Materials Management Methodology Draft Agreements

Developed by a Committee of CO, MT, ND, SD, UT, and WY State offices and Recycling Association representatives.

Origin of Materials Management Methodology Committee

- EPA Region 8 States (CO, MT, ND, SD, UT, WY) convened in June of 2010 to discuss the potential for Regional Consistency among Materials Measurement
- Voluntarily formed Committee with each State Office Solid Waste and State Recycling/Solid Waste Association representatives
- Initial Goal was to find agreement on Interstate consistency of:
  - Terminology/Definitions;
  - Common Commodities;
  - Units of Measurement;
  - Unified Data Analysis Tool
  - Market development opportunities

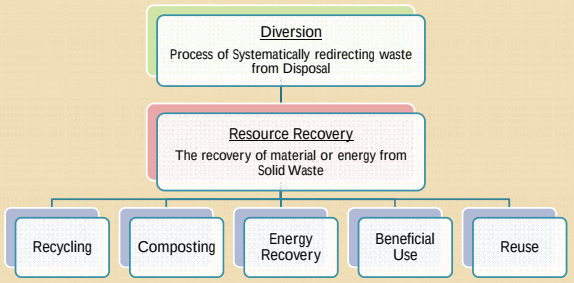
State Attributes that Affect Materials Measurement

- Vast transportation distances between communities, transfer stations, and markets
- 5 of 6 States have Voluntary Reporting only.
- Annual Measurement reports are solicited from specific entities.
- Slight variances in definitions between States.
- Desire to make a reporting form that is Simple to understand & enter data into.
  - A burdensome reporting form could mean a loss of data from an entity in a voluntary reporting State.
- Interested in calculating Inter-state materials traffic.

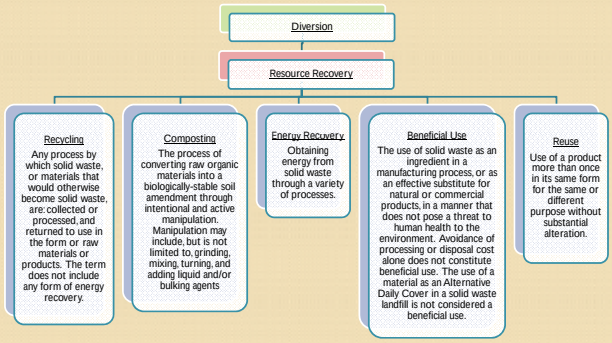
Focus of Committee's Efforts

- Agreeing on a Core Commodities list
  - For each State to measure in their best means possible
  - Create a stable base of comparable commodities
  - Accommodate more specific data gatherings, but still allow for common commodity categories and subcategories.
- Reach common understanding and usage of key terms (ie. Diversion, Recycling, Energy Recovery, Reuse)
  - Basing all changes of "agreed" definitions on compiled State regulations and thorough discussions of the impacts
  - By doing so, creates "Apples to Apples" measurement and lends to interstate comparisons/coordination.

MATERIALS METHODOLOGY DEFINITION FLOW



MATERIALS METHODOLOGY DEFINITION FLOW (CONTINUED)



Other Critical Materials Measurement Methodology Definitions (draft)

- **Disposal**: means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters. (SWDA)
- **Industrial Solid Waste**: means solid waste that is not subject to regulation as a hazardous waste generated from manufacturing operations, construction, food processing, industrial processes; or agricultural and mining wastes that are managed by a solid waste facility and regulated at State agencies.
- **Municipal Solid Waste**: means solid waste from household, community, and commercial sources that does not contain regulated hazardous wastes. Sectors defined within MSW include:
  - **Residential Solid Waste**: means any solid waste derived from households, including single and multiple residences, crew quarters, campgrounds, and other public recreation and public land management facilities.
  - **Commercial Solid Waste**: means all solid wastes generated by stores, hotels, markets, offices, restaurants, warehouses, and other non-manufacturing activities, excluding residential and industrial wastes.

AGREED COMMODITIES

****Account for Materials actually Diverted to viable Resource Recovery End Use****

Select Facility Type: *Select from drop list* or circle on of the following:
(MRF, Permitted Landfill, Municipality, Transfer Station, Salvage Recycler, Community, Large Retail Business, Broker)

Materials within each General Commodity grouping are organized by Sub-category, and futher to Individual Commodity. Please provide data in the most specific categories possible.

General Commodity	Sub-category	Individual Commodity		Amount	Units of Measure	Optional: Shipped Out-of-State?
Paper			Total	0		Yes / Yes, where
	Paper (All Mixed)			0		Yes / Yes, where
	(not included in the All Mixed amount above)	White Office Paper (high	#			Yes / Yes, where
		Mixed Paper (newsprint, other office paper)	#			Yes / Yes, where
		Phonebooks	#			Yes / Yes, where
	Cardboard (& Paperboard)			0		Yes / Yes, where
	(not included in the Cardboard amount above)	Paperboard	#			Yes / Yes, where
		Cardboard	#			Yes / Yes, where

Metals		Total	0	Units	Yes / Yes, where
	Residential Aluminum Cans	#			Yes / Yes, where
	Residential Steel Cans / Tin Cans (food containers)	#			Yes / Yes, where
	White Goods	#			Yes / Yes, where

AGREED COMMODITIES
(CONTINUED)

	Auto Scrap / Shred	#			No / Yes, where
	Industrial Non-Ferrous	#			No / Yes, where
	Industrial Ferrous	#			No / Yes, where
	Other Industrial steel	#			No / Yes, where
Batteries		Total:	0	Units	
	Vehicle Batteries	#			No / Yes, where
	Other Batteries (rechargeables & all else)	#			No / Yes, where
Plastics	(#1 -#7 Mixed)	Total:		Units	
			Subtotals		No / Yes, where
	#1 & #2 Mixed	#	0		No / Yes, where
(not included in the #1& #2 Mixed amount above)	PET #1	#			No / Yes, where
	HDPE #2 - Mixed	#	0		No / Yes, where
	(not included in the HDPE #2 Mixed amount above) HDPE #2 Natural	#			No / Yes, where
	HDPE #2 Colored	#			No / Yes, where
	All others #3 through #7	#			No / Yes, where
Organics		Total:	0	Units	
	Other Organics		0		No / Yes, where
the Other Organics amount	Food Scraps	#			No / Yes, where
	Yard Trimmings (grass & wood chips)	#			No / Yes, where
	Agricultural Organics (livestock, manure, food waste)	#			No / Yes, where
	Compost Feed Stock	#			No / Yes, where
	Biosolids	#			No / Yes, where

AGREED COMMODITIES
(CONTINUED)

(not included in above)	Food Processing Residuals	#			No / Yes, where
	Sewage Sludge	#			No / Yes, where
	Drywall	#			No / Yes, where
	Other Compostables	#			No / Yes, where
Wood			0		No / Yes, where
(not included in the Wood amount above)	Agricultural Wood (Large Limbs & Stumps)	#			No / Yes, where
	Construction/Dimensional Lumber/ Pallets/Crates/Shingles	#			No / Yes, where
	Forestry Secondary Materials - Mill byproducts	#			No / Yes, where
Aggregates		Total:	0	Units	
	Concrete	#			No / Yes, where
	Asphalt pavement	#			No / Yes, where
	Other	#			No / Yes, where
Coal Combustion Products		Total:	0	Units	
	Fly Ash	#			No / Yes, where
	FGD Gypsum	#			No / Yes, where
	Bottom Ash	#			No / Yes, where
	Coal Slag	#			No / Yes, where
	All others	#			No / Yes, where
Textiles		Total:	0	Units	
	Carpet	#			No / Yes, where
	Carpet Padding	#			No / Yes, where
	Other textiles (clothing, fabric, upholstery)	#			No / Yes, where

AGREED COMMODITIES
(CONTINUED)

Glass		Total:	0	Units	No / Yes, where
	Mixed Glass	#	0		No / Yes, where
	Amber Glass (not included in the Mixed amount above)	#			No / Yes, where
Scrap Tires / Rubber		Total:	0	Units	No / Yes, where
	Passenger Tires	#			No / Yes, where
	Commercial Truck	#			No / Yes, where
Used Oil		Total:	0	Units	No / Yes, where
Anti-Freeze		Total:	0	Units	No / Yes, where
Cooking Oils		Total:	0	Units	No / Yes, where
Electronics		Total:	0	Units	No / Yes, where
	Mixed Electronics	#	0		No / Yes, where
	Monitors & TV's (not included in the Mixed amount above)	#			No / Yes, where
Asphalt Shingles		Total:	0	Units	No / Yes, where

AGREED COMMODITIES
(CONTINUED)

Alternative Daily Cover		Total:	0	Units	No / Yes, where
List amounts of different materials used for alternative daily cover. For Tracking purposes only, amounts will not be added to total of Resource Recovery.	Write in...				
	Write in...				
	Write in...				
	Write in...				
	Write in...				
Single Stream Recyclables		Total:	0	Units	No / Yes, where
List materials in your Single Stream collection	...				
	...				
Other Materials		Total:	0	Units	
	Write in...				No / Yes, where
	Write in...				No / Yes, where
	Write in...				No / Yes, where

Conversions of Materials not Reported by Weight

The Preferable Unit of Measure = Tons (2,000 lbs)

To ensure that all Material data reported as a non-weight based amount could be converted uniformly :

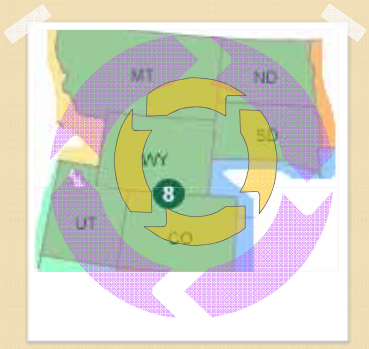
→ The Committee performed comparison research of trusted reference material and agreed to use:

- The EPA Office of Solid Waste's "Volume to Weight Conversion Factors" was the most consistent among all sources (http://wastewise.tms.icfi.com/re-trac/Volume-to-WeightConversionFactors.pdf)
- The EPA Office of Solid Waste's "Standard Volume to Weight Conversion Factors provided more detailed commodity conversions (http://www.epa.gov/osw/partnerships/wastewise/pubs/conversions.pdf)

Confidentiality

- States that have Confidentiality Clauses:
  - Will uphold their ethical and legal agreements
- States that do not have Confidentiality Clauses:
  - Will ask their Waste/Recycling Associations to gather data, remove confidential information, and calculate whole numbers before giving to State's Representatives

The Committee is interested in the combined numbers of commodities, origin location, and market direction. Keeping your Business viable is the key to our purpose.



Long Term Focus:

1) Assess the Flow of Commodities

2) Develop Strategies to retain: Commodities → Markets → Value $$ Locally.

Collective Insights provided by Committee members:

Rick Thompson, Kathy O'Hern – MT DEQ; Craig McOmie – WY DEQ; Wolf Kray, David Snapp – CDPHE; Ted Poppke, Christy Smith, Steve Tillotson – NDDH; Andrew McCloud – SDDENR; Sam Schroyer, Allan Moore – UDEQ; Marjorie Griek - CAFR; Carolyn Trautman - SDSWMA; Jerry Volk – NDSWRA; Myron Heny – WySWRA, Debbie Lyons SLC Recycling.

Presentation prepared by Benjamin Bents, EPA Region 8

DRAFT MATERIALS MEASUREMENT METHODOLOGY FOR CO, MT, ND, SD, UT, WY.

In July, EPA put a request out for comments on their existing Waste Characterization Report. The comment period is over and the EPA is reviewing those at this time.

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