### Ministry of the Environment Waste Form

# Report of a Waste Audit

### Industrial, Commercial and Institutional Establishments

As required by O. Reg. 102/94

- This report must be prepared 6 months after becoming subject to O. Reg. 102/94 and a copy retained on file for at least five years after it is prepared, and be made available to the ministry upon request.
- For large construction and demolition projects, please refer to the forms included with "A Guide to Waste Audits and Waste Reduction Work Plans for Construction and Demolition Projects as Required Under Ontario Regulation 102/94" (revised July 2008)

### I. GENERAL INFORMATION

Name of Owner and/or Operator of En McMaster University	ntity(ies) and Company Nar	ne:	
Name of Contact Person: Carlos Figueira	<b>Telephone #:</b> (905) 525-9149 ext.28695	Email address: figueir@mcmaster.ca	
Street Address(es) of Entity(ies):			
1280 Main Street West			
Municipality:			
Hamilton, Ontario, L8S 4L8			
	Type of Entity		
	(check one)		
Retail Shopping Establishments	Hotels and Motels		
Retail Shopping Complexes	Hospitals		
Office Buildings	Educational Institution	ons	X
Restaurants	Large Manufacturing	Establishments	

Note: O. Reg. 102/94 does not apply to multi-unit residential buildings.

### II. DESCRIPTION OF ENTITY

### Provide a brief overview of the entity(ties):

McMaster University is an educational institution with approximately 29,758 FTE students which satisfies Part X of Ontario Regulation 102/94 & 103/94. O.Reg. 102/94 requires operators of educational institutions with more than 350 full- or part-time students enrolled during the calendar year to conduct an annual waste audit and implement a waste reduction work plan. O.Reg. 103/94 requires that source separation programs be implemented and maintained for fine papers, newsprint, aluminum cans, steel cans, glass beverage containers and corrugated cardboard. McMaster University undertook this audit in order to assist them in reducing wastes generated on campus and/or disposed to landfill, while being in compliance with the required Regulations.

# III. How Waste is Produced And Decisions Affecting the Production of Waste

For each category of waste that is produced at the entity(ies), explain how the waste will be produced and how management decisions and policies will affect the production of waste.

management decisions and policies will affect	the production of waste.			
Categories of Waste	How Is the Waste Produced and What Management			
	Decisions/Policies Affect Its Production?			
PET (#1) plastic food and beverage bottles	Brought onto campus or generated on campus by staff/students/faculty			
HDPE (#2) Containers	Brought onto campus or generated on campus by staff/students/faculty			
Polypropylene (#5) Containers	Brought onto campus or generated on campus by staff/students/faculty			
Polystyrene (#6) Containers	Brought onto campus or generated on campus by staff/students/faculty			
Glass food and beverage bottles/jars	Brought onto campus or generated on campus by staff/students/faculty			
Aluminum food and beverage cans	Brought onto campus or generated on campus by staff/students/faculty			
Steel food and beverage cans	Brought onto campus or generated on campus by staff/students/faculty			
Gable Top Containers	Brought onto campus or generated on campus by staff/students/faculty			
Aseptic Containers	Brought onto campus or generated on campus by staff/students/faculty			
Fine paper	Brought onto campus or generated on campus by staff/students/faculty			
Newsprint	Brought onto campus or generated on campus by staff/students/faculty			
Boxboard shoe boxes, cereal boxes, etc.	Brought onto campus or generated on campus by staff/students/faculty			
Glossy magazines, catalogues, flyers	Brought onto campus or generated on campus by staff/students/faculty			
Cardboard	Brought onto campus or generated on campus by staff/students/faculty			
Paper towels	Generated by staff/students/faculty on campus			
Coffee cups	Brought onto campus or generated on campus by			
- Correc cups	staff/students/Faculty			
Organics / Food Waste	Brought onto campus or generated on campus by			
	staff/students/Faculty			
LDPE (#4) plastic film Styrofoam	Brought onto campus or generated on campus by staff/students/faculty			
	Brought onto campus or generated on campus by staff/students/faculty			
Plastics Strapping	Brought onto campus or generated on campus by staff/students/faculty			
Scrap Woods/Pallets	Generated by staff/students/faculty on campus			
Scrap Metals	Generated by staff/students/faculty on campus			
Electronic Wastes (incl. toners)	Generated by staff/students/faculty on campus			
Bulbs & Ballasts	Generated by staff/students/faculty on campus			
Batteries	Generated by staff/students/faculty on campus			
Concrete	Generated by staff/students/faculty on campus			
Oil & Grease	Generated by staff/students/faculty on campus			
Textbooks	Generated by staff/students faculty on campus			
Used Furniture	Generated by staff/students/faculty on campus			
Other / Non-Recyclable	Generated by staff/students/faculty on campus			

Note: When completing this form, write "n/a" in the columns where the entity will not produce any waste for a category of waste.

### IV. MANAGEMENT OF WASTE

For each category of waste listed below, indicate which waste items will be disposed or reused/recycled and how each item will be managed at the entity(ies). Category Waste to be Disposed Reused or Recycled Waste PET (#1) plastic food and beverage Staff/Students/faculty may place in Staff/Students/faculty may place in garbage recycling containers. bottles Staff/Students/faculty may place in Staff/Students/faculty place may in HDPE (#2) Containers garbage recycling containers. Staff/Students/faculty may place in Staff/Students/faculty may place in Polypropylene (#5) Containers garbage recycling containers. Staff/Students/faculty may place in Staff/Students/faculty place may in Polystyrene (#6) Containers garbage recycling containers. Staff/Students/faculty may place in Staff/Students/faculty Glass food and beverage may place in recycling containers. bottles/jars Staff/Students/faculty may place in Staff/Students/faculty may place in Aluminum food and beverage cans garbage recycling containers. Staff/Students/faculty may place in Staff/Students/faculty may place in Steel food and beverage cans garbage recycling containers. Staff/Students/faculty may place in Staff/Students/faculty may place in Gable Top Containers garbage recycling containers. Staff/Students/faculty may place in Staff/Students/faculty may place in **Aseptic Containers** garbage recycling containers. Staff/Students/faculty may place in Staff/Students/faculty place may in Fine paper garbage recycling containers. Staff/Students/faculty may place in Staff/Students/faculty place in may Newsprint garbage recycling containers. Staff/Students/faculty may place in Boxboard shoe boxes, cereal Staff/Students/faculty may place in garbage recycling containers. boxes, etc. Glossy magazines, catalogues, Staff/Students/faculty may place in Staff/Students/faculty may place in garbage recycling containers. flyers Staff/Students/faculty may place in Staff/Students/faculty may place in Cardboard recycling containers. garbage Staff/Students/faculty may place in Staff/Students/faculty may place in Paper towels garbage organics container (trial) Staff/Students/faculty may place in No recycling program implemented. Coffee cups garbage Staff/Students/faculty may place in Staff/Students/faculty may place in Organics / Food Waste garbage organics containers. Staff/Students/faculty may place in Staff/students/faculty may place in LDPE (#4) Plastic Film recycling containers. garbage Staff/Students/faculty may place in No recycling program implemented. Styrofoam (#6) garbage Staff/Students/faculty may place in Staff/students/faculty may place in Plastic Strapping garbage recycling containers. Staff/Students/faculty may place in Staff/students/faculty place may Scrap Woods/Pallets garbage loading areas for pickup Staff/Students/faculty may place in Staff/students/faculty may place Scrap Metals garbage centralize metal recycling containers. Staff/Students/faculty may place in Staff/students/faculty may place in IT Electronic Wastes (incl. toners) garbage recycling containers. Staff/Students/faculty Staff/students/faculty may notify FS for place **Bulbs & Ballasts** garbage Staff/Students/faculty Staff/students/faculty may place in battery place Batteries garbage recycling bins. (EOHS) Staff/Students/faculty place No recycling program implemented. Concrete garbage Staff/Students/faculty place Staff may place in recycling containers. Cooking Oil garbage

Textbooks	Staff/Students/faculty garbage	place	in	Students/Faculty may place in recycling through bookstore for resale
Used Furniture	Staff/Students/faculty garbage	place	in	Staff/students/faculty may send out bldg. notices to reuse
Other / Non-Recyclable	Staff students place in g	arbage		Not applicable.

Note: When completing this form, write "n'a" in the columns where the entity will not produce any waste for a category of waste.

# V. ESTIMATED QUANTITY OF WASTE PRODUCED ANNUALLY

V. ESTIMATED QUANTITY OF WASTEL KODUCED ANNOALLY	E I NODO	CED CIVING	JALLI	7	A local	The second	sta Duadin	in tons	An (*)			
		Generated		Times .	Rensed	ATTL OT AN W	2001 1 200	Rensed Recycled Recycled	103 (1)		Disposed	
	*	:В: *	"C" *	Α.	B*	"C" *	"^"	B*	C *	V	 8	-:C" *
Categories of Waste	Base	Current	Change	Base	Current	Change	Base	Current	Change	Basc	Current	Change
	Year	Year	(A-B)	Year	Year	(A-B)	Year	Year	(A-B)	Year	Year	(A-B)
PET (#1) plastic food and beverage bottles	126.42	168.25	-41.84	0.00	3.96	-3.96	103.06	134.10	-31.04	23.35	30.19	-6.84
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l el celli Cilange (total C. total A y 100)	1.070	WAS ALCOHOLD	7.070		Total Control of the last of t	-100/0	Contract of the last		2	Annual Property of	STATE OF THE PERSON NAMED IN	20.070

Note: When completing this form, write "n/a" in the "Estimated Amount of Waste Produced" column where the entity will not produce any waste for a category of waste.

\* Fill out these columns each year following the initial waste audit or baseline year to determine the progress that is being made by your waste reduction program.

# VI. EXTENT TO WHICH MATERIALS OR PRODUCTS USED OR SOLD BY THE ENTITY CONSIST OF RECYCLED OR REUSED MATERIALS OR PRODUCTS

Please answer the following questions:

1. Do you have a management policy in place that promotes the purchasing and/or use of materials or products that consist of recycled and/or reused materials or products? If yes, please describe.

No formal "green" purchasing policy is in place at McMaster University. However, the different purchasing departments at the University do consider environmental impacts of their purchases whenever options are available and feasible.

2. Do you have plans to increase the extent to which materials or products used or sold\* consist of recycled or reused materials or products? If yes, please describe.

Not applicable.

\* Information regarding materials or products "sold" that consist of recycled or reused materials or products is only required from owner(s) of retail shopping establishments and the owner(s) or operator(s) of large manufacturing establishments.

Please attach any additional page(s) as required to answer the above questions.

I hereby certify that the information p	rovided in this Report of Waste	e Audit is complete and correct.
Signature of authorized official:	Title: Director Custodial Services	Date: 2023/01/31

# Ministry of the Environment Waste Form

### Report of a Waste Reduction Work Plan

### Industrial, Commercial and Institutional Establishments

As required by O. Reg. 102/94

This report must be prepared 6 months after becoming subject to O. Reg. 102/94 and a copy retained on file for at least five years after it is prepared, and be made available to the ministry upon request.

### I. GENERAL INFORMATION

Name of Owner and/or Operator of E	ntity(ies) and Company Name:		
McMaster University			
Name of Contact Person:	Telephone #:	Email address:	
Carlos Figueira	(905) 525 9140 ext 28695	figueir@mcmaster.ca	
Street Address(es) of Entity(ies):			
1280 Main Street West			
Municipality:		-	
Hamilton, Ontario, L8S 4L8			
	Type of Entity		
	(check one)		
Retail Shopping Establishments	Hotels and Motels		
Retail Shopping Complexes	Hospitals		
Office Buildings	Educational Institution	is	X
Restaurants	Large Manufacturing I	Establishments	

Note: O. Reg. 102/94 does not apply to multi-unit residential buildings.

### II. DESCRIPTION OF THE ENTITY

### Provide a brief overview of the entity(ties):

McMaster University is an educational institution with approximately 29,758 FTE students which satisfies Part X of Ontario Regulation 102/94 & 103/94. O.Reg. 102/94 requires operators of educational institutions with more than 350 full- or part-time students enrolled during the calendar year to conduct an annual waste audit and implement a waste reduction work plan. O.Reg. 103/94 requires that source separation programs be implemented and maintained for fine papers, newsprint, aluminum cans, steel cans, glass beverage containers and corrugated cardboard. McMaster University undertook this audit in order to assist them in reducing wastes generated on campus and/or disposed to landfill, while being in compliance with the required Regulations.

# III. PLANS TO REDUCE, REUSE AND RECYCLE WASTE

For each category of waste described in Part V of "Report of a Waste Audit" (on which this plan is based), explain what your plans are to Reduce, Reuse and Recycle the waste, including: 1) how the waste will be source separated at the establishment, and 2) the programs to reduce, reuse and recycle all source separated waste.

recycle all source s	eparated waste.
Waste Category (as stated in Part V of your "Report of a Waste Audit")	Source Separation and 3Rs Program
Comingled Containers (PET, HDPE, LDPE, PP, PS, Aluminum, Steel, Glass, Aseptic)	"Comingled 3Rs Program"  Reduce: Staff/Students/Faculty are encouraged to bring reusable containers food/beverage containers for lunch and breaks. McMaster University encourages suppliers to reduce the amount of polystyrene used to transport supplies. McMaster University encourages suppliers to reduce the amount of plastic film and wrapping materials used to transport supplies.  Reuse: Staff/Students/Faculty are encouraged to reuse plastic crates and totes wherever possible.  Recycle: Staff/Students/Faculty are provided with recycling bins in high waste generating areas and food service areas for mixed containers/plastics. Staff/Students/Faculty are encouraged to place mixed containers/plastics in appropriate recycling bins with appropriate signage affixed to the receptacle. Receptacles are emptied on a regular basis before they become full into large roll away bins for collection as required.
Mixed Papers (Fine Paper, newsprint, boxboard, magazines, molded papers, kraft, catalogues, flyers, etc)	"Mixed Paper 3Rs Program"  Reduce: Staff/Students/Faculty are encouraged to print on both sides of each piece of paper as well as not print when it is unnecessary. Staff/Students/Faculty are encouraged to take reading materials home with them after they are finished with them. Staff/students/Faculty will be sent, via email, news sources that are available online opposed to purchasing paper copies of news.  Reuse: Discarded paper with print only on one side will be used for note pads/scrap paper. Staff/Students/Faculty are encouraged to leave newspapers they are finished reading in common areas for others to read.  Recycle: Staff/Students/Faculty are provided with instructions via email where possible. Receptacles are provided in each office, classroom and high waste generating areas. Staff/Students/Faculty will be encouraged to place newsprint, fine paper, boxboard, magazines, molded papers, etc in appropriate recycling receptacles. Staff/Students/Faculty will empty receptacles into centralized containers. Custodial Staff empty centralized containers into bulk container in designated area for recycle collection as required.
Confidential Papers	"Confidential Paper 3Rs Program"  Reduce: None.  Reuse: None.  Recycle: Staff/Students/Faculty are aware of the existing program. Secure Receptacles are provided in designated areas as required. Staff/Students/Faculty are encouraged to place all confidential paper in the designated consoles. Contactor empty consoles on a bi-weekly basis and recycle shredded material.
Cardboard	"Cardboard 3Rs Program"  Reduce: Suppliers will be encouraged to make use of reusable containers for the shipment of supplies to the University.  Reuse: Cardboard boxes will be reused for shipments when appropriate.  Recycle: Staff/Students/Faculty are reminded of the existing program. Cleaners will be trained on where to dispose of cardboard waste correctly.
Paper Towels	Trial of a few high traffic locations for composting. Trial will be reviewed for feasibility.
Organics	"Organics 3Rs Program" Reduce: Students are encouraged to bring uneaten food items home after lunch breaks or uneaten. Non-perishable food items can be donated on campus Community Fridge. Reuse: Staff/Students/Faculty are provided with reusable china in some food service areas. Recycle: Staff/Students/Faculty will be continually reminded of the existence of compost champions program for their work areas and departments. Kitchen staff & cleaners are trained on where to dispose of waste correctly. Additional bins are added to the university food service

	areas to capture organic materials at their food prep stations.
Coffee Cups, LDPE (#4) films,	"Mixed Container 3Rs Program" – Refer above for description
Plastic Strapping	
Styrofoam	No 3Rs Program
Wood Pallets/Scrap Woods	"Scrap Woods & Wood Pallets 3Rs Program"  Reduce: Staff to monitor use of Pallet to eliminate/reduce broken pallets.  Reuse: Staff are reminded of the existing pallet recycling program.  Recycle: Staff monitor loading areas for left over pallets. They are collecting by service provider as necessary.
Scrap Metals	"Scrap Metals 3Rs Program" <u>Reduce:</u> metal is only used when necessary. <u>Reuse:</u> metal is reused as required. <u>Recycle:</u> all metal products are recycling in various locations on campus.
Electronic Wastes (incl. printer toners)	"Electronic Wastes 3Rs Program"  Reduce: None.  Reuse: Staff/students/Faculty are encouraged to reuse/donate electronic wastes if possible.  Electronic community re use program exists on campus. Electronic items are cleaned and donated to community in need.  Recycle: Staff/Students/Faculty are reminded of the existing program, collection events for that are held 2 x per year.
Bulbs & Ballasts	Bulbs and Ballasts are collected throughout campus and stored for recycling when required.
Batteries	A detailed battery recycling program exists in various locations across campus. Outside service collects when required.
Concrete	"Concrete 3Rs Program"  Reduce: None.  Reuse: None.  Recycle: None.
Cooking Oil	"Oil & Grease 3Rs Program"  Reduce: None.  Reuse: None.  Recycle: Staff will be reminded of the existing program.
Textbooks	"Textbooks 3Rs Program" <u>Reduce:</u> None. <u>Reuse:</u> Staff will be reminded of existing program through our bookstore <u>Recycle:</u> Staff will be reminded of the existing program.
Used Furniture	"Used Furniture 3Rs Program" Reduce: None. Reuse: Staff will be reminded of existing program through bldg. notices to all staff. Recycle: Staff will be reminded of the existing program.
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# IV. RESPONSIBILITY FOR IMPLEMENTING THE WASTE REDUCTION WORK PLAN

Identify who is responsible for implementing the Waste Reduction Work Plan at your entity(ies). If more than one person is responsible for implementation, identify each person who is responsible and indicate the part of the Waste Reduction Work Plan that each person is responsible for implementing.

Responsibility	Telephone #
Cardboard	(905) 525-9140
(PET, HDPE, LDPE, PP, PS, Aluminum,	
Steel, Glass, Aseptic)	
Mixed Papers (Fine Paper, newsprint,	
kraft, catalogues, flyers, etc)	
Confidential Papers	
Organics	
Wood Pallets/Scrap Woods	
Scrap Metals	
Electronic Wastes	
Garbage Disposal	
Cooking Oil	
Textbooks	
Used Furniture	
	(PET, HDPE, LDPE, PP, PS, Aluminum, Steel, Glass, Aseptic)  Mixed Papers (Fine Paper, newsprint, boxboard, magazines, molded papers, kraft, catalogues, flyers, etc)  Confidential Papers  Organics  Wood Pallets/Scrap Woods  Scrap Metals  Electronic Wastes  Garbage Disposal  Cooking Oil  Textbooks

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# V. TIMETABLE FOR IMPLEMENTING WASTE REDUCTION WORK PLAN

Provide a timetable in Reduction Work Plan w	dicating when each Source Separation and 3Rs program of the Waste ill be implemented.
Source Separation and 3Rs Program	Schedule for Completion
Cardboard	3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.
Comingled	3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.
Mixed Papers	3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.
Confidential Papers	3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.
Organics	3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.
Scrap Wood/ Wood Pallets	3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.
Scrap Metals	3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.
Electronic Waste	3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.
Concrete	No 3Rs Program currently in place
Oil & Grease	3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.
Used Furniture/Textbooks	3Rs Program currently in place. Continual improvement to signage and additional promotional campaigns to be considered.

Explain how the Waste Reduction Work Plan will be communicated to employees, customers, tenants, guests/visitors and students:

Explain how the Waste Reduction Work Plan will be communicated to students/staff/faculty? Sustainability committee will review existing programs and develop a plan to promote sustainable activities on campus. Additional promotional campaigns will also be considered to target specific audiences for specific programs. Continue to improve educational materials (hand-outs, flyers) and signage across campus as required.

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### VII. ESTIMATED WASTE PRODUCED BY MATERIAL TYPE AND THE PROJECTED AMOUNT

Material Categories (as stated in Part III)	Estimated Annual Waste Produced * (tonnes)	Name of Proposed 3Rs Program (as stated in Part III)		ojections to Reduce, Reuse or Recycle Waste (tonnes)		Estimated Annual Amount to be Diverted ** (%)
			Reduce	Reuse	Recycle	
PET (#1) plastic food and beverage bottles	15.18	Comingled 3Rs Program			9.87	65%
HDPE (#2) Containers	3.78	Comingled 3Rs Program			2.45	65%
Polypropylene (#5) Containers	22.42	Comingled 3Rs Program			14.57	65%
Polystyrene (#6) Containers	6.99	Comingled 3Rs Program			4.55	65%
Glass food and beverage bottles/jars	40.83	Comingled 3Rs Program			26.54	65%
Aluminum food and beverage cans	11.97	Comingled 3Rs Program			7.78	65%
Steel food and beverage cans	2.39	Comingled 3Rs Program			1.56	65%
Gable Top Containers	7.79	Comingled 3Rs Program			5.06	65%
Aseptic Containers	7.50	Comingled 3Rs Program			4.87	65%
Fine paper	62.75	Mixed Papers & Confidential Paper 3Rs Program			47.06	75%
Newsprint	0.00	Mixed Papers 3Rs Program			0.00	65%
Boxboard shoe boxes, cereal boxes, etc.	140.13	Mixed Papers 3Rs Program			91.09	65%
Glossy magazines, catalogues, flyers	37.14	Mixed Papers 3Rs Program			24.14	65%
Cardboard	152.06	Cardboard 3Rs Program			136.85	90%
Paper towels	67.86	No 3Rs Program				NA

Coffee cups	55.57	No 3Rs Program			NA
Organics / Food Waste	366.16	Organics 3Rs Program		219.69	60%
LDPE (#4) Plastic Film	25.45	Comingled 3Rs Program		16.54	65%
Styrofoam (#6)	1.94	No 3Rs Program			NA
Plastic Strapping	1.39	No 3Rs Program			NA
Scrap Woods/Pallets	54.00	Scrap Woods/Pallets 3Rs Program		54.00	100%
Scrap Metals	42.75	Scrap Metals 3Rs Program		42.75	100%
Electronic Wastes	24.03	Electronic Wastes 3Rs Program		24.03	100%
Bulbs & Ballasts	0.07	No 3Rs Program			NA
Batteries	0.21	No 3Rs Program			NA
Concrete	0.00	No 3Rs Program		0.00	100%
Oil & Grease	14.56	No 3Rs Program		14.56	100%
Textbook Donations	0.00	Textbooks 3Rs Program	0.00		100%
PPE	9.00	No 3Rs Program			NA
Textiles	0.09	No 3Rs Program			NA
Other / Non- Recyclable	120.84	No 3Rs Program			NA

I hereby certify that the information provided in this Waste Reduction Work Plan is complete and correct.		
Signature of authorized official:	Title: Director Custodial Services	Date: 2023/01/31

Estimated Waste Produced = Waste Diverted (3Rs) + Waste Disposed
Estimated Waste Diversion Rate = Amount of Waste Diverted (3Rs) + Estimated Waste Produced x 100%