



Mexico : Waste Management Equipment Market

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Summary

The following report describes the market in Mexico for equipment used for the collection, transport, recycling, and final disposition of solid municipal waste.

The total 2008 market for solid municipal waste equipment was USD 905 million. It is expected that the total market will increase to USD 932.2 million by the end of 2009 and grow 5 percent from 2009 to 2010.

Market Demand

In 1992, the Secretariat for the Environment, and Natural Resources (SEMARNAT) created an enforcement agency, the Attorney General for Environmental Protection (PROFEPA). SEMARNAT and PROFEPA have been working together with Mexico's 32 states towards improving the infrastructure needed to dispose of the large quantities of solid municipal waste that is generated annually in major urban and rural areas of the country.

Mexico has an environmental protection regulatory system that has directed the 32 states to be responsible for implementing local laws and programs to handle solid municipal waste. Today, the states have adopted their own environmental laws and are responsible for the policies and implementation of programs to properly handle the solid municipal waste generated in their states.

According to the National Program for the Prevention and Integral Management of Solid Waste 2008-2012 published recently by SEMARNAT, at the end of 2008, the 32 states were generating over 105,000 tons of solid waste daily. Fifty three percent is considered organic waste, 28 inorganic waste with commercial value (recyclable), and 19 percent of waste with no commercial value.

The table below shows the volume of solid municipal waste that is generated by zones, 2008.

Table 1

Zones	Tons Per Day	Tons Per Day	Tons Per Day
Center	Organic	Inorganic (Commercial Value)	Inorganic (no Commercial Value)
States: Jalisco, Guanajuato, Michoacan, Guerrero, Colima, Queretaro, Veracruz, Mexico, Puebla, Hidalgo, Tlaxcala, Morelos	32,235	13,465	9,915
North			
States: Baja California, Baja California Sur, Sonora, Chihuahua, Coahuila, Nuevo Leon, Tamaulipas, Sinaloa, Durango, Zacatecas, San Luis Potosi, Nayarit.	17,066	7,314	4,960
South			
States: Oaxaca, Chiapas, Tabasco, Campeche, Chiapas, Quintana Roo, Yucatan	6,349	2,721	2,700
Mexico City	6,625	3,500	2,375
TOTALS	55,650	29,400	19,950

Source: Secretary for Social Development (SEDESOL) and Secretary for the Environment and Natural Resources (SEMARNAT), 2008.

Table 2 shows, in percentages the sources of organic and inorganic solid municipal waste.

Table 2

Sources generating organic and inorganic solid municipal waste, 2008

Sources	Organic %	Inorganic %	Totals
Homes	31	69	100
Commercial Sector	35	65	100
Public Markets	34	66	100
Services Sector	24	76	100
Food Distribution Centers	36	64	100
Others	20	80	100

Source: Interviews and SEMARNAT, 2006

Table 3 below shows the type and percentage of inorganic solid waste generated in 2008.

Table 3

Type of inorganic waste	Percentage
Textiles	10
Metals	12
Plastics	35
Glass	12
Paper Products	19
Sanitary waste	12
Total	100

Source: SEMARNAT, 2008

Mexico has a total of 2,400 municipalities with a population (December of 2008) of over 103.2 million. Of the total waste generated daily, 87 percent is collected and 13 percent is dumped illegally. Of the 87 percent collected, 64 percent goes to sanitary landfills and controlled areas and 33 percent is sent to open air landfills with no control. SEMARNAT indicates that Mexico needs at least 50 new sanitary landfills to meet the existing demand of the 105,000 tons of solid waste generated daily. SEMARNAT also reports that at the end of 2008, Mexico had a total of 11 sanitary landfills; 30 controlled landfills; and 17 open air landfills.

Table 4

Landfills in the country and type of concessions.

Type operation/management of landfills	Number
Integral Services (collection, transportation, final disposition and landfill operation)*	11
Controlled Landfills**	30
Open air landfills**	17
Total	58

*Private companies have concessions that are awarded by the municipalities to the winners of domestic tenders for periods of five to 10 years.

**Combination of private/public landfill.

According to SEMARNAT and SEDESOL officials, the number of transportation trucks used in Mexico for the collection of solid municipal organic and inorganic waste is over 10,000, of which 20 percent are models manufactured from year 2001 to 2008; 50 percent are models from 1990 to 2000; and 30 percent are trucks that were manufactured from 1975 to 1989.

As of 2008, there are 40 separation facilities; 80 transfer stations, and a total of 100 composting plants for organic waste.

Market Data

Table 5
Market Size for solid municipal waste equipment
(USD Millions)

	2006	2007	2008	2008-2009 Growth rate
Import Market	795.6	827.4	868.8	4.0%
Local Production	193.8	199.6	201.6	1.0%
Exports	156.0	163.8	165.4	1.0%
Total Market	833.4	863.2	905.0	3.0%
Imports from U.S.	485.3	512.9	533.4	3.0%

Sources: statistics from the Mexican Import and Export Bank (Bancomext); SEDESOL and SEMARNAT publications and reports; National Institute of Ecology (INE) reports; National Council of Environmental Executives (CONIECO), and interviews with end-users and distributors of equipment and services for the solid municipal waste industry.

Exchange Rate (2008): 1 USD = 14.50

Best Prospects

Best prospects for this sub-sector include the following:

Automated carts, lifters, dumpers, containers, bin systems, recycling equipment for corrugated boxes, plastic bottles, tin cans, etc, cranes, landfill cover materials/equipment, landfill dozers, scrapers, landfill treatment systems/equipment, odor control systems, shredders/pulverizers, conveyors/live floors, safety equipment, transfer trailers/liners, truck bodies, rear loaders, recyclers, truck parts, vehicle washing and maintenance equipment, solid waste balers, classification systems, scales, transfer trailers, transportation trucks, landfill covers, landfill compactors, liners/geotextiles, methane recovery systems, methane analyzing instruments, cranes, crushers, sorting systems, tub grinders, wood chippers, garbage incinerators, etc.

Key Suppliers

Key suppliers for this sub-sector includes the following:

Freightliner, Navistar International, Volvo Trucks North America, Sterling Truck Corporation, Coleman Tool and Manufacturing, Leach Company, Dempster Equipment, McNeilus Truck and Manufacturing, Wastequip, Wayne Engineering Corporation Caterpillar, Continental Biomass Industries, Detroit Diesel, Cummins, Duratech Industries, Geotech Environmental, Equipment, Harris Waste, Industrial Lifters, Hustler Conveyors, Komatsu America, Pioneer Cover, RJM Equipment, Marathon Equipment, PTR Baler and Compactor, Waste Pro, etc.

The main third-country competitors are Canada, Germany, Japan, and France. The corresponding percentages are given in Table 6.

Table 6
Origin of Imports
Market Share (%)

Market share	2007	2008	2009 Estimate
US	60	61	62
Canada	11	13	13
Germany	9	9	8
Japan	7	8	6
France	6	6	6
Others	7	3	5

Third-country competitors

Third country firms usually have a representative in Mexico or have a strategic alliance with a local solid municipal waste equipment firm. Many have actively promoted their interests during the last five years by participating in trade shows and technical seminars in Mexican cities where the demand for the equipment is greatest. When shows and seminars are held in their countries, they may invite private sector executives and state officials, and potential representatives to participate with all expenses paid. These visits include tours of the manufacturing plants, landfills, end-users, research institutions, which many times result in cooperation agreements, exchange of research information, and technical training programs. The below firms are some of the third country competitors.

Company	Country of Origin
Envista Technologies	Canada
Proeco Corporation	Canada
Netc North-East Trading and Consulting Group	Germany
Dresdner Standtreinigung	Germany

Lausitzer Umwelt	Germany
Wirth Machinery –Und Bchrgerate-Fabrik	Germany

Prospective Buyers

Private Sector

Proactiva, Ecolimpio, Ambtec, Germen, S.A. de C.V., IECOSA Corporacion, Eco Ingenieria, Control y Equilibrio Ecologico, Promotora Ambiental, Wolf Consultores y Asesores Ambientales, Tecma, S.A. de C.V., Comercializadora y Servicios Ingenieriles, Constructores e Ingenieria del Medio Ambiente, Halcon Internacional de Proyectos Ecologicos, Equipamiento y Suministros Industriales, Sistemas de Ingenieria y Control Ambiental, S.A. de C.V., Soluciones Ambientales Integrales, Control, Ingenieria y Medicion, etc.

Government Sector

The 32 Mexican states have either a Public Services or an Environmental Division that is charged with researching equipment and creating or increasing their existing infrastructure to properly manage the solid waste generated daily in their major cities.

The following cities are among the 142 with more than 100,000 people that as December 2008 have expressed the intention to build a landfill and buy some type of solid waste equipment: San Cristobal de las Casas, Celaya, Salamanca, Chilpancingo, Tulancingo, Guadalajara, Puerto Vallarta, Chalco, Texcoco, Lazaro Cardenas, Cuernavaca, Oaxaca, Salina Cruz, Chetumal, Ciudad obregon, Coatzacoalcos and Zacatecas.

Mexico City:

The city's only operational landfill will be closed by the middle to 2009. It currently receives daily 12,500 tons of waste generated by over 20 million people living in the metropolitan area. The landfill started operations in 1994 and it has accumulated 60 million tons of waste that now emit nearly 1.3 million tons of CO₂ annually. The authorities will build a methane capture system and a power plant to convert the captured methane into electricity that can be fed back into the city's grid.

The city's goal is to begin construction by the end of 2009 of a waste management center to include: a Recycling Integral Center and Energy (Centro Integral de Reciclado y Energia), a new landfill with state of the art recycling technology for tires, plastics, electronics, tin cans, etc., and a composting facility. The Mexico City authorities have a budget of US\$150 million.

Import, Duties and Taxes

According to the 1998 modifications in the Mexican customs law, the participation of a customs broker is not obligatory for imports if all legal and technical requirements are met. In the same change, in order to import some goods, it is now required that the importer be registered as such with the Secretariat of Treasury and Public Credit (Secretaria de Hacienda y Credito Publico-SHCP). The participation of a customs broker is suggested when the exporter is not familiar with Mexican standards and customs processing procedures.

Almost all solid municipal waste equipment from NAFTA countries are exempt from any import duties. Duty for non-NAFTA countries range from 3 to 15 percent for the same products. For specific tariff information on non-NAFTA rates, contact the author of this report.

A 15 percent Value Added Tax (IVA) is assessed on the cumulative value, consisting of the U.S. plant value (invoice) of the product, plus the inland U.S. freight charges, any other costs listed separately on the invoice such as export packing plus the duty. The importer will pay other IVA fees for such services as the inland Mexico freight and warehousing. The IVA tax is only 10 percent for border area destinations. The IVA is recovered at the point of sale.

The following example shows the difference in import costs for a NAFTA firm versus a non-NAFTA firm. The example also shows the effect of the 15 percent IVA on the final import price versus a non-NAFTA manufacturer's price.

Direct Import Cost Template

	US Firm	Non-NAFTA Firm
Base Price	\$100.00	\$100.00
Freight (estimated 8.0%)	8.00	8.00
Insurance (1.5% of C&F)	1.62	1.62
Dutiable base =CIF	109.62	109.62
Ad Valorem Duty (3.0%)	0	3.29
Value Added Tax (15.0%)	16.44	16.94
Total	\$126.06	\$129.85
Port Costs (Unloading, storage, Est 6.0% CIF)	7.56	7.79
Freight forwarder fee (Est. 1.5% CIF)	1.64	1.64
Bank charges (2.0% of FOB price)	2.00	2.00
GRAND TOTAL	\$137.26	\$141.28

Note:

As of July 1, 1999 NAFTA originating goods are no longer subject to the 0.8% customs processing fee. A NAFTA certificate of origin is needed to take advantage of this exemption.

CERTIFICATE OF ORIGIN: A certificate of origin is required from all foreign suppliers or exporters. If the product qualifies as NAFTA originating according to NAFTA Rules of Origin, the exporter must use the NAFTA Certificate of Origin in order to benefit from preferential treatment under NAFTA. This is the responsibility of the exporter and the forms are available from the U.S. Customs Service, freight forwarders, or local U.S. Chambers of Commerce.

FREE SALE CERTIFICATE: This certificate is required for many products entering Mexico. This certificate proves that the imported goods are also sold in the country of origin. A letter from the local Chamber of Commerce is sufficient proof and the importer would present it at the time of importation.

NOM CERTIFICATION: (Normas Oficiales Mexicanas - Mexican Official Standards). There are no norms for the collection, transport, and recycling of solid municipal waste equipment.

For companies interested in offering engineering services for the design and construction of sanitary landfills, they should know that SEMARNAT has the NOM-083-SEMARNAT-2003 that must be followed.

LABELING REQUIREMENTS: According to Mexico's Federal Law on Metrology and Standardization, solid municipal waste equipment sold in Mexico is exempted from having a label in Spanish affixed to each product. Listing the required information in Spanish on the shipping container will satisfy the labeling requirement. The Spanish information on the box must contain, at a minimum, the following information:

- Name and address of the importer
- Importer's Ministry of Finance Taxation Number (RFC number and/or their Industry Association registration number)
- Exporter's name and address
- Trademark or commercial brand name of the product
- Product description whenever the product is packed in such a form that it is not visible
- Use, handling, and care instructions for the product, as required
- Country of origin
- Warnings or precautions on hazardous products
- Size, if applicable, Mexico's Federal Law on Metrology and Standardization stipulates that all weights and measures must be in the metric system.

There are no barriers for importing solid municipal waste equipment. However, the Mexican import law is very strict on the required documentation. While it is not required, it may be advantageous when selling equipment to use a reputable customs broker to properly prepare the paperwork needed. The basic documents required to import solid municipal waste equipment into Mexico include:

- 1) Import petition
- 2) NAFTA Certificate of origin
- 3) Commercial bill
- 4) Insurance and freight bills

The products qualifying as North American must use the NAFTA Certificate of Origin in order to receive preferential treatment. The exporter or broker may issue such a certificate. It does not have to be validated or formalized. Other entities that may issue a Certificate of Origin include government agencies, producers, exporters, industrial and commercial chambers of commerce, and associations that are legally authorized in the United States. Like the U.S., Mexico uses the Harmonized Tariff System (H.S.). However, Mexico uses only eight digits while the U.S. uses up to ten digits. The first six digits used under the HS system are identical for all countries, the rest may vary.

Table 7 shows the import duties assessed on some solid municipal waste equipment.

Table 7

Import Duties for selected solid municipal waste equipment

Harmonized System Number	Product	NAFTA Tariff Reduction Schedule	Current Import Duties N/O*
8705.90.01	Trucks for street cleaning	C	0/2
8609.00.01	Garbage containers	C	0/15
8479.82.03	Inorganic garbage crushing machines	B	0/10
8708.10.01	Brushes for street cleaning trucks	C	0/15
8709.19.99	Push garbage carts	A	0/12
8609.00.02	Modular trash push pits	A	0/15
8609.00.03	Transfer trash compactors	A	0/15
8590.30.01	Home garbage crushing machines	A	0/15
9026.80.01	Methane gas detecting instruments	B	0/15
3926.00	Landfills liners	B	0/15

*In the 4th column it shows import duties for products from NAFTA (N) and non-NAFTA countries (O). Example 0/2, column shows import duties for products imported from NAFTA countries (0) and with which Mexico has no free trade agreement (2).

Category A: Duties on U.S. products were fully eliminated on January 1, 1994.

Category B: Duties on U.S. products were fully eliminated on January 1, 1998.

Category C: Duties on U.S. products were fully eliminated on January 1, 2003.

The Commercial Service of the U.S. Embassy in Mexico City has an officer who follows developments in the standards area:

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Market Entry

Often, the decision to select a solid municipal waste equipment and services provider depends on the demonstrated commitment to service after the sale has been made. This has been the most effective tool that third country manufacturers have used to penetrate the market. They offer to have their maintenance personnel at the clients' facilities in no more than 48 hours after a service call is made. The availability of required spares is the natural complement to the presence of their technicians.

Customers in the solid municipal waste equipment and services are demanding uniform quality control, compliance with international standards, productivity, lower production costs, just-in-time deliveries and above all, reliable local service and maintenance programs. This last factor has become, in many instances, even more important than pricing or financing in the solid municipal waste equipment purchasing decision.

OPPORTUNITIES FOR PROFILE BUILDING

U.S. firms wishing to promote their products and/or services to Mexican representatives and/or buyers can do so by participating in the trade exhibitions program of Commercial Service Mexico, held annually in Mexico through privately held exhibitions and/or seminars.

Advertisements in specialized magazines are very effective, especially in publications distributed to members of associations or distributed to large potential end-users, equipment distributors, contractors, and government officials.

Financing

Financing is very important to marketing in Mexico, particularly in the solid municipal waste equipment.

Mexico's 10 commercial banks offer a full spectrum of services within one institution. These services range from offering deposit accounts, consumer and commercial lending, corporate finance, and the operation of trust and mutual funds, to foreign exchange and money market trading. Mexico's commercial banking sector has been opened to foreign competition. The North American Free Trade Agreement (NAFTA) permits U.S. and Canadian banks or any other foreign bank with a subsidiary in the U.S. or Canada to establish wholly owned subsidiaries in Mexico.

It is not a requirement for U.S. suppliers of solid municipal waste equipment to bring the financing to sell their equipment. It is a general practice for Mexican companies that purchase solid municipal waste equipment to use commercial bank financing to pay for the technology. An irrevocable letter of credit is commonly used when dealing with foreign suppliers. The major Mexican commercial banks, besides having correspondent banks in the United States provide typical bank services, such as transfer of funds, letters of credit, and money orders.

Additionally, U.S. government agencies, such as the U.S. Trade and Development Agency (USTDA), the U.S. Export Import Bank (Exim), the Overseas Private Investment Corporation (OPIC) have programs in this sector. USTDA finances feasibility studies and other forms of

technical assistance. Exim can guarantee up to 85% of the U.S. content and OPIC can provide insurance if 25% of the project investment is from the United States.

High value sales usually are made through letters of credit. Small value sales are either made with cash or with a 50 percent advance payment when the order is placed and 50 percent on delivery.

BANOBRAS

BANOBRAS is Mexico's infrastructure bank that has an important role for municipalities to purchase equipment to provide the solid waste services. BANOBRAS can finance the construction of a new landfill, purchase of trucks, garbage carts, compactors, transfer trailers, shredders, equipment for the recycling of inorganic waste, etc. Mexico's national infrastructure bank (BANOBRAS) has a budget of US \$200 million for solid waste projects.

NADB

North American Development Bank (NADB) and its sister institution, the Border Environment Cooperation Commission (BECC), were created under the auspices of the North American Free Trade Agreement (NAFTA) to address environmental issues in the U.S.-Mexico border region. The two institutions initiated operations under the November 1993 Agreement Between the Government of the United States of America and the Government of the United Mexican States Concerning the Establishment of a Border Environment Cooperation Commission and a North American Development Bank (the "Charter").

Since its creation to the end of 2008, the NADB has financed over 38 projects on the Mexican side of the border related to the solid municipal waste. The projects have included the building of new landfills, the purchase of trucks, containers, solid waste compactors, etc.

Resources and Key contacts

Secretariat for the Environment and Natural Resources: www.semarnat.gob.mx

Secretariat for Social Development: www.sedesol.gob.mx

National Institute of Ecology: www.ine.gob.mx

Attorney General for Environmental Protection: www.profepa.gob.mx

National Council of Environmental Executives: www.conieco.org

Mexico City Government: www.df.gob.mx

Mexico's Public Works Bank (BANOBRAS): www.banobras.gob.mx

For More information

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