

Solid Waste Separation Stations in Matamoros, Tamaulipas

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The municipality of Matamoros, Tamaulipas received funding from the Border 2020 Program to implement an integrated solid waste management pilot program. It is estimated that over 700 tons/day of solid waste is generated within the City from everyday activities, waste that is neither separated nor recycled. Taking into account studies conducted by the Secretaria del Medio Ambiente y Recursos Naturales (SEMARNAT) on Mexico's standard composition of waste, the city has a potential of 525 tons of recoverable waste, of which 50% pertains to organic material, 15% to paper/carton, 5% glass, 3% plastic and 2% metal. Of the waste that is produced in Matamoros, it is estimated that approximately 68% of it is collected by either the city or other private collection business. This means the rest of the waste is ending up in illegal dump sites or the city's parks and streets. In 2016, at least 44 illegal clandestine sites were identified. Another common practice is for the waste to be burned, which can have an impact to public health due to the air pollution caused from this practice.

The project aimed to promote both the collection and proper disposal of recyclable waste such as: cardboard and paper, cans, plastic and used batteries. With participation from its citizens, as

well as support by public and private institutions, Matamoros hoped by implementing waste separation and recycling measures, this would help reduce the impact to the environment and build environmental awareness among its citizens.

The city placed informational flyers, brochures and coloring books through city schools and parks, on topics related to waste segregation and recycling. Six small solid waste separation stations were placed throughout the city to help promote and bring awareness on recycling to its citizens (Figure 1).



Figure 1. Recycling station for plastic, paper/carton, metal.

In addition, the city partnered with the auto service stations, OXXO, to place 50 battery recycling stations (Figure 2) where citizens could bring their spent batteries to properly dispose of, as well as, a formal agreement with a local recycler to help process any recyclable material collected throughout the project. Throughout the project, the municipality staff provided outreach at schools and workshops at local parks, reaching more than 3,000 children (Figure 3) and 400 additional community members. In these events, the city provided information on recycling but taught the community how to compost and highlight the impact to public health of burning their trash (Figure 4).

Between April 2019 and February 2020, the city was able to collect and divert the following recyclables from going to the landfill: 15 tons of carton, 13.2 tons of aluminum, 17.6 tons of plastic and 3 tons of batteries. Overall, the staff of Matamoros was able to provide education to the community on the importance their actions have on improving their environment by recycling and not burning their trash. In addition, they showed how vital it is to implement public and private partnerships within a community to create a successful sustainable material management program.



Figure 2. Battery recycling station at OXXO service station.



Figure 2. Matamoros staff conducting outreach at a school



Figure 4. Matamoros staff conducting outreach at a local park.