

# Multi-Material Stewardship Western

**Greenhouse Gas Reporting Webinar  
Depot, Curbside, Multi-family  
COLLECTION & POST-COLLECTION**

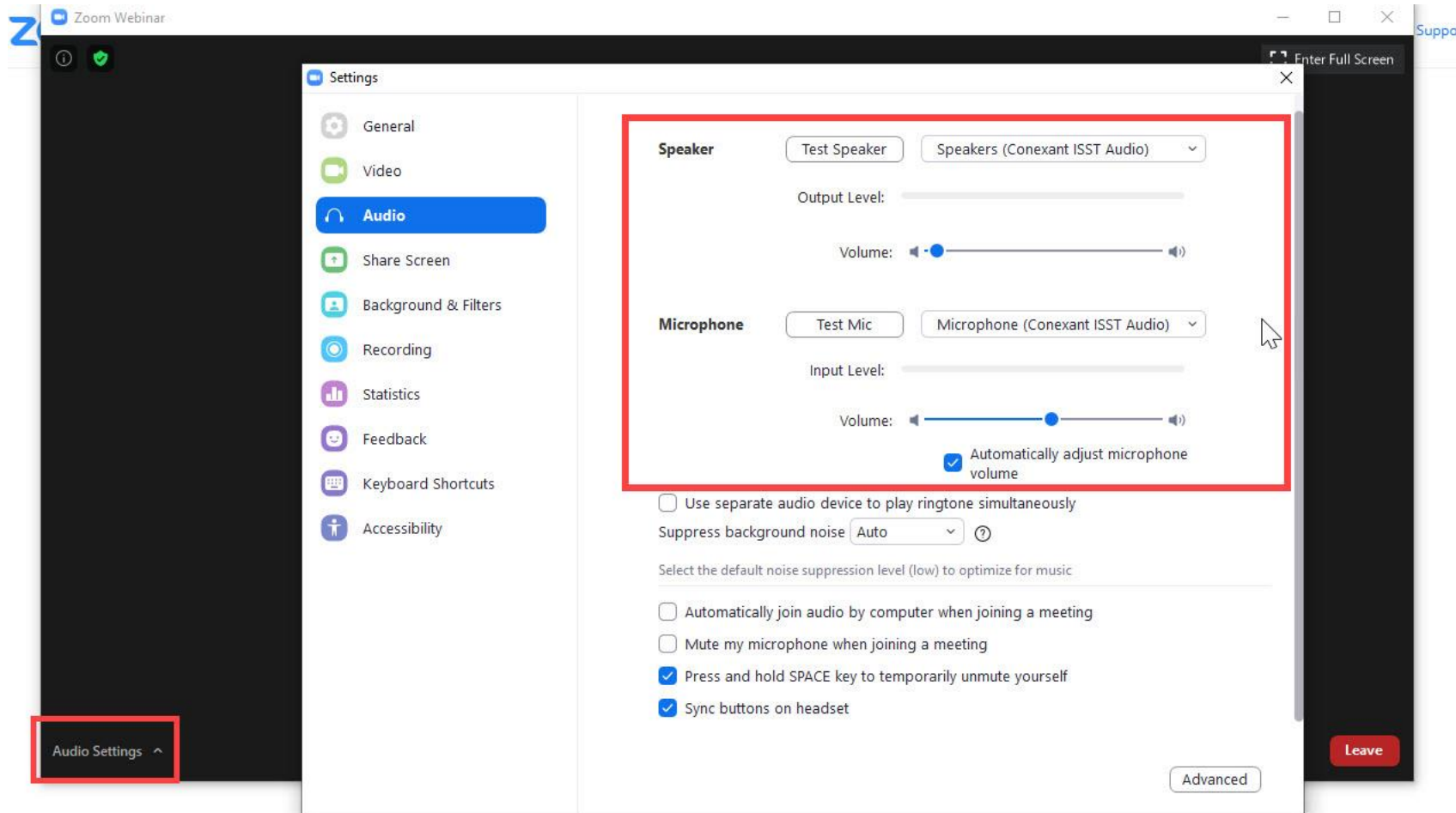


# Agenda

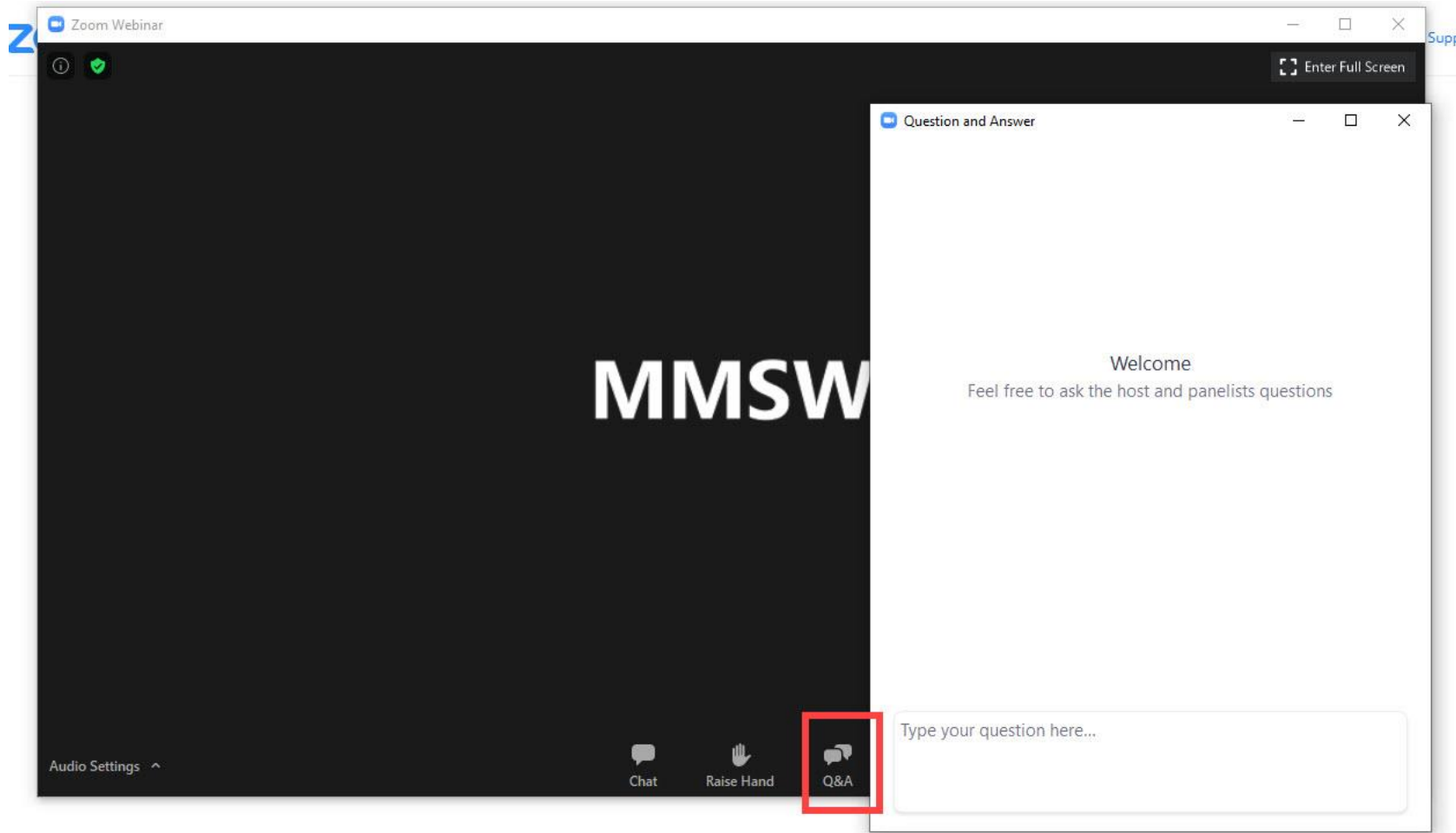
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- General webinar instructions
- Introduction
- GHG reporting for depot programs
- GHG reporting for curbside & multi-family programs
- GHG reporting for post-collection activities
- Q&A via webinar tool
- Contact information and resources

# Using Zoom Webinar Features – Audio Settings



# Using Zoom Webinar Features – Q&A Function



# Introduction



# Why Greenhouse Gas (GHG) Reporting

- Ministry of Environment's Waste Packaging and Paper Stewardship Regulation.
- This data is required by MMSW to allow us to calculate the GHG emissions associated with the collection and processing of residential waste packaging and paper (WPP) in Saskatchewan, as outlined in the Waste Packaging and Paper Stewardship Plan (See section 4.6.2).
- GHG is a reporting obligation for collectors under the Services Agreement Section 7.2(b).

# What is GHG?

- GHG emissions are generated from the burning of fossil fuels across a variety of activities associated with the operation of your residential recycling program.
- It also includes the GHG emissions associated with the manufacturing of paper products (flyers, brochures, utility bill inserts, etc.) which may be used in the promotion and education portion of your residential recycling program.

# When Do You Report GHG?

- The first GHG report is due by **January 31, 2021** and will include GHG emissions data from **January 1, 2020 to December 31, 2020**.
- On an annual basis, GHG reporting will be due by January 31 of the following year.
  - For example, GHG data for the January to December 2021 operational year will be due by January 31, 2022.




# Where Do You Report GHG?

https://werecycle.cssalliance.ca/irj/portal#Shell-home

Welcome

to the WeRecycle Portal!



Canadian Stewardship  
Services Alliance

[Did you forget your password?](#)

Login

New to the WeRecycle Portal?

[Create an Account](#)

RECYCLEBC

Multi-Material  
Stewardship Western

MMSM  
Multi-Material  
Stewardship Manitoba

Stewardship Ontario

Automotive  
Materials  
Stewardship

\*Please refer to our [GHG Portal User Guide](#) for more information on submitting your GHG report via the [WeRecycle Portal](#).

# GHG Data Reporting - Collection

Depot, Curbside & Multi-family



# What GHG Data Do You Report for Collection?

- Generally, GHG data will come from three activities:
  - **Fleet** (collection vehicles),
  - **Facilities** (buildings and equipment), and
  - **Supplies** (paper for recycling guides, etc.).

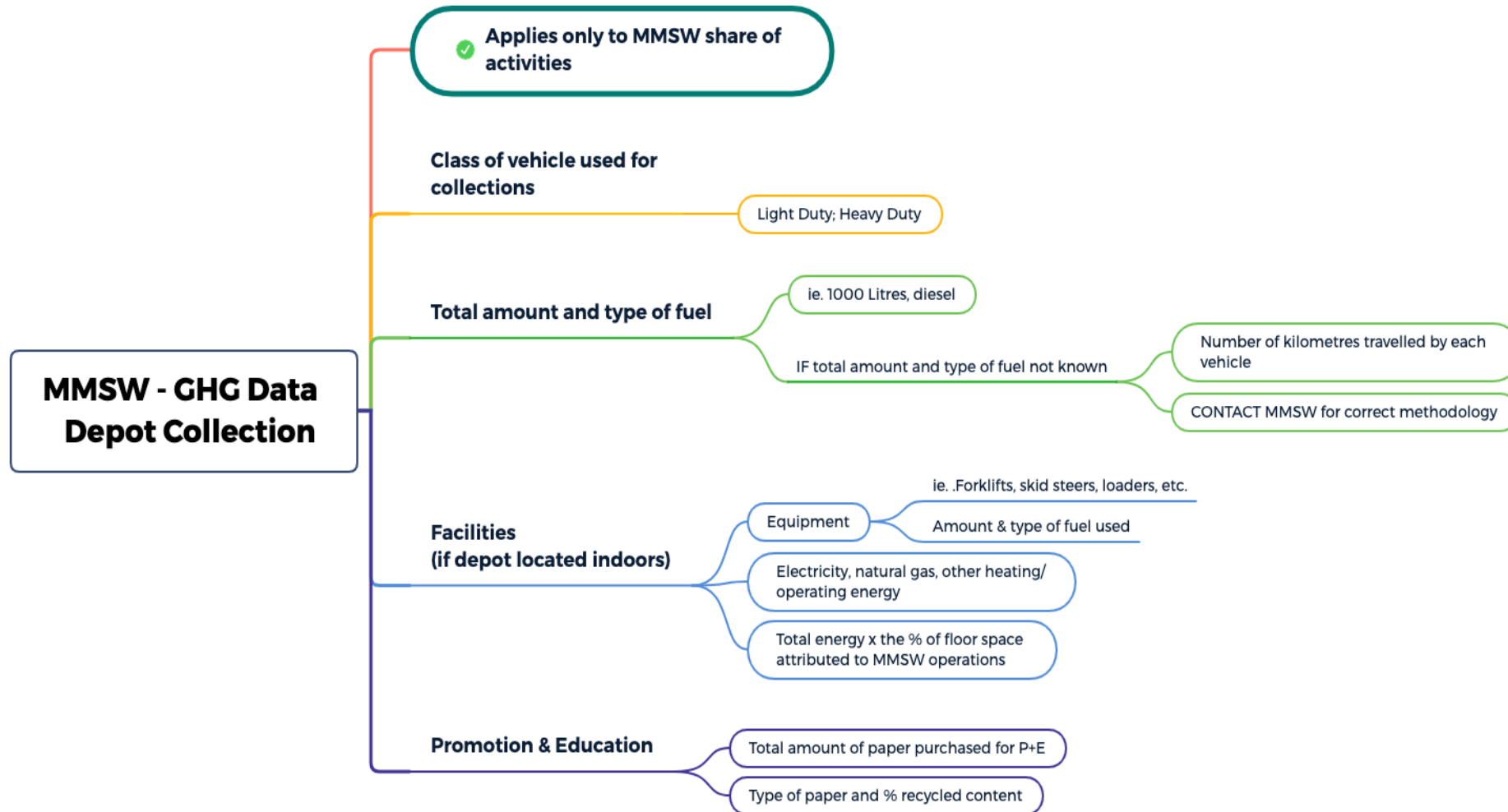
# Working With Your Sub-Contractor

- As a municipality, regional waste authority or First Nations community providing residential WPP recycling service, do you directly:
  - Collect WPP from residents via depot service?
  - Collect WPP from residents via curbside service?
- If the answer to any of the above is 'no', then you will need to work with your sub-contractor to obtain the required GHG data from those activities.

# GHG Reporting - Depots



# GHG Reporting for Depot Programs



# Regional Waste Authorities

- If you are a Regional Waste Authority, GHG data can be reported for your entire membership in aggregate.
- You do not need to report GHG data on a per-member basis.

# Fleet

- Class of Vehicle (s) used
  - Light Duty Truck
  - Heavy Duty
- Total amount and type of fuel consumed by each vehicle class (e.g. Heavy Duty vehicle; 1,000 liters of diesel)?

Canadian Stewardship Services Alliance

Key in Your Report

Test Environment

Multi-Material Stewardship Western

Select a report

Material Quantities

Report Submission

GREENHOUSE GAS - DEPOT (47...)

Document No: [New Document](#) (1)

Add Another Document

New Originating Site

Save for Later

Submit Report

\*Document No:

\*Reporting Period Start (DDMMYY...)

\*Reporting Period End (DDMMYY...)

Reference:

Comments:

\*Originating Site:

Search for name or address, minimum 3 characters

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure	Originating Site
GHG	Vehicle (Light Duty) - CNG		Percentage		Cubic meter	
GHG	Vehicle (Light Duty) - Biodiesel		Percentage		Litres	
GHG	Vehicle (Light Duty) - Diesel		Percentage		Litres	
GHG	Vehicle (Light Duty) - Natural Gas		Percentage		Litres	
GHG	Vehicle (Light Duty) - Electric		Percentage		Kilowatt hours	
GHG	Vehicle (Light Duty) - Propane		Percentage		Litres	
GHG	Vehicle (Heavy Duty) - CNG		Percentage		Cubic meter	
GHG	Vehicle (Heavy Duty) - Biodiesel		Percentage		Litres	
	Vehicle (Heavy Duty) - Diesel	100	Percentage	1000	Litres	
GHG	Vehicle (Heavy Duty) - Natural Gas		Percentage		Litres	



# Fleet Mileage

- If the total amount of fuel consumed per vehicle class is not available, then we will need to know the number of kilometers travelled by each vehicle type (i.e. total mileage).
- Please contact MMSW to determine the appropriate methodology for reporting on kilometres travelled.

# Program Maintenance & Staff Activity

---

- Be sure to include fuel usage associated with maintenance or staff activity like site inspections or cart repair/drop-off, etc.

# How do I Allocate for My Share of GHG?

- MMSW recognizes that your/sub-contractor's collection activities may not be entirely related to your MMSW-based materials, and therefore requires that you report only data as it relates to MMSW's allocation of the overall activities.

# Two Allocation Scenarios – Scenario 1

- **Scenario 1: Collection Vehicle Activity**
- If the collection vehicle used for your residential WPP recycling program also collects other non-WPP materials (ie. organics, garbage, commercial material, etc.) during the year, you must allocate the share of fuel or kilometres driven to only the activities involved with collection of WPP for your residential recycling program.

# Example Allocation Scenario 1

Collection truck A used for WPP and garbage on different days...

Total annual fuel used for collection 1000 L

Annual fuel used for collection of residential WPP 750 L

Annual fuel used for collection of garbage 250 L

Please report 750 L fuel usage to MMSW

**Material Quantities**

Document No: [New Document](#) (1) [Add Another Document](#) [New Originating Site](#) [Save for Later](#)

\*Document No:  \*Reporting Period Start (DDMMYYYY):  \*Reporting Period End (DDMMYYYY):  Reference:  Comments:

\*Originating Site:  Search for name or address, minimum 3 characters

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure	Originating Site
GHG	Vehicle (Light Duty) - Electric	<input type="text"/>	Percentage	<input type="text"/>	Kilowatt hours	
GHG	Vehicle (Light Duty) - Propane	<input type="text"/>	Percentage	<input type="text"/>	Litres	
GHG	Vehicle (Heavy Duty) - CNG	<input type="text"/>	Percentage	<input type="text"/>	Cubic meter	
GHG	Vehicle (Heavy Duty) - Biodiesel	<input type="text"/>	Percentage	<input type="text"/>	Litres	
GHG	Vehicle (Heavy Duty) - Diesel	75	Percentage	750	Litres	
GHG	Vehicle (Heavy Duty) - Natural Gas	<input type="text"/>	Percentage	<input type="text"/>	Litres	
GHG	Vehicle (Heavy Duty) - Electric	<input type="text"/>	Percentage	<input type="text"/>	Kilowatt hours	
GHG	Vehicle (Heavy Duty) - Propane	<input type="text"/>	Percentage	<input type="text"/>	Litres	
GHG	Vehicle (Passenger) - CNG	<input type="text"/>	Percentage	<input type="text"/>	Cubic meter	

## Two Allocation Scenarios – Scenario 2

- If applicable, check with your sub-contractor to determine if your collected WPP is on a shared route with other collectors. If it is, the amount of GHGs generated by collections activities will need to be allocated based on your annual share of households on a full truck.
- If share of households is unknown, you may alternatively allocate based on percent share of total weight of WPP.

# Example Allocation Scenario 2

Total Fuel Usage = 750 L	
Community A Households	80
Community B Households	20
Total Households On Full Truck	100
Community A Share GHG	80% x 750 L = 600 L
Community B Share GHG	20% x 750 L = 150 L

Canadian Stewardship Services Alliance

Key in Your Report

Test Environment

GREENHOUSE GAS – END MARKET TRANSPORTATION (47 5)

Material Quantities

Document No: New Document (1)

\*Document No: \*Reporting Period Start (DDMMYY...) \*Reporting Period End (DDMMYY...) Reference: Comments:

\*Originating Site: Community A

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure	Originating Site
GHG	Vehicle (Light Duty) - Diesel		Percentage		Litres	
GHG	Vehicle (Light Duty) - Natural Gas		Percentage		Litres	
GHG	Vehicle (Light Duty) - Electric		Percentage		Kilowatt hours	
GHG	Vehicle (Heavy Duty) - Biodiesel		Percentage		Litres	
GHG	Vehicle (Heavy Duty) - Diesel	80	Percentage	600	Litres	
GHG	Vehicle (Heavy Duty) - Natural Gas		Percentage		Litres	

Canadian Stewardship Services Alliance

Key in Your Report

Test Environment

GREENHOUSE GAS – END MARKET TRANSPORTATION (4 )

Material Quantities

Document No: New Document (1)

\*Document No: \*Reporting Period Start (DDMMYY...) \*Reporting Period End (DDMMYY...) Reference: Comments:

\*Originating Site: Community B

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure	Originating Site
GHG	Vehicle (Light Duty) - Diesel		Percentage		Litres	
GHG	Vehicle (Light Duty) - Natural Gas		Percentage		Litres	
GHG	Vehicle (Light Duty) - Electric		Percentage		Kilowatt hours	
GHG	Vehicle (Heavy Duty) - Biodiesel		Percentage		Litres	
GHG	Vehicle (Heavy Duty) - Diesel	20	Percentage	150	Litres	
GHG	Vehicle (Heavy Duty) - Natural Gas		Percentage		Litres	

# Facilities

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- GHG from facilities applies only if your/sub-contractor's depot is located inside a building or is outdoors and uses energy for lighting.



# Equipment

- We would like to know what kind(s) of fossil fuel-based equipment you use at your/sub-contractor's depot.
- Remember, this is only equipment that is used for the collection of WPP, including staff activity like site inspections or maintenance
- forklifts,
- skid steers,
- loaders, etc.?
- gasoline,
- diesel,
- liquefied petroleum gas (propane),
- natural gas?

# Equipment

- Amount of fuel purchased for your/sub-contractor's equipment.
  - record the total in litres
- If different pieces of equipment use different fuels, please record the equipment and fuel usage separately.
- Please also include the percent of the time this type of equipment is used for MMSW-related use.

# Example – Equipment

Type of Equipment	Forklift	Type of Equipment	Front-end loader
% of the time dedicated to MMSW materials	25%	% of the time dedicated to MMSW materials	10%
Type of Fuel Used	Diesel	Type of Fuel Used	Diesel
Month	Total Fuel Usage (L)	Month	Total Fuel Usage (L)
January	398	January	612
January (MMSW allocation)	$398 \times .25 = 99.50 \text{ L}$	January (MMSW allocation)	$612 \times .10 = 61 \text{ L}$

## Material Quantities

Document No: Test12345 (1)

Add Another Document

New Originating Site

Save for Later

\*Document No:

Test12345

\*Reporting Period Start (DDMMYY...)

January 1, 2020

\*Reporting Period End (DDMMYY...)

January 31, 2020

Reference:

Comments:

Jan - GHG - Equipment data

\*Originating Site:

Community 1

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure
GHG	Forklift - Propane		Percentage		Litres
GHG	Forklift - CNG		Percentage		Cubic meter
GHG	Forklift - Biodiesel		Percentage		Litres
GHG	Forklift - Diesel	25	Percentage	99.5	Litres
GHG	Forklift - Natural Gas		Percentage		Litres
GHG	Forklift - Electricity		Percentage		Kilowatt hours
GHG	Front End Loader - CNG		Percentage		Cubic meter
GHG	Front End Loader - Biodiesel		Percentage		Litres
GHG	Front End Loader - Diesel	10	Percentage	61	Litres

# Electricity Consumption

Month	Usage (kWh)
January	1,394

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Key in Your Report ▾

Test Environment

Select a report

Material Quantities

Report Submission

GREENHOUSE GAS – END MARKET TRANSPORTATION (4/00002303)

Material Quantities

Document No: [New Document](#) (1)

Add Another Document

New Originating Site

Save for Later

Sub

\*Document No:

\*Reporting Period Start (DDMMYY...  
January 1, 2020

\*Reporting Period End (DDMMYY...  
January 31, 2020

Reference:

Comments:  
Jan - electricity GHG

\*Originating Site:

Community 1

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure
GHG	Indoor floor space		Percentage		Square foot
GHG	Outdoor floor space		Percentage		Square foot
GHG	Electricity Consumption	100	Percentage	1394	Kilowatt hours
GHG	Heating - Natural Gas		Percentage		Cubic meter
GHG	Heating - Natural Gas		Percentage		Gigajoule
GHG	Heating - Butane		Percentage		Litres
GHG	Heating - Diesel		Percentage		Litres

# Heating Consumption

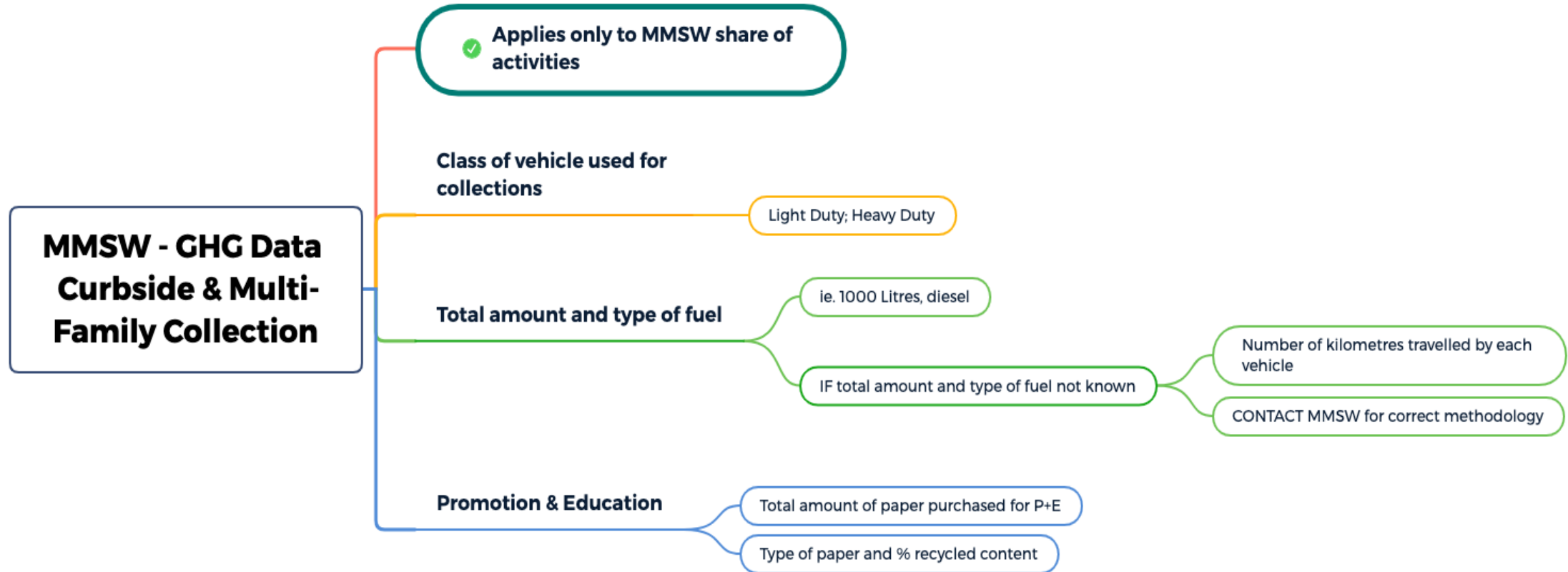
- Record how much is being consumed at each facility

Fuel Type	Unit
Natural Gas	GJ/m3
Diesel, kerosene, light fuel oil, heavy fuel oil, propane, ethane, butane	L

# GHG Reporting Curbside & Multi-family



# GHG Reporting for Curbside & Multi-family



# Fleet

- Class of Vehicle (s) used
  - Light Duty Truck
  - Heavy Duty
- Total amount and type of fuel consumed by each vehicle class (e.g. Heavy Duty vehicle; 1,000 liters of diesel)?

Canadian Stewardship Services Alliance

Key in Your Report

Test Environment

Multi-Material Stewardship Western

Select a report

Material Quantities

Report Submission

GREENHOUSE GAS - DEPOT (47...)

Document No: [New Document](#) (1)

Add Another Document

New Originating Site

Save for Later

Submit Report

\*Document No:

\*Reporting Period Start (DDMMYY...)

\*Reporting Period End (DDMMYY...)

Reference:

Comments:

\*Originating Site:

Search for name or address, minimum 3 characters

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure	Originating Site
GHG	Vehicle (Light Duty) - CNG		Percentage		Cubic meter	
GHG	Vehicle (Light Duty) - Biodiesel		Percentage		Litres	
GHG	Vehicle (Light Duty) - Diesel		Percentage		Litres	
GHG	Vehicle (Light Duty) - Natural Gas		Percentage		Litres	
GHG	Vehicle (Light Duty) - Electric		Percentage		Kilowatt hours	
GHG	Vehicle (Light Duty) - Propane		Percentage		Litres	
GHG	Vehicle (Heavy Duty) - CNG		Percentage		Cubic meter	
GHG	Vehicle (Heavy Duty) - Biodiesel		Percentage		Litres	
	Vehicle (Heavy Duty) - Diesel	100	Percentage	1000	Litres	
GHG	Vehicle (Heavy Duty) - Natural Gas		Percentage		Litres	



# Fleet Mileage

- If the total amount of fuel consumed per vehicle class is not available, then we will need to know the number of kilometers travelled by each vehicle type (i.e. total mileage).
- Please contact MMSW to determine the appropriate methodology for reporting on kilometres travelled.

# Program Maintenance & Staff Activity

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- Be sure to include fuel usage associated with maintenance or staff activity like site inspections or cart repair/drop-off, etc.

# Regional Waste Authorities

- If you are a Regional Waste Authority, GHG data can be reported for your entire membership in aggregate.
- You do not need to report GHG data on a per-member basis.

# How Do I Allocate for My Share of GHG?

- MMSW recognizes that your/sub-contractor's collection activities may not be entirely related to your MMSW-based materials, and therefore requires that you report only data as it relates to MMSW's allocation of the overall activities.

# Two Allocation Scenarios – Scenario 1

- **Scenario 1: Collection Vehicle Activity**
- If the collection vehicle used for your residential WPP recycling program also collects other non-WPP materials (ie. organics, garbage, commercial material, etc.) during the year, you must allocate the share of fuel or kilometres driven to only the activities involved with collection of WPP for your residential recycling program.

# Example Allocation Scenario 1

Collection truck A used for WPP and garbage on different days...

Total annual fuel used for collection	1000 L
---------------------------------------	--------

Annual fuel used for collection of residential WPP	750 L
--	-------

Annual fuel used for collection of garbage	250 L
--	-------

Please report 750 L fuel usage to MMSW

**Material Quantities**

Document ID: [New Document](#) (1)

[Add Another Document](#) [New Originating Site](#) [Save for Later](#)

\*Document No:  \*Reporting Period Start (DDMMYYYY):  \*Reporting Period End (DDMMYYYY):  Reference:  Comments:

\*Originating Site:

Search for name or address, minimum 3 characters

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure	Originating Site
GHG	Vehicle (Light Duty) - Electric	<input type="text"/>	Percentage	<input type="text"/>	Kilowatt hours	
GHG	Vehicle (Light Duty) - Propane	<input type="text"/>	Percentage	<input type="text"/>	Litres	
GHG	Vehicle (Heavy Duty) - CNG	<input type="text"/>	Percentage	<input type="text"/>	Cubic meter	
GHG	Vehicle (Heavy Duty) - Biodiesel	<input type="text"/>	Percentage	<input type="text"/>	Litres	
GHG	Vehicle (Heavy Duty) - Diesel	75	Percentage	750	Litres	
GHG	Vehicle (Heavy Duty) - Natural Gas	<input type="text"/>	Percentage	<input type="text"/>	Litres	
GHG	Vehicle (Heavy Duty) - Electric	<input type="text"/>	Percentage	<input type="text"/>	Kilowatt hours	
GHG	Vehicle (Heavy Duty) - Propane	<input type="text"/>	Percentage	<input type="text"/>	Litres	
GHG	Vehicle (Passenger) - CNG	<input type="text"/>	Percentage	<input type="text"/>	Cubic meter	

## Two Allocation Scenarios – Scenario 2

- If applicable, check with your sub-contractor to determine if your collected WPP is on a shared route with other collectors. If it is, the amount of GHGs generated by collections activities will need to be allocated based on your annual share of households on a full truck.
- If share of households is unknown, you may alternatively allocate based on the percentage share of total weight of WPP.

# Example Allocation Scenario 2

Total Fuel Usage = 750 L	
Community A Households	80
Community B Households	20
Total Households On Full Truck	100
Community A Share GHG	80% x 750 L = 600 L
Community B Share GHG	20% x 750 L = 150 L

Canadian Stewardship Services Alliance

Key in Your Report

Test Environment

GREENHOUSE GAS – END MARKET TRANSPORTATION (47 5)

Material Quantities

Document No: New Document (1)

\*Document No: \*Reporting Period Start (DDMMYY...) \*Reporting Period End (DDMMYY...) Reference: Comments:

\*Originating Site: Community A

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure	Originating Site
GHG	Vehicle (Light Duty) - Diesel		Percentage		Litres	
GHG	Vehicle (Light Duty) - Natural Gas		Percentage		Litres	
GHG	Vehicle (Light Duty) - Electric		Percentage		Kilowatt hours	
GHG	Vehicle (Heavy Duty) - Biodiesel		Percentage		Litres	
GHG	Vehicle (Heavy Duty) - Diesel	80	Percentage	600	Litres	
GHG	Vehicle (Heavy Duty) - Natural Gas		Percentage		Litres	

Canadian Stewardship Services Alliance

Key in Your Report

Test Environment

GREENHOUSE GAS – END MARKET TRANSPORTATION (4 )

Material Quantities

Document No: New Document (1)

\*Document No: \*Reporting Period Start (DDMMYY...) \*Reporting Period End (DDMMYY...) Reference: Comments:

\*Originating Site: Community B

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure	Originating Site
GHG	Vehicle (Light Duty) - Diesel		Percentage		Litres	
GHG	Vehicle (Light Duty) - Natural Gas		Percentage		Litres	
GHG	Vehicle (Light Duty) - Electric		Percentage		Kilowatt hours	
GHG	Vehicle (Heavy Duty) - Biodiesel		Percentage		Litres	
GHG	Vehicle (Heavy Duty) - Diesel	20	Percentage	150	Litres	
GHG	Vehicle (Heavy Duty) - Natural Gas		Percentage		Litres	



# GHG Paper Use: Depot, Curbside & Multi-family



# Paper Use

- How much paper by weight has been purchased for printed packaging and paper product recycling brochures, pamphlets, etc.
- The paper type must be known as well as the percent of recycled content
- Please divide your total volume of paper purchased by the number of pages allocated to recycling of paper and packaging only.

# Example Paper Types

<b>Copy paper</b>	Copy paper, inkjet/laser paper, letterhead, stationery, some higher-end notebook and lined writing paper, envelopes, fine book papers, text and cover grades (often beautiful designer papers), report covers, “post-it” notes, some brochures, invitations, some business cards, some menus
<b>Catalog (High-End)</b>	High-end catalogs, magazines, luxury advertising, and brochures
<b>Newsprint</b>	Newspaper, newsprint, directory papers (e.g., phone books), inexpensive paperback books, some lined writing papers
<b>Catalog (Mass Mkt)</b>	Mass-market catalogs and magazines, mass-market advertising on “slick” paper
<b>Newspaper inserts</b>	Newspaper inserts, grocery and drug store advertising papers, some bulk mailbox advertisements, some mass-market catalogs and magazines

# GHG Reporting Post-Collection



# What GHG Data Do You Report for Post-collection?

- Generally, GHG data will come from three activities:
  - **Hauling** (transportation of WPP to sorting facilities);
  - **Facilities** (buildings and equipment for processing WPP); and
  - **Shipping to End Markets** (transportation of WPP to markets for reuse).

# Regional Waste Authorities

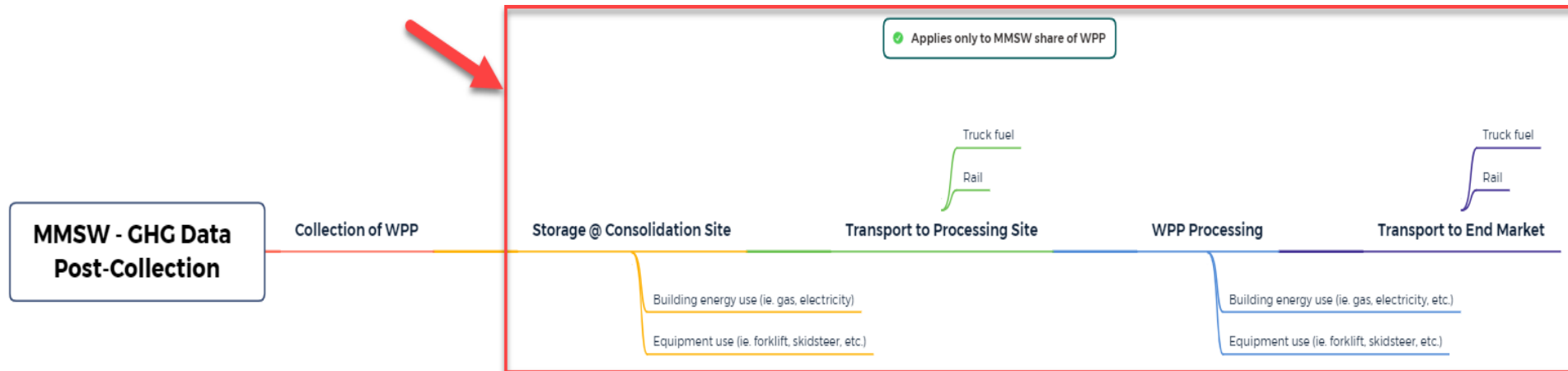
- If you are a Regional Waste Authority, GHG data can be reported for your entire membership in aggregate.
- You do not need to report GHG data on a per-member basis.

# Working With Your Sub-Contractor

- As a municipality, regional waste authority or First Nations community, do you directly:
  - Transport collected WPP to a receiving facility such as a consolidation site or a material recovery facility (MRF)?
  - Operate/own a receiving facility such as a consolidation site or MRF?
  - Process or sort collected WPP into marketable categories?
  - Sell and ship collected WPP to markets for reuse?

# Post-Collection Boundaries Type 1

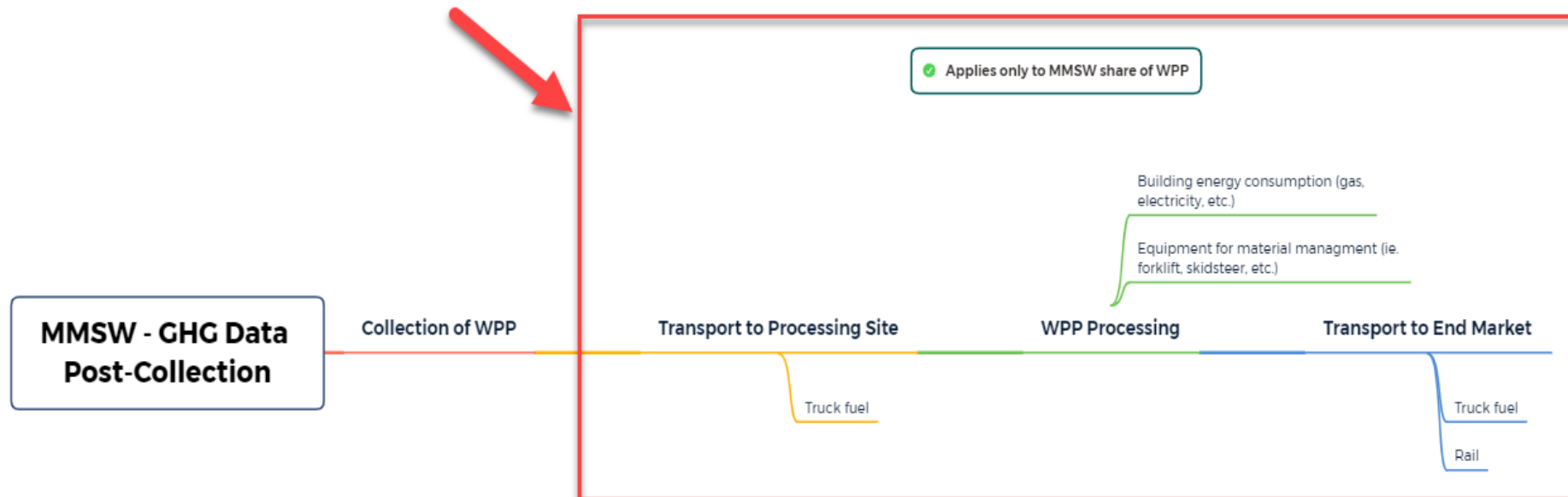
- Post-Collection refers to any material management activities that take place after initial collection of WPP.



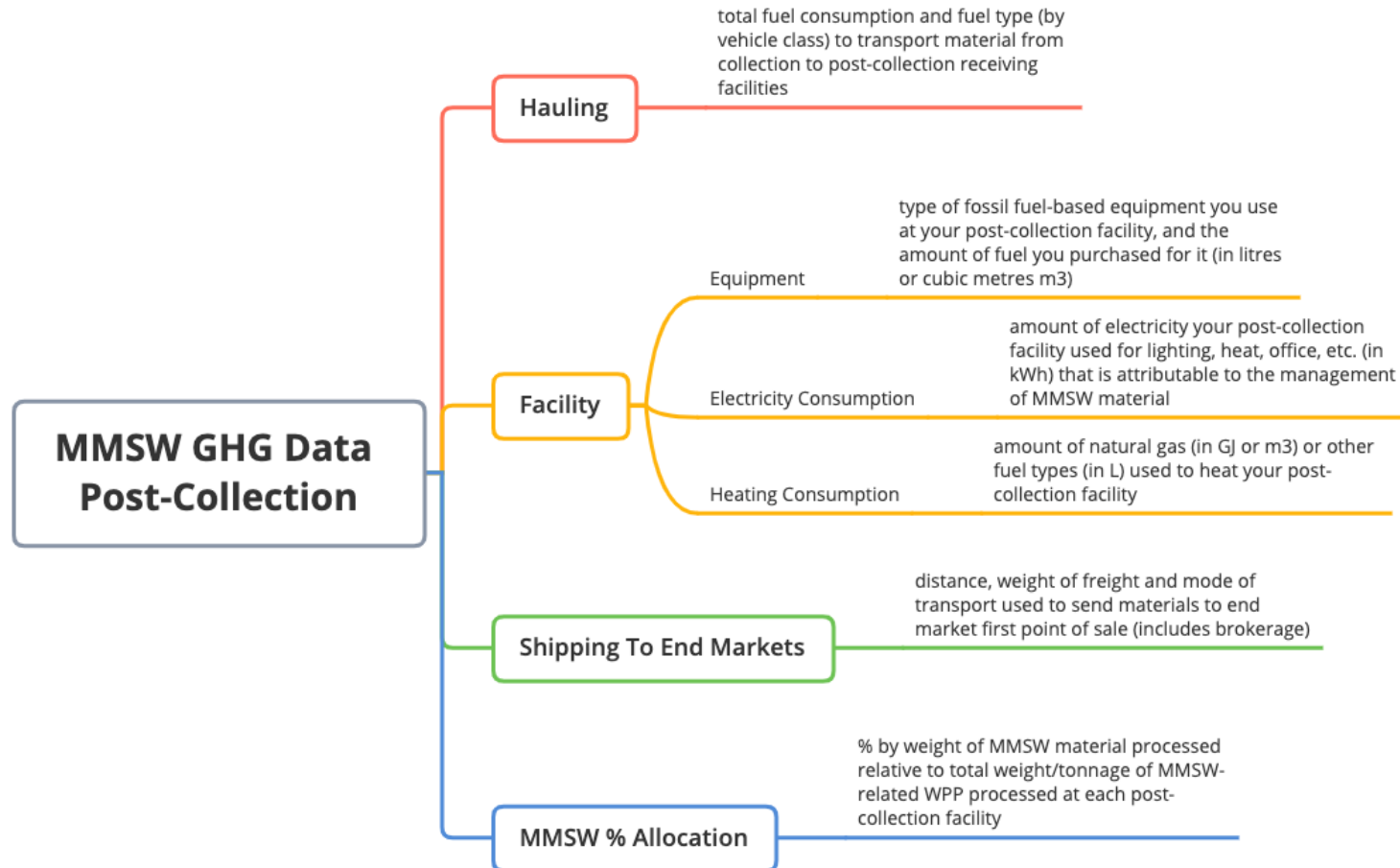


# Post-Collection Boundaries Type 2

- Or, material may be hauled directly to a processing facility for sorting and sale to remanufacturing markets.



# What GHG Data Do You Report for Post-collection?



# Fleet

- Class of Vehicle (s) used
  - Light Duty Truck
  - Heavy Duty
- Total amount and type of fuel consumed by each vehicle class (e.g. Heavy Duty vehicle; 1,000 liters of diesel)?

Canadian Stewardship Services Alliance

Key in Your Report

Test Environment

Multi-Material Stewardship Western

Select a report

Material Quantities

Report Submission

GREENHOUSE GAS - DEPOT (47...)

Document No: [New Document](#) (1)

Add Another Document

New Originating Site

Save for Later

Submit Report

\*Document No:

\*Reporting Period Start (DDMMYY...)

\*Reporting Period End (DDMMYY...)

Reference:

Comments:

\*Originating Site:

Search for name or address, minimum 3 characters

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure	Originating Site
GHG	Vehicle (Light Duty) - CNG		Percentage		Cubic meter	
GHG	Vehicle (Light Duty) - Biodiesel		Percentage		Litres	
GHG	Vehicle (Light Duty) - Diesel		Percentage		Litres	
GHG	Vehicle (Light Duty) - Natural Gas		Percentage		Litres	
GHG	Vehicle (Light Duty) - Electric		Percentage		Kilowatt hours	
GHG	Vehicle (Light Duty) - Propane		Percentage		Litres	
GHG	Vehicle (Heavy Duty) - CNG		Percentage		Cubic meter	
GHG	Vehicle (Heavy Duty) - Biodiesel		Percentage		Litres	
	Vehicle (Heavy Duty) - Diesel	100	Percentage	1000	Litres	
GHG	Vehicle (Heavy Duty) - Natural Gas		Percentage		Litres	

# Hauling Mileage

- If the total amount and type of fuel consumed per vehicle class is not available, then we will need to know the number of kilometers travelled by each vehicle type (i.e. total mileage) in order to calculate the estimated volume of fuel consumed.
- Please contact MMSW to determine the appropriate methodology for reporting on kilometres travelled.

# Equipment

- We would like to know what kind(s) of fossil fuel-based equipment you use at your/sub-contractor's facility.
- forklifts,
- skid steers,
- loaders, etc.?
- gasoline,
- diesel,
- liquefied petroleum gas (propane),
- natural gas?

# Equipment

- Amount of fuel purchased for your/sub-contractor/third party's equipment.
  - record the total in litres
- If different pieces of equipment use different fuels, please record the equipment and fuel usage separately.
- Please also include the percent of the time this type of equipment is used for MMSW-related use.

# Example – Equipment

Type of Equipment	Forklift	Type of Equipment	Front-end loader
% of the time dedicated to MMSW materials	25%	% of the time dedicated to MMSW materials	10%
Type of Fuel Used	Diesel	Type of Fuel Used	Diesel
Month	Total Fuel Usage (L)	Month	Total Fuel Usage (L)
January	398	January	612
January (MMSW allocation)	$398 \times .25 = 99.50 \text{ L}$	January (MMSW allocation)	$612 \times .10 = 61 \text{ L}$

## Material Quantities

Document No: Test12345 (1)

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\*Document No:

Test12345

\*Reporting Period Start (DDMMYY...)

January 1, 2020

\*Reporting Period End (DDMMYY...)

January 31, 2020

Reference:

Comments:

Jan - GHG - Equipment data

\*Originating Site:

Community 1

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure
GHG	Forklift - Propane		Percentage		Litres
GHG	Forklift - CNG		Percentage		Cubic meter
GHG	Forklift - Biodiesel		Percentage		Litres
GHG	Forklift - Diesel	25	Percentage	99.5	Litres
GHG	Forklift - Natural Gas		Percentage		Litres
GHG	Forklift - Electricity		Percentage		Kilowatt hours
GHG	Front End Loader - CNG		Percentage		Cubic meter
GHG	Front End Loader - Biodiesel		Percentage		Litres
GHG	Front End Loader - Diesel	10	Percentage	61	Litres

# Electricity Consumption

Month	Usage (kWh)
January	1,394

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Material Quantities

Report Submission

GREENHOUSE GAS – END MARKET TRANSPORTATION (4/00002303)

Material Quantities

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\*Document No:

\*Reporting Period Start (DDMMYY...  
January 1, 2020

\*Reporting Period End (DDMMYY...  
January 31, 2020

Reference:

Comments:  
Jan - electricity GHG

\*Originating Site:

Community 1

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure
GHG	Indoor floor space		Percentage		Square foot
GHG	Outdoor floor space		Percentage		Square foot
GHG	Electricity Consumption	100	Percentage	1394	Kilowatt hours
GHG	Heating - Natural Gas		Percentage		Cubic meter
GHG	Heating - Natural Gas		Percentage		Gigajoule
GHG	Heating - Butane		Percentage		Litres
GHG	Heating - Diesel		Percentage		Litres



# Facilities - Heating Consumption

- Record how much is being consumed at each post-collection facility.
  - natural gas
  - diesel, kerosene, light fuel oil, heavy fuel oil, propane, ethane, butane
- For natural gas, the amount should be in gigajoules or cubic metres (GJ or m<sup>3</sup>); other fuel types should be reported in litres (L).
- OR if the post-collection facility is your sub-contractor's, or a third-party organization, then **you can report the total area of the facility in square metres or square feet and the type of fuel used** for heating the building.

# Shipping To End Markets

- What is the total distance WPP was shipped to end markets?
- Total weight of all material shipped during the calendar year is also required
- What is mode of transport for each material - ground transport, marine, or rail?

# How Do You Allocate for MMSW Share of GHG?

- MMSW recognizes that hauling, facility activities, and shipping to end markets may not be entirely attributed to your MMSW-related WPP, and therefore requires that you report only data as it relates to MMSW's allocation of the overall activities.

# Hauling – Shared Routes

- Check with your sub-contractor to determine if your collected WPP is on a shared route with other collectors. If it is, the amount of GHGs generated by hauling activities will need to be allocated based on your annual share of WPP hauled to receiving facilities.

# Example Allocation Shared Routes

Total Fuel Usage = 750 L	
Community A Households	80
Community B Households	20
Total Households On Full Truck	100
Community A Share GHG	80% x 750 L = 600 L
Community B Share GHG	20% x 750 L = 150 L

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GREENHOUSE GAS – END MARKET TRANSPORTATION (47 5)

Material Quantities

Document No: New Document (1)

\*Document No: \*Reporting Period Start (DDMMYY...) \*Reporting Period End (DDMMYY...) Reference: Comments:

\*Originating Site: Community A

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure	Originating Site
GHG	Vehicle (Light Duty) - Diesel		Percentage		Litres	
GHG	Vehicle (Light Duty) - Natural Gas		Percentage		Litres	
GHG	Vehicle (Light Duty) - Electric		Percentage		Kilowatt hours	
GHG	Vehicle (Heavy Duty) - Biodiesel		Percentage		Litres	
GHG	Vehicle (Heavy Duty) - Diesel	80	Percentage	600	Litres	
GHG	Vehicle (Heavy Duty) - Natural Gas		Percentage		Litres	

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Key in Your Report

Test Environment

GREENHOUSE GAS – END MARKET TRANSPORTATION (4 )

Material Quantities

Document No: New Document (1)

\*Document No: \*Reporting Period Start (DDMMYY...) \*Reporting Period End (DDMMYY...) Reference: Comments:

\*Originating Site: Community B

Service Type	Emission Type	% attributed to MMSW	Unit of Measure	Quantity	Unit of Measure	Originating Site
GHG	Vehicle (Light Duty) - Diesel		Percentage		Litres	
GHG	Vehicle (Light Duty) - Natural Gas		Percentage		Litres	
GHG	Vehicle (Light Duty) - Electric		Percentage		Kilowatt hours	
GHG	Vehicle (Heavy Duty) - Biodiesel		Percentage		Litres	
GHG	Vehicle (Heavy Duty) - Diesel	20	Percentage	150	Litres	
GHG	Vehicle (Heavy Duty) - Natural Gas		Percentage		Litres	

# Facilities - Allocation

- The percent of annual MMSW weight of material processed by the facility relative to the total weight/tonnage of your WPP processed would be used as the percent allocation.
- This would then be applied to the total energy use for the facility to determine only the MMSW portion of GHG data to be reported.

# Facilities – Allocation Example

- The following table provides an example of this allocation. For this example, the collector is the 'Town of Gotham' and is part of the MMSW program.

Annual tonnes WPP to MRF – all sources	1000
Town of Gotham annual tonnes WPP to MRF	300
Percent share applied to facility GHG data for Town of Gotham	$300/1000 = 30\%$
Total electricity used by MRF	700 kWh
Total electricity usage reported by Town of Gotham	$700 \times .30 =$ <b>210 kWh</b>

# Shipping To End Market - Allocation

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- The percent of annual weight of MMSW WPP shipped to end markets would be used as the percentage allocation.
- This would then be applied to the total fuel use for shipping to end markets to determine your GHG data to be reported.



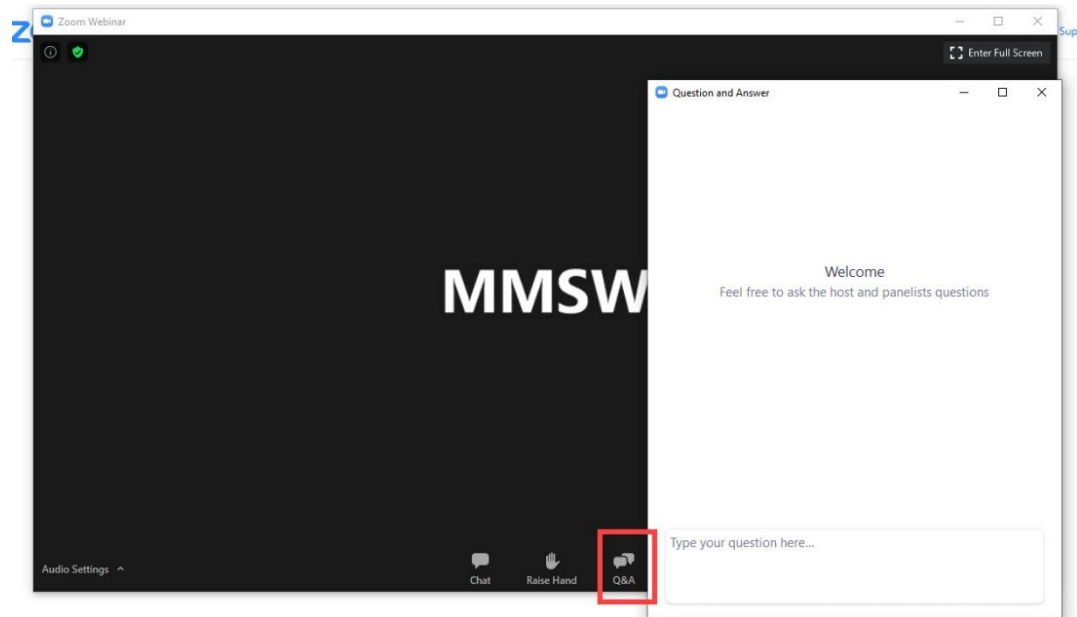
# Shipping To End Market – Allocation Example

- The following table provides an example of this allocation. For this example, the collector is the 'Town of Gotham' and is part of the MMSW program.

Annual tonnes WPP shipped to market	975
Town of Gotham annual tonnes WPP shipped to markets	278
Percent share applied to GHG data for Town of Gotham	$278/975 = 29\%$
Total fuel used for shipping to end market(s)	890 L
Total fuel usage reported by Town of Gotham	$890 \times .29 =$ <b>258 L</b>

# Questions?

Please submit via the webinar Q&A button:



# Contact Information/Resources

- Email: [greenhousegas@multimaterialsw.ca](mailto:greenhousegas@multimaterialsw.ca)
- Toll free: 1-855-886-4558 (option 4)
- Web: [www.mmsk.ca/ghg](http://www.mmsk.ca/ghg)
- FAQs: Watch for our FAQ document to be released soon.

# Thank You!

