

There is also a Municipal Waste Transfer Station at 150 Cape Gegogan Road, Hwy 7 Goldenville. The Enviro Depot™, is a mobile site. MacMillan’s Recycling Centre in Lower South River Antigonish set up at the NSLC parking lot in Sherbrooke with a trailer to provide the refund two Saturdays per month, weather pending. Program tires, paint, items containing mercury and e-waste can be dropped off at the St Mary’s Municipal Waste Transfer Station in Gegogan, which is open Monday, Tuesday, Friday, and Saturday 9:00am to 4:30pm. The depot location and the transfer station are approximately 9 km apart and convenient for those who live in the area or come to Sherbrooke to do business.



Public Education and Outreach Programs

Eastern Region Solid Waste Management (ERSWM), Region 2a, Regional Coordinator/Educator and Compliance Officer provides Waste Management Program Education and Compliance support for the municipality and all of Region 2a. Information is also shared through the monthly newsletter that is mailed to all properties. This is known to be the best way to reach residents in the municipality. Information on the waste management program is also available on the Municipality of the District of St Mary's website (<https://www.saint-marys.ca/waste-disposal.html>), as well as the Eastern Region Solid Waste Management Committee website (<https://www.erswm.ca/waste-collection-calendar-waste-sorting-wizard/>) and through the Antigonish & Guysborough Counties Waste Info Facebook page.

Each of these locations also have a link to the online portal that is maintained by ERSWM with waste collection schedules and a waste sorting wizard for the municipality.

Through the education contract, ERSWM is available to provide face to face education with the school, businesses and community. The ERSWM Compliance Officer inspects loads of solid waste and recycling received at the Guysborough Waste Management Facility and performs follow-up reports and visits when necessary. Reports of illegal dumping in the municipality are also made to the ERSWM Compliance Officer. The municipality also responds to calls and questions from the public related to solid waste and illegal dumping. The collection calendar direct calls related to collection to Eastern Shore Cartage.



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	
1	Landfill	△	Accepts garbage	Guysborough Landfill Site, 151 Waste Management Rd, Boylston, NS
1	CF	△	Accepts organics	Guysborough Composting Facility, 151 Waste Management Rd, Boylston, NS
2	MRF	△	Accepts recyclables	Colchester Recycling Facility, 185 Mingo Rd., Kemptown NS
3	TS	△	Accepts garbage, organics, C&D, HHW, E-waste, & metal	St. Mary's Municipal Waste Transfer Station, 151 Gegogan Rd., Sherbrooke NS
3	C&D LF	△	Accepts C&D waste	St. Mary's C&D Landfill, 151 Gegogan Rd., Sherbrooke NS

Challenges and Future Considerations

Cost and inconvenience due to travel distances are challenges. In 2011, the municipality signed a collection agreement for recycling and garbage from St Mary's residents. Each residential property owner now pays a separate fee for waste collection on their tax bill. Prior to this, residents delivered themselves to the Gegogan site or paid a private collector. With such a low population density, just 1.2 persons per kilometer square, the challenge is collection cost and the financial impact regulation has on residents. For this reason, a residential organics collection program has not been added to the program. Backyard composting is a challenge for residents because of the bear population. Residents and businesses can self-haul to the Gegogan site but it's not as convenient as a curbside collection program, especially for the people who don't normally do business in Sherbrooke. The convenience of a mobile Enviro-Depot is also a challenge and will be more so if items are taken from the blue bag and added to the depot program.

2.4 Town of Antigonish

Community Data



Population:	4,364	Area:	501 ha
Households:	1,997	Median Age:	47.0
Population Changes:	-3.5% (2011-2016)	Mother Tongue:	5.3%

* Other Than English or French:



The Town of Antigonish is situated on the Northumberland Strait. Together the town and the municipality of Antigonish are the service center for North Eastern Nova Scotia. The town is home to St Francis Xavier University and the oldest continuous Highland Games outside of Scotland. According to Stats Canada, the Town of Antigonish recorded a population of 4,364 living in 1,997 of its 2,596 total private dwellings, a change of -3.5% from its 2011 population of 4,524. With a land area of 5.01 km² (501 hectares), it had a population density of 871.1/km² (2,256.0/sq mi) in 2016. People from the area are employed by institutions such as St Francis Xavier University, St Martha's Regional Hospital and Bethany, others by construction and forestry contractors, and a mix of other businesses.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	393.58	313.30	N/A	N/A	354.95
Tonnes collected per household	0.181	0.144	N/A	N/A	0.163
Collection method	Manual	Manual	N/A	N/A	Semi-automated
Collection frequency	Bi-weekly	Bi-weekly	N/A	N/A	weekly
Container limit (#)	Unlimited	Unlimited	N/A	N/A	1
Container size (max L)	78	78	N/A	N/A	290

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	No Data	No Data	No Data	No Data	No Data
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	No Data	Bi-weekly	No Data	No Data	No Data
Collection charge mechanism	No Data	Utility fees & Property tax	No Data	No Data	No Data
Container size (cubic yards)	No Data	78 L	No Data	No Data	No Data

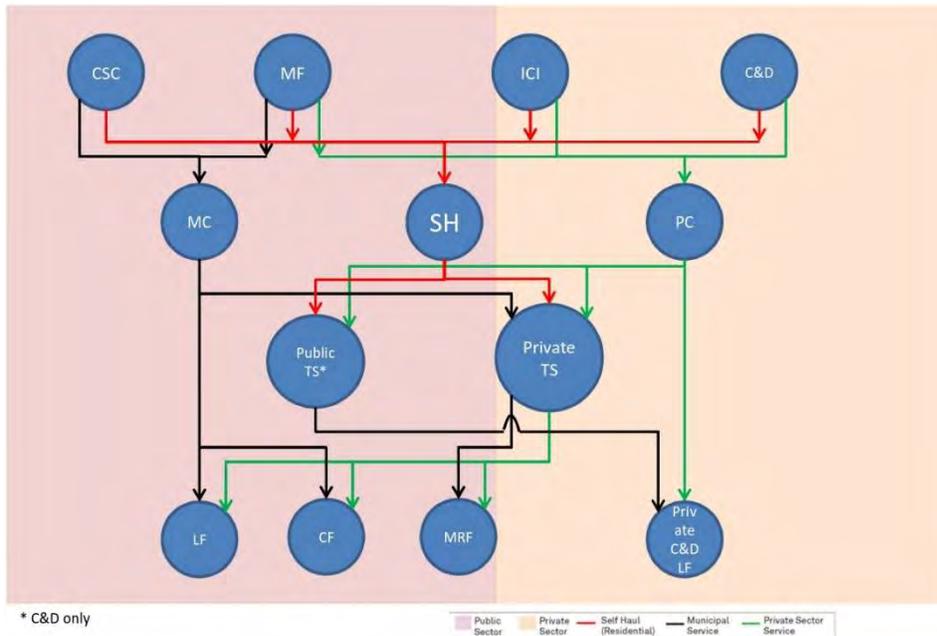
RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	N/D	0	51	0	19	0	No Data
Tonnes accepted per capita	#VALUE!	0.0000	0.0111	0.0000	0.0042	0.0000	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	N/A
Minimum charge (\$)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

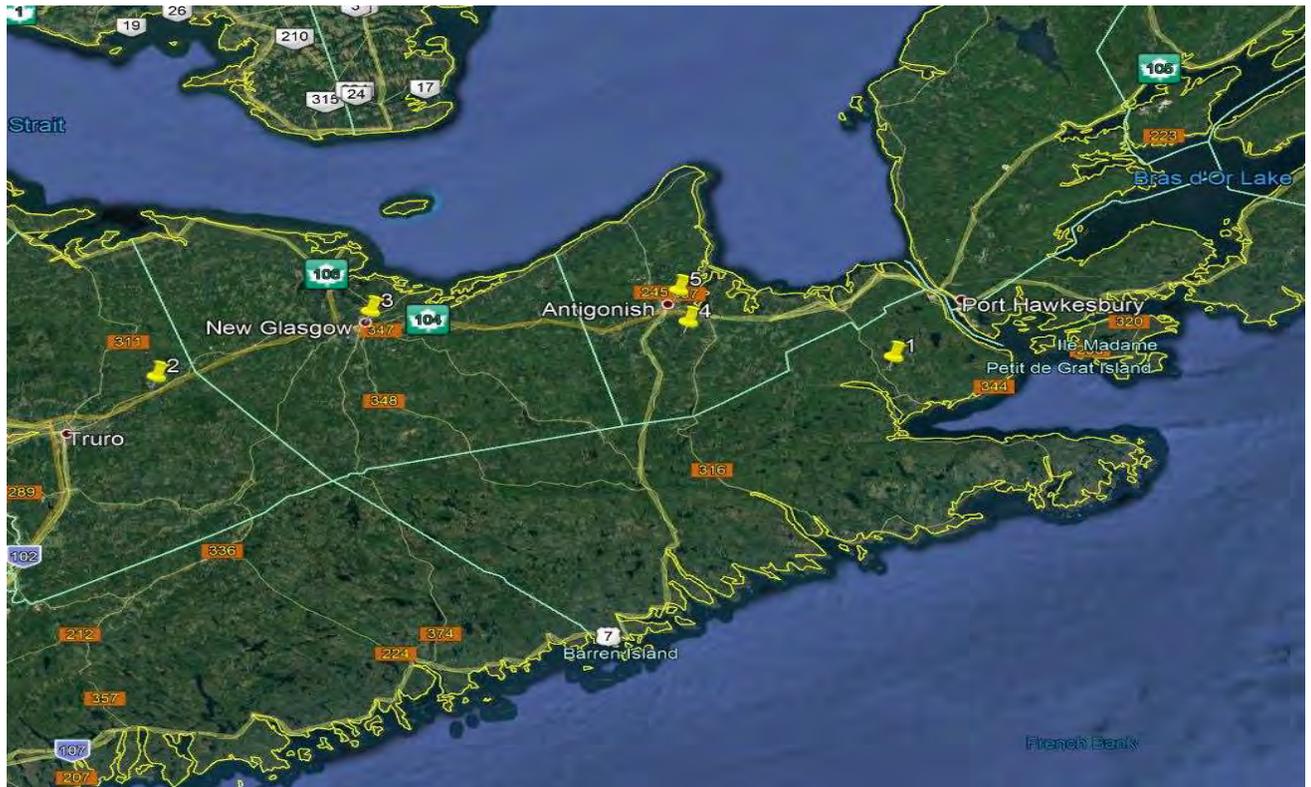
Solid Waste System Summary

The Town of Antigonish contracts waste collection services from Eastern Sanitation Limited (ESL), with operations based in the town. There are three residential waste collection routes. The collection contract includes multifamily properties with four (4) units or less. Garbage and organics are collected together biweekly; organics are also collected weekly mid-June to September. Household batteries are also collected in a small sealed bag or plastic container by placing them on top of the green cart. Recycling is collected bi-weekly on the alternating week throughout the year. Residential bulky waste is collected as a special pick up in the Spring and Fall. Residents are encouraged to self-haul leaf and yard waste to ESL on Adam St, Antigonish. Household Hazardous Waste is collected from residents at a special event at Antigonish Market Square over 2 days (a Friday and Saturday).

When the town collection contractor collects garbage in clear garbage bags and organics in green carts, the load is direct hauled to the Guysborough Waste Management Facility. The truck is weighed and the garbage is direct hauled to the face of the landfill where it may be inspected by the Eastern Region Solid Waste Management Compliance Officer. The truck crosses the scale again and then unloads the organics at the composting building, then one more trip across the scale. During the summer months the truck with organics will make a trip to the compost facility following each collection. The Recycling truck will collect the route then return to the ESL yard to unload into a larger trailer that is hauled by ESL to Colchester when full. Bulky waste is collected in the Spring and Fall, one collection per route per season. This excludes car parts, construction and demolition materials, hazardous waste, and other program materials.

Residents can rent roll-off containers from ESL for construction and demolition projects or self-haul to Beech Hill Waste Management Facility. In the yard of ESL, there is a container for bulky waste that is used by residents of the town for bulky items that they need to dispose throughout the year and a designated spot for leaf and yard waste which is hauled to Guysborough on occasion for composting. Recycling self-hauled to the yard is added to the curbside recycling to be hauled to Colchester.





Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	△	Accepts garbage, organics and HHW	Guysborough Landfill Site, 151 Waste Management Rd., Boylston, NS
1	CF	△	Accepts organics	Guysborough Compost Facility, 151 Waste Management Rd., Boylston, NS
2	MRF	△	Recyclables Processing Facility	Colchester Recycling Facility, 185 Mingo Rd., Kemptown, NS
3	C&D LF	Ⓢ	Accepts C&D (transferred from Beech Hill #4)	Marinus Verhagen C&D Disposal Site, Off TCH exit 25, Pictou County, NS
4	TS	△	Accept C&D waste	Beech Hill Municipal Solid Waste Transfer Station, 1356 Beech Hill Road, Beech Hill, NS
5	TS	Ⓢ	Accepts garbage, recyclables, yard waste, and C&D	Eastern Sanitation Limited, 17 Adams Street, Antigonish, NS

Public Education and Outreach Programs

Eastern Region Solid Waste Management (ERSWM), Region 2a, Regional Coordinator/Educator and Compliance Officer provides Waste Management Program Education and Compliance support for the town and all of Region 2a. Information is also shared through the Talk of the Town online newsletter and in an annual collection calendar that is printed and left for pick-up at town hall. Information on the waste management program is also available on the Town of Antigonish website (<https://www.townofantigonish.ca/residential-waste-management.html>), as well as the Eastern Region Solid Waste Management Committee website (<https://www.erswm.ca/waste-collection-calendar-waste-sorting-wizard/>) and through the Antigonish & Guysborough Counties Waste Info Facebook page.

Each of these locations also have a link to the online portal that is maintained by ERSWM with waste collection schedules and a waste sorting wizard for the town.

Through the education contract, ERSWM is available to provide face to face education with the schools, businesses and community. The ERSWM Compliance Officer has inspected bags curbside and loads of solid waste received at the Guysborough Waste Management Facility. Follow-up reports are prepared and visits when necessary. Reports of illegal dumping in the town are also made to the ERSWM Compliance Officer. The town also responds to calls and questions from the public related to solid waste and illegal dumping. The collection calendar direct calls related to collection to the Town of Antigonish Waste Collection Hotline.

Challenges and Future Considerations

The cost of waste management continues to rise. Green carts are aging and need replacement. Residents are paying the annual cost of waste management as a direct utility and through their property taxes. As more programs are added that require change to collection it impacts costs. There is strong support for diversion but more needs to be done to impact change in product packaging that reduces impact and need for diversion. Convenience for the walking/biking community within the town is also important, especially since the town's population doubles when St Francis Xavier University students return to the area. Currently the closest depot for refundables is in Lower South River which is on average 8 km from town center. This is also the drop-off location for paint and electronics. The Beech Hill Waste Management Facility is a similar distance for town residents. Other considerations involve the apartments and commercial properties that currently do not have access to residential collection. Compliance is most challenging with these properties. Any assistance to identify a provincial compliance plan that includes mandatory hauler involvement would be helpful.

2.5 Town of Mulgrave

Community Data



Population:	722	Area:	1783 ha
Households:	327	Median Age:	50.7
Population Changes:	-9.1% (2011-2016)	Mother Tongue:*	0.7%

* Other Than English or French:



The Town of Mulgrave borders the Strait of Canso in Guysborough County, Nova Scotia opposite the Town of Port Hawkesbury. There are a variety of small businesses, services and organizations available in the Town. Services include a pool, public library, medical centre and fire hall. The year-round ice-free harbor is the deepest in North America and the port is open for marine business.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Commingled organics
Tonnes collected	91.25	35.19	N/A	N/A	11.70
Tonnes collected per household	0.278	0.107	N/A	N/A	0.04
Collection method	Manual	Manual	N/A	N/A	Semi-automated
Collection frequency	Weekly	Weekly	N/A	N/A	Weekly
Container limit (#)	3	3	N/A	N/A	1
Container size (max L)	78	78	N/A	N/A	80

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	No Data	No Data	No Data	No Data	No Data
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	Weekly	No Data	No Data	Weekly	Weekly
Collection charge mechanism	Property tax	No Data	No Data	Property tax	Property tax
Container size (cubic yards)	78L Clear bags	No Data	No Data	max 78 L bags	0

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&I)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	No Data	No Data	No Data	No Data	1	No Data	No Data
Tonnes accepted per capita	No Data	No Data	No Data	No Data	0.0015	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	\$210.00	\$55.00	\$55.00	\$45.00	\$45.00	No Data
Minimum charge (\$)	No Data	\$0.00	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

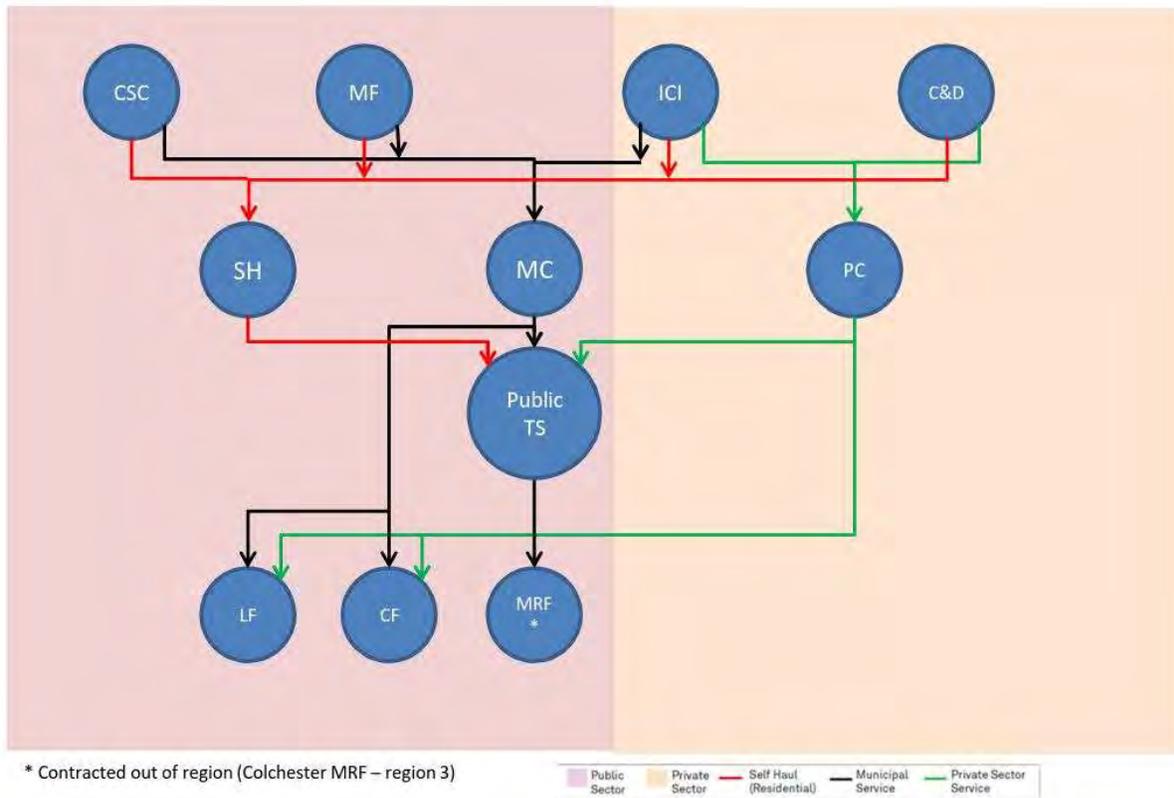
The Town of Mulgrave provides a full range of waste management services to the residential, multi-family and commercial units located within the Town. All dwelling located within the town receive the same level of service regardless of size.

The Town's waste is collected in two (2) split collection vehicles managed by the Municipality of the District of Guysborough. Collection services are provided weekly and include garbage, recycling and organics. Organics are collected in green carts, blue bags are used for paper, oil containers and other recyclables, cardboard is bundled and garbage is collected in clear bags. Each clear regular sized garbage bag may contain one small solid colour bag with non-recyclable/compostable contents. Bulky waste is collected curbside, usually during the Spring.

All wastes collected in the Town are transferred directly to the Guysborough Waste Management Facility. The Guysborough Solid Waste Management Facility consists of a transfer station, and construction and demolition waste site, metals recycling, and a composting facility. The transfer station includes a public drop off centre, a household hazardous waste facility, tire corral, and a CFC removal area.

Recycling materials transferred to the Guysborough Waste Management Facility are managed in the public transfer building and shipped to the Colchester Material Recovery Facility in Kemptown for processing. The garbage is disposed of in the landfill and organics are tipped at the compost building for processing.

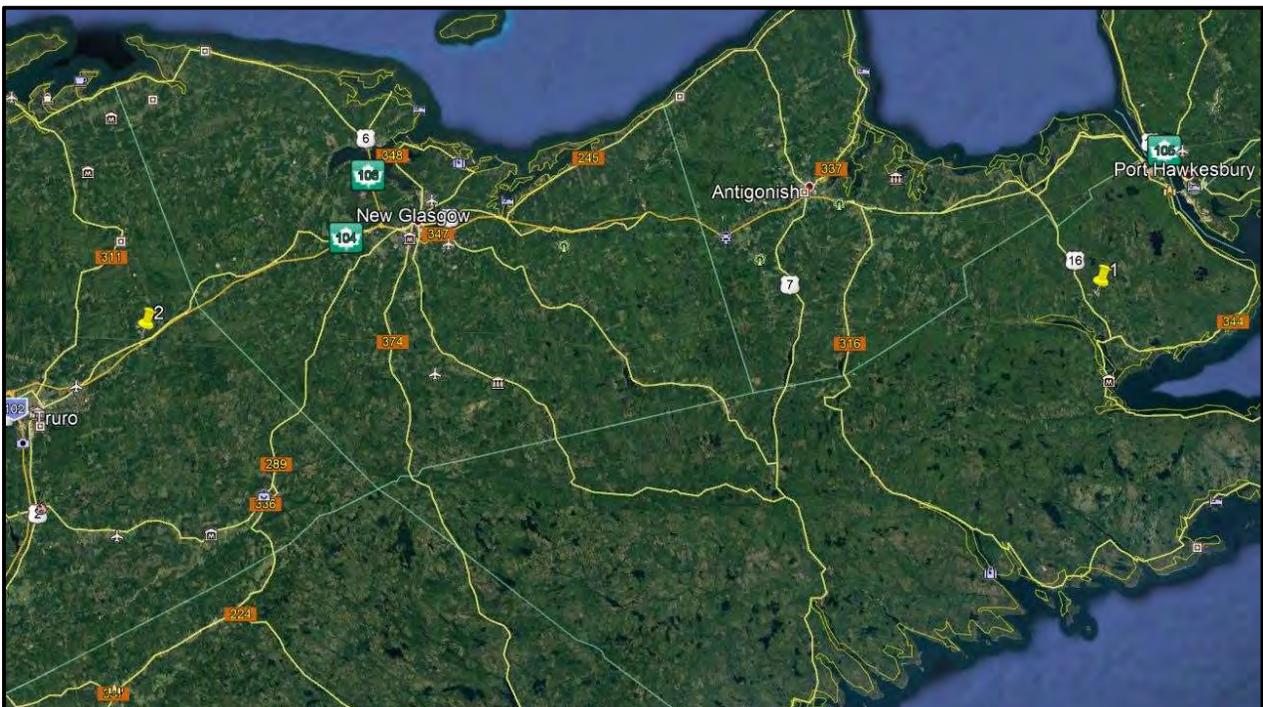
All wastes including C & D waste can also be self-hauled by Town residents to the Guysborough Facility where tipping fees are applied.



Public Education and Outreach Programs

In 2017, the Town of Mulgrave established the following programs:

- a) **Educational Programs** – The Eastern Region Solid Waste Management (ERSWM) provides waste management program education and compliance support to the Town. Information on the Town’s waste management program is also available on the ERSWM Committee website and through their Facebook page. There an online portal is provided to the public on waste collection schedules etc. and newsletters are provided to all residential and commercial businesses within the Town. ERSWM also provides face to face education with businesses and in the community.
- b) **Waste Audits** – ERSWM conducts curbside inspections and audits of garbage and recycling loads received at the Guysborough Waste Management Facility.



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	△	Accepts garbage	Guysborough Landfill Site, 151 Waste Management Rd., Boylston NS
1	CF	△	Accepts organics	Guysborough Composting Facility, 151 Waste Management Rd., Boylston NS
1	TS	△	Accepts garbage, recyclables, organics, C&D, and HHW	Guysborough County Recycling Transfer Station, 151 Waste Management Rd., Boylston NS
2	MRF	△	Recyclables Processing Facility	Colchester Recycling Facility, 185 Mingo Rd., Kemptown NS

Challenges and Future Considerations

The biggest challenge the Town of Mulgrave faces are changes in provincial regulations that impact collection costs. There are also no transfer stations in the area. All waste materials are direct hauled to Guysborough Waste Management, which is 44km one way. The closest Enviro Depot is in Port Hawkesbury which is approximately 18 km away.

2.6 Pictou County Shared Services Authority

Community Data



Population:	43,748	Area:	285 ha
Households:	26,355	Median Age:	48.4
Population Changes:	-4.2% (2011-2016)	Mother Tongue:*	2.1%

* Other Than English or French:



The Pictou County Shared Services Authority (PCSSA) is a municipal corporation incorporated pursuant to section 60 of the *Municipal Government Act*. The PCSSA Board of Governance comprises the five (5) Pictou County Mayors and the Warden of the Municipality of the County of Pictou. The Board and the Chief Operating Officer operate under the Chief Administrative Officer model of local government. The PCSSA retains three (3) operating divisions: Pictou County Solid Waste Management System; the East River Environmental Control Centre (wastewater), and the Regional Emergency Measures Organization. In addition, the PCSSA acts as the Board of Governance for Active Pictou County.

Pictou County resource based industries include coal mining, forestry, fishing and agriculture. Manufacturing industries include Michelin Tire and Northern Pulp. Web.Com operates a call center in New Glasgow. Tourism is an important part of the economy during the summer, and in 2006 employed 1,200 people and brought 45 million dollars to the economy. Rail car manufacturer Trenton Works was closed in 2007 when owners Greenbrier moved production to Mexico. There are 2,400 small and medium-sized businesses that collectively generate more than 15,000 jobs.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	4,014	2,275	334	No Data	3,845
Tonnes collected per household	0.15	0.09	0.0127	No Data	0.15
Collection method	Manual	Manual	Manual	N/A	Semi-
Collection frequency	Bi-weekly	Bi-weekly	Occasional seasonal	N/A (No collection)	Bi-weekly
Container limit (#)	4	Unlimited	Unlimited	Unlimited	1
Container size (max L)	40	40	40	40	240

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	N/A	No Data	No Data	No Data	No Data
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	Bi-weekly	No Data	No Data	Bi-weekly	Bi-weekly
Collection charge mechanism	Property tax	No Data	No Data	Property tax	Property tax
Container size (cubic yards)	No Data	No Data	No Data	No Data	No Data

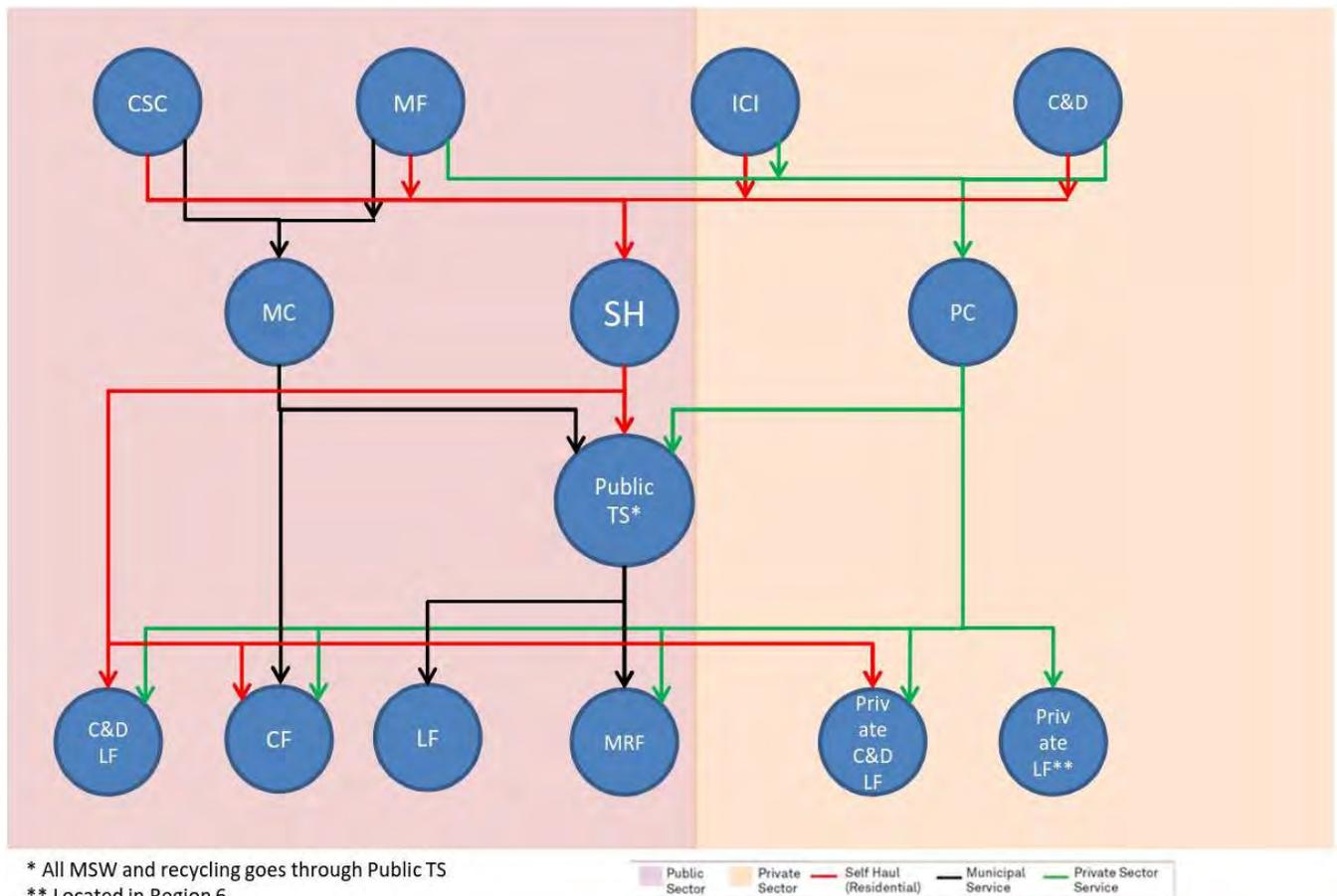
RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (L&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

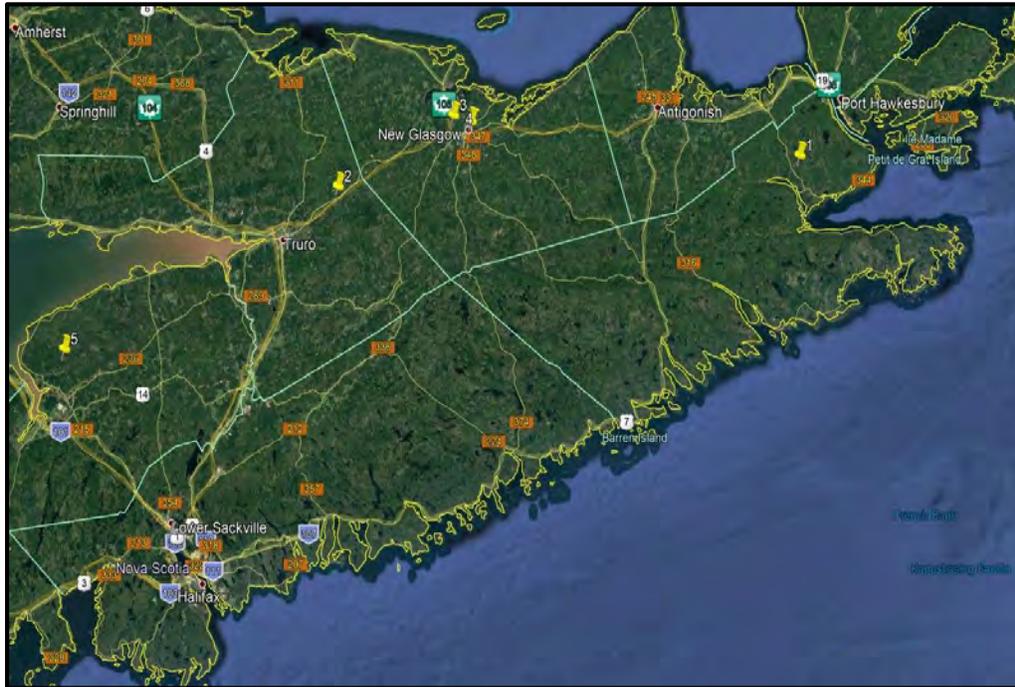
Pictou County Solid Waste Management System provides solid waste disposal services to the Residential and ICI sectors in Region 2B of Nova Scotia. Construction and Demolition disposal is also provided and accounts for approximately 1/3 of the disposal in the Region. Two (2) private C&D sites make up the remaining 2/3's of the disposal in the Region. The Pictou County Solid Waste Management Facility consists of a transfer station, and construction and demolition waste site, metals recycling, and a composting facility. The transfer station includes a public drop off centre, a household hazardous waste facility, tire corral, and a CFC removal area. Within the transfer station, residential and ICI waste and recycling is received and transferred into 53 foot walking floor trailers. Garbage is transported 113 km to the Municipality of Guysborough's 2nd Generation Landfill and the blue bag recycling is transported 45 km to the Municipality of Colchester's MRF. Pictou County Solid Waste Management System also maintains two (2) closed landfill sites with the Region.

Pictou County Solid Waste Management System is responsible for the solid waste planning for six (6) municipalities. All municipalities provide residential curbside collection through private contractor for garbage, organics, and two (2) stream bluebag recycling. Residential collection is extended to multi-family dwellings of four (4) units or less and the Municipality of Pictou County provides curbside collection to small "mom and pop" commercial establishments.

Private sector haulers collect the majority of the of the ICI waste, organics and recycling within the County. There are two (2) privately owned and operated C&D sites.



Pictou County Shared Services has contracts in place on behalf of the municipalities for Residential Curbside Collection program, disposal of municipal solid waste and processing of bluebag recycling.



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
	TS	△	Accepts garbage and recyclables	Pictou County Transfer Station 220 Landfill Rd., Mount William, NS
1	Landfill	△	Accepts garbage and organics	Guysborough Landfill Site, 151 Waste Management Rd., Boylston, NS
2	MRF (Region 3)	△	Recyclables Processing Facility	Colchester Recycling Facility, 185 Mingo Rd., Kemptown, NS
3	CF	△	Accepts organics	Pictou County Solid Waste Management Composting Facility, 220 Landfill Rd., Mount William, NS
3	C&D LF	△	Accepts C&D	Pictou County Solid Waste Centre 220 Landfill Rd., Mount William, NS
4	C&D LF	⊙	Accepts C&D	Marinus Verhagen C & D Disposal Site Off TCH at Exit 25 Pictou County, NS
5	Landfill	⊙	Accepts garbage	West Hants Landfill 1569 Walton Woods Road Cogmagun, NS

A flow diagram illustrates the solid waste management system. Shading is used to identify the various aspects of the solid waste system that are controlled or managed by the subject community. It also identifies other parts of the solid waste management system that are controlled by the private sector or other public sector entities.

Public Education and Outreach Programs

In 2016 and 2017 Pictou County established the following programs:

- a) **Educational Programs** - The County initiated a number of educational programs for the public and private sectors including restaurants and schools on all their waste management programs. Educational events took place throughout the County during Earth Day, Environment Week and Waste Reduction Week. A reuse textile crafting and vermicomposting programs were adopted by some schools and a new certificate program “The History of Garbage” was utilized by some high school teachers. School Tours of the Pictou County Solid Waste Management Facility also took place during Environment Week.
- b) **Waste Audits** - County wide waste audits were performed in 18 CCRSB schools, 3 private schools and 5,225 residents. Following the inspections, feedback was provided for improvement in the form of written reports and discussion with Principals or CCRSB Management. Curbside inspections and audits of dumpsters at apartment buildings were ongoing. Landlords and apartment owners received reports of improvements necessary on their properties. Tenants received several visits to promote, educate, award, re-educate, etc. as well as to be given bags for all waste streams. This activity was a staple of the contract. Tenants received the annual waste management calendar at their door which promoted proper separation of waste; promoted textile recycling; promoted litter clean-up campaigns. They received information about the new online app for Pictou County. For new apartment buildings, the tenants received workshops and information sessions. Asked by the Housing Authority of Pictou County, 590 senior units received education packages during July 2016.
- c) **Textile Recycling Promotion** - This initiative was very active in Region 2B with flyers and information delivered and posted in numerous venues. Collection of textiles took place at the Waste Management Facility with a total of 124.11 tonne in past 16 months. This program was the work of the Educator, Compliance Officer and the Clothesline workers. The work will continue into the new contract.
- d) **“Go Clean, Get Green Litter Campaign”** - 3,240 people registered and many communities in the County participated to make our piece of Nova Scotia beautiful again.

Challenges and Future Considerations

No information provided.

Region 3

REGION 3

3.1 Town of Amherst

Community Data



Population:	9,413	Area:	1,207 ha
Households:	22,230	Median Age:	47.7
Population Changes:	-3.1% (2011-2016)	Mother Tongue:*	1.4%

* Other Than English or French:



The Town of Amherst is located in Cumberland County, Nova Scotia, Canada, at the northeast end of the Cumberland Basin, an arm of the Bay of Fundy. Amherst is strategically situated on the eastern boundary of the Tantramar Marshes, 3 km east of the interprovincial border with New Brunswick and 65 km southeast of the City of Moncton. It is 60 km southwest of the Confederation Bridge to Prince Edward Island. Amherst is the largest population centre in Cumberland County.

The original Town of Amherst was established in 1764, 2 miles west of its present location following the Expulsion of the Acadians. New England settlers were invited to settle many communities along the shores of the Bay of Fundy. One of these settlements grew to become the Town of Amherst. A grist mill and tannery were built over a mile to the east of the settlement. The community gradually moved closer to them so that by 1850 Amherst was located where you find it today.

In 1908 the manufacturing output of Amherst's industries was not exceeded by any centre in the Maritime Provinces, and the term "Busy Amherst" was well deserved. Many of the fine old buildings along Victoria Street are considered industrial artifacts because they were constructed during a period of tremendous industry growth. Local contractors employed local craftsmen, who used local materials. Notice the emphasis on sandstone and brick, both locally produced and delightful detail which reflects the skilled craftsmanship prevalent in the 19th century.

While much has changed over the years, the Town of Amherst remains the retail and industrial centre of Cumberland County and the southeastern part of New Brunswick.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	728	6	29	1,168	N/A
Tonnes collected per household	0.23	No Data	0.0090	0.3672	N/A
Collection method	Manual	Manual	Manual	Manual	N/A
Collection frequency	Bi-weekly	Bi-weekly	Bi-weekly	Bi-weekly	N/A
Container limit (#)	4	Unlimited	Unlimited	1	N/A
Container size (max L)	60	60	40	175.05	N/A

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	2,544	N/A	N/A	No Data	877
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	No Data	No Data	No Data	No Data	No Data
Collection charge mechanism	No Data	No Data	No Data	No Data	No Data
Container size (cubic yards)	No Data	No Data	No Data	No Data	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	105	No Data	52	12	26	No Data	105
Tonnes accepted per capita	0.0111	No Data	0.0056	0.0013	0.0028	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	\$175.00	No Data	No Data	\$75.00	\$35.00	No Data	\$60.00
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

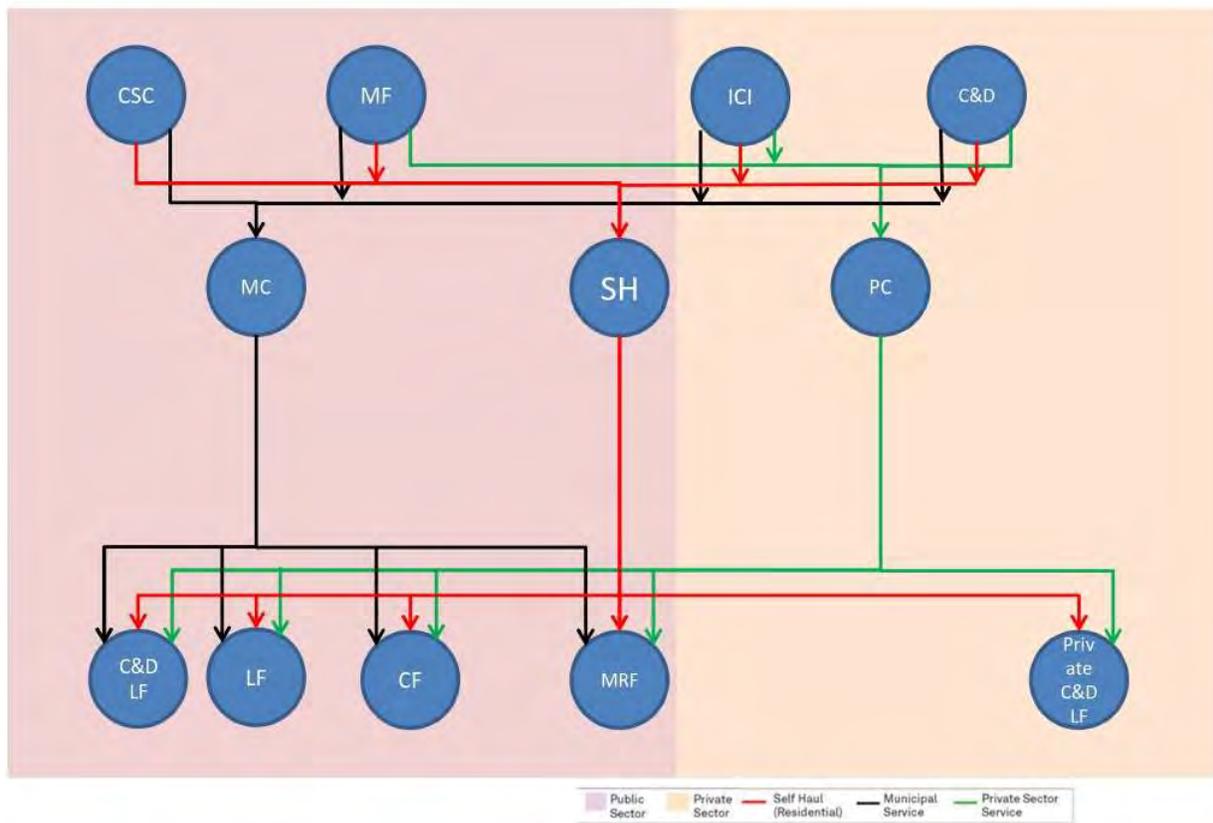
Solid Waste System Summary

The Town’s contracted hauler collects materials from the residential sector only. Amherst provides bi-weekly collection of residual waste and organics one week, with recyclables collected the following week. The Town allows up to ten (10) bags of leaf and yard waste, in addition to the green cart, with organics collection. Special collection is conducted each spring which collects bulky waste, white goods and Construction and Demolition (C&D) materials (eliminated in 2018). The residential sector includes apartment buildings with three (3) or less units in them.

The Town funds its residential solid waste program through a uniform charge of \$165 per household per year. This uniform charge covers curbside collection costs and tipping fees paid to the Cumberland Joint Services Management Authority (CJSMA). CJSMA is a Board Authority made up of the three (3) municipal units in Cumberland County, of which the Town of Amherst appoints two (2) elected officials to serve on the six-member CJSMA Board.

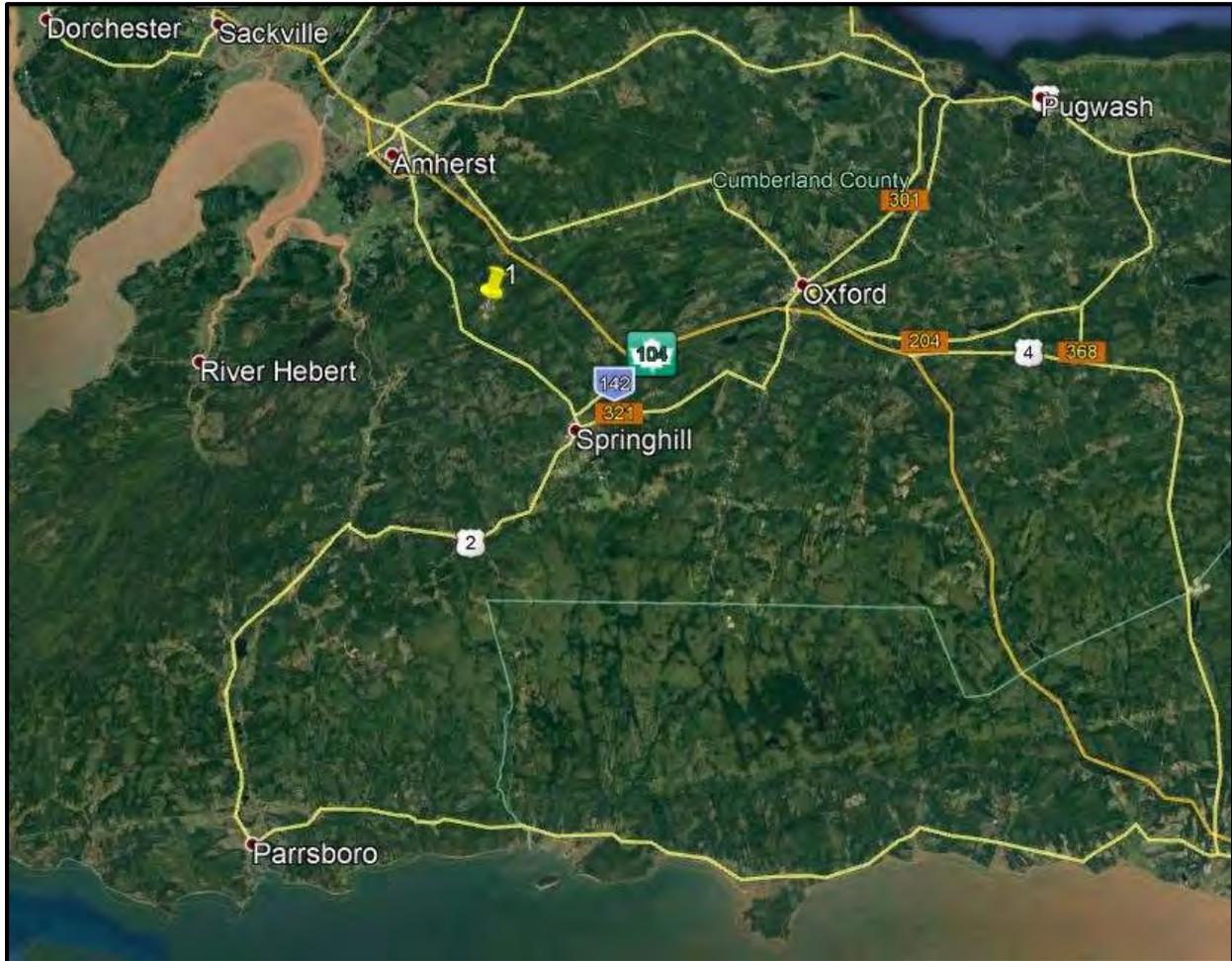
The Industrial, Commercial and Institutional (ICI) sector of the Town is responsible for the disposal of the waste they generate by contracting private haulers for disposal. This sector includes apartment buildings with four (4) or more units.

All waste material from both sectors is transported directly to the Cumberland Central Landfill (CCL) Site located 13 km from the Amherst border. The CCL is operated by CJSMA. Facilities at the CCL include a Material Recycling Facility (burned September 2017), second generation landfill, compost facility, C&D landfill, and an asbestos disposal site. The CCL site also receives leaf and yard waste and scrap metals.



A flow diagram illustrates the solid waste management system. Shading is used to identify the various aspects of the solid waste system that are controlled or managed by the subject community. It also identifies other parts of the solid waste management system that are controlled by the private sector or other public sector entities.

Solid waste facilities in the community are summarized in a table and plotted on a map. The facilities identified include landfills, material recovery facilities (MRF), transfer stations, recycling depots, landfill gas recovery facilities and energy-from-waste (EFW) facilities.



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	△	Accepts garbage and C&D waste	Little Forks Municipal Landfill 2052 Little Forks Rd. Nappan, NS
1	CF	△	Accepts organics	Little Forks Municipal Landfill 2052 Little Forks Rd. Nappan, NS
1	MRF	△	Accepts recyclables	Little Forks Municipal Landfill 2052 Little Forks Rd. Nappan, NS

Public Education and Outreach Programs

The CJSMA also provides public education to Amherst's residential and business sectors based on the Town's solid waste program and by-law.

Public education programs include:

- a) Annual collection calendars
- b) Spring and fall solid waste newsletters
- c) Website with on-line searches "What goes where" database
- d) Social media, newspaper and radio ads
- e) Solid waste app with customizable collection reminders
- f) Public/private information sessions

Challenges and Future Considerations

In Nova Scotia, solid waste is regulated by the Province, but solid waste service delivery is performed by municipalities. Challenges can arise when the regulator revises solid waste related regulations. Rising solid waste related costs also pose a challenge. CJSMA is challenged to provide the infrastructure needed to maintain facilities/services on shrinking populations/decreasing volumes. The Town funds its residential solid waste program through a uniform charge of \$165 per household per year. This fee will increase to \$175 per household for 2018/2019.

3.2 Colchester County

Community Data



Population:	50,585	Area:	362,800 ha
Households:	22,230	Median Age:	46.6
Population Changes:	-0.8% (2011-2016)	Mother Tongue:*	2.2%

** Other Than English or French:*



Colchester County comprises the Municipality of the County of Colchester, Town of Truro, Town of Stewiacke and the First Nations Community of Millbrook. The Town of Stewiacke has the geographical distinction to be located halfway between the equator and the North Pole.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	4,352	1,887	21	No Data	4,965.90
Tonnes collected per household	2,176	No Data	No Data	No Data	2482.95
Collection method	Manual	Manual	No Data	No Data	Semi-automated
Collection frequency	Bi-weekly	Bi-weekly	No Data	No Data	Bi-weekly
Container limit (#)	6	No Data	No Data	No Data	1
Container size (max L)	77	77	No Data	No Data	240

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	12,275	N/A	N/A	1,294	3,333
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	No Data	No Data	No Data	No Data	No Data
Collection charge mechanism	No Data	No Data	No Data	No Data	No Data
Container size (cubic yards)	No Data	No Data	No Data	No Data	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	340	0	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	0.0066	0	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	\$90.00	\$51.00	\$51.00	\$35.00	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

The Province of Nova Scotia has regulations on designated materials that are banned from landfill. The list is organics, food and beverage containers (glass, plastic, tin, aluminum) plastic film, leaf and yard waste, paint, oil, hazardous waste, tires, and electronics.

The Municipality of Colchester owns and operates a second-generation landfill, Materials Recovery Facility (MRF), construction and demolition landfill and a compost facility. There is an agreement in place with the citizens of Colchester which has been in place when the landfill was sited in Kempton in 1995. The agreement was made to ensure no waste could be imported to the landfill from outside the municipal limits. Therefore, the landfill, construction and demolition landfill and organics facilities are processing materials from wastes generated only within Colchester County and the Towns of Truro and Stewiacke.

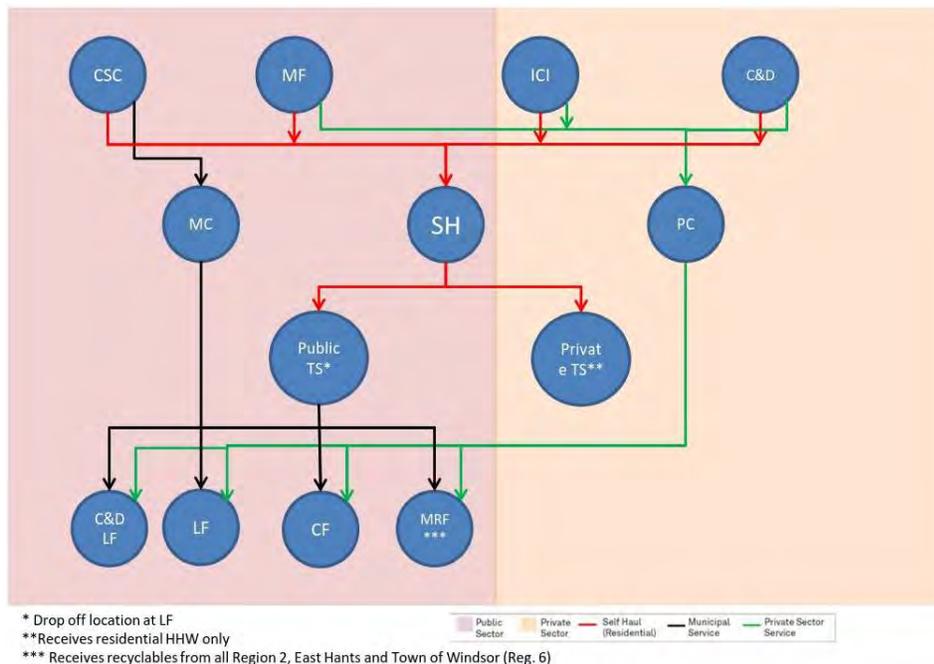
The MRF does have contractual agreements with the thirteen (13) Municipalities located within Guysborough County, Pictou County, Town of Windsor and the Municipality of East Hants. The MRF also is a non-buy back depot and provides services for Divert NS in handling some of the deposit materials.

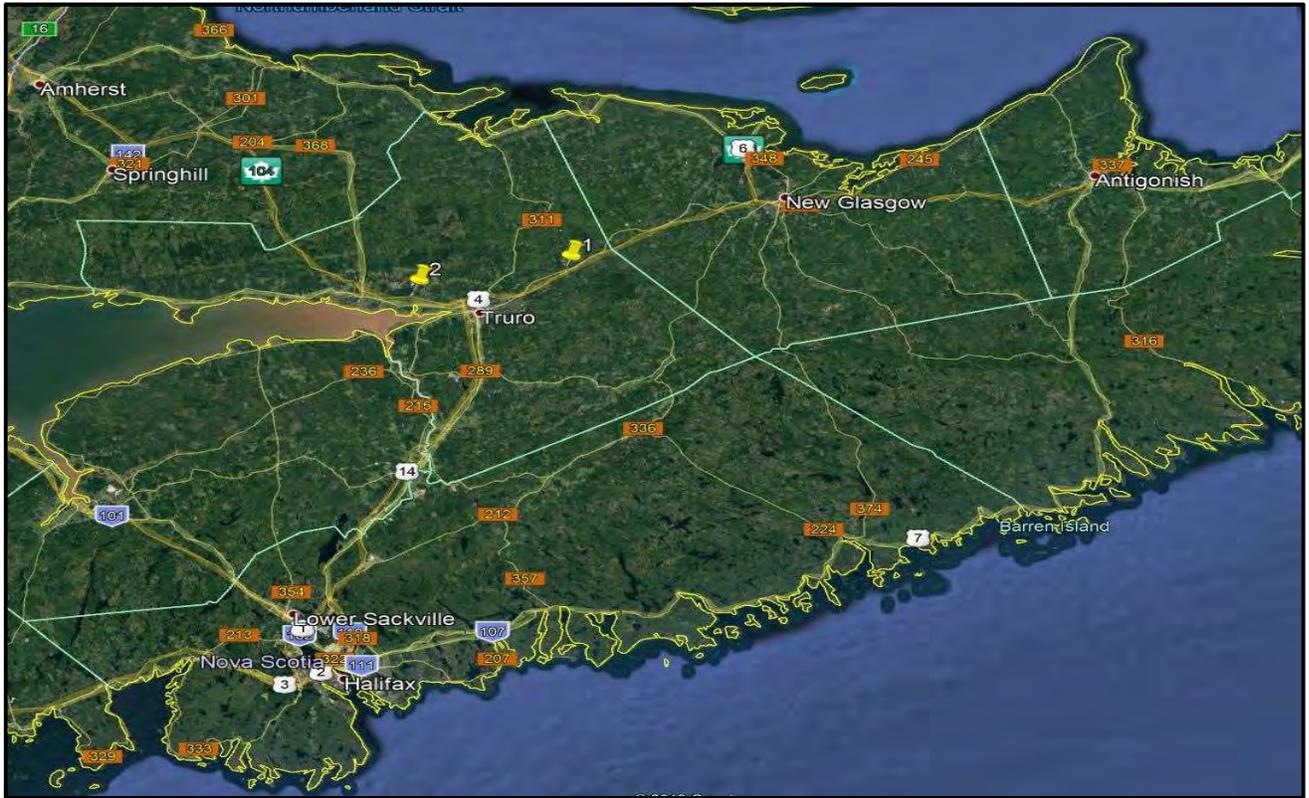
All waste collection services for the County are provided by private sector contractors. The Municipalities have collection contracts in place with private haulers for residential four-stream collection. Each residential unit is permitted for one (1) privacy bag (non-see through) and up to five (5) clear bags for garbage, twelve (12) blue bags and either one (1) 240-liter green cart or 80 liter green cart for organics. Collection services are provided once every two (2) weeks.

Wastes generated by the ICI sector as well as multi-family dwellings are collected by commercial haulers and transported to the Colchester Balefill Facility. All waste is baled for densification.

The Municipality of Colchester has been composting organics since 1996 and currently operates a state of the art composting facility. The composting facility was upgraded in 2015.

The wind turbines generate power revenues that are used to offset electrical costs for the Municipality.





Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	△	Accepts garbage and C&D	Colchester Balefill Facility 188 Mingo Road, Kempton, NS
1	CF	△	Accepts organics	Colchester Composting Facility 188 Mingo Road, Kempton, NS
1	MRF	△	Accepts recyclables	Colchester Materials Recovery Facility 185 Mingo Road, Kempton, NS
1	TS	△	Accepts garbage, recyclables, organics, and C&D	
2	TS	⊙	Accepts HHW	Clean Harbors & Safety-Kleen 640 Mc Elmon Rd, Debert, NS

Public Education and Outreach Programs

The Municipality has a number of educational programs in place which include the following:

- a) **Educational Programs** – The Municipality has a dedicated team of four (4) persons that provide public educational programs. The Municipality also operates is a telephone Helpline to assist communities with information regarding waste services. The Municipality also employs an Environmental and Education Officer, Waste Management Officer and Waste Reduction Manager.
- b) **Educational Messaging** – This program involves the use of curbside stickers that the collector is contracted to place on non-compliant waste materials. There are also Colchester Waste Resource Management Facebook and Twitter accounts for Social Media Messaging. Recollect electronic calendars with reminders are sent out via email, text or telephone to all that sign up. It is a great public messaging system especially when there are service disruptions due to weather etc. Each Municipality has their own website.
- c) **Community Events** - Several public outreach events take place each year and include the Colchester Home Show, Senior Expos, Youth Expos, Exhibition, School and community presentations as well as hosting tours of the waste management facilities. Each fall, the Colchester Facility hosts an open house where there are accessible tours, educational displays etc.
- d) **“Compost Give Away”** – This event takes place each Spring and Fall. Compost produced by the County is given to the public free of charge.
- e) **“Household Hazardous Waste Events”** – Multiple events are hosted by the County throughout the year where residents can dispose of their HHW.
- f) **“Anti-Littering Roadside Checkpoint”** – County staff have teamed up with the local RCMP office to promote anti-littering roadside checkpoint messaging.

Challenges and Future Considerations

No information provided.

3.3 Municipality of the County of Cumberland

Community Data



Population:	19,402	Area:	425,504 ha
Households:	8,714	Median Age:	51.1
Population Changes:	-4.3% (2011-2016)	Mother Tongue:*	1.6%

** Other Than English or French:*



The Municipality of the County of Cumberland (MCC) is bordered by the Province of New Brunswick, Colchester County, the Northumberland Strait, and the Bay of Fundy.

Rivers, golf courses, mountains, oceans, and trails offer endless opportunities for recreational pursuits, and many fine dining opportunities are available throughout our Municipality. The Joggins Fossil Institute, the Parrsboro Geological Museum, and Pugwash Thinkers Lodge offer wonderful educational opportunities for all ages.

The Municipality is growing with the addition of the communities of Springhill and Parrsboro. The Municipality also has an abundance of renewable energy resources that are currently being developed as alternative energy opportunities. Tidal turbines supply power to residents in the community of Parrsboro, geothermal energy powers the Springhill Community Centre and several Springhill businesses, and wind turbines are supplying power to homes in Amherst and surrounding area.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	1,972	34	3	1,615	N/A
Tonnes collected per household	0.16	No Data	No Data	No Data	N/A
Collection method	Manual	Manual	Manual	Semi-automated	N/A
Collection frequency	Bi-weekly	Bi-weekly	Occasional seasonal	Bi-weekly	N/A
Container limit (#)	Unlimited	Unlimited	Unlimited	1	N/A
Container size (max L)	60	60	40	175	N/A

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	1,466	N/A	N/A	No Data	529
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	No Data	No Data	No Data	No Data	No Data
Collection charge mechanism	No Data	No Data	No Data	No Data	No Data
Container size (cubic yards)	No Data	No Data	No Data	No Data	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	194	82	46	52	46	No Data	No Data
Tonnes accepted per capita	0.0106	0.0045	0.0025	0.0029	0.0025	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	\$175.00	No Data	No Data	\$75.00	\$35.00	No Data	\$60.00
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

The Municipality has developed and approved its curbside collection program based on provincial regulatory requirements.

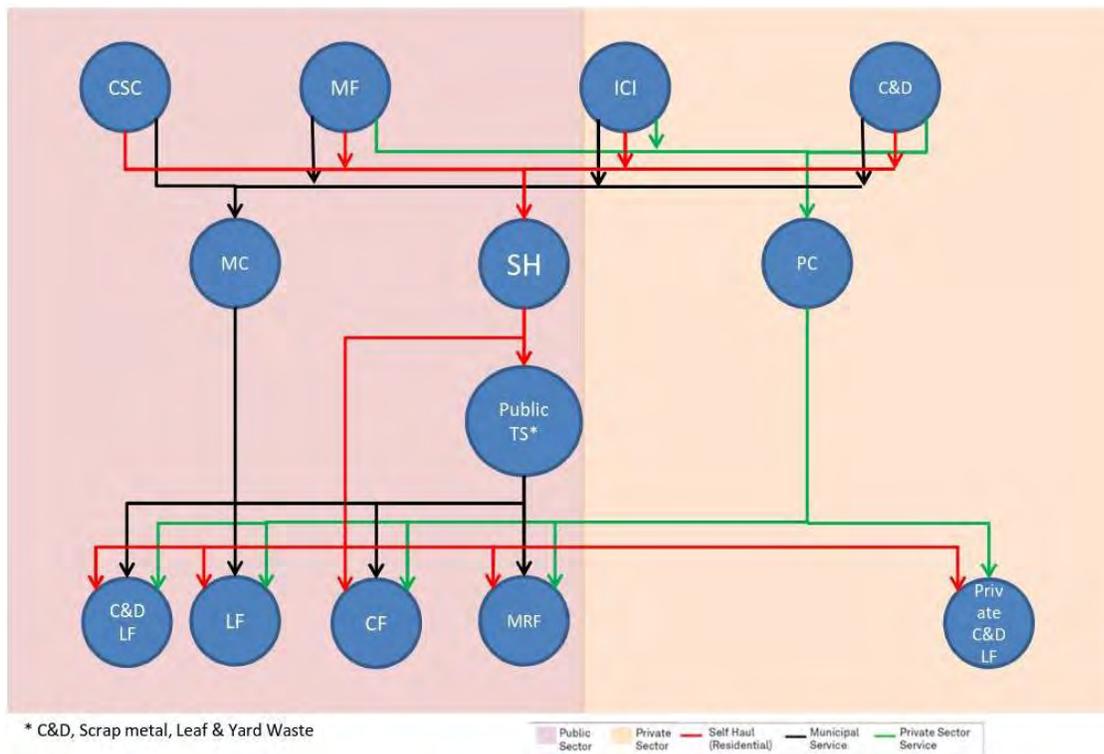
The Municipality’s contracted hauler collects materials from the residential and small business sectors. The Municipality provides bi-weekly collection of residual waste and organics on one week, with recyclables collected the following week. Residents may also put out one bulky item with each residual waste collection. Additionally, special collection is conducted each summer which collects bulky waste, white goods/scrap metal, and Construction and Demolition (C&D) materials.

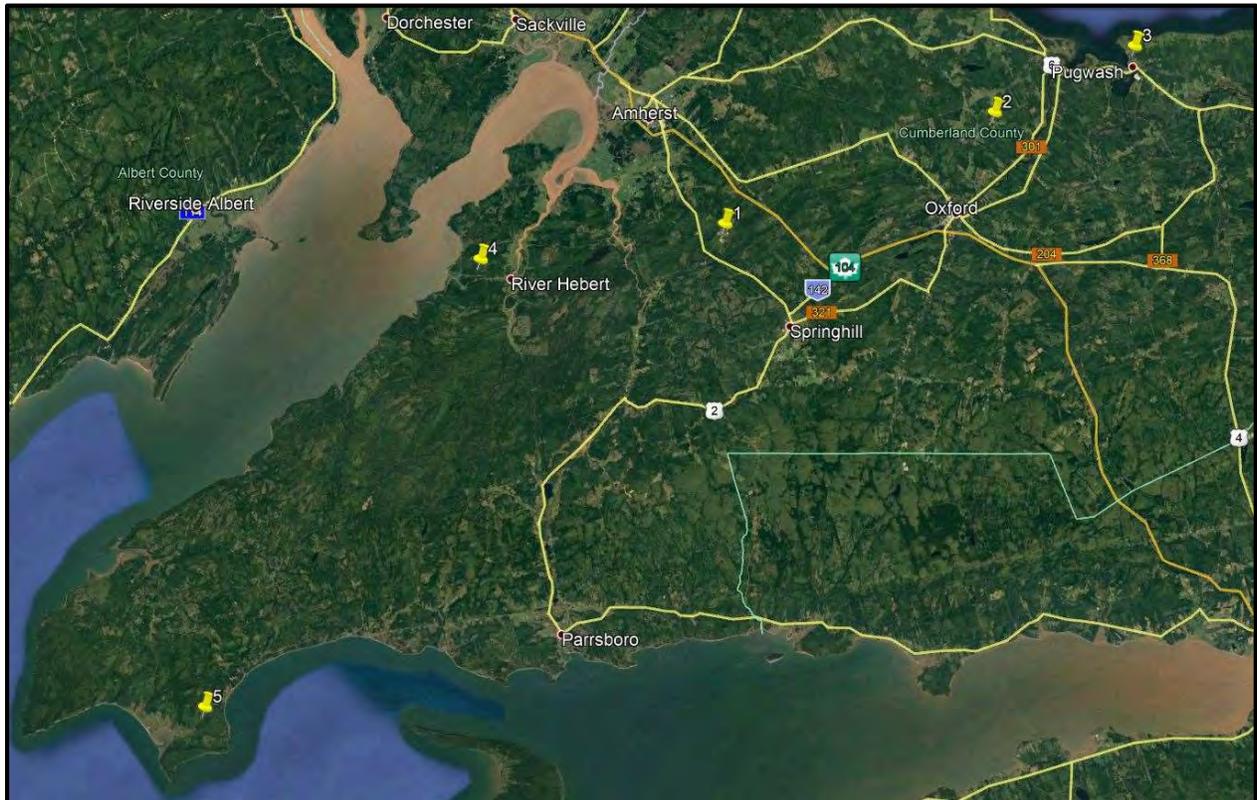
Material is collected and transferred to the Cumberland Central Landfill (CCL) by a waste hauler working under contract for the Municipality. Facilities at the CCL include a Material Recycling Facility (burned September 2017), second generation landfill, compost facility, C&D landfill, and an asbestos disposal site. The CCL site also receives leaf and yard waste and scrap metals.

The Industrial, Commercial and Institutional (ICI) sector of the Municipality is responsible for the disposal of the waste they generate by contracting private haulers for disposal which is also transported to the CCL.

The CCL is operated by Cumberland Joint Services Management Authority (CJSMA). CJSMA is a Board Authority made up of the three municipal units in Cumberland County. The Municipality appoints three elected officials to serve on the six-member CJSMA Board.

The Municipality also operates three (3) transfer stations that accept scrap metal, leaf and yard waste, and construction and demolition material only. Materials may be dropped off at these stations free of charge. C&D material is transferred to the CCL annually via a private contractor.





Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	△	Accepts garbage	Cumberland Central Landfill 2052 Little Forks Road Little Forks, NS
1	CF	△	Accepts organics	Cumberland Central Composting Facility 2052 Little Forks Road Little Forks, NS
1	MRF	△	Accepts recyclables	Cumberland Central Recycling Facility 2052 Little Forks Road Little Forks, NS
2	C&D LF	Ⓢ	Accepts C&D waste	Cumberland Central C&D Landfill 2052 Little Forks Road Little Forks, NS
3	TS (Pugwash)	△	Accepts C&D, scrap metal, clean wood, leaf and yard	Transfer Station – Pugwash 1031 Irishtown Rd Pugwash, NS
4	TS (River Hebert)	△	Accepts C&D, scrap metal, clean wood, leaf and yard	Transfer Station – River Hebert 142 Dump Rd River Hebert, NS
5	TS (Advocate)	△	Accepts C&D, scrap metal, clean wood, leaf and yard	Transfer Station – Advocate 4472 Highway 209 Advocate Harbour, NS

Public Education and Outreach Programs

The CJSMA also provides public education to the Municipality of the County of Cumberland's residential and business sectors based on the Municipality's solid waste program and by-law.

Public education programs include:

- a) Annual Collection Calendars
- b) Spring and fall solid waste newsletters
- c) Website with on-line searches "What goes where" database
- d) Social media, newspaper and radio ads
- e) Solid waste app with customizable collection reminders
- f) Public/private information sessions

Challenges and Future Considerations

In Nova Scotia, solid waste is regulated by the Province, but solid waste service delivery is performed by municipalities. Challenges can arise when the regulator revises solid waste related regulations.

Curbside collection costs are also a challenge, given the geographic size of the Municipality and its low population density. The Municipality also has a large seasonal population. This presents a challenge because cottagers are often present only on weekends, making both curbside collection and public education difficult (cottagers may be coming from areas with different solid waste programs).

CJSMA is challenged to provide the infrastructure needed to maintain facilities/services on shrinking populations/decreasing volumes.

The Municipality funds its residential solid waste program through its general tax rate. Costs include operation of the transfer station, the contract to haul materials to the CCL, and tipping fees paid to the CJSMA

3.4 The Municipality of the District of East Hants

Community Data



Population:	22,453	Area:	178,656 ha
Households:	8,753	Median Age:	43.6
Population Changes:	1.5% (2011-2016)	Mother Tongue:*	2.9%

** Other Than English or French:*

The Municipality of East Hants is proud to be an area with a rich history of shipbuilding, forestry, railway construction and preserved natural surroundings. During the past decade significant growth in the region, and rapid growth along the northern boundary of Halifax have transformed East Hants into both a local retail centre and a residential area with business, finance, healthcare, professional services, education, and trades and transportation sectors well represented.



RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Disinfectant organics
Tonnes collected	3,173	190	41	No Data	N/A
Tonnes collected per household	0.316	No Data	0.0041	No Data	N/A
Collection method	Manual	Manual	Manual	N/A	N/A
Collection frequency	Bi-weekly	Bi-weekly	Occasional seasonal	N/A (No collection)	N/A
Container limit (#)	No Data	No Data	No Data	No Data	N/A
Container size (max L)	No Data	No Data	No Data	No Data	N/A

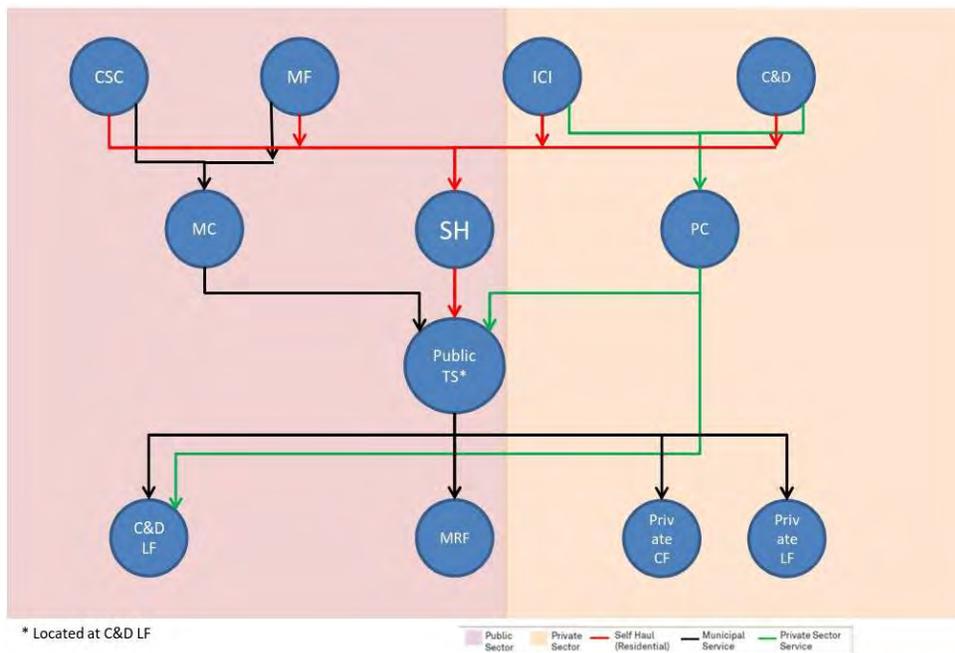
MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	N/A	N/A	N/A	No Data	No Data
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	No Data	No Data	No Data	No Data	No Data
Collection charge mechanism	No Data	No Data	No Data	No Data	No Data
Container size (cubic yards)	No Data	No Data	No Data	No Data	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (L&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

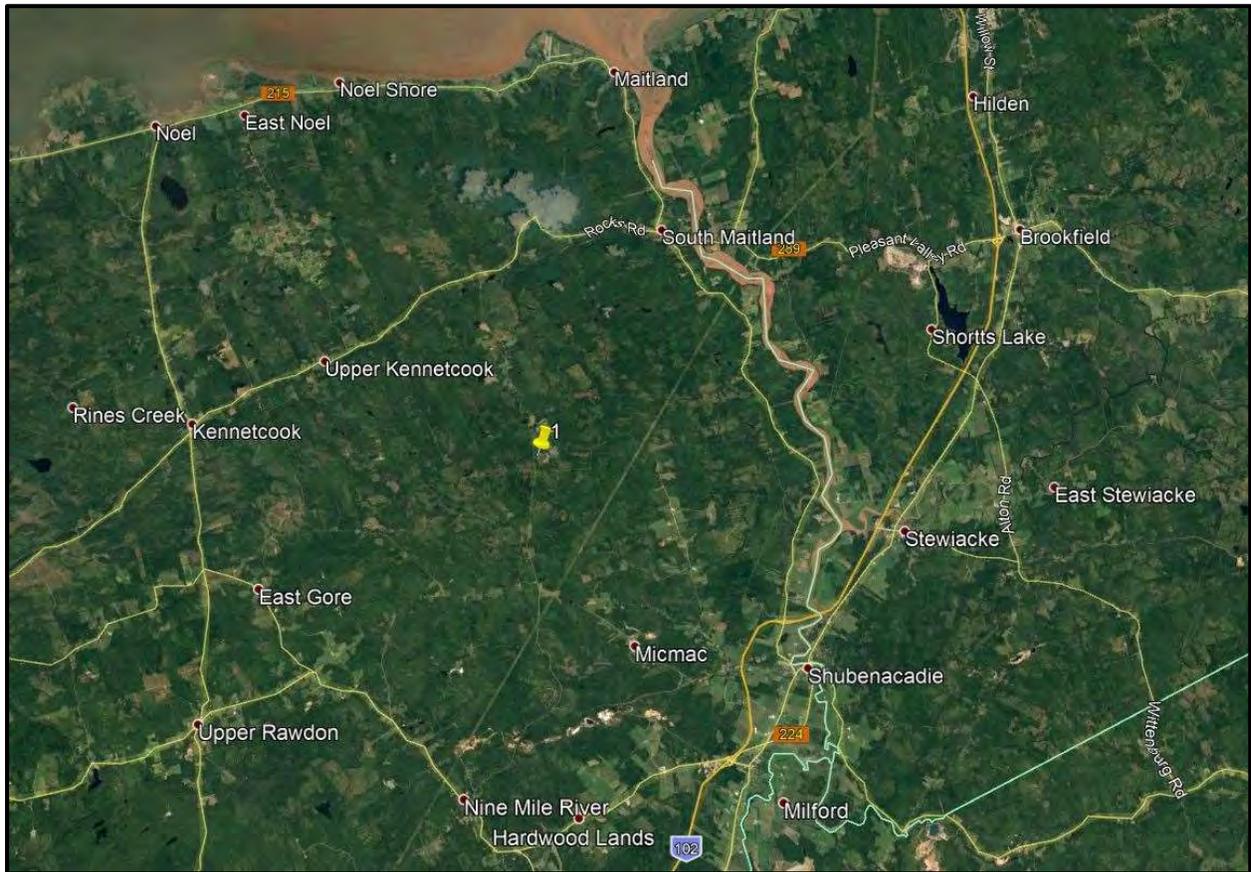
Solid Waste System Summary

The Municipality provides curbside waste collection services to all single and multi-residential buildings (where requested) including garbage, recyclables, organics, electronics, metal, and bulky furniture every two (2) weeks. The commercial sector, regardless of size, is entitled to participate in the curbside collection program with a limit of double (2x) the residential collection limits.

All waste material is collected and hauled to the East Hants Waste Management Centre (EHWMC) by private waste haulers working under contract with the Municipality. The EHWMC includes a closed first generation landfill, transfer station for garbage, recycling and organics, tire drop-off, electronics drop-off, residential HHW depot, and a C&D landfill. There are no fees charged to residents of the municipality for materials they direct haul to the EHWMC, there are tipping fees for commercial materials. No materials from outside the Municipality are accepted at the EHWMC.



Curbside Collection – Municipality of East Hants



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name and Location
1	Landfill	△	Accepts C&D	East Hants Waste Management Centre 1306 Georgefield Rd Georgefield, NS
1	TS	△	Accepts garbage, recyclables, organics, and metals	East Hants Waste Management Centre 1306 Georgefield Rd Georgefield, NS

Public Education and Outreach Programs

The Municipality provides extensive solid waste management public education and outreach programs to the residents and businesses. Programming special events workshops, special material drop-off days in the communities to the annual compost give-away. Staff work to educate through in person activities such as school presentations and community booths. The Municipality utilizes social media to share program and service information and contracts for the services of online collection schedules and a searchable sort guide as well. Traditional print material is also available, including a printed collection schedule that is mailed out annually as some areas of the municipality have inconsistent internet access due to coverage in their communities.



Challenges and Future Considerations

The Municipality is seeing and will continue to see growth in our corridor area. As a result, considerations on services, both curbside collection and at the Waste Management Centre (therefore including our service contracts) will need to be managed to accommodate.



East Hants Waste Management Centre Facility

3.5 Town of Oxford

Community Data



Population:	1,190	Area:	1,076 ha
Households:	528	Median Age:	46.8
Population Changes:	3.4% (2011-2016)	Mother Tongue:*	0.9%

** Other Than English or French:*

The Town of Oxford is located in Cumberland County, Nova Scotia, Canada. Oxford was founded in 1791. The name "Oxford" is derived from the shallow river that was used to enter the town. Early settlers used Oxen to cross, or "ford", the river, and thus derived the town's name. Oxford is considered the wild blueberry capital of Canada as it is centred in a large blueberry growing region.



RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Commingled organics
Tonnes collected	No Data	No Data	N/A	N/A	N/A
Tonnes collected per household	No Data	No Data	N/A	N/A	N/A
Collection method	No Data	No Data	N/A	N/A	N/A
Collection frequency	No Data	No Data	N/A	N/A	N/A
Container limit (#)	No Data	No Data	N/A	N/A	N/A
Container size (max L)	No Data	No Data	N/A	N/A	N/A

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	105	N/A	N/A	No Data	80
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	No Data	No Data	No Data	No Data	No Data
Collection charge mechanism	No Data	No Data	No Data	No Data	No Data
Container size (cubic yards)	No Data	No Data	No Data	No Data	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	153	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	0.1285	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	\$175.00	No Data	No Data	\$75.00	\$35.00	No Data	\$60.00
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

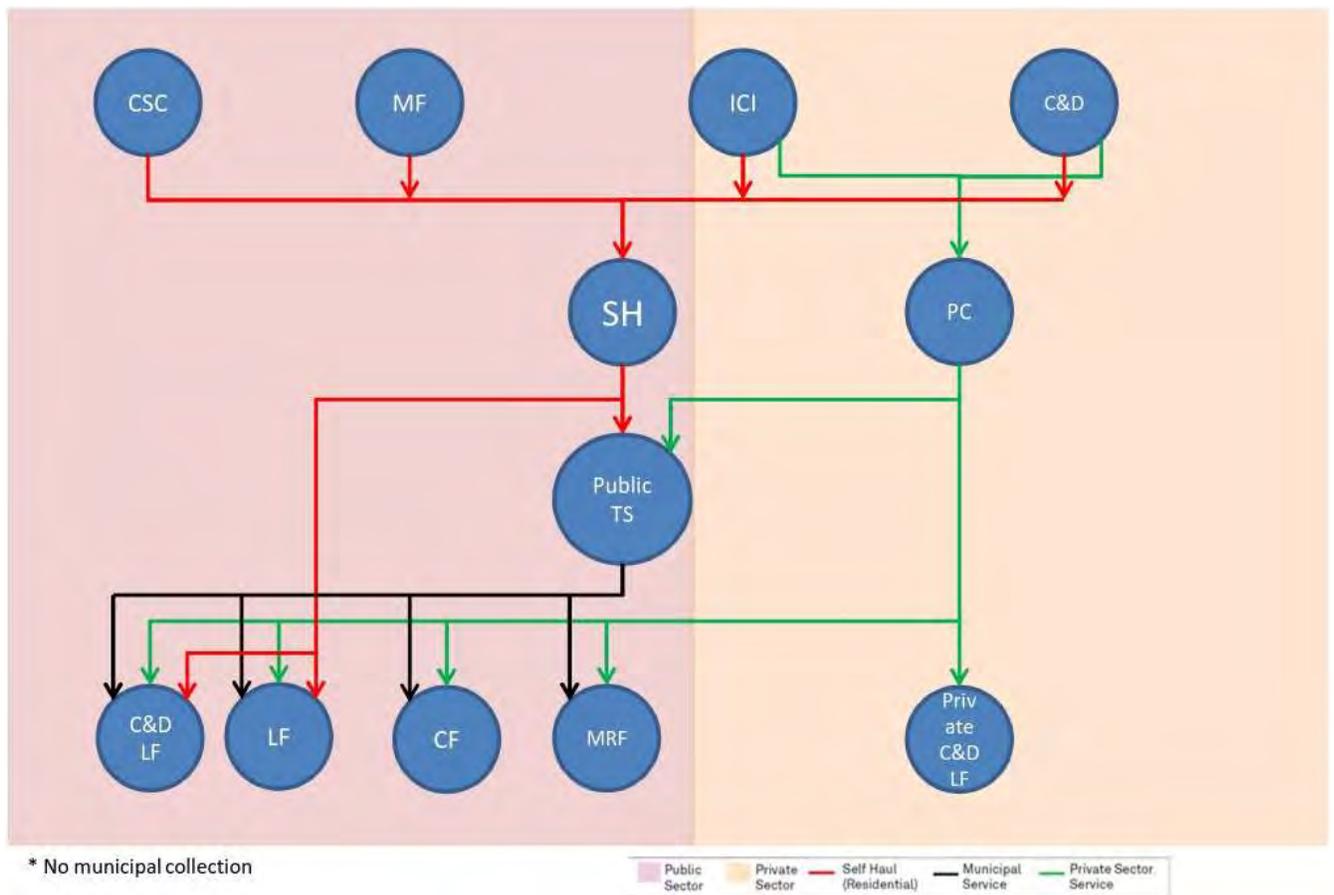
Solid Waste System Summary

The Town operates a transfer station located at 6279 Highway 321 (Roslin). Residents must self-haul their waste materials to the transfer station, which is open three (3) days per week. It accepts residual waste, recycling, organics, scrap metal, and leaf and yard waste.

Material is collected and transferred to the Cumberland Central Landfill (CCL) by a waste hauler working under contract for the Town. Facilities at the CCL include a Material Recycling Facility (burned September 2017), second generation landfill, compost facility, C&D landfill, and an asbestos disposal site. The CCL site also receives leaf and yard waste and scrap metals.

The Industrial, Commercial and Institutional (ICI) sector of the Town is responsible for the disposal of the waste they generate by contracting private haulers for disposal which is also transported to the CCL.

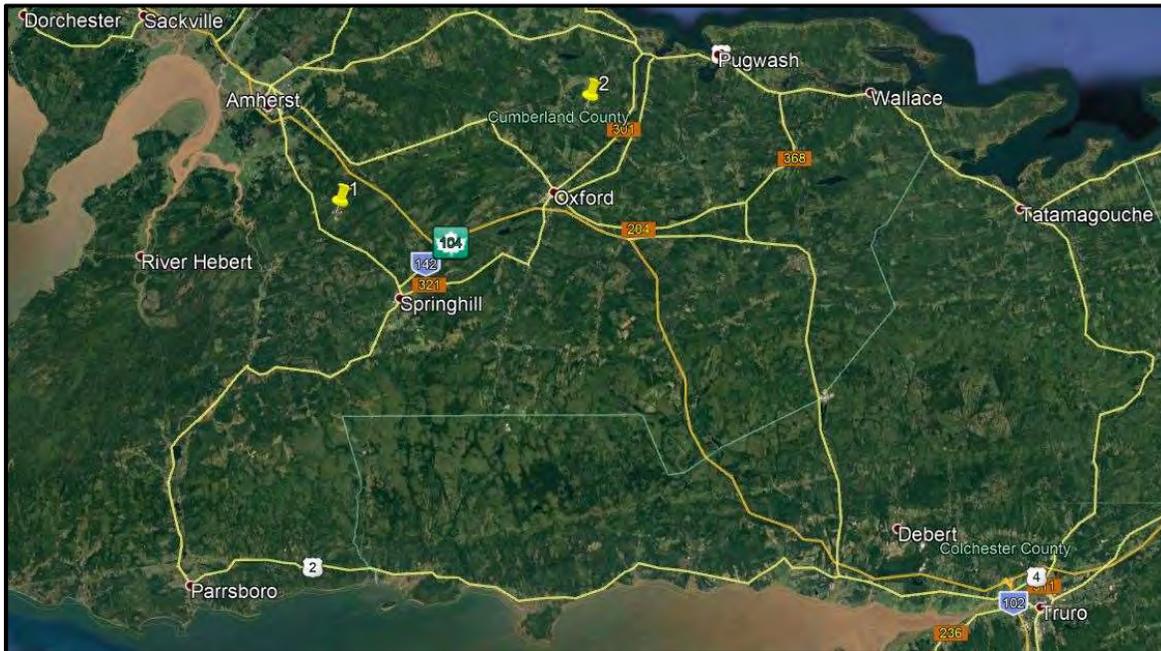
The CCL is operated by Cumberland Joint Services Management Authority (CJSMA). CJSMA is a Board Authority made up of the three municipal units in Cumberland County. The Town of Oxford appoints one elected official to serve on the six-member CJSMA Board.



Public Education and Outreach Programs

CJSMA is responsible for public education of the Town’s solid waste program. Public education includes the following:

- a) Spring solid waste newsletters (mailed)
- b) Website with on-line searches “what goes where” database
- c) Social media, newspaper and radio ads
- d) Solid waste app with customizable collection reminders
- e) Public/private information sessions (when invited)



Processing and Disposal Facilities 2017				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	△	Accepts garbage and C&D waste	Little Forks Municipal Landfill 2052 Little Forks Road Little Forks, NS
1	CF	△	Accepts organics	Cumberland Central Composting Facility 2052 Little Forks Road Little Forks, NS
1	MRF	△	Accepts recyclables	Cumberland Central Recycling Facility 2052 Little Forks Road Little Forks, NS
1	C&D LF	⊙	Accepts C&D waste	Cumberland Central C&D Landfill 2052 Little Forks Road Little Forks, NS
2	TS	△	Accepts garbage, recyclables, organics, and scrap metal	Oxford (for Town residents only) 6279 Highway 321 Roslin, NS

Challenges and Future Considerations

In Nova Scotia, solid waste is regulated by the Province, but solid waste service delivery is performed by municipalities. Challenges can arise when the regulator revises solid waste related regulations. Rising solid waste related costs also pose a challenge.

Additionally, there is some pressure from CJSMA and the Province to switch to curbside collection, as it has been identified as a best management practice. However, residents of the Town prefer the use of the transfer station site.

CJSMA is challenged to provide the infrastructure needed to maintain facilities/services on shrinking populations/decreasing volumes.

The Town funds its residential solid waste program through its general tax rate. Costs include operation of the transfer station, the contract to haul materials to the CCL, and tipping fees paid to the CJSMA.

Region 4

REGION 4

4.1 Halifax Regional Municipality

Community Data



Population:	403,131	Area:	549,035 ha
Households:	173,325	Median Age:	41.0
Population Changes:	3.3% (2011-2016)	Mother Tongue:*	7.7%

* Other Than English or French:



Halifax Regional Municipality (HRM), the Region, was formed in 1996 with the amalgamation of the former City of Halifax, City of Dartmouth, Town of Bedford and the Municipality of the County of Halifax. The Region covers a land mass, equivalent to the size of the province of Prince Edward Island comprised of urban, suburban and rural communities.

Halifax is the capital of Nova Scotia, a port city with a population of over 400,000, the largest city in Atlantic Canada. With almost half of Nova Scotia's population residing within it, HRM is the province's largest and most diverse municipality, generating 52% of provincial gross domestic product. It is estimated that 55% of those who immigrate to Atlantic Canada live here. The municipality's diverse and growing economy includes trade, real estate, health care, professional services, public administration and education, with a local concentration of universities.

Major employers in the Region include Dalhousie University, Saint Mary's University and Irving Shipyard. Halifax is also home to the largest military base in Canada, CFB Halifax.

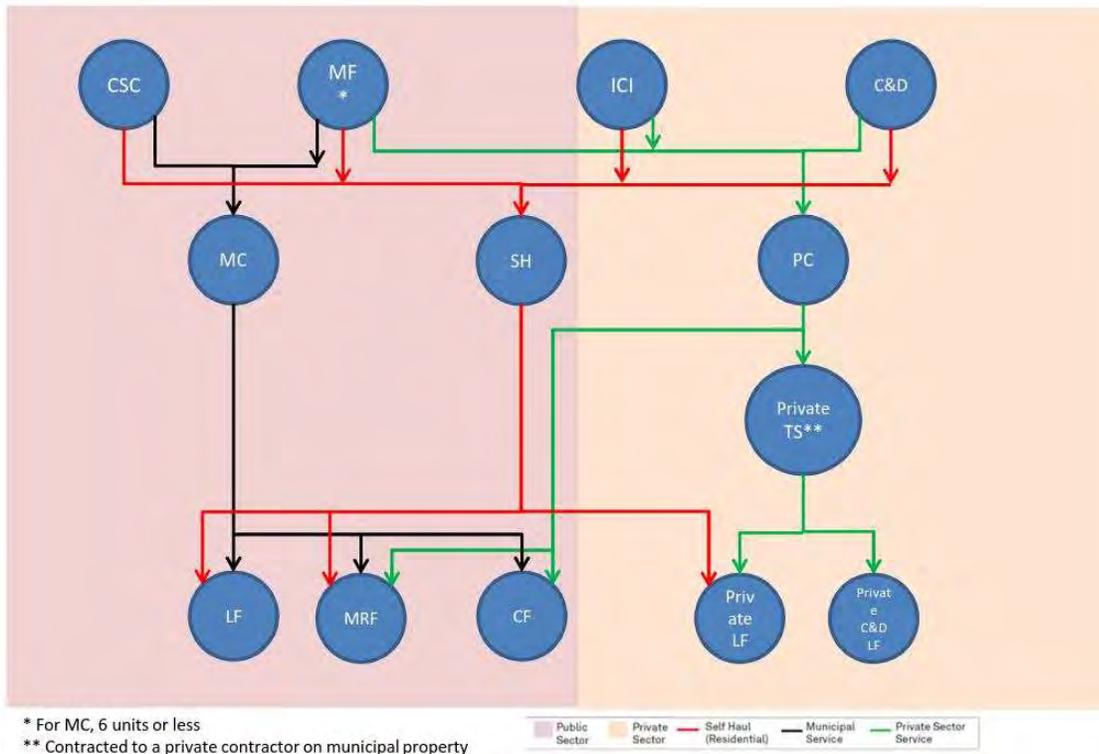
RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Commingled organics
Tonnes collected	44,664	16,855	3,232	47,144	N/A
Tonnes collected per household	0	No Data	0.0233	0.3395	N/A
Collection method	Manual	Manual	Manual	Semi-automated	N/A
Collection frequency	Bi-weekly	Weekly	Bi-weekly	Bi-weekly	N/A
Container limit (#)	6	Unlimited	20	1	N/A
Container size (max L)	77	77	240	240 litre	N/A

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	No Data	No Data	No Data	No Data	0
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	No Data	Weekly	No Data	No Data	No Data
Collection charge mechanism	No Data	Property tax	No Data	No Data	No Data
Container size (cubic yards)	No Data	3	No Data	No Data	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&I)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

HRM is responsible for the management of municipal solid waste, source separated collection and diversion programs for residential properties and the facilities for processing, recycling, composting, marketing and disposal of solid waste resource materials for both residential and non-residential customers. The Solid Waste Management business unit provides for delivery of education programs and administration of the construction and demolition waste management strategy.



Halifax contracts for the operation of two privately owned compost plants, each with a capacity of 25,000 tonnes, operation of 36,000 tonne capacity Materials Recovery Facility (MRF) owned by HRM and municipally owned waste processing and disposal facility (landfill) and a transfer station jointly operated by HRM and the landfill contracted operator. These facilities process materials from HRM residents and the ICI (Industrial, Commercial, and Institutional) Sector.

The waste processing and disposal facility includes the operation of a Front-End Processor (FEP) and Waste Stabilization Facilities (WSF) for pre-processing waste prior to residual waste disposal into landfill cells. Solid Waste is responsible for the management of one closed landfill site, the maintenance, monitoring and the operation of the site leachate plant along with an energy-from-waste project.

There are two rural refuse depots for the consolidation and transfer of curbside collected garbage from the Eastern Shore and Musquodoboit Valley to Otter Lake Waste Processing and Disposal Facility.

An HRM owned facility for drop off and handling of household hazardous (special) waste was established in 1996, contracted year-round operation supplemented by up to 10 mobile events in suburban and rural communities across the Region annually. This service is provided to residential generators only, no commercial waste hazardous waste is accepted.

HRM residential customers receive removal of CFCs from appliances, at no additional cost, the unit can be placed curbside for collection with garbage.

HRM contracts private waste collection haulers to provide curbside collection services to eligible residential properties (buildings with 6 units or less). Garbage and Organics are collected bi-weekly, on opposite weeks, with weekly Organics collection in the months of July, August and September. Recycling (blue bag and fiber recycling) is collected weekly in urban/suburban areas, bi-weekly in rural areas.

Residents are permitted to place one bulky item (i.e. appliance, piece of furniture) curbside on each garbage collection day, year-round. Large appliances are collected in a dedicated truck and delivered to the Otter Lake Facility for recycling. HRM introduced clear bags for garbage in August 2015. Residents may place up to 6 clear bags for curbside collection (1 of 6 can be non-clear privacy bag) or substitute up to five bags of garbage with bundles of construction & renovation waste. Green carts (240 litre capacity) are used to collect organic materials and provision for additional placement of up to 20 paper bags of leaf & yard waste and five bundles of branches. HRM has provided curbside collection of organics since 1999.

Industrial, Commercial and Institutional (ICI) properties are required provide separate receptacles for waste stream separation and processing at waste management facilities. This is outlined in HRM By-Law S 600. Private haulers are engaged by ICI sector clients for provision of separate bins and collection services. ICI sector properties, which includes apartment buildings, are not eligible for municipal collection services. The municipality does provide multi-unit residential collection for condominium properties as property owners are individuals taxed as a residential property. Property management firms or condominium Boards apply for the service and are required to be registered as a Halifax Condominium Corporation to be eligible for municipal collection services.

Construction, Renovation & Demolition (C&D) waste is regulated in HRM by By-Law L200. All C&D debris is required to be delivered to an HRM licensed facility (no export is permitted), where it is sorted and processed. Under licensing requirements, the private C&D facility operator is mandated to divert a minimum of 75% of incoming material from landfill disposal. Material that cannot be diverted is disposed in a private C&D landfill.

Halifax is a member of the Municipal Benchmarking Network (MBN) Canada, along with other cities in Canada, reporting and measuring program operations and costs. As illustrated in the MBN Performance Measurement data for 2016/17 in Table 1, HRM is considered a leader in waste diversion with almost 60% diversion. Costs to manage the solid waste system are generally aligned to contracted consumer price index (CPI) adjustments. The projected and planned cost figures are adjusted based on an estimated 2.5% annual increase in CPI. As shown in this table, Halifax has an above average cost to landfill waste. The elevated cost is generally related to the requirement of the provincial landfill operating approval that Halifax pre-process and stabilize waste prior to being landfilled.

Table 1: Performance Measures

Performance Measures	2016/17 Actual
% of Residential Solid Waste Diverted (through curbside collection)	59.5%
Tonnes of All Residential Material Collected per Household	0.67
Tonnes of Residential Solid Waste Disposed per Household	0.31
Tonnes of Residential Solid Waste Diverted per Household	0.45
Total Cost of Garbage Collection per Tonne – All Property Classes	\$162
Total Cost for Solid Waste (All Streams) Disposal Per Tonne – All Property Classes	\$207
Total Cost for Solid Waste Diversion Per Tonne – All Property Classes	\$255

Solid Waste Facilities in HRM (addresses for map)

- Otter Lake Waste Processing and Disposal Facility – 600 Otter Lake Dr
- Otter Lake Waste Transfer Facility– 600 Otter Lake Dr
- Material Recycling Facility - 50 Horseshoe Lake Drive, Bayers Lake
- Household Special Waste Depot - 50 Horseshoe Lake Drive, Bayers Lake
- Miller Compost – 80 Gloria McCluskey, Burnside
- Ragged Lake Compost - 61 Evergreen Place, Ragged Lake
- Sheet Harbour Transfer Station - 21611 Hwy#7, Sheet Harbour,
- Middle Musquodoboit Transfer Station - 249 Sibley Rd, Middle Musquodoboit
- Halifax C&D Recycling Ltd - 188 Ross Rd., Westphal
- Halifax C&D Recycling Ltd - 16 Mills Drive, Goodwood
- Halifax C&D Recycling Ltd Antrim Landfill – 4185 Old Guysborough Rd, Antrim

Public Education and Outreach Programs

Diversion Programming - HRM Solid Waste delivers public education and outreach to support source separated recycling, composting, and diversion programming as guided by provincial legislation and HRM bylaws.

Solid Waste carries out education and outreach with 4 Education Officers and a staff of 2 Diversion Compliance officers conducting ICI property visits and inspections.

In 2016/17 Halifax Solid Waste public education and outreach programs included the following:



Recycling Ambassador Program - Halifax Solid Waste introduced the 'Recycling Ambassador' program to enhance diversion education in the multi-residential sector audience. This program provided training and resource materials for building tenants, owners and superintendents. Resources developed included a manual that informs the recipient of their responsibilities towards the waste management system, best practices for bin set-up and maintenance, and how to engage with residents and tenants to promote recycling and composting programs. Educators provided training and information sessions on how to use best practice tools and conducted waste facility tours for volunteer waste "champions".

I pledge to
recycle and
compost.



Join me!

Residential Curbside Monitoring & Door to Door Education Program - Curbside Monitoring measures set-out rates and compliance around use of clear bags for garbage and bag limits. In cases where non-compliance is noted, an educational package can be left at the property.

Residential Waste Audits - Solid Waste staff conduct Residential Waste Audits for identification of materials to target for diversion potential. This helps drive policy research and material focus for planning and delivery of educational campaigns.

Communication tools and educational resources employed to promote proper waste separation and compliance with municipal programs include:

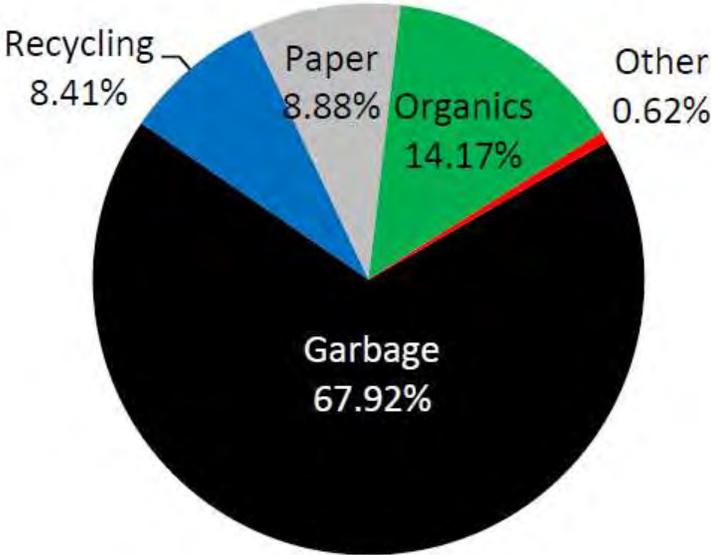
- Annual distribution of waste sorting guide and collection schedules to all households via Canada Post
- Halifax.ca/recycle website
- Social media presence (Facebook, Twitter and Instagram)
- Advertisements: newspaper, radio, digital screens in HRM buildings
- Halifax Recycles Waste app
 - Over 48,000 app downloads (as of March 2017)
 - 960,000 'What Goes Where' items searched (as of March 2017)



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	△	Accepts garbage	Otter Lake Waste Processing & Disposal Facility 600 Otter Lake Dr.
1	TS	Ⓢ	Accepts garbage and C&D	Otter Lake Waste Transfer Facility 600 Otter Lake Dr.
2	Private Landfill	Ⓢ	Accepts garbage	Chester & West Hants (Region 6)
3	CF	△	Accepts organics	HRM – Miller Waste Systems 80 Gloria McCluskey, Dartmouth, NS
4	MRF	△	Accepts recycling	Halifax Regional Recycling Facility 20 Horseshoe Lake Drive, Bayers Lake
5	C&D LF	Ⓢ	Accepts C&D waste	Halifax C&D Recycling Ltd Antrim Landfill 4185 Old Guysborough Rd, Antrim

Challenges and Future Considerations

In 2015 Halifax introduced clear bags for curbside garbage collection. Though an overall 25% reduction in garbage tonnage has been achieved with the clear bag program, there remains challenges. Moving forward we will look to remove the smaller organic and recycling fractions from the garbage stream, and to identify other materials that have diversion potential, such as textiles.



1. Halifax Residential Waste Audit 2016/17

Region 5

REGION 5

5.1 Valley Region

Community Data



Population:	83,838	Area:	555,500 ha
Households:	40,064	Median Age:	
Population Changes:		Mother Tongue:*	

** Other Than English or French:*

The Valley Region has traditionally been built on a diversified agricultural industry, with a wide range of output ranging from livestock to fruit trees and berries. Hundreds of farms line the valley floor in the region.

The last twenty-five years have witnessed the agricultural base strengthen its links with food processing industries like meat and poultry and fruits and vegetables. There also several fishing harbours along the Bay of Fundy. The last quarter century has also seen the development of a wine, beer, and cider industry.

Today, the Valley is still largely dominated by agriculture, but also has a growing diversity in its economies, partly aided by the importance of post-secondary education centres provided by Acadia University in Wolfville, and the Nova Scotia Community College campuses located in Kentville, Middleton and Lawrencetown. Michelin has an important truck tire manufacturing plant in Waterville and the Department of National Defence has an air force base at 14 Wing Greenwood along with a training facility at Camp Aldershot, near Kentville.

Tourism is also an important industry and the Annapolis Valley is known for its scenic farmland and rustic shoreline along the Bay of Fundy.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	9,383	4,102	N/A	N/A	8,515.00
Tonnes collected per household	0.23	0.10	N/A	N/A	0.21
Collection method	Manual	Manual	N/A	N/A	Semi-automated
Collection frequency	Bi-weekly	Bi-weekly	N/A	N/A	Bi-weekly
Container limit (#)	4	8	N/A	N/A	1
Container size (max L)	N/A	N/A	N/A	N/A	240

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	N/A	N/A	N/A	N/A	N/A
Collected tonnes per serviced unit	N/A	N/A	N/A	N/A	N/A
Collection frequency	Bi-weekly	N/A	N/A	Bi-weekly	Bi-weekly
Collection charge mechanism	Property tax	N/A	N/A	Property tax	Property tax
Container size (cubic yards)	N/A	N/A	N/A	N/A	N/A

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	2,195	114	449	23	667	N/A	N/A
Tonnes accepted per capita	0.0263	0.0014	0.0054	0.0003	0.0080	N/A	N/A
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	\$110.00	\$98.00	\$57.00	\$98.00	\$57.00	\$110.00	N/A
Minimum charge (\$)	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	\$5.00	N/A

Solid Waste System Summary

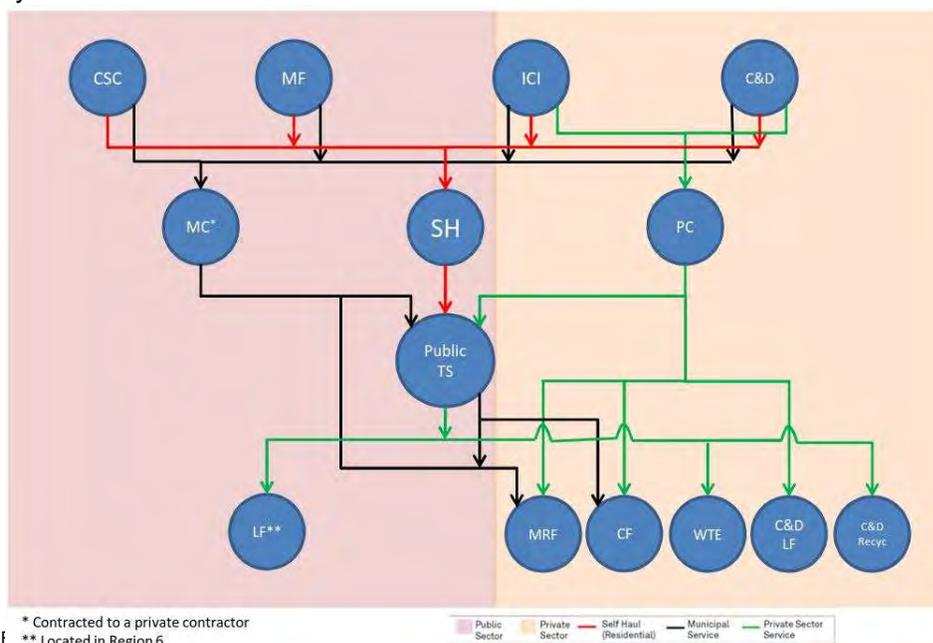
The Valley Region is managed by the Valley Waste-Resource Management Authority (VWRMA). The Authority was formed in 1999 as a body corporate under an Intermunicipal Services Agreement encompassing (7) municipalities. The 7 municipalities served are the Counties of Annapolis and Kings and the Towns of Annapolis Royal, Berwick, Kentville, Middleton and Wolfville. Additionally, (3) First Nations communities (Bear River, Annapolis Valley and Glooscap) receive services from the Authority based on a fee per serviced unit. Each municipal unit has given the Authority responsibility for waste management services within their jurisdictions and has one member on the VWRMA Board. The VWRMA has performed comparatively well with regards to cost efficiency and waste diversion.

The VWRMA provides a full range of waste management services to over 40,000 residential, multi-family and commercial units. All dwelling units within the region receive the same level of service regardless of size. Any excess materials must be managed commercially or brought to the municipally operated transfer facilities.

The Authority operates two transfer stations that accept all types of solid waste which includes residuals, recyclables, compostable organics, HHW and C&D materials. For ease of operation and to balance populations and hauling distances to the respective management centres, VWRMA has been divided into East and West service zones. The eastern zone generates more waste due to the presence of the urban concentration from Kentville and Wolfville and more and larger ICI generators. The East Management Centre (located in Kentville) manages roughly twice as much volume as the West Management Centre (located in Lawrencetown).

Residual waste is transported to Kaizer Meadow landfill. The landfilling arrangement involves VWRMA paying a per tonne tipping fee equal to their portion of net operating costs (per tonne) plus a small host community fee to Chester. Chester will begin contracting solid waste processing to Sustane Technologies (WTE).

The private sector is contracted to provide roadside collection, recyclables processing, organics processing and transportation of most materials. The private sector is also contracted to provide most C&D waste recycling. The recycling is processed by Scotia Recycling, located at the VWRMA transfer station in Kentville. Organics are transported and processed by Fundy Compost in Northridge Farms in Aylesford.



* Contracted to a private contractor
 ** Located in Region 6



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name and Location
1	Landfill (Region 6)	△	Accepts garbage	Kaizer Meadow C&D Landfill 450 Kaizer Meadow Rd Chester, NS
2	CF	⊙	Accepts organics	Northridge Farms 2546 Hwy 221 Ay
3	MRF	⊙	Accepts Recycling	Valley Waste Recycling Facility 100 Donald Hiltz Connector Rd Kentville, NS
4	WTE	⊙	Accepts Wood	
5	Landfill	⊙	Accepts C&D	
6	Landfill	⊙	Accepts C&D	
7	Landfill	⊙	Accepts C&D	
8	Recycling – C&D	⊙	Accepts Shingles	
9	Eastern TS	△	Accepts garbage, recycling, and organics	Valley Waste Recycling Facility 100 Donald Hiltz Connector Rd Kentville, NS

10	Western TS	△	Accepts garbage, recycling, and organics	343 Elliot Rd, Lawrencetown NS
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Public Education and Outreach Programs

VWRMA provides communication and education to the residential and ICI sectors through various outreach programs. Some of these activities include the development of communication and education materials, workshops, special events, and residential/ICI visits. Education is used as the first step in reaching compliance with solid waste programs and bylaws.

Education programs are focused around the waste hierarchy which values waste reduction and reuse over recycling and composting with WTE and landfilling as the least preferred options for managing solid waste. Programs include the operation of a Reuse Centre, annual events during Compost Awareness Week and Waste Reduction Week and an interactive education program for elementary students called “Planet Protectors”.

The VWRM employs a Communications Manager, two Educators, a Bylaw Enforcement Officer, two Compliance staff and a Hotline. Educational resources include an annual Waste Management Calendar, Recycle Coach app, website, social media and traditional media (radio and newsprint).

Challenges and Future Considerations

Under the Inter-municipal Services Agreement, the costs of the VWRMA are shared among the municipal partners based on the averages of their respective shares of the total Census population and Uniform Assessment. Decisions regarding major contracts and operations are made by the VWRMA. This approach has traditionally been acceptable to all of the municipal parties; however recent discussions between the parties have raised some uncertainty of the regional structure going forward. The Governance structure and how municipal contributions are determined is being examined with one of the major municipalities expressing desire to leave the VWRMA.

Residual waste from the Valley Region is currently disposed at Kaizer Meadow Landfill. Sustane Technologies will begin processing residual waste from the region at the landfill to make fuel pellets and diesel fuel. Sustane Technologies depends on a certain amount of tonnage to make the project sustainable which could lead to the seeking of tonnage from other areas or pressures to current partners to meet tonnage requirements.

The VWRMA has a Flow Control Bylaw that requires any residual waste generated in the region be brought to the Authority’s transfer stations. This ensures the adequate tonnage to meet landfill requirements. There are two other 2nd generation landfills just outside the region that offer lower disposal rates that could influence commercial haulers to take waste out of the region.

The Valley Region contracts out most services to the private sector making a transition to an EPR program for packaging and printed paper less cumbersome than other areas. Recycling is currently processed by Scotia Recycling Ltd and the facility in Kentville manages recycling from a few other jurisdictions as well.

The closure of a private C&D disposal and recycling facility in Kings County has led to significantly higher volumes of C&D materials and residual waste at the Eastern Management Centre in Kentville. The facility struggles to keep up with the volumes and expansion may be required in the near future.

Servicing the ~2200 seasonal homes in the region is a big challenge for the VWRMA. They are currently serviced through a network of 50 drop-off depots located in rural areas of the region. The depots become common dumping grounds and compliance with sorting bylaws and collection requirements is a challenge. The VWRMA has been gradually removing bins and trying alternative collection services.

Region 6

REGION 6

6.1 Municipality of the District of Barrington

Community Data



Population:	6,646	Area:	63,232 ha
Households:	2,975	Median Age:	48.2
Population Changes:	-5.0% (2011-2016)	Mother Tongue:*	0.60%

* Other Than English or French:



The Municipality of the District of Barrington contains many communities, namely the southernmost part of Nova Scotia and Canada’s most southern salt water beach, Hawk Beach, Cape Sable. Cape Sable is also home to the tallest lighthouse in the maritime provinces.

Barrington’s economy has historically been fishing. As the Lobster Capital of Canada, many fishing villages, museums and many white sand beaches it is also a great place to attract tourists.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Commingled organics
Tonnes collected	No Data	No Data	N/A	N/A	N/A
Tonnes collected per household	No Data	No Data	N/A	N/A	N/A
Collection method	No Data	No Data	N/A	N/A	N/A
Collection frequency	No Data	No Data	N/A	N/A	N/A
Container limit (#)	No Data	No Data	N/A	N/A	N/A
Container size (max L)	No Data	No Data	N/A	N/A	N/A

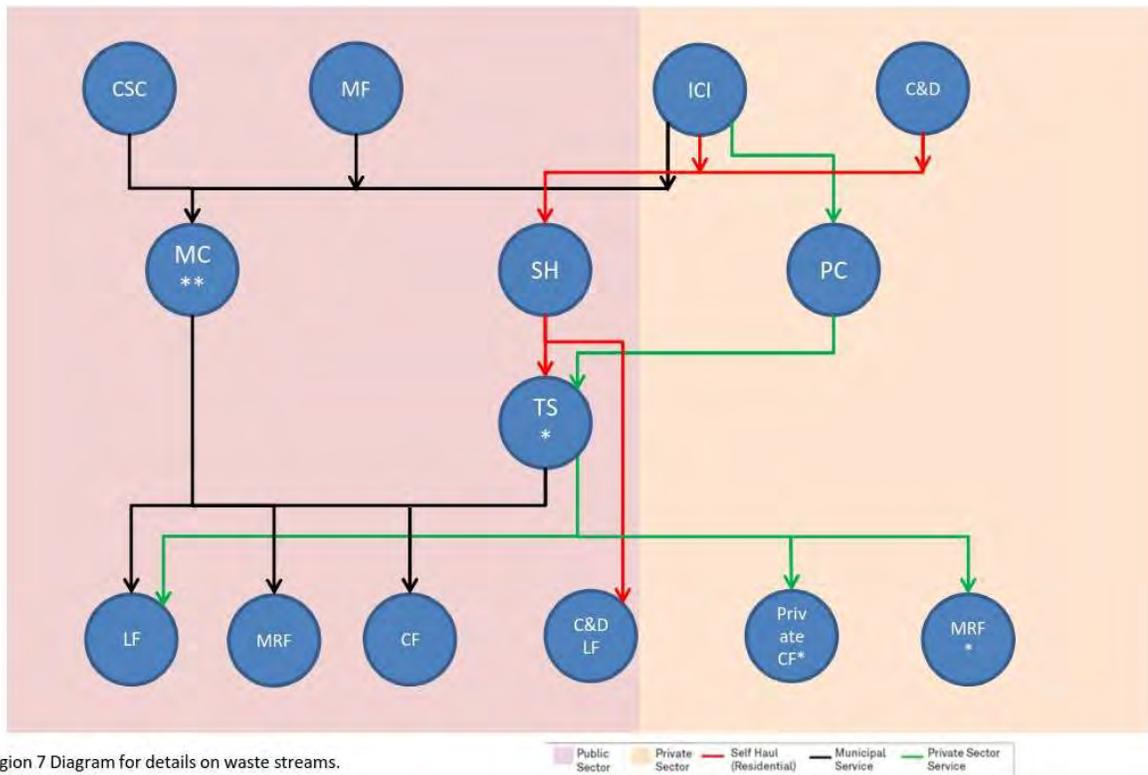
MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	2,018	N/A	N/A	253	335
Collected tonnes per serviced unit	0.6556	No Data	No Data	0.0821	0.1088
Collection frequency	Weekly	No Data	No Data	Weekly	Weekly
Collection charge mechanism	Property tax	No Data	No Data	Property tax	Property tax
Container size (cubic yards)	black bag	No Data	No Data	blue bag	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&I)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

Barrington contracts a private company to provide solid waste collection services to the residential and small ICI sectors in the Municipality.

C&D waste is managed at the municipal C&D site on highway 103. The solid waste is collected curbside weekly as garbage, blue bag recyclables and organics. All streams are hauled to the Queens Waste Management Facility. Once there, the recyclables are processed and marketed by Queens. The organics are merged with other organics from Shelburne County and Queens in a coverall building and transferred to Aylesford to a private facility to be processed into compost. The garbage is landfilled at Queens in their municipal solid waste landfill site.





Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	TS (Region 7)	△	Accepts garbage, organics, C&D and recyclables	Yarmouth County Solid Waste Park 1932 Hardscratch Rd Yarmouth, NS
1	MRF	⊙	Accepts recyclables	Yarmouth Recycling Facility 273 Forest St Yarmouth, NS
1	CF	⊙	Accepts organics	Town of Yarmouth Compost Facility 1932 Hardscratch Rd Yarmouth, NS
2	Landfill	△	Accepts garbage	Queens Municipal Landfill 3750 Highway 8 Caledonia, NS
2	CF	△	Accepts organics	Northridge Farms 2546 Hwy 221, Aylesford NS
2	MRF	△	Accepts recyclables	Queens Recycling Facility 3705 Highway 8 Caledonia, NS
3	C&D LF	△	Accepts C&D	Barrington C&D Landfill 1138 Highway 103 Clements Pond NS

Public Education and Outreach Programs

“Team up to Clean up” Barrington hosts a community-wide litter program engaging the entire community in a one-day clean up.

Barrington is involved in a number of education and outreach programs which include the following:

- **Schools** – Compliance promotion including curriculum-based presentations, how to sort properly presentations, composting presentations, presentations at staff meetings.
-
- **Public Spaces** – providing recommendations, checking for types of containers in public spaces and the signage on the containers, working with municipal/provincial and federal parks.
-
- **Special Events** - information booths, council presentations, community group presentations; Waste Reduction Week, Compost Awareness Week, Environment Week.
-
- **Media** – ‘R6Recycles’ is an electronic waste sorting app and collection calendar; social media (Twitter and Facebook) as well as various radio and print media interviews and stories



Challenges and Future Considerations

The cost borne by the Municipality to collect and manage all streams of materials is increasing (56% over the past 10 years). Waste disposal reporting over the past number of years varies (340 kg/capita disposed in 13-14; 441 kg/capita disposed in 16-17). The source of the variance is not clear. Participation in programs remains consistent.

Future considerations for a province-wide schema to target packaging waste and cost to manage the recycling system would help address some of the challenges facing Barrington and other rural municipalities.

Other potential on-the-ground program changes could be considered (and have been discussed at various council and staff meetings over the years):

- Introduction of a 'Clear bag program' for garbage
- Reduce the allowable eight (8) bags per week of garbage
- Shift from a weekly to a bi-weekly collection program

6.2 Town of Clark’s Harbour

Community Data



Population:	758	Area:	281 ha
Households:	360	Median Age:	48.1
Population Changes:	-7.6 (2011-2016)	Mother Tongue:*	0.0%

* Other Than English or French:



Clark’s Harbour is a town on Cape Sable Island in southwestern Shelburne County, Nova Scotia, Canada. Being the southernmost town in Nova Scotia makes it one of the southernmost towns in Canada.

The primary industry remains to be fishing; particularly lobster fishing. Fishing has also given rise to seafood processing and packaging as well as boat building. The town is noted as the birthplace of the well-known fishing boat style ‘Cape Islander’.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	No Data	No Data	N/A	N/A	N/A
Tonnes collected per household	No Data	No Data	N/A	N/A	N/A
Collection method	No Data	No Data	N/A	N/A	N/A
Collection frequency	No Data	No Data	N/A	N/A	N/A
Container limit (#)	No Data	No Data	N/A	N/A	N/A
Container size (max L)	No Data	No Data	N/A	N/A	N/A

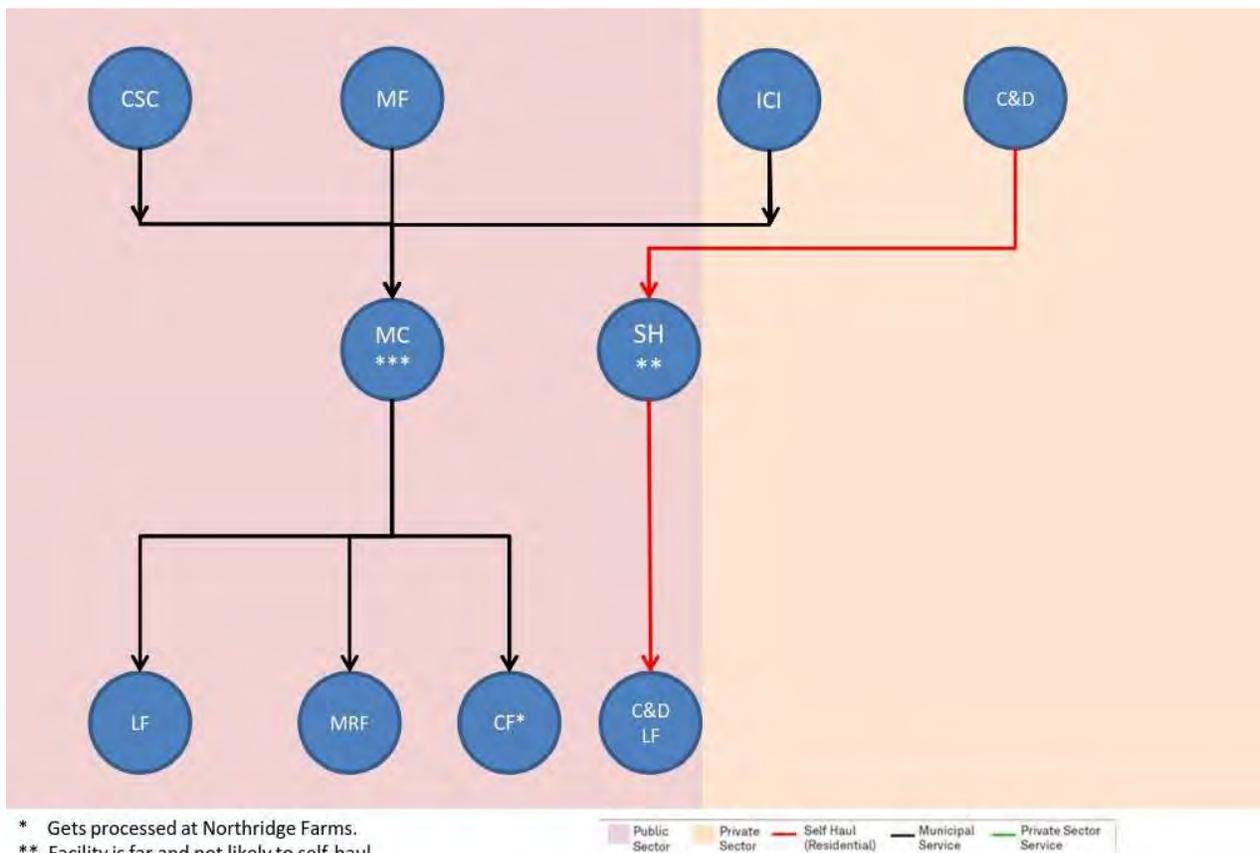
MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	293	N/A	N/A	32	12
Collected tonnes per serviced unit	0.7919	No Data	No Data	0.0859	0.0318
Collection frequency	Weekly	No Data	No Data	Weekly	Weekly
Collection charge mechanism	Property tax	No Data	No Data	No Data	Property tax
Container size (cubic yards)	black bag	No Data	No Data	blue bag	1 gal

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Dlitter)	Contaminated soil
Tonnes accepted	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

Clark's Harbour contracts a private company to provide solid waste collection services to the residential and small ICI sectors in the Town.

Waste is collected weekly as garbage, blue bag recyclables and organics (using a container of the residents choosing). All streams are hauled to Queens Waste Management Facility. Once there, the blue bags are processed and marketed by Queens. The organics are merged with other organics from Shelburne County and Queens in a coverall building and transferred to Aylesford to a private facility to be processed into compost. The garbage is landfilled at Queens in their municipal solid waste landfill site.



- * Gets processed at Northridge Farms.
- ** Facility is far and not likely to self-haul.
- *** Municipally contracted (all Region 6).



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	△	Accepts garbage	Queens Municipal Landfill 3750 Highway 8 Caledonia, NS
1	CF	△	Accepts organics	Queens Organic Transfer Station 3750 Highway 8 Caledonia, NS
1	MRF	△	Accepts recyclables	Queens Recycling Facility 3750 Highway 8 Caledonia, NS
2	C&D LF	△	Accepts C&D waste	Queens C&D Landfill 3750 Highway 8 Caledonia, NS

Public Education and Outreach Programs

Clark's Harbour is involved in a number of education and outreach programs which include the following:

- **Schools** - Compliance promotion including curriculum-based presentations, how to sort properly presentations, composting presentations, presentations at staff meetings.
-
- **Public Spaces** - providing recommendations, checking for types of containers in public spaces and the signage on the containers, working with municipal/provincial and federal parks.
-
- **Special Events** - information booths, council presentations, community group presentations; Waste Reduction Week, Compost Awareness Week, Environment Week.
-
- **Media** - 'R6Recycles' is an electronic waste sorting app and collection calendar; social media (Twitter and Facebook) as well as various radio and print media interviews and stories.
-

Challenges and Future Considerations

The Town is located over 130 km from the receiving site for all streams of waste collected curbside including garbage, recyclables and organics. The cost to manage solid waste services for a small community with a four (4) hour round trip is unsustainable. Future considerations for a province-wide schema to target packaging waste and cost to manage the recycling system would help address the challenges facing Clark's Harbour and other small rural towns.

6.3 Region of Queens Municipality

Community Data



Population:	10,307	Area:	430 ha
Households:	4,745	Median Age:	53.2
Population Changes:	-5.6 (2011-2016)	Mother Tongue:*	1.5%

** Other Than English or French*



The Region of Queens Municipality has a diverse geography with inland hiking and historic Mi'kmaq waterways and petroglyphs balanced by vast white sandy beaches and coastal activities.

Building on its diverse geography the main industry in Queens has been logging, forestry and pulp and paper. A variety of talents in shipbuilding, privateering and gold mining also lay claim to the area's past successes.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard Waste	Flammable Waste	Co-mingled Organic
Tonnes collected	No Data	No Data	N/A	N/A	N/A
Tonnes collected per household	No Data	No Data	N/A	N/A	N/A
Collection method	No Data	No Data	N/A	N/A	N/A
Collection frequency	No Data	No Data	N/A	N/A	N/A
Container limit (#)	No Data	No Data	N/A	N/A	N/A
Container size (max L)	No Data	No Data	N/A	N/A	N/A

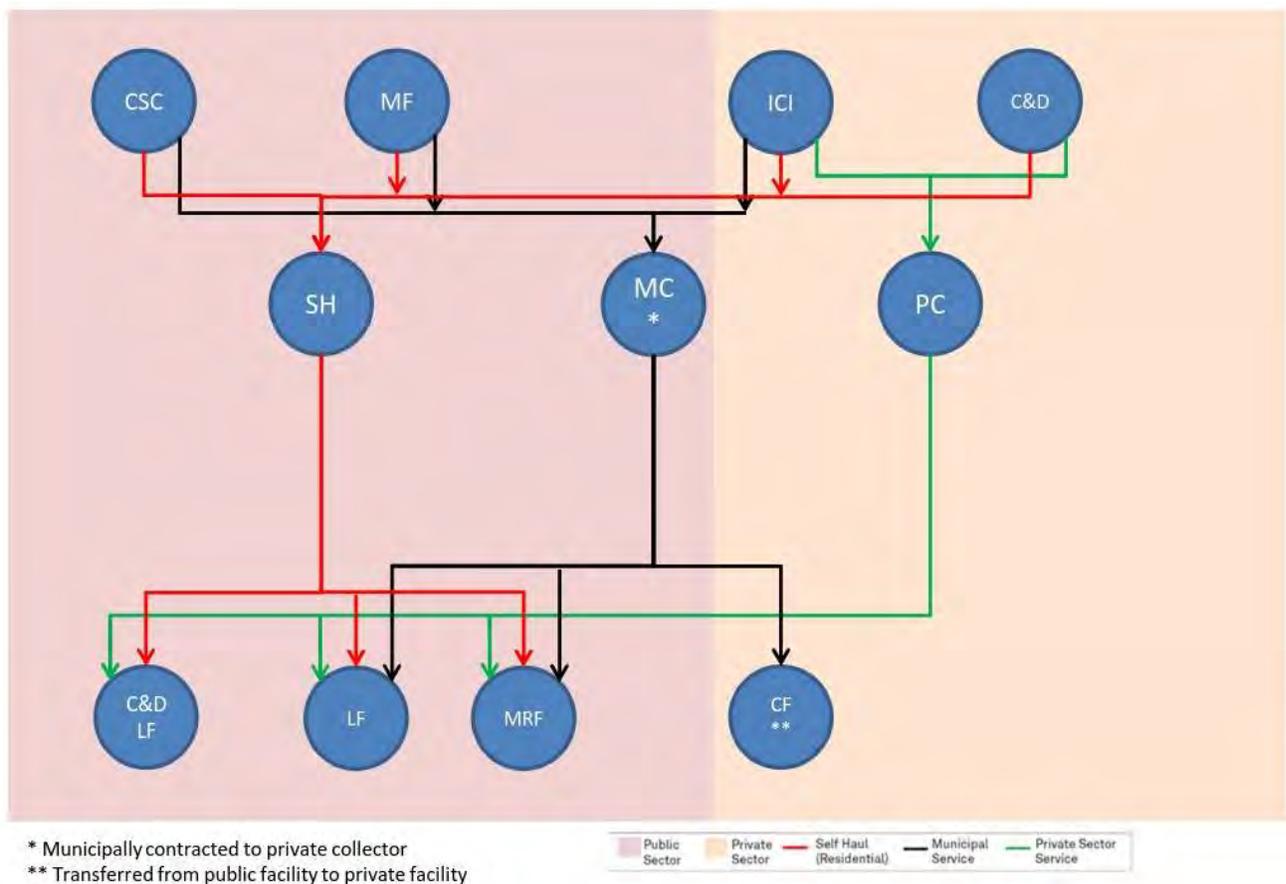
MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	1,842	N/A	N/A	578	1,118
Collected tonnes per serviced unit	0.3588	No Data	No Data	0.1126	0.2179
Collection frequency	Bi-weekly	No Data	No Data	Bi-weekly	Bi-weekly
Collection charge mechanism	Property tax	No Data	No Data	Property tax	Property tax
Container size (cubic yards)	black bag	No Data	No Data	blue bag	No Data

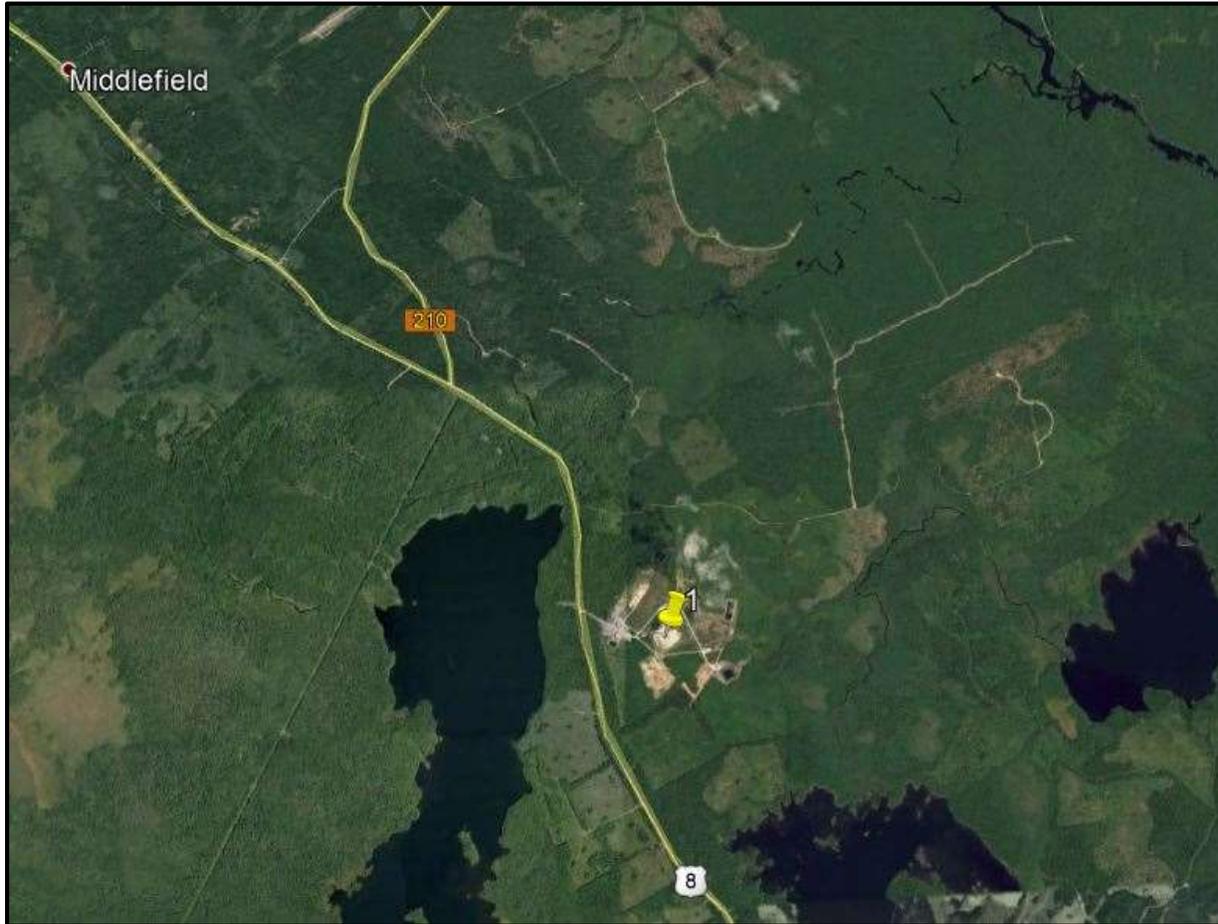
RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard Waste	Liquid Waste	Clean wood waste (C&D)	Clean wood waste (OTHER)	Contaminated soil
Tonnes accepted	20,871	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	2.0164	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

The Region of Queens Municipality contracts a private company to provide solid waste collection services to the residential and small ICI sectors. Collection services are conducted bi-weekly including garbage, recyclables and organics.

All waste streams are managed at the Municipality owned and operated, Queens Waste Management Facility (QWMF). Recyclables are processed at the QWMF and marketed along with materials received from the municipalities located in Shelburne County. The organics are co-mingled with other organics from Shelburne County in a coverall building and transferred to Aylesford to a private facility to be processed into compost. The garbage is landfilled in their municipal solid waste landfill site. The area also owns and operates a C&D disposal site along with a Household Hazardous and Special Waste depot.





Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	△	Accepts garbage, organics, C&D, HHW, and recyclables	Queens Municipal Landfill 3750 Highway 8 Caledonia NS
1	C&D LF	△	Accepts C&D waste	Queens C&D Landfill 3750 Highway 8 Caledonia NS
1	CF	△	Accepts organics	Queens Waste Management Facility 3750 Highway 8 Caledonia, NS
1	MRF	△	Accepts recyclables	Queens Recycling Facility 3750 Highway 8 Caledonia NS

Public Education and Outreach Programs

The Municipality is involved in a number of education and outreach programs which include the following:

- **Schools** – Compliance promotion including curriculum-based presentations, how to sort properly presentations, composting presentations, presentations at staff meetings.
-
- **Public Spaces** – providing recommendations, checking for types of containers in public spaces and the signage on the containers, working with municipal/provincial and federal parks.
-
- **Special Events** - information booths, council presentations, community group presentations; Waste Reduction Week, Compost Awareness Week, Environment Week.
-
- **Media** – ‘R6Recycles’ is an electronic waste sorting app and collection calendar; social media (Twitter and Facebook) as well as various radio and print media interviews and stories.
-

Challenges and Future Considerations

The Queens area lost its primary industry in 2012 and is working hard to build its tourism and attract research and development at its former pulp and paper mill site. Strategic location and diverse geography provide opportunity for this area to become a pre-processor and merger site for all waste materials generated and collected in the southwestern portion of the province.

Future considerations for a province-wide schema to target packaging waste and cost to manage the recycling system would help bring focus to this area’s strategic location and efficiency.

6.4 Municipal Joint Services Board

Community Data



Population:	24,863	Area:	175,959 ha
Households:	11,010	Median Age:	51.8
Population Changes:	-1.0 (2011-2016)	Mother Tongue:*	1.7%

* Other Than English or French



In 2013, the Municipal Joint Services Board was created to better serve residents of the Municipality of the District of Lunenburg and the Towns of Bridgewater and Mahone Bay.

With an abundance of clean air, open spaces and coastal as well as forestry; this area offers a unique opportunity of traditional trades approach to modern development and technology. Ship builders at the turn of the century have passed their time-honoured skill in architectural design. Highly skilled and educated workforce and lower cost of living in a safe and healthy environment make this a great place to live and lots of room to play.

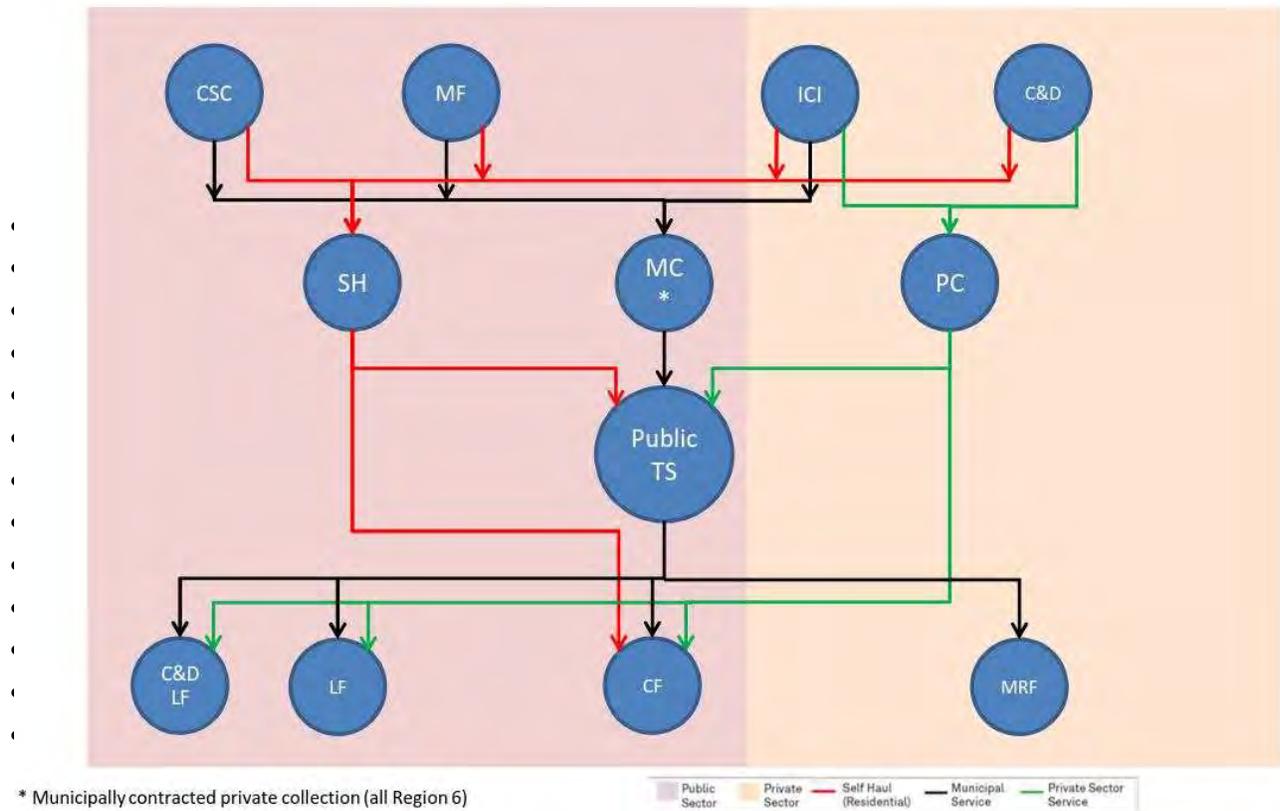
RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	No Data	No Data	N/A	N/A	N/A
Tonnes collected per household	No Data	No Data	N/A	N/A	N/A
Collection method	No Data	No Data	N/A	N/A	N/A
Collection frequency	No Data	No Data	N/A	N/A	N/A
Container limit (#)	No Data	No Data	N/A	N/A	N/A
Container size (max L)	No Data	No Data	N/A	N/A	N/A

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	6,080	N/A	N/A	2,264	3,851
Collected tonnes per serviced unit	0.3741	No Data	No Data	0.1393	0.2370
Collection frequency	Bi-weekly	No Data	No Data	Bi-weekly	Bi-weekly
Collection charge mechanism	Property tax	No Data	No Data	Property tax	Property tax
Container size (cubic yards)	clear bag	No Data	No Data	blue bag	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Other wood waste (Other)	Contaminated soil
Tonnes accepted	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

Each member unit within the board contracts a private company to provide solid waste collection services to their residents and small ICI sectors. The solid waste is collected bi-weekly as clear bag garbage, blue bag recyclables and green cart organics. All streams are managed at the facility, owned and operated by the MJSB, Lunenburg Regional Community Recycling Centre (LRCRC). The blue bags are transferred to a private company in Kentville. The organics are processed at the in-vessel operation of the LRCRC. The garbage is transferred to Chester. The area also owns and operates a C&D transfer site along with a Household Hazardous and Special Waste depot.





Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	TS	△	Accepts garbage, C&D waste, and recyclables	
1	CF	△	Accepts organics	
2	Landfill	△	Accepts garbage	Chester
2	C&D LF	△	Accepts C&D	Chester
3	MRF	⊕	Accepts recycling	

Public Education and Outreach Programs

The Municipality is involved in a number of education and outreach programs which include the following:

- **Schools** – Compliance promotion including curriculum-based presentations, how to sort properly presentations, composting presentations, presentations at staff meetings.
-
- **Public Spaces** – providing recommendations, checking for types of containers in public spaces and the signage on the containers, working with municipal/provincial and federal parks.
-
- **Special Events** - information booths, council presentations, community group presentations; Waste Reduction Week, Compost Awareness Week, Environment Week.
-
- **Media** – ‘R6Recycles’ is an electronic waste sorting app and collection calendar; social media (Twitter and Facebook) as well as various radio and print media interviews and stories.

Challenges and Future Considerations

When it began operating in 1995, the LRCRC was the first of its type in North America. Aging infrastructure has caused some significant investment of public money and therefore a shared service. It continues to create new ways to improve the business. Other civil services, such as Information Technology, are now forming part of the function for the board. Others are also being considered; such as communication and enforcement.

6.5 Shelburne Shared Services

Community Data



Population:	4,288	Area:	182,107 ha
Households:	1,970	Median Age:	52.5
Population Changes:	-2.7% (2011-2016)	Mother Tongue:*	1.1%

* Other Than English or French



The Town of Lockeport, Town of Shelburne and the Municipality of Shelburne share in the education and operation of solid waste services for these communities. Historically, this area is known for the settlement of more than 3,000 Black Loyalists in the late 1700s.

Most income in the area is derived from the sea. Fishing remains the primary industry with other activities such as tourism, shipbuilding and repair, logging and fish processing

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	No Data	No Data	N/A	N/A	N/A
Tonnes collected per household	No Data	No Data	N/A	N/A	N/A
Collection method	No Data	No Data	N/A	N/A	N/A
Collection frequency	No Data	No Data	N/A	N/A	N/A
Container limit (#)	No Data	No Data	N/A	N/A	N/A
Container size (max L)	No Data	No Data	N/A	N/A	N/A

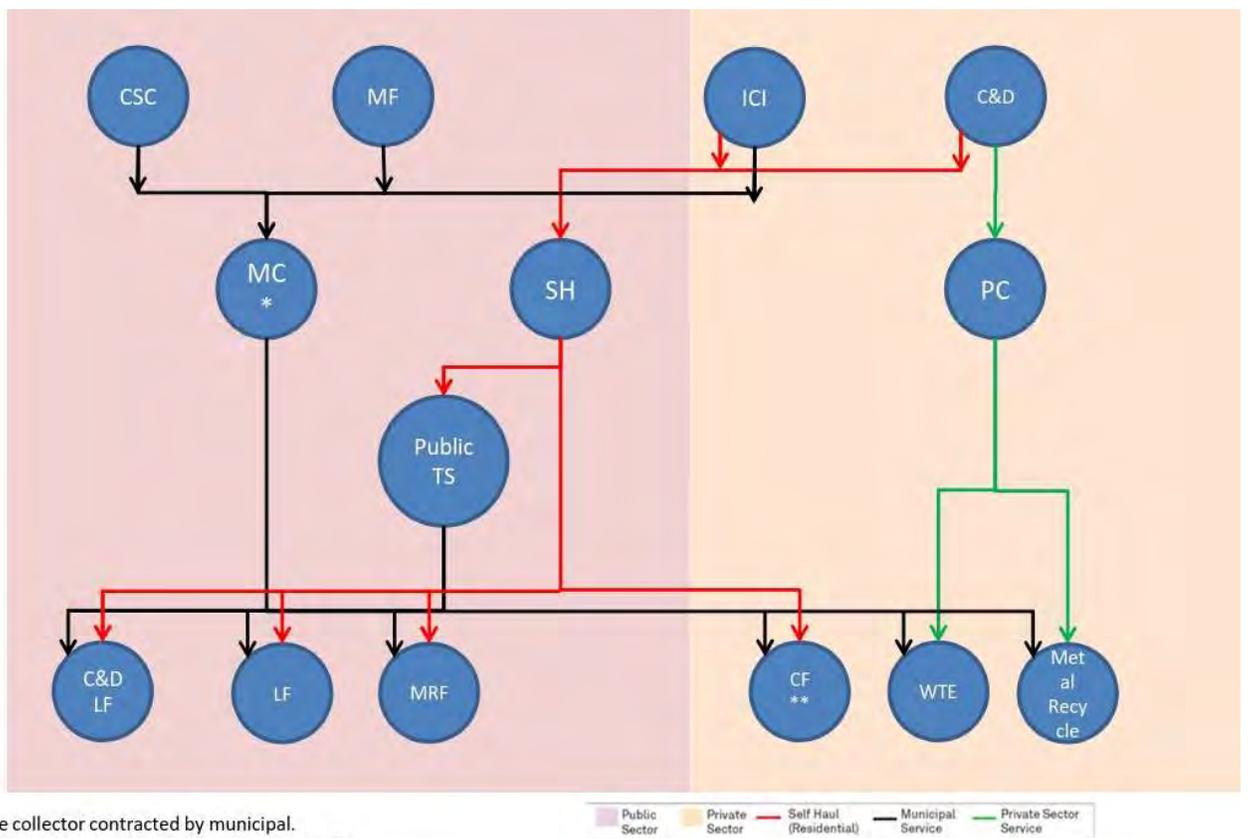
MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	858	N/A	N/A	432	511
Collected tonnes per serviced unit	0.2676	No Data	No Data	0.1348	0.1594
Collection frequency	Bi-weekly	No Data	No Data	Bi-weekly	Bi-weekly
Collection charge mechanism	Property tax	No Data	No Data	No Data	Property tax
Container size (cubic yards)	clear bag	No Data	No Data	blue bag	240 Lt cart

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (F&O)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	930	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	0.1417	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

Shelburne Shared Services contracts a private company to provide solid waste collection services to the residential and small ICI sectors in the three (3) communities.

The solid waste is collected bi-weekly as clear bag garbage, blue bag recyclables and green cart organics. All streams are hauled to Queens Waste Management Facility. Once there, the blue bags are processed and marketed by Queens. The organics are merged with other organics from Shelburne County and Queens in a coverall building and transferred to Aylesford to a private facility to be processed into compost. The garbage is landfilled at Queens in their municipal solid waste landfill site. The area also owns and operates a self-haul C&D transfer facility along with a Household Hazardous and Special Waste depot.





Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	TS	△	Accepts garbage, C&D waste and recyclables	
1	CF	△	Accepts organics	
2	Landfill	△	Accepts garbage	
2	C&D LF	△	Accepts C&D waste	
3	MRF	⊙	Accepts recyclables	

Public Education and Outreach Programs

Shelburne Shared Services is involved in several education and outreach programs which include the following:

- **Schools** - Compliance promotion including curriculum-based presentations, how to sort properly presentations, composting presentations, presentations at staff meetings.
-
- **Public Spaces** - providing recommendations, checking for types of containers in public spaces and the signage on the containers, working with municipal/provincial and federal parks.
-
- **Special Events** - information booths, council presentations, community group presentations; Waste Reduction Week, Compost Awareness Week, Environment Week.
-
- **Media** - 'R6Recycles' is an electronic waste sorting app and collection calendar; social media (Twitter and Facebook) as well as various radio and print media interviews and stories.

Challenges and Future Considerations

The provincial target to reach 300 kg/capita of waste disposed was actually achieved by Shelburne Shared Services in 2005. Participation in programs remains consistent today but the cost borne by the joint service administration to collect and manage all streams of materials is increasing (56% over the past 10 years) while the population is decreasing.

Future considerations for a province-wide schema to target packaging waste and cost to manage the recycling system would help address some of the challenges facing Shelburne Shared Services and its rural communities.

6.6 Town of Lunenburg

Community Data



Population:	2,263	Area:	404 ha
Households:	1,040	Median Age:	56.1
Population Changes:	-2.2% (2011-2016)	Mother Tongue:*	3.1%

* Other Than English or French



The Town of Lunenburg is a hilly, coastal town known for its boat building history; namely the Bluenose. The historic town was designated a UNESCO World Heritage site in 1995 protecting its heritage and boosting its tourism economy.

Lunenburg was also the first town in Nova Scotia (and likely North America) to provide and collect green carts for the diversion of source separated organics back in 1994.

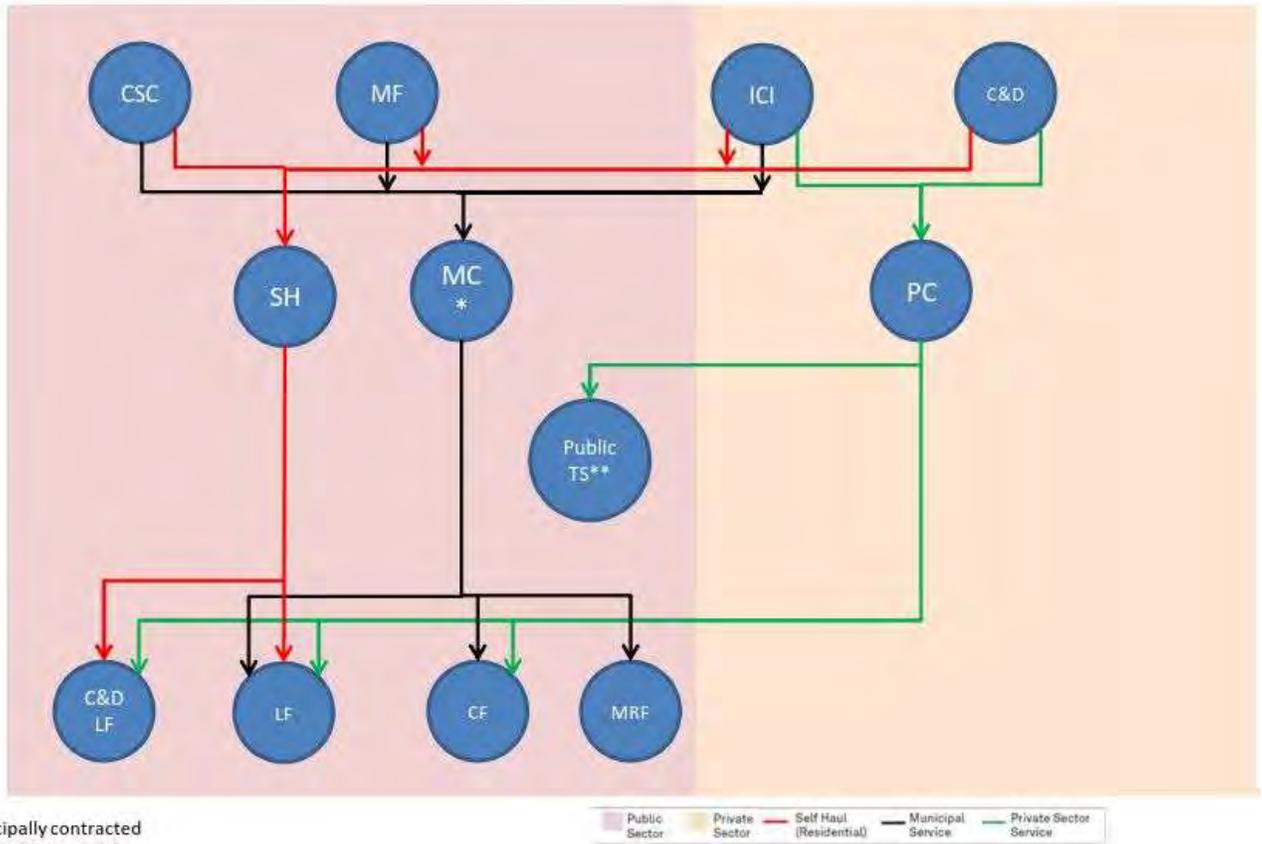
RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	No Data	No Data	N/A	N/A	N/A
Tonnes collected per household	No Data	No Data	N/A	N/A	N/A
Collection method	No Data	No Data	N/A	N/A	N/A
Collection frequency	No Data	No Data	N/A	N/A	N/A
Container limit (#)	No Data	No Data	N/A	N/A	N/A
Container size (max L)	No Data	No Data	N/A	N/A	N/A

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	368	N/A	N/A	187	354
Collected tonnes per serviced unit	0.3428	No Data	No Data	0.1744	0.3302
Collection frequency	Bi-weekly	No Data	No Data	Bi-weekly	Bi-weekly
Collection charge mechanism	Property tax	No Data	No Data	Property tax	Property tax
Container size (cubic yards)	clear bag	No Data	No Data	blue bag	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

The town does not own or operate any solid waste infrastructure. Collection of clear bag garbage, recyclables and green cart organics are performed by a private contractor. All materials collected go to Chester's Kaizer Meadow Environmental Management Centre. Garbage is landfilled at their municipal solid waste landfill. Blue bag materials are transferred to the HRM MRF and the organics go to the Lunenburg Regional Community Recycling Centre's compost facility.





Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	TS	△	Accepts garbage and C&D waste	
1	CF	△	Accepts organics	
2	Landfill	△	Accepts garbage, recyclables and organics	
2	C&D LF	△	Accepts C&D waste	
3	MRF	Ⓢ	Accepts recycling	

Public Education and Outreach Programs

The town is involved in several education and outreach programs which include the following:

- **Schools** - Compliance promotion including curriculum-based presentations, how to sort properly presentations, composting presentations, presentations at staff meetings.
-
- **Public Spaces** - providing recommendations, checking for types of containers in public spaces and the signage on the containers, working with municipal/provincial and federal parks.
-
- **Special Events** - information booths, council presentations, community group presentations; Waste Reduction Week, Compost Awareness Week, Environment Week.
-
- **Media** - 'R6Recycles' is an electronic waste sorting app and collection calendar; social media (Twitter and Facebook) as well as various radio and print media interviews and stories.
-

Challenges and Future Considerations

Because of Lunenburg's size it is reliant on private contractors and partnerships for all solid waste services. While they maintain their UNSECO World Heritage designation, they continue to provide modern collection and sorting services. As a major tourist centre and focus for the arts (Folk Harbour Festival and Tall Ships), Lunenburg is often challenged with making waste separation and collection a high profile with the population exploding daily from April to October.

6.7 Municipality of the District of Chester

Community Data



Population:	10,310	Area:	112,211 ha
Households:	4,770	Median Age:	53.1
Population Changes:	-2.7% (2011-2016)	Mother Tongue:*	1.7%

* Other Than English or French



With a rich community and sheltered bay, Chester was an important site for shipping, shipbuilding as well as lumbering and fishing. Currently the workforce is mainly professional services. Because of the close community and shoreline, it is a popular tourist spot for boaters and hikers alike.

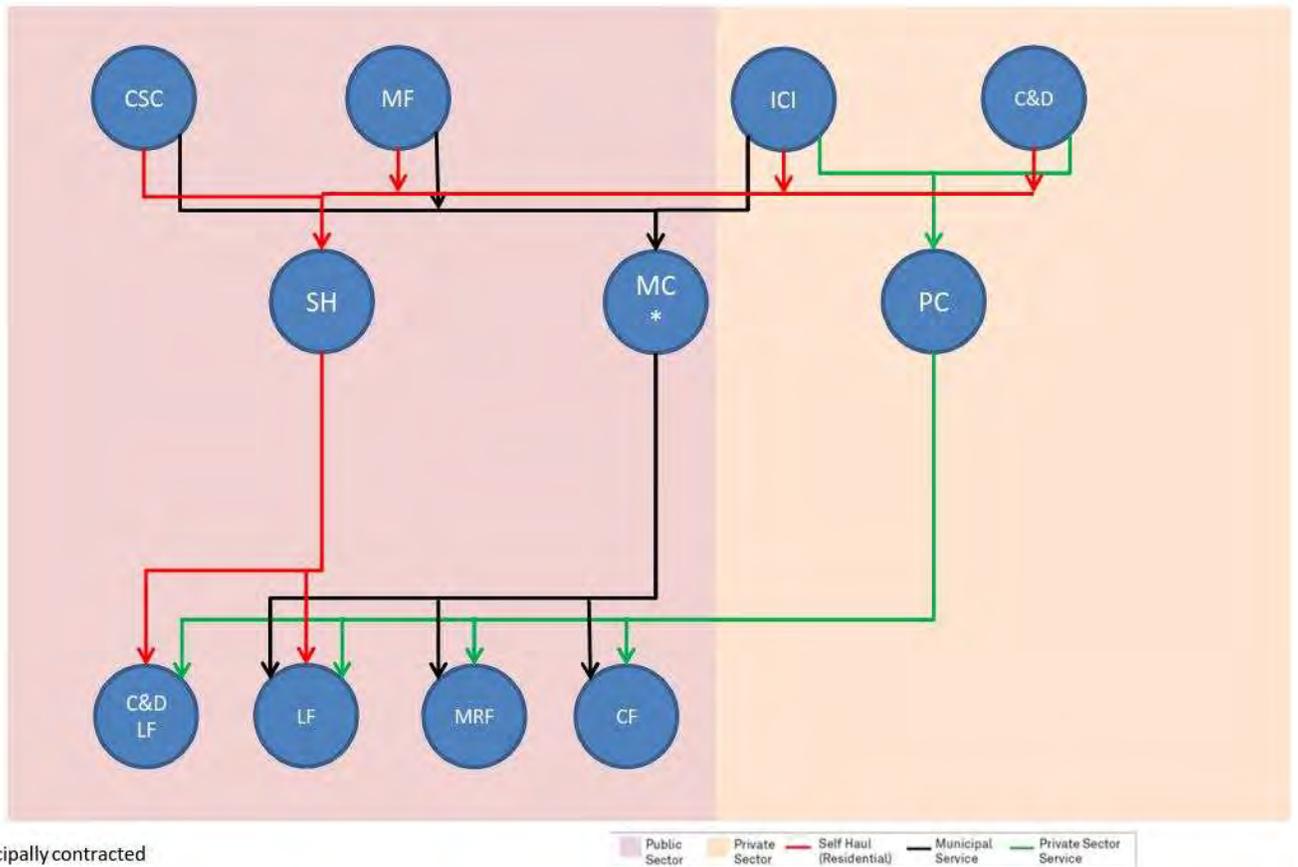
RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	No Data	No Data	N/A	N/A	N/A
Tonnes collected per household	No Data	No Data	N/A	N/A	N/A
Collection method	No Data	No Data	N/A	N/A	N/A
Collection frequency	No Data	No Data	N/A	N/A	N/A
Container limit (#)	No Data	No Data	N/A	N/A	N/A
Container size (max L)	No Data	No Data	N/A	N/A	N/A

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	769	N/A	N/A	768	1,236
Collected tonnes per serviced unit	0.1491	No Data	No Data	0.1489	0.2397
Collection frequency	Bi-weekly	No Data	No Data	Bi-weekly	Bi-weekly
Collection charge mechanism	Property tax	No Data	No Data	Property tax	Property tax
Container size (cubic yards)	clear bag	No Data	No Data	blue bag	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

The municipality owns and operates the Kaizer Meadow Environmental Management Centre. This site houses a Municipal Solid Waste Landfill as well as an outdoor transfer for blue bag and organics. The blue bags are shipped to Halifax to a private contractor for processing and marketing. Organics go to the Lunenburg Regional Community Recycling Centre's compost facility. This site also receives C&D materials and is a drop off for Household Hazardous and Special Wastes.



* Municipally contracted



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	CF (at TS)	△	Accepts organics	
2	Landfill	△	Accepts garbage, recyclables and organics	
2	C&D LF	△	Accepts C&D waste	
3	MRF	Ⓢ	Accepts recyclables	

Public Education and Outreach Programs

The Municipality is involved in several education and outreach programs which include the following:

- **Schools** - Compliance promotion including curriculum-based presentations, how to sort properly presentations, composting presentations, presentations at staff meetings.
-
- **Public Spaces** - providing recommendations, checking for types of containers in public spaces and the signage on the containers, working with municipal/provincial and federal parks.
-
- **Special Events** - information booths, council presentations, community group presentations; Waste Reduction Week, Compost Awareness Week, Environment Week.
-
- **Media** - 'R6Recycles' is an electronic waste sorting app and collection calendar; social media (Twitter and Facebook) as well as various radio and print media interviews and stories.
-

Challenges and Future Considerations

When it comes to solid waste, Chester has always been on the innovative end. When they decided to invest in the improved municipal solid waste standards in 2005, they also decided to develop an Eco-Park. The site for the landfill houses the only 'snow making' machine, as part of its leachate treatment, in Nova Scotia as well as trails and picnic tables to encourage patrons to visit the lands surrounding the site. Currently a private company is investigating making fuel pellets from the 45,000 tonnes of garbage delivered to the site annually.

6.8 Municipality of the District of West Hants

Community Data



Population:	15,368	Area:	124,409 ha
Households:	6,425	Median Age:	46.6
Population Changes:	0.3% (2011-2016)	Mother Tongue:*	1.3%

** Other Than English or French*



Surrounded by the worlds highest tides the area developed based on the fruitful shores of the marshlands. Watercourses and shorelines continue to be an important resource to the area while protecting the rural character. Gypsum mining challenged the balance of all this for 200 years. A major employer in the area, Fundy Gypsum closed in 2011 but continues with minor activity, planned care and maintenance obligations, until 2021.

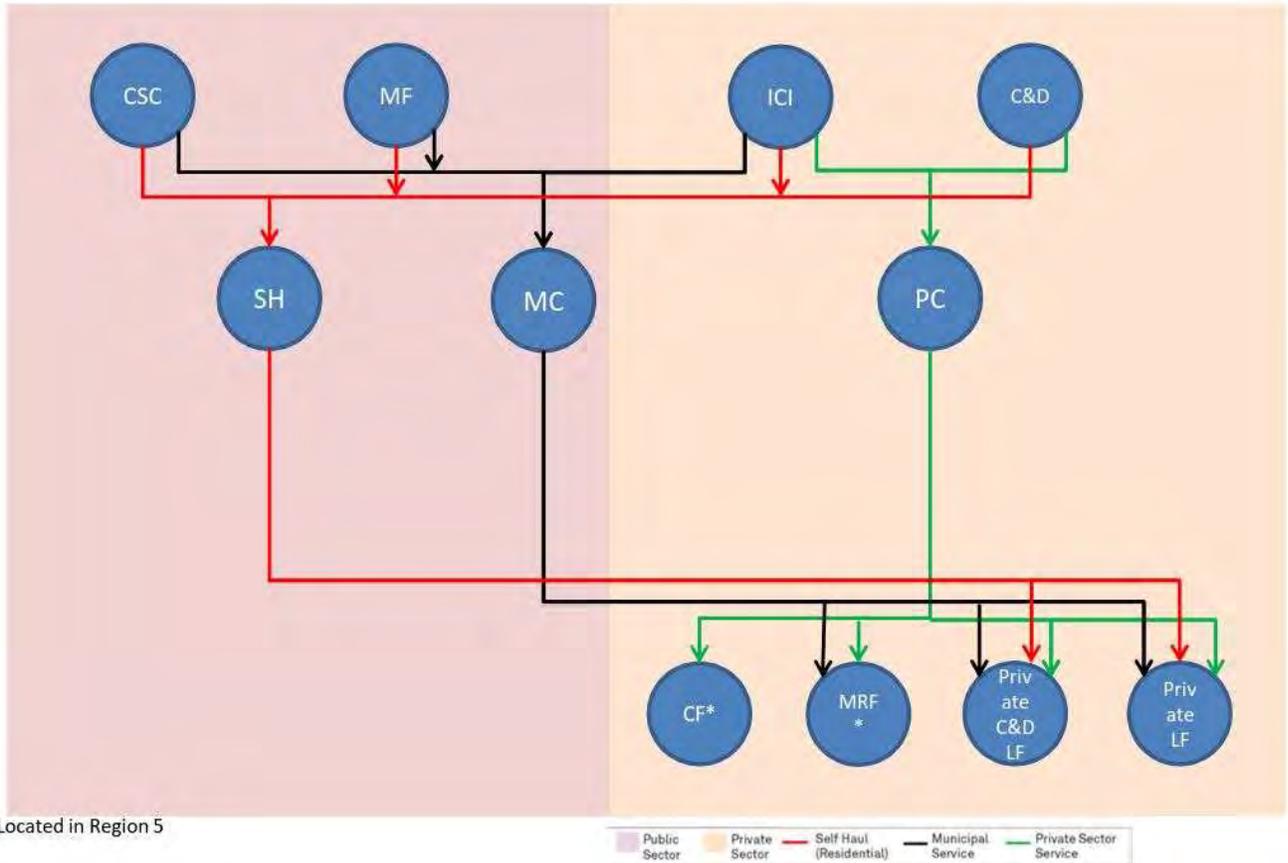
RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	No Data	No Data	N/A	N/A	N/A
Tonnes collected per household	No Data	No Data	N/A	N/A	N/A
Collection method	No Data	No Data	N/A	N/A	N/A
Collection frequency	No Data	No Data	N/A	N/A	N/A
Container limit (#)	No Data	No Data	N/A	N/A	N/A
Container size (max L)	No Data	No Data	N/A	N/A	N/A

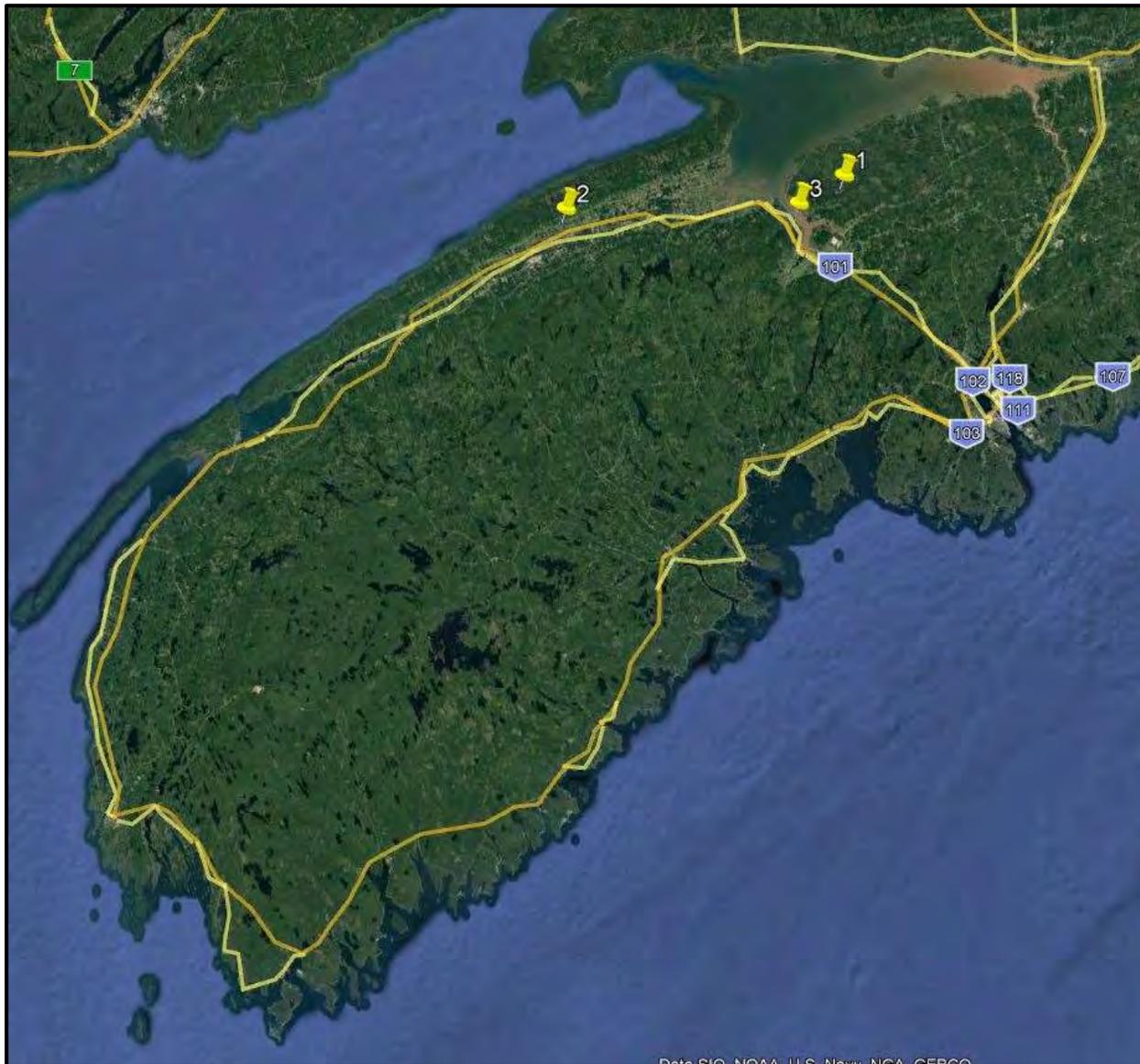
MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	1,769	N/A	N/A	576	No Data
Collected tonnes per serviced unit	0.2691	No Data	No Data	0.0876	No Data
Collection frequency	Bi-weekly	No Data	No Data	Bi-weekly	No Data
Collection charge mechanism	Property tax	No Data	No Data	Property tax	No Data
Container size (cubic yards)	clear bag	No Data	No Data	blue bag	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Dlter)	Contaminated soil
Tonnes accepted	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

West Hants provided the land for the development of a privately owned and operated landfill, West Hants Landfill, currently operated by Green For Life. All garbage collected in West Hants goes to that site as well as any self-hauled Construction and Demolition materials and Household Hazardous and Special Wastes. Blue bags are collected and delivered to a private contractor, Scotia Recycling, in Kentville. Collection of organics began in April 2018. All organics are delivered to Northridge Farms in Ayelsford.





Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	☉	Accepts garbage and HHW	
1	C&D LF	☉	Accepts C&D waste	
2	CF (Region 5)	☉	Accepts organics	
3	MRF	☉	Accepts recycling	

Public Education and Outreach Programs

The Municipality is involved in several education and outreach programs which include the following:

- **Schools** - Compliance promotion including curriculum-based presentations, how to sort properly presentations, composting presentations, presentations at staff meetings.
-
- **Public Spaces** - providing recommendations, checking for types of containers in public spaces and the signage on the containers, working with municipal/provincial and federal parks.
-
- **Special Events** - information booths, council presentations, community group presentations; Waste Reduction Week, Compost Awareness Week, Environment Week.
-
- **Media** - 'R6Recycles' is an electronic waste sorting app and collection calendar; social media (Twitter and Facebook) as well as various radio and print media interviews and stories.
-

Challenges and Future Considerations

West Hants was among the first municipal units to achieve less than 300 kg/capita disposal target established by the province. The areas' curbside inspection program keeps residents on top of the sorting rules. West Hants was also among the first to implement a 'clear bag for garbage' program in 2005. Future considerations are maintaining the low disposal rate and full compliance with all programs.

6.9 Town of Windsor

Community Data



Population:	3,648	Area:	911 ha
Households:	1,585	Median Age:	50.2
Population Changes:	-3.6% (2011-2016)	Mother Tongue:*	2.1%

* Other Than English or French



Windsor is commonly referred to as ‘The Birthplace of Hockey’ and home of the ‘Giant Pumpkin’. It is the retail centre for the surrounding West Hants. Prior to 1970 and the development of the Trans Canada Highway, Windsor’s harbour was a major port connecting rail to the steamships for exports.

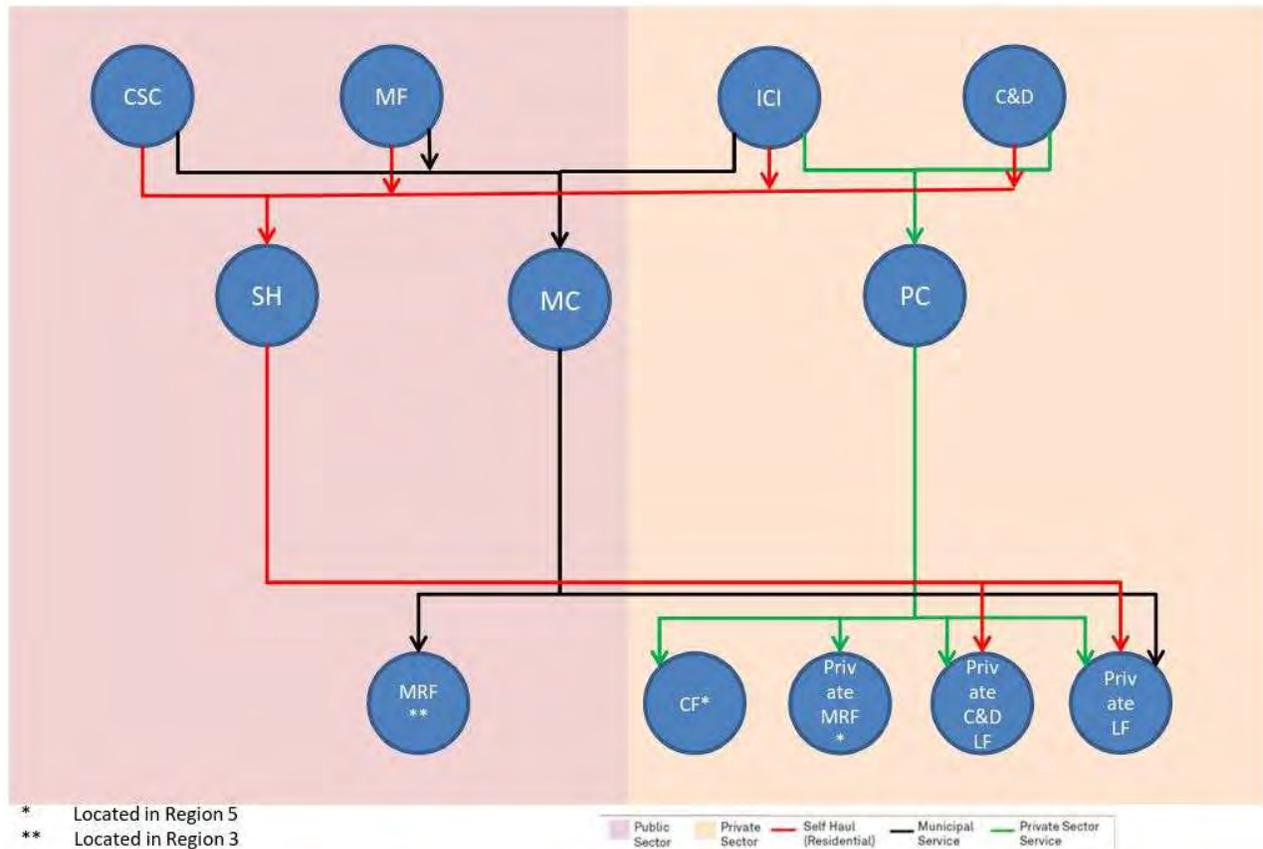
RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Co-mingled organics
Tonnes collected	No Data	No Data	N/A	N/A	N/A
Tonnes collected per household	No Data	No Data	N/A	N/A	N/A
Collection method	No Data	No Data	N/A	N/A	N/A
Collection frequency	No Data	No Data	N/A	N/A	N/A
Container limit (#)	No Data	No Data	N/A	N/A	N/A
Container size (max L)	No Data	No Data	N/A	N/A	N/A

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	445	N/A	N/A	151	420
Collected tonnes per serviced unit	0.2764	No Data	No Data	0.0935	0.2604
Collection frequency	Bi-weekly	No Data	No Data	Bi-weekly	Bi-weekly
Collection charge mechanism	Property tax	No Data	No Data	Property tax	Property tax
Container size (cubic yards)	clear bag	No Data	No Data	blue bag	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (C&D)	Clean wood waste (Other)	Contaminated soil
Tonnes accepted	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

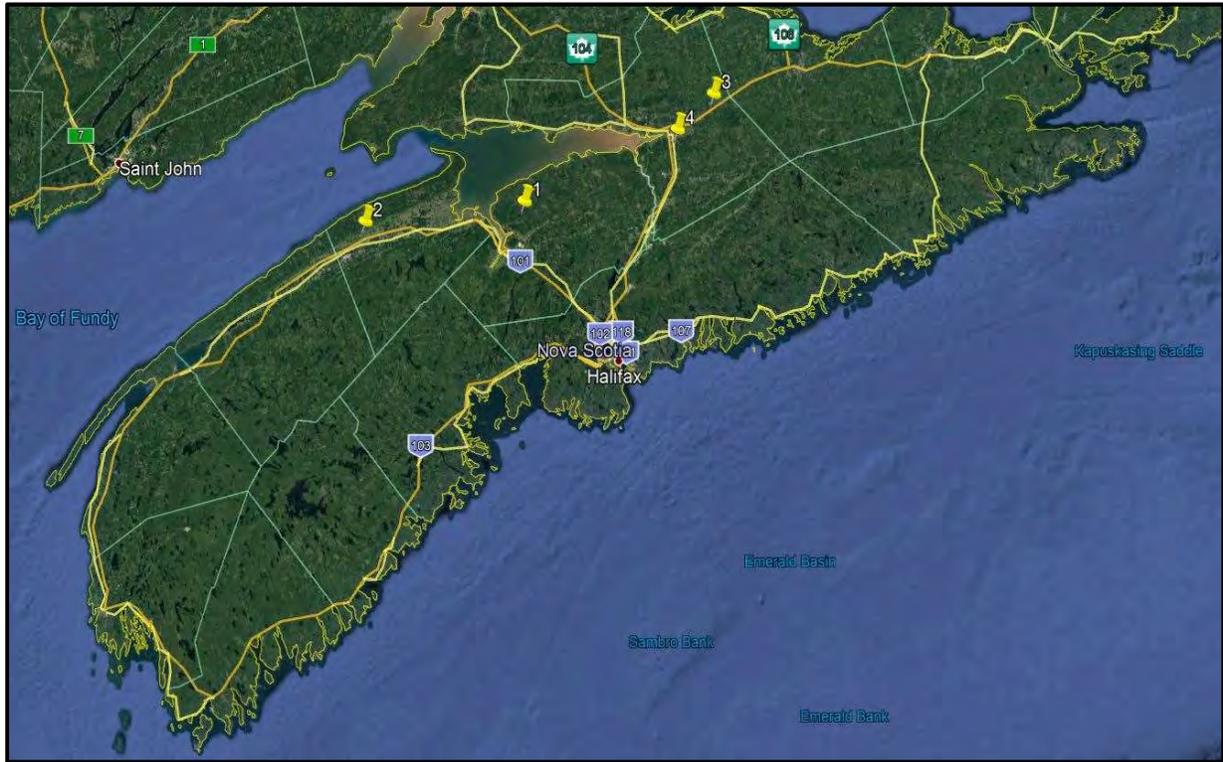
All garbage collected in Windsor goes to the privately-owned West Hants Landfill as well as any self-hauled Construction and Demolition materials and Household Hazardous and Special Wastes. Blue bags are collected and delivered to the Colchester Recycling Facility by a private contractor. Organics are collected in a green bin and delivered to Northridge Farms in Ayelsford.



Public Education and Outreach Programs

The town is involved in several education and outreach programs which include the following:

- **Schools** - Compliance promotion including curriculum-based presentations, how to sort properly presentations, composting presentations, presentations at staff meetings.
-
- **Public Spaces** - providing recommendations, checking for types of containers in public spaces and the signage on the containers, working with municipal/provincial and federal parks.
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- **Special Events** - information booths, council presentations, community group presentations; Waste Reduction Week, Compost Awareness Week, Environment Week.
- **Media** - 'R6Recycles' is an electronic waste sorting app and collection calendar; social media (Twitter and Facebook) as well as various radio and print media interviews and stories.



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	Landfill	Ⓢ	Accepts garbage	
1	C&D LF	Ⓢ	Accepts C&D waste	
2	CF (Region 5)	△	Accepts organics	
3	MRF (Region 3)	△	Accepts recyclables	
4	MRF	Ⓢ	Accepts recyclables	

Challenges and Future Considerations

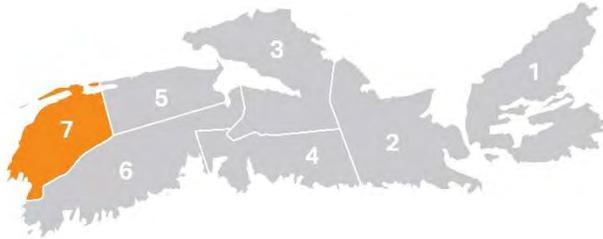
As a retail town with no primary industry, Windsor’s future considerations are to merge civil services with the neighbouring West Hants. Most days the population (and the waste generated) in the town multiplies. Merging civil operations is a way to make services more efficient, including solid waste services.

Region 7

REGION 7

Western Region Solid Waste Resource Management Authority (Waste Check)

Community Data



Population:	43,000	Area:	756,800 ha
Households:	22,000	Median Age:	
Population Changes:		Mother Tongue:*	

** Other Than English or French*

Region 7, also referred to as the Western Region, is managed by the Western Region Solid Waste Resource Management Authority (Waste Check). The Authority was formed in 1999 and later became a wholly owned Municipal corporation through an Intermunicipal Services Agreement which currently encompasses (6) municipalities including: the Municipality of the District of Argyle, Municipality of the District of Yarmouth, Town of Yarmouth, Municipality of the District of Clare, Municipality of the District of Digby and Town of Digby. The Authority is responsible for the management of waste services in all six (6) municipalities excluding collection within their jurisdictions and has two (2) members on the Waste Check Authority.

The Western Region has an economy centered primarily around the fishing industry with Lobster being the top catch with an annual landed value of approximately 500 million dollars. Scallop, snow crab, haddock and other species are also significant. Secondary industries include forestry and agriculture. As a result of its dependency on the sea, the area's economy fluctuates with the value of the catch landed. So, obviously, does the volume of waste. As is typically the case, when the economy goes up, so does the volume of waste. We have made considerable progress on waste reduction over the years, mainly through education, but we have seen recent increases in our disposal volumes. This, we feel, is more closely related to a strengthening economy than to shortcomings in our programs.

It is worth noting that Tourism is also an important industry in the Western Region.

RESIDENTIAL CURBSIDE COLLECTION					
	Garbage	Recycling	Yard waste	Food waste	Commingled organics
Tonnes collected	6,244	1,963	N/A	N/A	3,470.00
Tonnes collected per household	0	No Data	N/A	N/A	0.15
Collection method	Manual	Manual	N/A	N/A	Semi-automated
Collection frequency	Bi-weekly	No Data	N/A	N/A	Bi-weekly
Container limit (#)	No Data	No Data	N/A	N/A	1
Container size (max L)	No Data	No Data	N/A	N/A	No Data

MF & ICI CURBSIDE COLLECTION					
	Combined Stream Garbage	MF Garbage	ICI Garbage	Recycling	Organics
Tonnes collected	6,369	N/A	N/A	No Data	2,062
Collected tonnes per serviced unit	No Data	No Data	No Data	No Data	No Data
Collection frequency	No Data	No Data	No Data	No Data	No Data
Collection charge mechanism	No Data	No Data	No Data	No Data	No Data
Container size (cubic yards)	No Data	No Data	No Data	No Data	No Data

RESIDENTIAL SELF-HAUL							
	Garbage	Curbside Type Recyclables	Yard waste	Food waste	Clean wood waste (L&I)	Unclean wood waste (Other)	Contaminated soil
Tonnes accepted	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tonnes accepted per capita	No Data	No Data	No Data	No Data	No Data	No Data	No Data
Tipping fee (\$/tonne), load size 501 kg - 1 tonne	No Data	No Data	No Data	No Data	No Data	No Data	\$55.00
Minimum charge (\$)	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Solid Waste System Summary

The Western Region has a population of approximately 43,000 and includes 22,000 households. Waste Check provides a full range of waste management services to residential, multi-family and commercial units such as green cart delivery and repair, waste education, program support and enforcement. The six collection contracts are held separately by each of the municipal units in the region; however, there are only two collection companies who provide the services to the six municipal units.

Recyclables are collected at curbside in blue bags through a two bag system which means papers go in blue bag #1 and plastics and containers go in blue bag #2.

Organics are collected bi-weekly using a green cart at the curb in each municipal unit. There are two carts sizes available 65 gallon and 35 gallon. Only paper liners are accepted in the green cart.

Garbage is collected bi-weekly in clear bags however one black/green bag is permitted per garbage collection for each household.

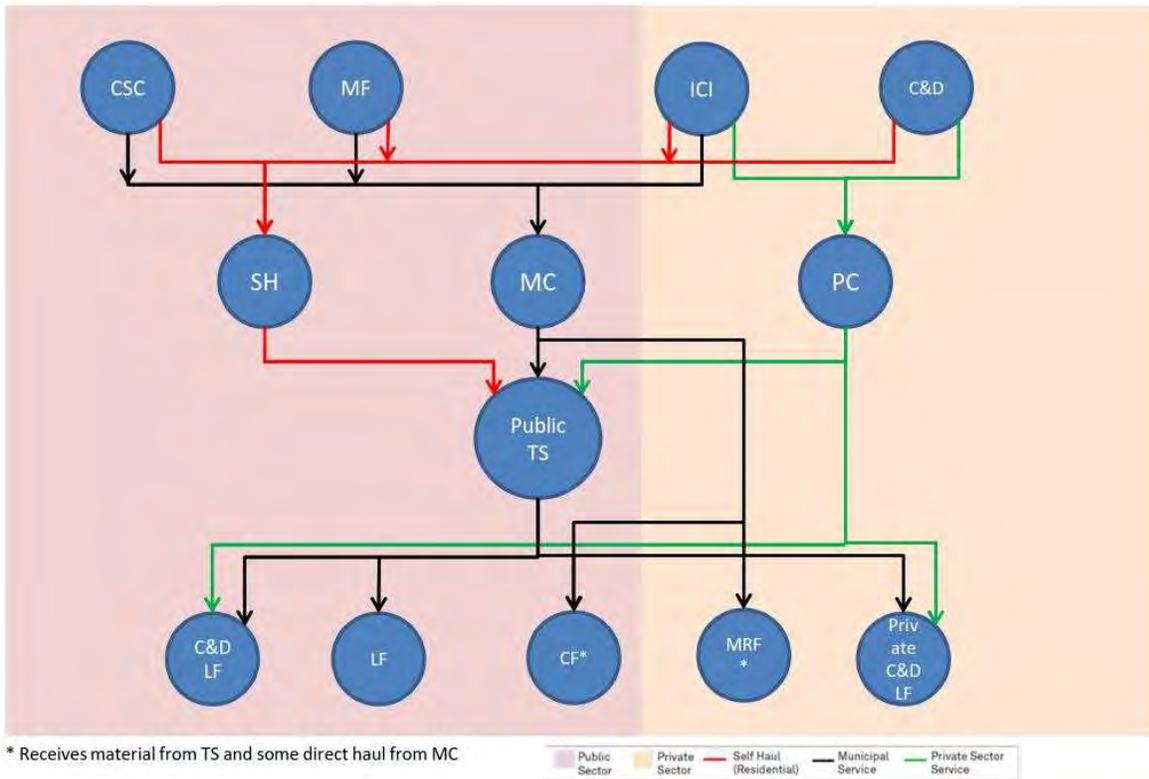
The region has three municipally owned transfer stations located in Yarmouth, Clare and Digby. The Yarmouth transfer station is part of the Yarmouth County Solid Waste Park (YCSWP). The Yarmouth County Solid Waste Park is overseen by the Yarmouth County Solid Waste Park Authority which has two municipal representatives from each of the 3 municipal units in Yarmouth County (Municipality of the District of Argyle, Municipality of the District of Yarmouth and Town of Yarmouth). The YCSWP accepts residual waste, recyclables, organics, C&D waste, asbestos and contaminated soils as they are home to an HHW depot, C&D disposal site, asbestos disposal site, contaminated soil site and public drop off. There is also a C&D Diversion area where metal, wood and shingles are separated from disposal. The Town of Yarmouth's Compost plant is also on this site but is owned solely by the Town of Yarmouth; however, all the regions organics are direct hauled and processed at this plant.

The Municipality of the District of Clare Transfer Station is operated by municipal staff and accepts residual waste, recyclables, C&D and HHW. At the transfer station there is an HHW depot and a C&D diversion area for wood, metals and shingles.

The Municipality of the District of Digby and Town of Digby own the Digby Transfer station. Also, at this site is a public drop off and HHW depot. The operation of this site is done by a private contractor.

Residual waste is transported to the Region of Queens landfill through a 20 year contract which was signed in 2005 and terminates in March 2027. The contract involves the Municipal units paying a per tonne tipping fee which includes transportation fees from our transfer stations to their facility.

The regions recycling is processed by a private company, Scotia Recycling. Digby County recyclables are processed at the Scotia Recycling plant located in Kentville while Yarmouth County recycling is processed by the Scotia Recycling plant located in Yarmouth.



Processing and Disposal Facilities				
Facility ID #	Type	Ownership	Description/Services	Facility Name & Location
1	TS	△	Accepts garbage, organics, recyclables, HHW, and C&D waste	Yarmouth County Solid Waste Park 1932 Hardscratch Rd Yarmouth, NS
1	C&D LF	△	Accepts C&D waste	Yarmouth C&D Landfill 1932 Hardscratch Rd Yarmouth, NS
1	CF	△	Accepts organics	Town of Yarmouth Compost Facility 1932 Hardscratch Rd Yarmouth, NS
2	Landfill	△	Accepts garbage	Shelburne C&D Landfill 4571 Highway 3 West Green Harbour, NS
3	C&D LF	Ⓢ	Accepts C&D waste	Clare C&D Facility 919 Bonnie Road Meteghan, Digby County, NS
4	MRF	Ⓢ	Accepts recyclables	Yarmouth Recycling Facility 273 Forest St Yarmouth, NS

Public Education and Outreach Programs

Waste Check provides communication, education and enforcement to the residential and ICI sectors through various outreach programs. Some of these activities include the development of communication and education materials, workshops, special events, and residential/ICI visits. Education is used as the first step in reaching compliance with solid waste programs and bylaws.

Waste Check employs six full time positions which include a General Manager, Waste Reduction Coordinator/Assistant Manager, Educator, Program Assistant/Hotline, Bylaw Enforcement Officer, and a Compliance Officer. Educational resources include collection calendars, sort guide, simple sorting tips, green cart tips and other print materials, My Waste app, website, social media, hotline and traditional media (radio and newsprint).

Challenges and Future Considerations

The region is fortunate to only have one private C&D disposal site located in Digby; however, there is no financial advantage for private sites to divert material, so it often gets buried and in the end that costs the region in diversion credits. The increase in C&D waste due to derelict buildings as well as the continued effort to clean up illegal dumpsites in the region, counts as disposal and negatively impacts the region's diversion credit funding, which Waste Check depends on to offset the operating budget. Waste Check aims to continue to work with the Province to have a look at the way funding is dispersed to the regions (ie. not including C&D in the diversion credit formula) to allow for a more level playing field for all regions.

Waste Check's budget relies on diversion credits and contracts with Divert NS to offset the budget. Being the smallest region in the Province program funding and resources are important and often funding is based on population. The annual operating budget is approximately \$500,000 with municipal partners contributing approximately \$100,000/ year (in total) based on population and uniformed assessment.

Having six collection contracts within the Region is certainly a challenge when it comes to consistency. It also puts Waste Check in an awkward position as it is often up to Waste Check to communicate and educate haulers. The region provides collection rejection stickers, info kits, hauler appreciation days, hauler information session and receives calls concerning collection from residents. Waste Check is working towards having one unified collection contract for the region which Waste Check would oversee.

The majority of the green carts are 20 years old, which requires extra staff time to deliver and repair carts. In an attempt to keep up with the demand, the Region is currently purchasing two loads of green carts a year, instead of one order every two years.

Waste Check Authority recently passed a new solid waste by law which includes a Flow Control Bylaw that requires any waste generated in the region to stay in the region. This ensures that waste generated in the region stays and supports the facilities in the region. There are C&D sites and other transfer stations outside the region that could influence commercial haulers to take waste out of the region.

The region contracts out recycling to the private sector and transports waste out to another region, therefore transitioning to an Extended Producer Responsibility (EPR) program for packaging and printed paper should be easier than for other areas with more infrastructure.

