



# New Mexico Solid Waste Today and in the Future

New Mexico's solid waste system has dramatically evolved over the past few decades. As recently as the early eighties, New Mexicans relied on community "dumps" which were often nothing more than open trenches. These "dumps" were regularly set on fire to "reduce" their volume and to make way for more trash. These sites are scattered across the state and can be found in close proximity to every town, village and rural community.



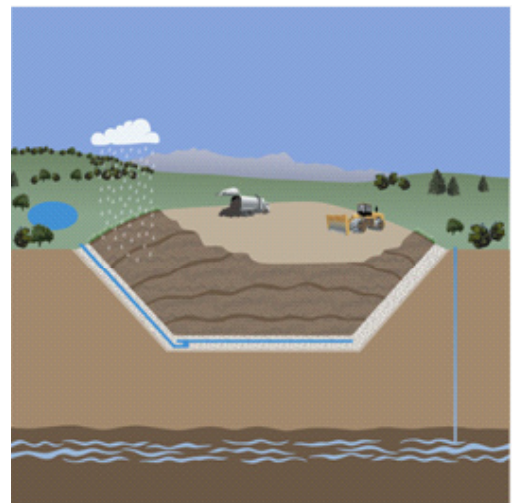
*Rural NM Dumpsite*

With the advent of the modern environmental movement and laws (see Waste and the Law) like the Clean Water Act and the Resource Recovery and Conservation Act (RCRA) in the 60's and 70's New Mexico began its move to the modern solid waste landfill. These, and other, federal laws built a framework for the design, construction, permitting and operation of landfills and for the management of waste in general. New Mexico adopted these new standards with the passage of the New Mexico Solid Waste Act of 1978.

Today's landfills are vastly different from the burn pits of the past. The modern sanitary landfill is designed by specialized engineering firms using the latest computer drafting and modeling technology. These landfills use complex systems to manage and mitigate potential environmental hazards and employ state of the art materials to ensure the public's safety and wellbeing.

## Landfills are Costly

While the modern landfill is certainly better for New Mexico's environment, its benefits come with significant cost. A permit application for the development of a new landfill in NM might cost as much as \$2.0 million, just for the document! Construction costs run in the tens of millions of dollars and are followed by increasingly expensive operational costs. In light of these costs, it is surprising to note that NM still ranks at the bottom of the list for actual disposal costs, averaging a mere \$26.00 per ton. Other parts of the country are faced with per ton costs of nearly \$200 and they will likely continue to rise.



*The Modern Landfill*

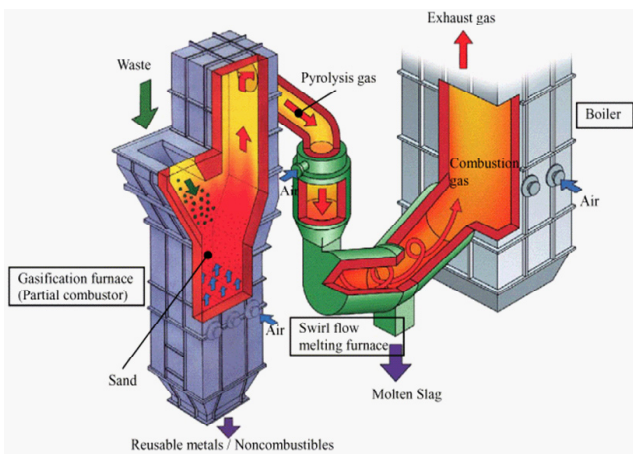
The cost, regulatory and political boundaries to the development of modern landfills has caused a marked decline in the number of active landfills in New Mexico. In 2008, 40 landfills were operating in New Mexico, with 33 receiving waste from households. This compares to several hundred active disposal sites in the early 1990's.

A second outcome of the financial barrier to developing modern landfills is the exploration of alternative waste handling mechanisms. These new systems range from simple waste diversion and recycling programs to elaborate

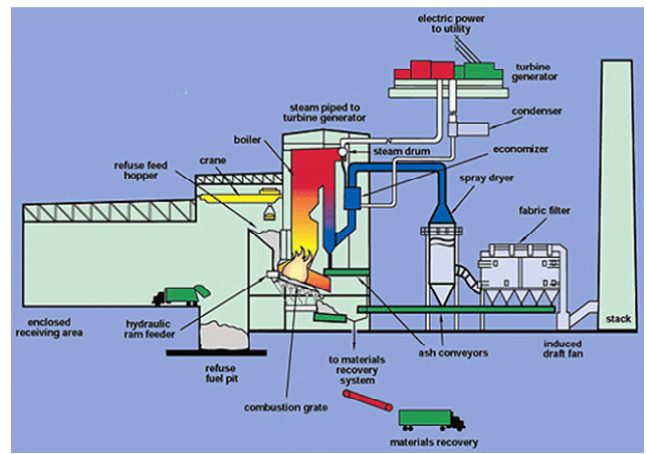


# New Mexico Solid Waste Today and in the Future

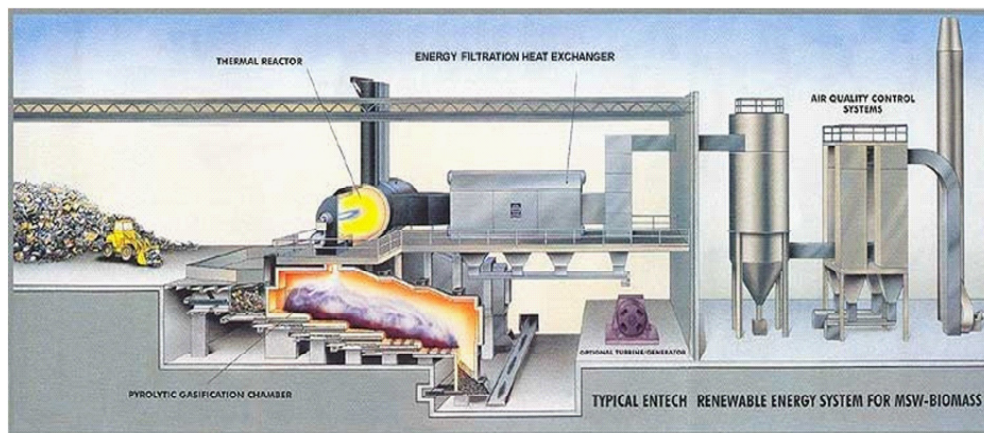
waste to energy conversion technologies. The focus of many of these efforts is to find a fiscally efficient means of handling our waste. They also tend to look at waste as a commodity or a resource to be utilized like oil or iron ore, rather than junk to be abandoned in landfills. The shift to recognizing waste as a resource is still relatively new in NM compared to areas where landfill costs are at the highest. The following figures offer a glimpse of new technologies being employed and developed to derive value from waste. It is important to note that the cost of many of these technologies makes their use in NM unlikely.



*Waste Gasification*



*Waste Incinerator*



*Pyrolytic Gasification*

## Waste is Not Inevitable

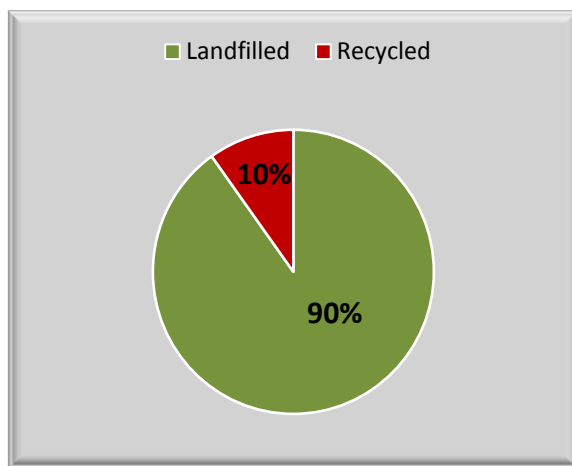
A more accessible opportunity for NM communities is the use of traditional waste diversion and recycling systems. These programs are proven and cost effective means of limiting disposal and finding value in our waste. Programs can be scaled to meet the needs of small rural communities, large urban cities and everyone in between. These



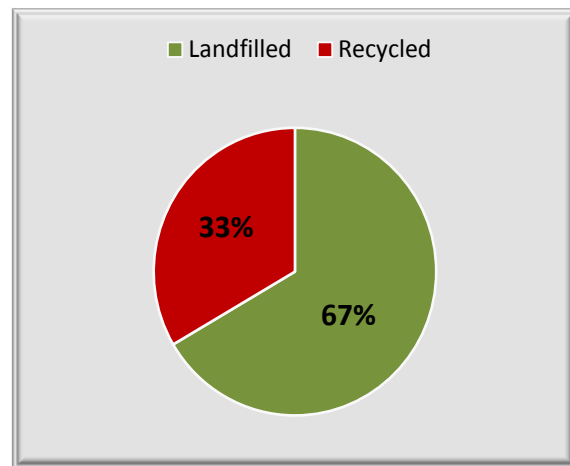
# New Mexico Solid Waste Today and in the Future

systems are explored in depth in the following chapters of this manual.

The following graph depicts the solid waste disposal vs recycling in NM in 2007. Of the more than 2,000,000 tons of waste generated in NM, only 228,254 tons were recycled. This relationship is better described in terms of a recycling rate, or the percent of waste recycled rather than landfilled. For 2007 New Mexico recycled 10.76% of our waste. The second graph explores the same data but on a national basis. Here we see that the national average for recycling is over 30%.



*NM Recycling Rate 2007*



*US Recycling Rate 2007*

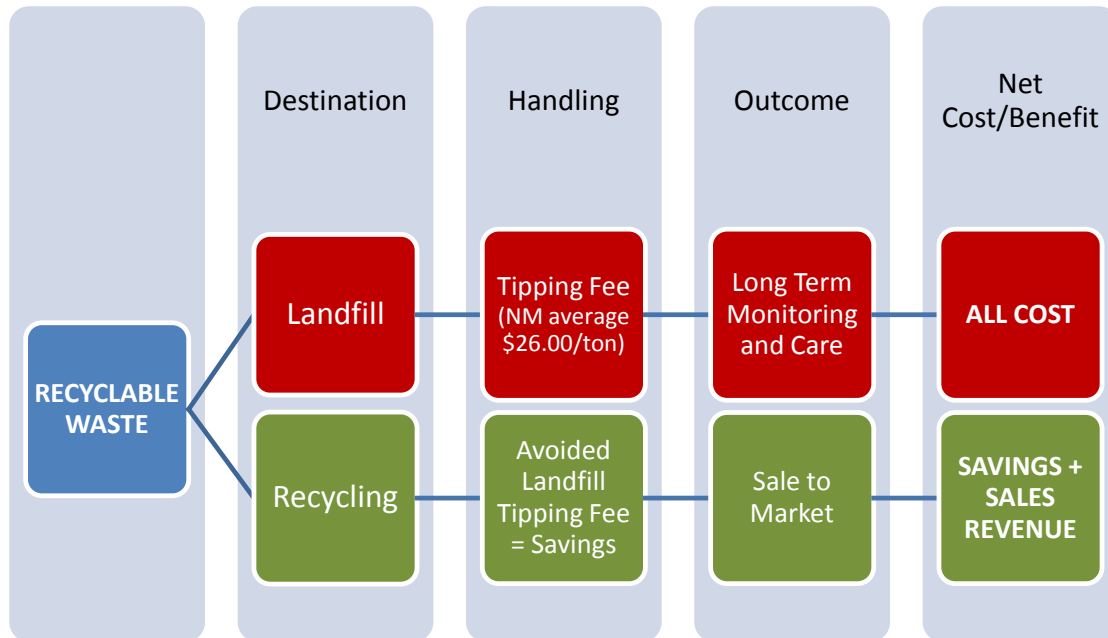
This stark contrast is not the result of barriers specific to NM. It is the result of a professional and political dedication to resolving past disposal challenges in New Mexico. Solid waste efforts have been directed at “cleaning up” past practices and redeveloping NM’s disposal infrastructure to reflect modern environmental standards. These initiatives have proven very successful with the closure of all but a handful of the small community dumps and the development of modern regional disposal facilities. In light of this, New Mexico is at a crossroads where the road towards increased waste diversion and recycling finally open.

## **Waste is a Valuable Resource**

Waste diversion activities do not only avoid the costs associated with landfills, they also strive to recover the residual value of the diverted materials. A ton of newspaper, for instance, will not only avoid the landfill tipping fee, but can be sold for an even greater financial reward. The graphic on the next page explores the recycling process from a financial perspective and demonstrates the direct economic benefits of recycling.

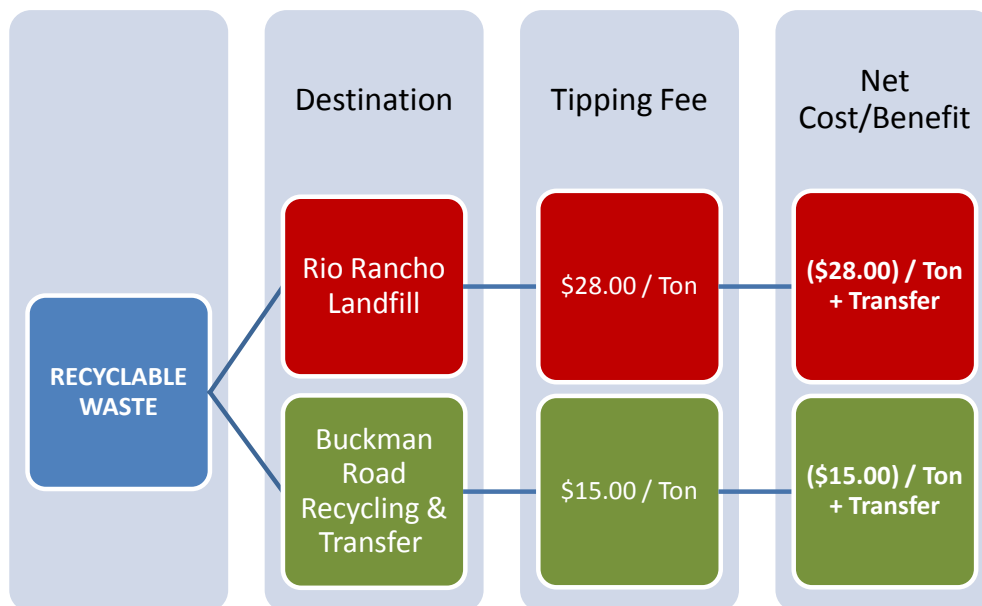


# New Mexico Solid Waste Today and in the Future



*Waste Diversion Fiscal Impact*

This next graphic looks at the real time cost/benefit of recycling at the North Central Solid Waste Authority:



*NCSWA Recycling Fiscal Impact*



# New Mexico Solid Waste Today and in the Future

## Recycling Saves Dollars, Resources & the Environment

In this case, the NCSWA saves \$13.00 per ton by recycling. Recycling also affords its several environmental benefits. While there are other costs not identified here, the bottom line for NCSWA is that recycling is a fiscally responsible decision. Another example can be found at the town of Taos, where they not only avoid the tip fee at the landfill, but they earn revenue from the sale of their recycled materials.

The value of waste diversion and recycling is clearly not limited to simple economics. Recycling activities are also proven economic development engines. Several respected sources have found that recycling that ton of paper will support as many as five jobs, while landfilling that paper will support only one. This ancillary benefit can be of tremendous value in rural areas where jobs are scarce and unemployment is more prevalent.

A commonly ignored benefit of recycling is its direct impact on landfill operations. Less material going into a landfill, preserves its finite space for only those materials that cannot be handled elsewhere. This space savings can add up to be a significant fiscal benefit of recycling as landfill last longer and their expansions are delayed.

Recycling efforts are also perhaps the simplest and most accessible means of limiting greenhouse gas emissions. In nearly every case, recycling conserves energy, and thereby greenhouse gases, when compared to production of the same materials from virgin extracted resources. Whether it is glass bottles being made from old glass bottle or paper from paper rather than trees; recycling provides a clear path to greenhouse gas emissions reduction. To explore the environmental benefits of recycling further, check out the National Recycling Coalition's Environmental Calculator available on their website at [www.nrc-recycles.org](http://www.nrc-recycles.org)

In short, there is no down side to a well designed and executed recycling program. Recycling provides financial savings, and in some cases a revenue stream, economic stimulus and job creation in addition to the many environmental benefits of recycling.

## Benefits of Recycling

### Financial

Recycling provides two distinct financial benefits; savings and revenue. By recycling a material the cost to landfill the material is avoided. In addition to cost avoidance, recycled materials can often be sold for a profit.

### Resources

Recycling avoids the need to extract resources via mining, timber cutting and drilling. Saved resources protect the environment and avoid the expense of extraction. In effect, households are easier to mine than the jungle.

### Environment

Recycling further benefits the environment through significant energy savings in the manufacture of consumer goods. These energy savings translate into avoided greenhouse gas emissions and lessens our dependence on foreign sources of oil.

### Jobs

Recycling is known to support job creation and economic development. Recycling creates jobs both locally and nationally as more workers are needed to recycle vs landfill.