

UP Solid Waste Forum

Implementing the Beneficial Use Statute

Department of Environmental Quality

Office of Waste Management and Radiological Protection

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Solid Waste Regulation

- Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended
- Michigan's Solid Waste Management Act Administrative Rules
- Subtitle D of the federal Resource Conservation and Recovery Act of 1976, as amended

Why Recycle?

- ✓ Good For Economy
- ✓ Creates Jobs
- ✓ Reduces Waste
- ✓ Good for Environment
- ✓ Saves Energy
- ✓ Preserves Landfill Space
- ✓ Prevents Global Warming
- ✓ Reduces Water Pollution
- ✓ Protects Wildlife
- ✓ Creates New Demand

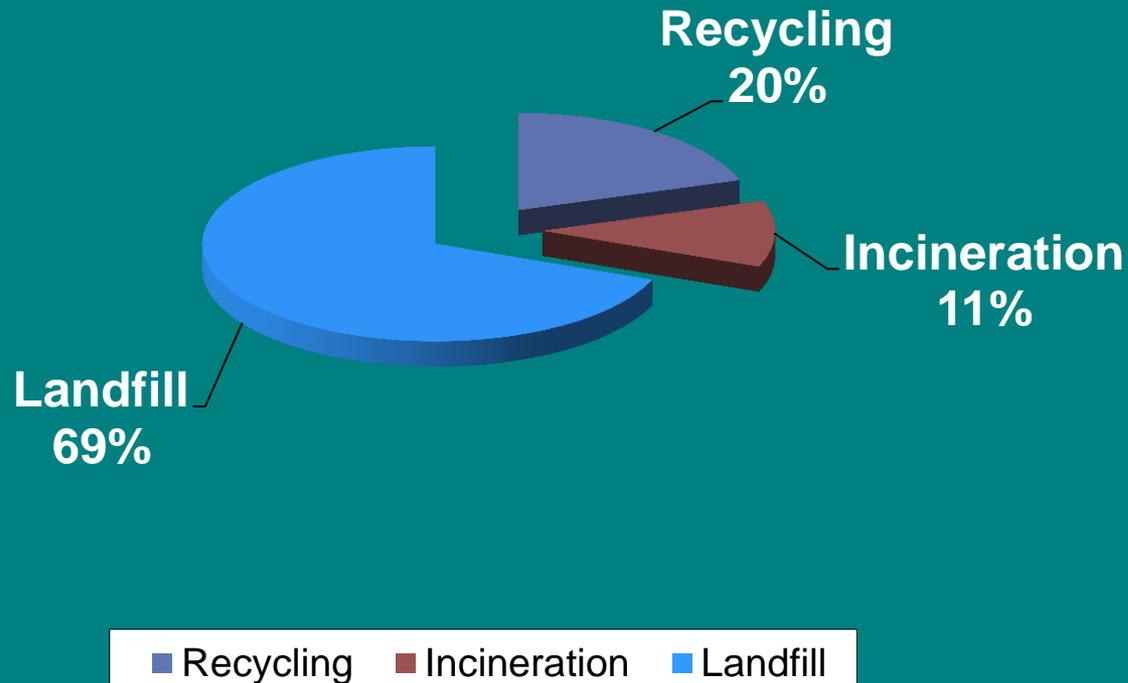
Waste Utilization

- Using waste, site or source separated materials, or other approved material for beneficial purposes
 - Reuse
 - Recycling
 - Composting
 - Energy recovery
 - Gasification
 - Anaerobic digestion
 - etc.

Where We Are Today

1999 Data Collection by Michigan Recycling Coalition

Solid Waste Stream in Michigan



Recycling rate Includes yard clippings, and about a 95% recovery rate for beverage containers covered by the bottle deposit law.

2013 Industrial By-Product Reuse

Material	Recycled	Disposed	Percent Recycled	Percent Volume Change from 2012	2009 Volumes	Percent Volume Change from 2009
Pulp/paper/wood sludge	121,672	143,312	46%	+27%	39,889	+205%
Shingles	31,580	?	?	+33%	19,650	+61%
Scrap Wood ⁴	69,020	?	?	-27%	26,432	+161%
CKD	43,114	239,657	15%	-22%	29,081	+48%
Foundry Sand	102,156	242,520	30%	+14%	66,870	+53%
Food Processing ³	35,121	?	?	-22%	16,073	+118%
Coal Ash ²	395,047	1,205,242	25%	+2%	174,900	+126%
Drywall	3,296	?	?	+3%	1,048	+208%
FGD	32,575	?	?	-6%	32,328	+1%
Wood Ash ¹	6,983	120,905	5%	+113%	5,592	+10%
Totals ³	847,722	?	?	+1%	411,863	+106%

Beneficial Use Regulations

- PA 178 of 2014 – amends parts 31, 85, 115, and 201
- PA 179 of 2014 – amends Part 201
- PA 180 of 2014 – amends PA 162 of 1955

Ways Materials are Exempted from Solid Waste Regulation

- Prior authorizations
 - Generic site/source separated
 - Site specific site/source separated
 - Inert (for general reuse or site specific reuse)
 - Agricultural use approvals
 - Self-declared
- Beneficial use statute
 - Beneficial use by-products
 - Listed as not a waste (Section 11506)
 - Listed as inert
 - Listed as site/source separated

Prior Authorizations

- Self-declared
 - Verso Paper
 - GM
 - Grand Haven BLP
 - USG
- Generic
 - water softening limes
 - fish waste
 - ethanol syrup
- Site specific
 - Cadillac Castings
 - Bentek
 - AUA's

Materials defined as Beneficial Use By-Products

- **Cement Kiln Dust/Lime Kiln Dust:** Particulate matter collected in air emission control devices serving Portland cement kilns and lime kilns.
- **Coal Bottom or Wood Ash:** Ash particles from combustion of coal or any type of ash or slag resulting from wood burning.
- **Coal or Wood Ash:** Material recovered from an air pollution control system or non-combusted residue from combustion of coal, wood, or both (although only cementitious ash is suitable for use as fill).
- **Dewatered Grinding Sludge:** from public transportation agency road projects.
- **Flue Gas Desulfurization Material:** Material recovered from air pollution control systems that capture sulfur dioxide during wood, coal, or fossil fuel combustion including synthetic gypsum.

Materials defined as Beneficial By-products (continued)

- **Foundry Sand:** Silica sand used in metal casting process from ferrous or nonferrous foundries.
- **Lime Softening Residuals:** from treatment and conditioning of water for domestic use or community water supply.
- **Mixed Wood Ash:** Material recovered from air pollution control systems or non-combusted residue from combustion of wood, scrap wood, railroad ties, and tires.
- **Pulp and Paper Mill Ash:** Non-combusted residue remaining after combustion of coal, wood, pulp and paper mill material, wood or biomass pellets, rail road ties, tires, and scrap wood.

Materials defined as Beneficial By-products (continued)

- **Pulp and Paper Mill Material:** Materials generated at pulp and paper mills including wastewater treatment sludge; rejects from screens, cleaners, and mills; bark, wood fiber, and chips; scrap paper and causticizing residues.
- **Soils Washed or Removed from Sugar Beets.**
- **Spent Media from sandblasting:** with uncontaminated soil, newly manufactured, and unpainted steel.
- **Stamp Sands:** Sand remaining after stamping and processing copper bearing ores.

Specific Beneficial Uses for By-Products

- **Beneficial Use 1** means use as aggregate, road material, or building material if it will be bonded or encapsulated by cement, limes, or asphalt.
- **Beneficial Use 2** means use as construction fill, road base, soil stabilizer, or road shoulder material.
- **Beneficial Use 3** means application of material as a fertilizer, a soil conditioner under Part 85, or a liming material under 1955 PA 162.
- **Beneficial Use 4** means use to stabilize, neutralize solid, or treat waste; to treat wastewater or sludge; to stabilize hazardous substances; or to serve as landfill construction material.
- **Beneficial Use 5** means soil mixtures using foundry sand and organic material to manufacture soil.

USE/MATERIAL	Bonded by lime, cement, or asphalt	Construction fill under impervious surface/Road shoulder	Land Applied	Remediate/ treat waste or used as fill at landfills	Soil blending	Flue gas scrubbing reagent
	Beneficial Use 1	Beneficial Use 2	Beneficial Use 3	Beneficial Use 4	Beneficial Use 5	
Wood ash/coal bottom ash			X			
Wood ash/coal ash	X	X		X		
Pulp/paper mill ash	X	X	X	X		
Mixed wood ash	X	X	X	X		
Cement kiln dust/Lime kiln dust	X	X	X	X		X
Foundry sands (ferrous/aluminum)	X	X	X	X	X	
Stamp sands	X	X				
Pulp/paper mill material			X			
Sand blasting media from new products	X	X				
Dewatered concrete grinding slurry	X	X	X	X		
Lime Softening residuals			X	X		
Sugar beet soils			X			
Flue gas desulfurization sludge	X		X			

Land Application







Land Application

- The land application of the following materials as a fertilizer, soil conditioner, or liming material is regulated by the Michigan Department of Agriculture and Rural Development:
 - Wood ash
 - Coal bottom ash
 - Pulp and paper mill ash
 - Cement kiln dust
 - Lime kiln dust
 - Foundry sands
 - Pulp and paper mill material
 - Dewatered concrete grinding slurry
 - Lime softening residuals
 - Sugar beet soils
 - Flue gas desulfurization sludge

Notifications/Reporting



The image shows a hand holding a pen pointing to a table of financial data. A blue calculator is visible on the left side of the table. The table contains several rows of numbers, likely representing financial figures. The pen is pointing to the value 1,076,839,5 in the fourth row.

30	815,073,273	30	1,213,5
30	549,630,000	30	928,0
31	384,741,000	30	549,6
1	1,076,839,5	30	1,319,3
	677,850,6	30	669,1
	591,625,9		
	395,67		
	549		

- **Beneficial Use 1** – generator/broker of over 1,000 cubic yards send yearly report to DEQ.
- **Beneficial Use 2**
 - Generator/broker of over 1,000 cubic yards send yearly report to DEQ;
 - Generator/broker notifies DEQ of any site receiving over 5,000 cubic yards;
 - A contractor, consultant, or agent of the owner must tell the owner that beneficial use by-products have been used for Beneficial Use 2 on the property;
 - The owner of a property must tell the future owner that beneficial use by-products have been used for Beneficial Use 2 on the property;
- **Beneficial Use 3** – Generator/broker registers/licenses with MDARD.
- **Beneficial Use 4** – Generator/broker of over 1,000 cubic yards send yearly report to DEQ.
- **Beneficial Use 5** – Generator/broker of over 1,000 cubic yards send yearly report to DEQ.

Petitioning the DEQ

The recent changes allow the DEQ to approve:

- Materials other than asphalt, concrete, or gravel to cover Beneficial Use 2 projects.
- Beneficial Use 4 materials for construction at licensed landfills.
- Additional materials as beneficial use by-products, inert material, source separated materials, or low-hazard industrial waste.
- Additional waste to the list of pulp and paper mill material.
- Approve the use of beneficial use by-products for Beneficial Use 2 at residential properties.
- Materials as a beneficial use by-product that do not meet the listed contaminant limits based on specific site conditions.

Other Exemptions Contained in the Beneficial Use Statute

Statutory Exemptions

- Ferrous or non-ferrous scrap.
- Foundry or steel mill slag.
- Garbage that is composted or land applied.*
- Coal bottom ash used as cold weather road abrasive.*
- Stamp sands used as cold weather road abrasive.*
- Non-hazardous secondary material approved for combustion under 40 CFR Part 241.*

Inert Materials

- Rocks
- Trees, stumps, and similar land clearing debris.
- Uncontaminated excavated soil or dredge material.
- Construction brick, masonry, pavement, or broken concrete.
- Asphalt pavement or concrete pavement.

Source Separated Materials

- Glass, metal, wood, paper, plastic, etc.
- Scrap wood, rail road ties, tires, or paint solids used as fuel.*
- Drywall or FGD used to produce drywall.*
- Shingles used for fuel or to produce hot mix asphalt.*
- MSW incinerator ash used for ADC.*
- Utility poles used for poles or posts.
- Rail road ties used for landscaping.

Low Hazard Industrial Waste

- Coal ash or wood ash
- Cement kiln dust
- Pulp and paper mill material
- Scrap wood
- Water treatment sludges
- Foundry sand
- Mixed wood ash
- Street cleanings
- Asphalt shingles
- New construction drywall
- Chipped or shredded tires
- Copper slag and stamp sands



Inert Criteria

- Old Criteria – Act 307 Type B criteria based on a 1 in a million risk.
- New Criteria – Part 201 generic residential criteria based on 1 in 100,000 risk.
- Background as defined by Part 201.

Storage Requirements

- Beneficial use by-products – requires no permit or license. The use or storage can't violate a groundwater or surface water criteria.
- Source separated materials – none listed.
- Inert material – none listed.
- Low-hazard industrial waste – owners/operators of a unit must ensure no violation of Part 31 and that no contamination has resulted after closure of the storage unit.
- Other wastes – must be stored in a Rule 130 contained waste pile.



Speculative Accumulation

- Beneficial use by-products – 3 years at the site of generation or use.
- Source separated material – 1 year.
- Low-hazard industrial waste – 3 years at the site of generation and 1 year at site of use
- Inert material – no limit.
- Yard clippings – 3 years.

Relationship of Beneficial Use Statute to Other Environmental Protection Statutes

- **Part 31** – Water Resources Protection
- **Part 201** – Environmental Remediation
- **Part 301** – Inland Lakes and Streams
- **Part 325** – Great Lakes Submerged lands

Part 31

- The storage or use of beneficial use by-products can not violate either groundwater or surface water protection criteria.
- A person does not need a Part 31 permit for the storage, placement, or use of beneficial use by-products done in compliance with Part 115.

Part 201

- A person may use background as defined in Part 201 to compare excavated soils or dredge material to determine if the material is contaminated.
- Contamination caused by the storage, placement, or use of beneficial use by-products or inert material would not create a “facility” if used in compliance with Part 115.
- The placement, storage, or use of beneficial use by-products in compliance with Part 115 is not a “release.”

Parts 301 and 325

- Recent statutory changes allows an applicant of a dredge permit the ability to use their knowledge to determine if their dredge spoils have the potential to be contaminated.
- Any project in a known or suspected location that could contain contaminated spoils will need to test in accordance with the dredge procedure unless the material is going to a licensed landfill, a Corps of Engineers confined disposal facility, or is being left upland, on-site, with clean cover and a deed restriction
- The DEQ is in the process of amending the dredge procedure to comply with the recent changes.



Questions



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www.Michignan.Gov/DEQ, type in “Solid Waste” into the search engine, then click on “Beneficial Use Provisions”)