

WasteWise Re-TRAC REPORTS

Bumpers Plus

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Reporting Location: Bumpers Plus Data

Modules (2):

- Annual Assessment Data Total Annual Municipal Solid Waste Disposed
- Annual Assessment Data Waste Reduction Activities

Note: All tonnage totals shown in this report include the weights from all selected module unless otherwise stated.

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1. EPA WARM Model

Disclaimer: This is not the official WasteWise Climate Profile. The data entered by the user may not have been reviewed by EPA and the information in this report should not be considered reviewed by the WasteWise program. The data below provides estimates of the environmental benefits of recycling when compared to disposal. The estimates are based on the most recent conversion factors available through the WARM model developed by the U.S. Environmental Protection Agency.

Table 1.1 - EPA Equivalent Factors for Emission saved, 2005 to 2009

Emission saved	2005	2006	2007	2008	2009
The annual GHG emissions from this many passenger vehicles					
Recycled			5	10	19
This many gallons of gasoline (based on CO2 emissions per gallon)					
Source Reduced			11		
Recycled			3,093	6,277	11,616
Barrels of oil					
Recycled			63	129	238

- The numbers in each of the rows above are not cumulative.

Table 1.2 - EPA Equivalent Factors for Energy saved, 2005 to 2009

Energy saved	2005	2006	2007	2008	2009
Annual emissions from the energy consumption of this many households (based on annual emissions per household)					
Recycled			2	5	9
Number of propane cylinders used for home barbeques (based on CO2 emissions per pound of propane)					
Source Reduced			4		
Recycled			1,135	2,304	4,264

- The numbers in each of the rows above are not cumulative.

Table 1.3 - EPA Equivalent Factors for Resource saved, 2005 to 2009

Resource saved	2005	2006	2007	2008	2009
Acres of standing forest (based on CO2 sequestration per tree)					
Recycled					1
Tons of waste recycled instead of landfilled (based on CO2 emissions per ton of waste landfilled)					
Recycled			9	19	35

- The numbers in each of the rows above are not cumulative.

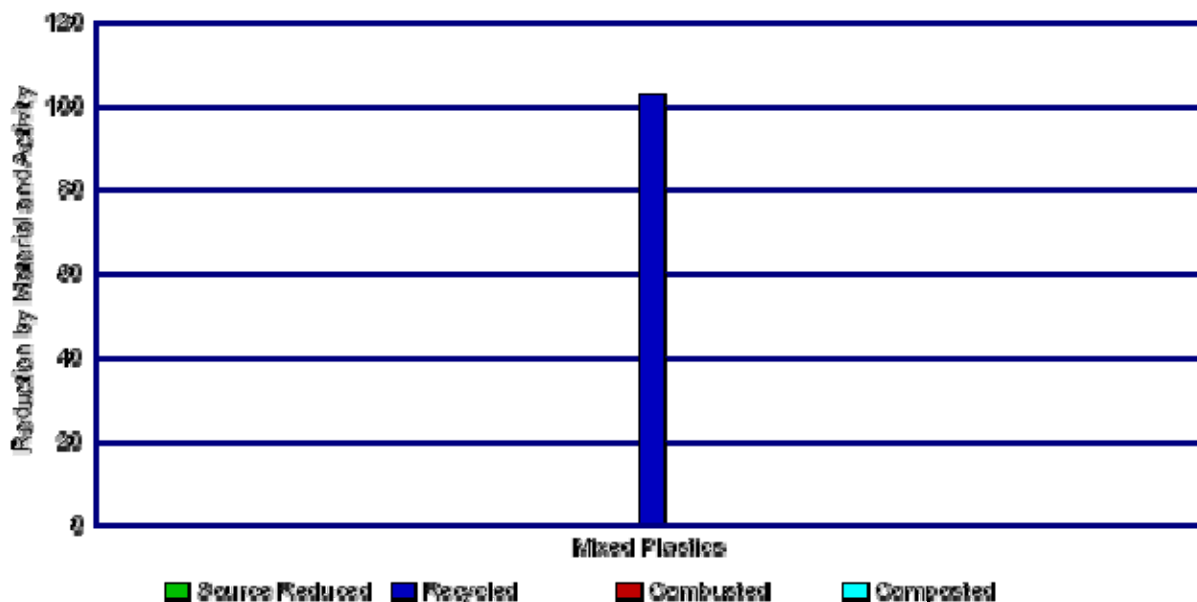
1.1 Greenhouse Gas Emissions Reductions (GHG)

Explanation of Results on Greenhouse Gas Avoidance: The emission of greenhouse gases, such as carbon dioxide and methane, is causing global warming. Recycling decreases these emissions because manufacturing with recycled materials consume less energy, and when less fuels such as oil, gas and coal are burned to produce energy, less greenhouse gas is produced. In addition, EPA has identified landfills as the single largest source of methane emissions, a very powerful greenhouse gas. The primary source of methane in landfills is decomposing paper, food waste and other organic material. By diverting organics from disposal, less methane is produced and more greenhouse gas is avoided.

Table 1.4 - Net GHG Reductions By Material Type, All Selected Modules, Bumpers Plus Data, 2009

EPA Material	Ton	Metric Ton Carbon Equivalent	Metric Ton Carbon Dioxide Equivalent
Mixed Plastics			
- Recycled	65.600	28.208	102.336
Total	65.600	28.208	102.336
Total	65.600	28.208	102.336

Figure 1.1 - Net GHG Reductions By Material Type, All Selected Modules, Bumpers Plus Data, 2009



1.2 Energy Savings

Explanation of Results on Energy Savings: Significant energy is required to make finished products and packaging, particularly during the energy intensive raw material extraction and refinement stages in a product's lifecycle. Recycling captures much of this embodied energy, and leads to significant net energy savings across material types. Manufacturing products from recycled materials saves substantial amounts of energy by preventing the extraction of virgin raw materials and also typically requires less energy in the production phase. Please note that the figures in the tables and graphs below are in MILLIONS of British Thermal Unit (BTU)'s.

Table 1.5 - Net Energy Savings By Material Type, All Selected Modules, Bumpers Plus Data, 2009

EPA Material	Ton	Energy Saved (Million BTUs)
Mixed Plastics		
- Recycled	65.600	3,490.576
Total	65.600	3,490.576
Total	65.600	3,490.576

Figure 1.2 - Net Energy Savings By Material Type, All Selected Modules, Bumpers Plus Data, 2009

