

New Mexico Landfill Rate Analysis and Opportunities for Increased Diversion with PAYT and Rate Incentives



New Mexico
Recycling Coalition

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RATE ANALYSIS EXECUTIVE SUMMARY

The analysis contained in this study was conducted using data gathered from landfills in New Mexico. The New Mexico Recycling Coalition (NMRC) and their subcontractor ICF International developed a survey, which was submitted to the New Mexico landfill managers. With the data collected, ICF developed this landfill-based New Mexico rate analysis study to shed light on the variety of rates and their setting mechanisms. This analysis also discusses existing rate incentives that will be used in an outreach campaign to inform and educate about the Pay-As-You-Throw Rate Incentive Program.

Of the 29 New Mexico landfills identified by NMRC, 28 landfills provided a response to some or all of the questions in the survey. The survey responses were collected through an online form and personal communications directly with landfill managers via email and telephone. Based on these responses, an analysis of trends across New Mexico landfills and their rates was conducted. General findings from the survey and rate analysis show that:

- Of the 29 New Mexico landfills surveyed, 19 charge for residential waste disposal per ton of waste landfilled. For these landfills, the average landfill tip fee for residential waste is \$31.29 per ton;
- In 2010, the total reported waste in New Mexico that was landfilled was 1,664,797 tons;
- Based on an average tip cost of \$31.29 per ton the state of New Mexico spent approximately \$51 million to bury waste;
- Based on US EPA 2010 Franklin Associates Waste Characterization Study, 54% of materials landfilled were commodity materials (paper [34%], plastic [12%], and metal [8%]) that can be recovered through recycling;
- Recycling commodities equaling 54% of material from New Mexico landfills would result in a tip cost avoidance of \$28,000,000 for taxpayers. The recovery and sale of these commodities through recycling could result in revenue of \$168,000,000 as well as additional economic growth and job potential;
- According to the New Mexico Environment Department's 2010 Annual Solid Waste Report (utilizing 2009 data) the state of New Mexico recycled 200,000 tons of commodity materials, which is estimated at today's value of \$25,000,000 [metal, paper and plastic];
- Eleven of the landfills reported that they separately track the tonnage of commercial and residential waste streams, with another ten reporting that they do not distinguish between these streams and seven landfills not providing information. Based on the total tonnage reported from the eleven sites, approximately 49% of waste was generated from the residential sector and 51% from the commercial sector;
- Just over half of the landfills surveyed adopted a weight-based rate structure for most materials they accept (although some of these landfills charge per item for less common materials like tires and white goods);
- Most landfills have adjusted their rates in the past 10 years;
- The majority of landfills accept most or all of their residential waste from haulers that use automated collection;
- Of the landfills surveyed, 22 offer some sort of recycling service;

- Of the landfills surveyed, 25 reported the tonnage of waste they accepted in 2010, reporting an average of 85,215 tons landfilled per facility, across all waste types;
- Most New Mexico landfills that collect recycling do not charge tipping fees for recyclable materials;
- Three landfills recently closed, and another six landfills are planning to close within the next six years; and
- The average household spends approximately \$50 in actual solid waste disposal costs in New Mexico This is a rounded average and will vary from landfill to landfill – but it is an easy number to use for demonstration purposes.

These general findings are helpful for educating about different rate initiatives in New Mexico. Rate incentives are strategies employed by communities to drive down disposal rates by putting a price on the amount of waste each resident or household generates. Under rate incentive programs, such as Pay-As-You-Throw (PAYT), residents are charged per unit for the collection of municipal solid waste, creating a direct economic incentive to recycle more and to generate less waste. Benefits of rate incentives include increased diversion and recycling, increased landfill life, flexibility to adjust rates as needed, decreased tipping costs, decreased greenhouse gas emissions, and job development opportunities. However, because each community is so different, there may be barriers to overcome. These potential barriers may include illegal dumping, transition issues associated with changing the existing system, concerns over increased need for infrastructure and personnel, initial financial start up costs, and the need for education and outreach. The benefits to rate incentives far outweigh the barriers; therefore, it is important to have a proactive education and outreach starting with community officials and stakeholders.

While the specific steps towards developing a successful rate incentive program will vary for each community, several widely used strategies have been successful and are discussed in this analysis. The foundation of a successful rate incentive program is choosing a rate structure that will not only cover the program costs, but positively influence customer behavior. Three strategies that have been successfully used in other states include mandatory state rate incentive laws, landfill regulations, and individual municipal programs.

SECTION 1—INTRODUCTION

The purpose of this landfill-based New Mexico rate analysis study is to shed light on the variety of rates and their setting mechanisms, but also to document existing rate incentives that will be used to inform a Pay-As-You-Throw and Rate Incentive outreach campaign. The picture painted from this report represents the bountiful opportunities to influence customer behavior, hauler business practices and landfill management in relation to increasing diversion opportunities. The information will further be used to tailor incentive recommendations to each landfill and their associated waste-shed communities that feed into it. The overall goal is to encourage communities, solid waste authorities and landfills to set appropriate rates to not only cover their operational costs, but to encourage increased diversion. The benefits of which not only extend the landfill life, but also increase jobs in the recycling sector and conserve energy embodied in the recycling process.

The analysis contained in this study was conducted using data gathered from a survey of landfills in New Mexico developed and conducted by the New Mexico Recycling Coalition (NMRC) and their subcontractor ICF International. The survey responses were collected through an online

form and personal communications with landfill managers via email and telephone. A list of the original survey questions and the follow-up questions are contained in Appendix A. Of the 29 New Mexico landfills identified by NMRC, 28 landfills provided response to some or all of the questions in the survey. Of the 28 responding landfills, eight landfills have either closed in the past year or are planning to close in the next two years.

SECTION 2—GENERAL FINDINGS

This section contains a summary of the results of the survey of New Mexico landfills. The findings note, when possible, general trends across the landfills that participated in the survey. We have also noted any instances when a clear trend across landfills is not evident or sufficient information was not available to assess landfill responses. The information in this section was used to inform the benefits of and barriers to rate incentives as well as the strategy to influence customer behavior and increase diversion in Section 3-5, respectively.

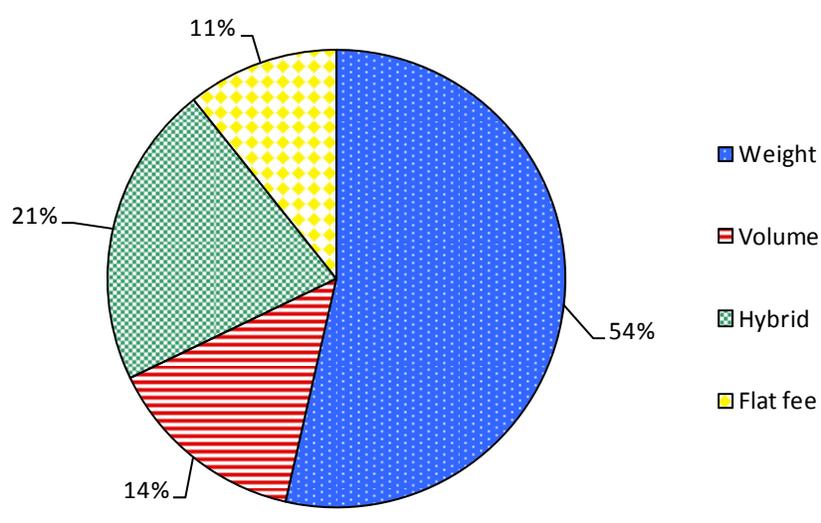
Rate Mechanisms and Strategies Currently Used

Just over half of landfills surveyed adopted a weight-based rate structure for most materials they accept (although some of these landfills charge per item for materials like tires and white goods), as shown in Figure 1.

Of the 15 landfills with weight-based rate structures, 10 landfills charge different rates per ton of waste, depending on the material dropped off, while five charge the same rate per ton of waste regardless of which of their accepted wastes is dropped-off. Some landfills also charged different rates per ton of waste depending on whether waste was generated inside or outside their municipality or whether the waste was dropped-off at the landfill or at a transfer station.

The majority of landfills use a weight-based rate structure for most materials they accept.

Figure 1: Percent of New Mexico landfills, by rate structure



The second most common rate structure could be broadly described as a hybrid of weight-, volume-, and/or container-based rate structures. For the six landfills that have hybrid rate structures, weight-based rates are generally charged for commercial and Construction and

Demolition (C&D) waste and waste brought by commercial haulers. However, the residential waste rate structures are based on residents (and sometimes, haulers) paying a fixed price over a given period of time (e.g., month, week, or trip to the landfill) to landfill their waste or have it collected. For example, the Sandoval County Landfill & Composting Facility charges by the ton for waste brought by commercial haulers, which includes yard trimmings and residential, commercial, and C&D waste and which constitutes the vast majority of waste brought to the landfill. However, the landfill charges a flat rate for two sizes of “residential size loads” brought to the landfill by residents: a level bed (i.e., whatever fits in a truck level with the top of the bed) and a level cab (i.e., whatever fits in a truck level with the top of the cab). For self-hauled residential waste that exceeds these sizes, residents are charged by weight at the same rates as commercial haulers. Similarly, the Eddy County Sandpoint Landfill charges weight-based rates for commercial haulers, including residential waste hauled by commercial trucks. Residents of the City of Carlsbad pay a fee to the City for each waste container, and municipal trucks bringing waste to the landfill from the City are not charged by the landfill. Eddy County residents who do not live in the City of Carlsbad pay a fee to one of two private haulers to pick up their waste based on the size of their bins. The commercial haulers then pay the normal rate per ton of waste brought to the landfill. In most of the six landfills with hybrid rate structures, unit rates apply for materials like tires and white goods.

Four of the 28 landfills surveyed for this study impose a volume-based rate structure for most materials they accept (although some of these landfills charge per item for less common materials like tires and white goods). Of the four landfills with weight-based rate structures, three landfills charge different rates per cubic yard of waste, depending on the material dropped off, while one landfill charges the same rate per cubic yard of waste regardless of which of their accepted waste is dropped-off.

Finally, three landfills charge a flat fee for waste brought to their landfill. The Pie Town and Quemado Landfills, both of which are now closed, charged \$72 plus tax per year to residents for unlimited self-haul dumping. De Baca County Landfill, which is also closing, plans to charge monthly fees of \$12 per resident and \$20 per business, although it is unclear if there is an existing rate structure. Tucumcari Landfill closed its landfill in July of 2011, but immediately opened a new landfill, also owned by the City.

Landfill Tipping Rates

Of the 28 New Mexico landfills surveyed, 19 charge for residential waste disposal per ton of waste landfilled. For these landfills, the average landfill tip fee for residential waste is \$31.29 per ton. This calculated value is in line with the 2008 average New Mexico tipping fees of \$28 per ton reported in the 2010 “State of Garbage in America” article from BioCycle magazine. The lowest reported rate was \$20 per ton at the Raton Landfill and Proposed Transfer Station and the highest reported rate was \$45 per ton at the Estancia Valley Regional Landfill and the Los Alamos County Eco Station.

The average landfill tip fee for residential waste is \$31.29 among landfills surveyed.

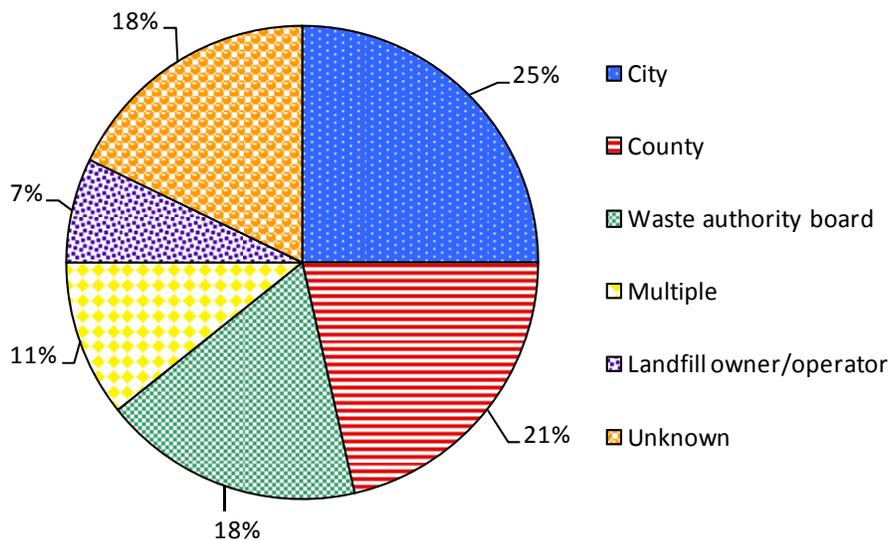
To place New Mexico’s landfill tipping rates in context, the average U.S. landfill tipping fees were reported to be \$44.09 in 2008, rising from \$42.08 in 2006, according to the 2010 and 2008

“State of Garbage in America” articles, respectively. The New Mexico landfill tipping fees are in line with the 2008 average tipping fees reported for neighboring states such as Colorado (\$30.47 per ton) and Texas (\$27.8 per ton). A detailed table of each landfill’s residential, commercial, and yard trimming tipping rates is contained in Appendix C.

Rate Structure Development

The results of the survey shows that landfill rates are developed using a range of different methods and involving a wide variety of parties. While there is no method that is clearly preferred, at just under half of the landfills surveyed (13 of 28 landfills), city or county officials had the final say in deciding landfill rates, as shown in Figure 2.

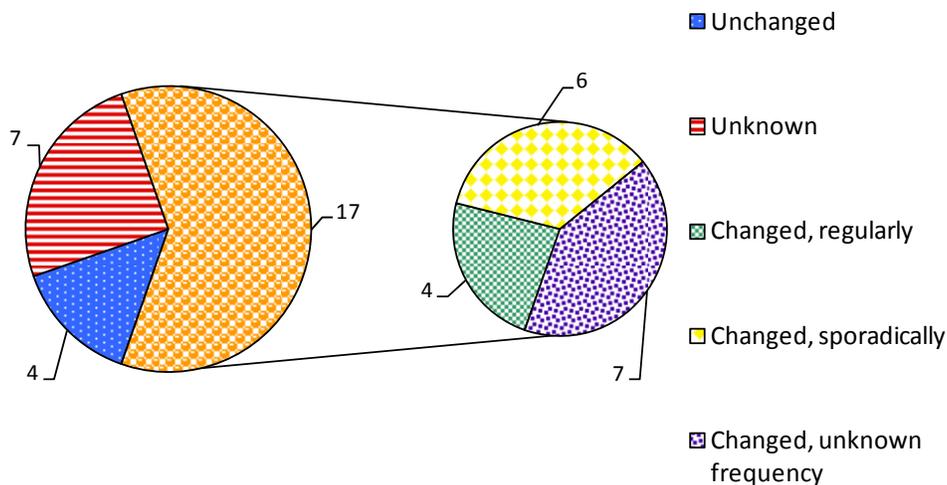
Figure 2: Percent of New Mexico landfills, by party responsible for developing rates



For seven of the 28 landfills surveyed, the city council or other similar municipal body was responsible for developing and/or approving landfill rates. For some of these landfills, the survey indicates that the rates are determined simply by city ordinance or by the city council. For others, the landfill managers surveyed stated that the city council receives guidance on landfill rates from a city manager, private consultant, or a revenue rate committee. Similarly, six of the 28 landfills surveyed indicated that county commissioners or another similar county body was responsible for developing and/or approving landfill rates. For one of these landfills, Sandoval County Landfill & Composting Facility, the landfill manager reports to the County Commission on net operating costs per ton. For five of the landfills surveyed, their rates are determined by a solid waste authority board. Depending on the landfill, this could be a city-, county-, or regional-level board in charge of solid waste management for its designated jurisdiction. No additional information about this type of rate development structure was provided by the landfills surveyed. Three of the landfills surveyed set their rates through the collaboration of two or more of the responsible parties addressed above. For example, the rates for the Southwest New Mexico Regional Landfill are set by a board comprised of city and county officials and managers. Similarly, the rates for the Eddy County Sandpoint Landfill are set annually following a meeting between city and county officials. Finally, five of the landfills surveyed did not indicate how their rates were developed.

The survey of landfills also found that most landfills have adjusted their rates in the past 10 years, as shown in Figure 3.

Figure 3: Number of New Mexico landfills, by rate changes over the past 10 years



Of those landfills that have reported changing their rates over the past 10 years, seven did not provide any additional information about why or how frequently their rates changed. Another six landfills indicated that they had sporadically changed their rates over the past 10 years. The reason for the infrequent rate changes, as provided by three of these landfills, was to increase

Four landfills reported that they regularly change their rates, with three of these landfills increasing their rates every year.

revenue to cover additional capital and operational costs. Four landfills reported that they regularly change their rates, with three of these landfills increasing their rates every year. Two landfills reported that they change their rates on a yearly basis to match increases in the Consumer Price Index. Of the remaining

landfills that did not report changing their landfilling rates over the past 10 years, four landfills affirmed that they had not changed their rates, while seven landfills did not provide any information on changes to their landfill rates over the past decade.

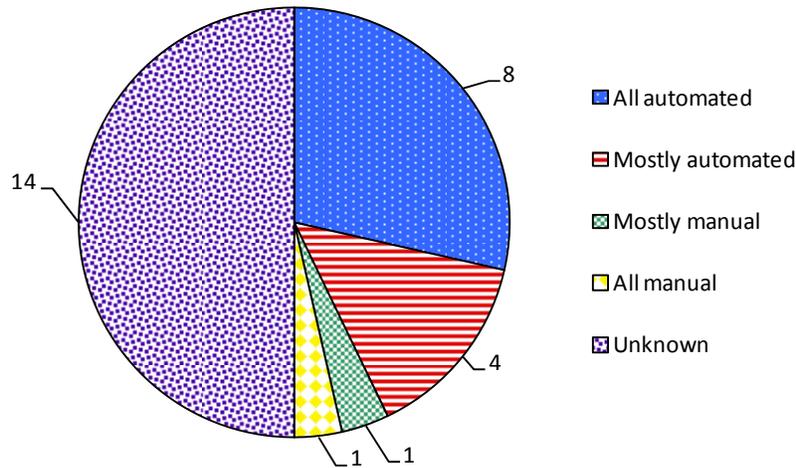
Waste Collection, Transportation and Classification at Landfills

As part of the survey, landfill managers were asked several questions that sought to identify how waste is collected before it gets to the landfill, how it is brought to the landfill, and how it is classified once it arrives at the landfill. Many of these questions focused on residential waste to better define the existing structure for residential waste collection and landfilling.

First, landfill managers were asked, of the residential waste that is brought by private haulers, what percentage of it was collected using automated collection versus manual collection. In the survey, automated collection was considered any method that involved trucks capable of mechanically lifting containers to dump trash in the truck, while manual collection was considered any method that involved waste collection workers physically lifting containers or bins to dump trash in the truck. As shown in Figure 4, of the landfill managers who provided information on the share of automated- and manually-collected residential waste brought to their

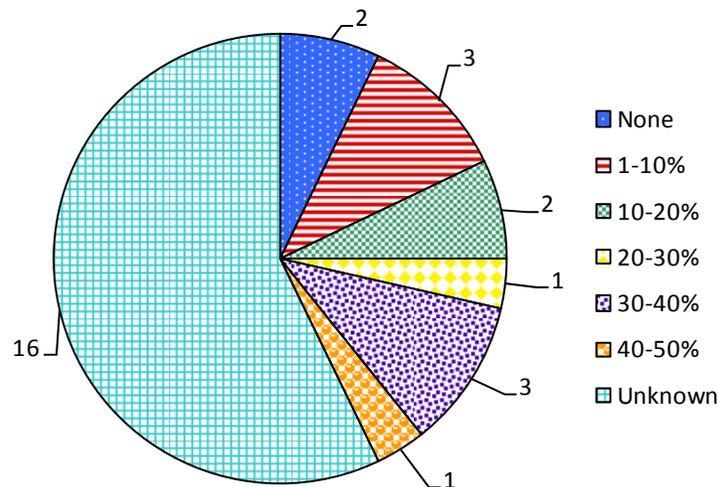
landfill, most landfills accept most or all of their residential waste from haulers that use automated collection. Eight landfills reported that all of the waste they accept is collected automatically and four landfills reported that most of the waste they accept is collected automatically. Conversely, only two landfills reported accepting mostly or completely manually collected residential waste. However, only half of landfill managers provided any information on this topic.

Figure 4: Number of New Mexico landfills, by automatically or manually collected residential waste



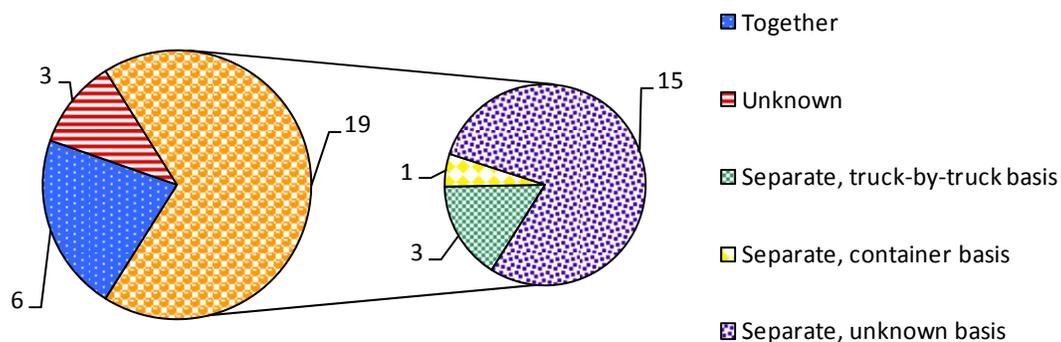
Next, the survey tracked which landfills accept waste brought to their facility from both private haulers and residents and, of those that allow self-hauled residential waste, what percent of their waste is brought in by residents. As shown in Figure 5, the majority of landfills did not provide information on this topic. Of the 12 landfills that did report on the amount of self-hauled residential waste they accept, two landfills do not accept any self-hauled residential waste, while most of the remaining landfills reported that this waste stream constitutes a relatively small percentage of the waste they accepted. Only one landfill reported accepting close to 50% of their waste directly from residents.

Figure 5: Number of New Mexico landfills, by self-hauled residential waste as a percentage of all waste accepted



When assessing the amount of commercial and residential waste processed at New Mexico landfills, we sought to clarify: (1) whether the landfill separately tracks the amount of commercial and residential entering the landfill and, if so; (2) each landfill's method for defining what constitutes those two waste streams. As shown in Figure 6, the survey found that 11 of the landfills surveyed indicated that they separately track commercial and residential waste streams, with another 10 reporting that they do not distinguish between these streams and seven landfills not providing information on whether or not they track these streams separately. Of the 11 landfills that separately track residential and commercial waste tonnages, three landfills indicated that they determine whether waste is commercial or residential based on which truck is bringing it to the landfill and one landfill bases the distinction on the container or bin used for the waste. Seven landfills did not provide any information on how they distinguish between the two streams.

Figure 6: Tracking and defining residential and commercial waste at New Mexico landfills.



Quantities and Types of Waste and Recyclables Collected at Landfills

While the primary role of New Mexico landfills is the permanent storage of waste, many landfills also remove recyclable materials from the landfilling stream and sort or bundle them for recycling. Of the 28 landfills surveyed for this report, 22 offer some sort of recycling service. These services range from collecting recyclables on site or at transfer stations, bailing household recyclables for processing at other facilities, mulching yard trimmings, and collecting special materials like white goods, electronic waste, and motor oil for recycling. Of the landfills surveyed, 25 reported the tonnage of waste they accepted in 2010, reporting an average of 85,215 tons landfilled per facility, across all waste types.

Tables 1 and 2 below show the tons of landfilled and recycled materials, respectively, that were processed at New Mexico landfills in 2010. As shown in the right-most column of both tables, the number of landfills reporting tonnages for each material type varied significantly. The tables below only contain average tonnage estimates for material types that were reported by at least two landfills. The recycling tonnages noted below only reflect materials collected through landfills, and do not include recycling that is not captured through landfills.

Table 1: Average tons of landfilled materials processed at New Mexico landfills in 2010, by material type

Landfilled Material	Tons Landfilled in 2010	Number of Landfills Reporting
Commercial waste	1,065,647	20
Residential waste	952,495	20
Mixed MSW ^a	340,632	6
Construction debris	240,206	15
Sludge	7,261	5
Clean fill	49,587	5

^a Mixed municipal solid waste from both residential and commercial sources.

Table 2: Average tons of recyclable materials processed at New Mexico landfills in 2010, by material type

Recycled Material	Tons Processed in 2010	Number of Landfills Reporting
Aluminum cans	4	2
Cardboard	734	7
Paper	207	4
Mixed plastics	49	4
Mixed metals	2357	11
Mixed recycling (Single stream residential)	25518	4
Tires	4122	14
Yard trimmings	44854	14
Electronic scrap	60	3
Motor oil	40	3
Batteries	5	2

Setting Rates at Landfills for Recyclable Items

The landfills that collect materials for recycling have an opportunity to encourage customers to recycle rather than landfill their waste by making recycling tipping rates lower than landfill tipping rates. The survey found that most New Mexico landfills that collect materials for

Most New Mexico landfills that collect materials for recycling do not charge tipping fees for recyclable materials.

recycling do not charge tipping fees for recyclable materials, with only two landfills charging recycling tipping fees for common household recyclables. Of those, the Los Alamos County Eco Station charged lower tipping fees for recyclable materials while the Cerro Colorado Landfill charged the same tipping fees for accepting materials for landfilling or recycling. More frequently, landfills will charge a rate per ton for

recycling materials such as yard trimmings and greenwaste, appliances, and tires. Of the ten landfills that diverted yard trimmings and other greenwaste from landfills, four landfills reported that they charged customers to collect yard trimmings for composting or chipping, generally at lower rates than they charged per ton for landfilling MSW; a list of the eight landfills that

accepted yard trimmings for free or at a discount rate is contained in Table 3. A detailed table of each landfill’s household recycling and yard trimming rates is contained in Appendix C.

Table 3: Yard trimming tipping rates for landfills that charge less to collect and/or process yard trimmings for recycling rather than landfilling

Facility Name	Yard Trimming Tip Rate (\$/ton unless otherwise noted)	Landfill Tip Rate (\$/ton unless otherwise noted)
Butterfield Trail Regional Landfill	No charge	\$25/Ton
Caja del Rio Landfill	\$20/ton	\$32.50-\$42.50 depending on the vehicle size
City of Socorro Landfill (permitted)	No charge	\$30/ton
Clovis Regional Solid Waste Facility	\$18/ton	\$30/ton
Eddy County Sandpoint Landfill	No charge	\$24/ton for waste generated inside Eddy County, \$36/ton for waste generated outside Eddy County
Estancia Valley Regional Landfill	No charge (residential); \$45 (commercial)	\$45/ton
Lea County Landfill	\$34/ton	\$34/ton
Los Alamos County Eco Station (closing)	\$37/ton	\$45/ton
Raton Landfill and Proposed Transfer Station (closing)	No charge	\$20/ton
Rio Rancho Landfill	\$30.50/ton	\$30.50/ton
Roswell Landfill	\$25/ton	\$25/ton
San Juan County Landfill	\$25.00/unit for large tree stumps	\$4.25/cubic yard (loose); \$5/cubic yard (compact)
Sandoval County Landfill & Composting Facility	\$3.25/load (self-hauled, county resident), \$4.25/load (self-hauled, non-county resident); \$15.25 (county commercially-hauled); \$17 (non-county commercially hauled)	\$24/ton in-county or \$25/ton non-county rates apply.
Sierra County Main Landfill (closing)	\$3.15/cubic yard	\$3.15/cubic yard

Population Served and Per-Capita Waste

The survey sought to identify the estimated population served by each landfill. However, because complete information on population was not available by many landfill managers, population estimates were developed for many landfills based on the cities, counties, and regions they covered, as reported by landfill managers. Twenty (20) landfills reported residential waste, totaling 952,495 tons, which is 47% of the total tonnage landfilled at those 20 landfills. For 19 of these landfills we have a population estimate. For these 19 landfills, the average per capita residential disposal rate is 0.702 tons. If we extrapolate this information over the state as a comparison we arrive at a similar number. The total landfilled tonnage reported from all landfills is 1,644,798 tons. Based on the assumption that 47% of the material is residential the

approximate residential disposal is 805,951 tons. Assuming that 15% of the population reside in multifamily homes and are therefore included in commercial waste the residential population of New Mexico is 1,700,000. Based on these assumptions, the statewide residential per capita disposal is 0.474 tons.

Avoided Disposal and Commodity Recycling Revenue Potential

In 2010 the state of New Mexico buried 1,644,000 tons of MSW garbage at an average cost of \$31.29 per/ton. The total cost of landfilling the material was approximately \$51 million dollars paid for through municipal general fund taxes and fees. Based on EPA’s 2010 report by Franklin Associates, the waste characterization breakdown notes that approximately 54% of all material in landfills is made up of three commodities (34% paper, 12% plastic and 8% metal). Through recycling, these commodities could have been recovered by municipalities or private entities and sold.

Based on national averages cited in the February 2012 Recyclenet Report, the state of New Mexico buried \$168 million dollars in vital commodity materials. The value of commodity materials can vary greatly depending on the quality, consistency of the material and the current market price. *Average prices used in Tables 4 and 5 reflect average per ton for sorted, prepared materials packaged and ready for shipment in typical truckload quantity.* The collection, processing, conversion and manufacturing of these resources has the potential to create thousands of reuse and recycling industry jobs as well as, exponential tax revenue for the state. The waste disposal cost of \$51 million dollars and the lost revenue opportunity through recycling of \$168 million dollars are great reasons to take recycling seriously.

Figure 7: Franklin Associates 2010 EPA waste characterization breakdown

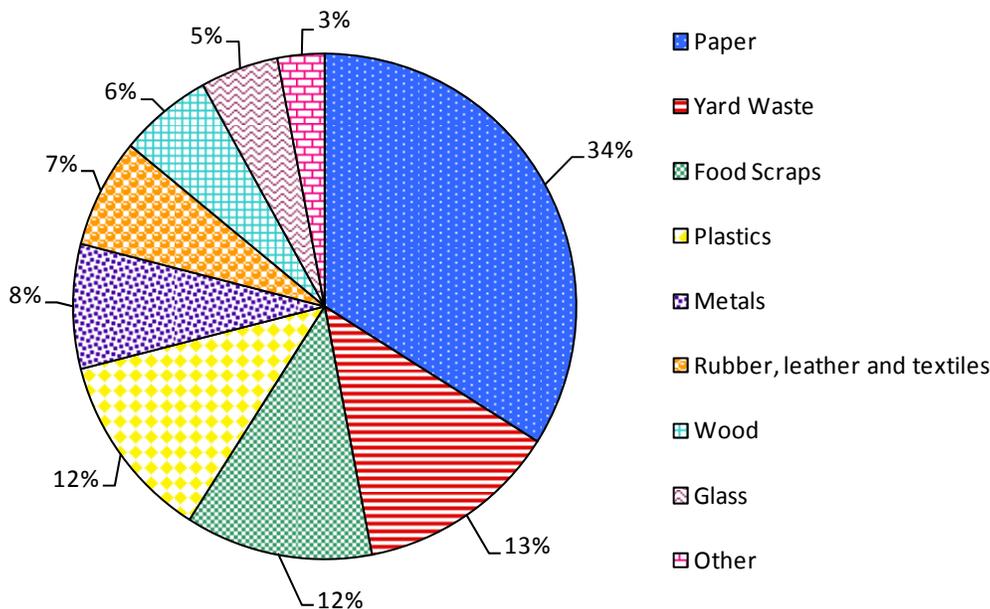


Table 4: New Mexico estimated revenue potential from recovered commodity materials currently landfilled (These numbers are for waste only. Further this is based on commodity material pricing as of February 2012)

	Total 2010 Tonnage	Value Range per/ton	Value or cost Estimate per/ ton <i>(based on Recyclenet Report Feb 2012)</i>	Total Cost to the State of New Mexico
Paper	559,231.32	\$27-\$193	\$100	\$55,923,132.00
Plastic	197,375.76	\$280-\$860	\$450	\$88,819,092.00
Metal*	131,583.84	\$150-\$1,900	\$180	\$23,685,091.20
				\$168,427,315.20

*** Assuming majority of metals are considered scrap metal rather than highly valued aluminum.**

Jobs, Economics and Energy Conservation Associated with Recycling

There are several economic studies that detail the value of recycling in regard to direct and indirect jobs. It is essential to note that the recycling sector has grown by 8% since 2005 (US Department of Labor Bureau of Labor Statistics, 2010), pays on average \$19/hr and creates full-time positions.

On average, for every 1 job in land-filling there are 5 in recycling through the material processing and re-manufacture chain (US EPA “US Recycling Economic Information Study” conducted by the Institute for Local Self Reliance, 2001). For that one job created in the recycling industry, there were another 1.4 jobs created through associated economic activity (“The Economic Impact of Recycling”, South Carolina Department of Commerce, 2006).

Another recycling jobs calculator created by the Institute for Local Self Reliance (ILSR) shows that for every 1,000 tons of new recyclables collected equates to 10 jobs. According to the NM 2010 Solid Waste report 1,953,643 tons of MSW (waste and recyclables) were collected and 285,546 tons were recycled, for an official 2010 recycling rate of 14.62%. If New Mexico increased recycling 17 percentage points up to the national average of 32%, the state would divert an additional 336,000 tons of recyclable material. Based on ILSR assumptions this additional tonnage would create 336 direct recycling and reuse industry jobs retained along the life cycle of collection, processing, transportation and re-manufacturing of recycled products. Plus an additional 470 new jobs through associated economic activity support industries. With that 17-point overall increase, approximately 90,640 MTCO₂E of GHG emissions would be avoided and 1,275,456 Million BTUs of total energy would be saved (the equivalent of 11,891 households’ annual energy consumption). A 2011 study by the Institute for Scrap Recycling Industries found 982 direct and indirect jobs located in New Mexico in their examination of the scrap brokering and re-manufacture supply and processing chain.

New Mexico Commodity Recycling

According to the New Mexico Environment Department 2010 Annual Solid Waste Report, 285,000 tons of materials were recycled, approximately 200,000 tons of which were revenue producing commodity materials (paper, plastic and metal). Based on average US commodity pricing from the May 2011 Recyclenet Report, these commodities produced revenue of approximately \$168 million dollars for local municipalities, private entities and regional landfills.

Table 5: New Mexico recycling by commodity material (tonnages are based on 2010 NMED Annual Report, commodity values are based on February 2012)

	Total Tonnage	Value Range per/ton*	Value Estimate per/ton <i>(based on Recyclenet Report February 2012)</i>	Total Cost to the state of New Mexico
	138,649	\$27-\$193	\$100	\$13,864,900.00
Plastic	2,299	\$280-\$860	\$450	\$1,034,550.00
Metal	57,606	\$150-\$1,900	\$180	\$10,369,080.00
				\$25,268,530.00

Landfill Revenue and Expenses

Eleven of the landfills surveyed reported their estimated revenue for 2010, with average revenue of \$1,991,000. The survey also asked landfill managers to report their expenses for 2010; 13 landfills provided this information, with average expenses of \$1,445,000. Additionally, two landfills

The 13 landfills that reported financial information reported an average of \$1,445,000 in annual expenses for 2010.

reported receiving additional subsidies and grants in 2010: the Raton Landfill received a \$200,000 severance tax grant to develop a transfer station and the Tucumcari Landfill received a grant of \$650,000 to aid in the development of a new landfill site.

Closed and Closing Landfills

The results of the landfill survey showed that three landfills closed recently and another six landfills are planning to close within the next six years, as shown in Table 6. Of the closed landfills surveyed, Sierra County Main Landfill closed on December 31, 2010, while Pie Town and Quemado Landfills both closed recently, although their exact closing dates were not provided. Tucumcari Landfill closed on July 5, 2011, but a new landfill owned by the City of Tucumcari opened on the same day and began receiving the waste that had been sent to the old landfill. Of the landfills closing in the next few years, Los Alamos County Eco Station plans to close between six months and one year after the survey was conducted, City of Truth or Consequences Landfill (Sierra County Landfill) plans to close in August 2012, and Rio Rancho Landfill plans to close in 2018. The expected closing dates for two landfills, De Baca County Landfill and Raton Landfill and Proposed Transfer Station, were not provided.

Only two closed or closing landfills provided information on the reason for closing the landfill. De Baca County Landfill is planning to close because the ground water is too shallow, while Los Alamos County Eco Station is planning to close because the landfill is full.

Finally, all of the closed and closing landfills plan to transport the waste that would have been disposed of at their landfill to other landfills, either directly or via transfer stations. Only one landfill, Tucumcari Landfill, sent their waste to a newly constructed landfill: the City of Tucumcari Landfill.

Table 6: Closed and closing landfills in New Mexico

Facility Name	Actual or Scheduled Closing Date	Reason for Closing	Plans for Waste Disposal After Closing
City of Truth or Consequences Landfill (Sierra County Landfill)	August 2012	Unknown	Waste will be brought to a transfer station.
De Baca County Landfill	Unknown	The water is too shallow about the last part of this year.	Waste will be brought to a transfer station.
Los Alamos County Eco Station	Six months to one year after survey was conducted	Landfill is full	The majority of waste will be transported to the Valencia County Landfill and a small percentage to the Rio Rancho Landfill.
Pie Town Landfill	Unknown, already closed	Unknown	Currently transporting waste to Blue Hills Environmental in St. Johns, Arizona at \$35/ton plus \$500 haul fee.
Quemado Landfill	Unknown, already closed	Unknown	Currently transporting waste to Blue Hills Environmental in St. Johns, Arizona at \$35/ton plus \$500 haul fee.
Raton Landfill and Proposed Transfer Station	Unknown, planned and plan is approved	Unknown	Transfer station and hauling.
Rio Rancho Landfill	2018	Unknown	Eco center at Rio Rancho, landfill at Valencia Regional Landfill.
Sierra County Main Landfill	December 31, 2010	Unknown	Transfer to neighboring landfill.
Tucumcari Landfill	July 5, 2011	Unknown	A new landfill owned by the City was opened on the same day that the old landfill closed; all waste was immediately sent to the new landfill.

SECTION 3—BENEFITS OF RATE INCENTIVES

Rate incentives are strategies employed by communities to drive-down disposal rates by putting a price on the amount of waste each resident or household generates. Under rate incentive programs, such as Pay-As-You-Throw (PAYT), residents are charged for the amount of municipal solid waste, creating a direct economic incentive to recycle more and to generate less waste. Commercial tonnages were requested in the survey in order to differentiate between commercial and residential waste collected. However, this study does not examine the options available for commercial PAYT programs. The benefits of rate incentives are numerous, but several of the most common benefits reported by communities with successful rate incentive programs include:

- **Increased Diversion and Recycling.**

Under many residential waste collection schemes, waste collection is financed through local taxes or other flat fees per residence. Thus, the price of waste collection for residents is completely detached from the quantity of waste they generate, creating no disincentive to generate and landfill more waste. By creating a direct relationship between the amount of waste a household generates and the amount of money they pay for disposal, residents save money by reducing the

By creating a direct relationship between the amount of waste a household generates and the amount of money they pay to have it collected for disposal, residents save money by reducing the amount of waste they generate and by recycling as many materials as possible.

amount of waste they generate and by recycling as many materials as possible. Rate incentives have successfully increased diversion and recycling in thousands of communities in the U.S. According to U.S. EPA 2010 Summer Bulletin, PAYT communities dispose of 45% less waste than non-PAYT communities. This means 45% less paid in landfill fees. Correspondingly recycling revenues increase.

- **Increased Landfill Life.** As rate incentives decrease the rate of waste disposed, landfills can stay open and accept waste for longer, as less waste will be landfilled annually. This helps delay or avoid the costs associated with shutting down existing landfills, finding new landfill sites, or sending waste to other landfills.
- **Communities Can Adjust Rates and Cover Costs.** Should communities be unable to completely cover the cost of waste and recyclables collection and processing, waste collection rates can be easily adjusted to quickly raise revenue.
- **Decreased Tipping Costs.** When the price residents pay for waste collection depends on the amount of waste they dispose of, the revenue raised by municipalities through waste collection will more-directly match the cost per ton of waste collection and processing. For municipalities that own landfills, they can then decrease the tipping costs at the landfill.
- **Decreased Greenhouse Gas Emissions.** As organic materials decay in landfills, they release methane, a potent greenhouse gas. However, diverting waste from landfills for recycling has two-fold greenhouse gas reduction benefits: (1) methane emissions from

landfills decrease and (2) the energy, and, in turn, greenhouse gas emissions associated with manufacturing new goods is decreased by using recycled inputs.

- **Job Development Opportunities.** An average of 14 people were employed at the landfills surveyed for this report and an average of 11 people were employed by public and private haulers that bring waste to the landfills. Although some jobs may be lost due to handling of decreased waste materials, for each lost waste sector job there will be 5 to 6.4 jobs created in recycling and recycling related sectors. As municipalities increase diversion through rate incentives, additional employees will likely be needed for hauling and processing, converting and manufacturing, distributing and selling new recycled products.

SECTION 4—BARRIERS TO RATE INCENTIVES

While rate incentive programs offer several clear benefits to communities, there are barriers which must be addressed to ensure that the program is successful. The following list of barriers to rate incentives are based on the feedback provided by landfill managers in the survey and information from other communities that have developed rate incentive programs:

- **Illegal Dumping.** The primary barrier to enacting rate incentives, as identified in the survey of landfill managers, was illegal dumping. One manager noted that he felt illegal dumping would increase significantly if the tipping fees at his landfill were to increase. To address this issue, communities must carefully choose their waste collection rates to ensure that the cost of disposal to customers does not increase too significantly. Robust stakeholder outreach and education initiatives are also an important part of ensuring that illegal dumping doesn't increase under the rate incentive program. According to US EPA municipalities that are proactive see little to no continued illegal dumping due to rate incentives.
- **Political Change.** Another challenge to enacting rate incentive programs is ensuring that the program will not be severely altered or dismantled following political change. Solid waste authorities should work closely with local politicians during the development and kick-off of the program to ensure that those in power understand the importance of the program and have their concerns addressed.
- **Change to Existing System.** Like any major local government initiative, rate incentive programs can experience resistance and difficulty due to the amount of change to existing practices, infrastructure, and policies required. To mitigate these issues, communities should carefully consider all stakeholders who will be affected by the program change and address their concerns. For example, haulers will need to know how their collection process will change and how much more recyclables or less waste they can expect to collect. Likewise, landfill operators will need to be involved in the process of setting waste collection rates to ensure that their tipping fees do not over or under-charge residents or commercial haulers. Typically the best time to implement change is when a system change will occur regardless, such as a landfill closing, increased recycling collection systems or cost of service and rate increases.
- **Concerns over Increased Need for Infrastructure and Personnel.** In order to charge residents for how much waste is set out for collection, additional infrastructure is likely needed. This may come in the form of scales, trucks with volume-based carts, bag or

sticker systems, or others. Likewise, as noted above, rate incentive programs often generate additional jobs, which will require communities and private haulers to search for and hire new, qualified employees. The purchase and integration of new equipment and adjustments to staffing can be intimidating to communities as they plan for a rate incentive program. Grants and other subsidies may be available to aid in this transition.

- **Need for Education and Outreach.** As noted several times above, effective education and outreach programs can greatly mitigate the barriers to rate incentive programs. The results of the survey of landfill managers found that existing landfill management is not aware of or educated about different rate structure or incentive-based options. In general, landfill managers noted that they prefer a “weight-based” approach, but many were unsure about what was the best approach for reducing residential waste generation. In essence, most rate incentive programs use a weight-based approach, in that residents are charged depending on how many pounds of waste they dispose of. A well-executed education plan can demonstrate to landfill managers how supporting rate incentive programs align with their current preferences.

Effective education and outreach programs can greatly mitigate the barriers to rate incentive programs.

SECTION 5—STRATEGY TO DEVELOP RATE INCENTIVE PROGRAMS

An effective rate incentive program will influence resident behavior positively, increasing diversion and recycling while decreasing land filling and minimizing negative side effects, such as illegal dumping. This section is intended to provide an overview of options for the state of New Mexico.

Developing Rate Incentives. The foundation of a successful rate incentive program is choosing a rate structure that will not only cover the costs of the program, but positively influence customer behavior. Determining a tip rate for the private or municipal hauler is very different than determining the rates that the hauler or municipality is charging the consumer. The hauler or the municipality determines the rate based on the landfill tip rate, and the cost to administer the program. Each municipality incurs different costs to administer based on the level of service they provide: Drop off centers, curbside collection of waste, curbside collection of recycling and other administrative costs. Residents pay these costs either in taxes, fixed fees, private hauling fees, or a combination. Ultimately the rates that will influence resident behavior will have to be set by the private hauler or the municipality. It is not possible to have one statewide rate; however there are three potential roadmaps to a successful PAYT strategy for New Mexico. Section 6 of this study suggests different PAYT structures for hauler and municipalities.

- **Mandatory State Rate Incentive Law:** Mandatory State residential PAYT has been implemented in three states; Oregon, Washington, and Minnesota. The states require that all municipalities and their residential haulers use a rate structure, which is considered PAYT. The state of Iowa suggests that municipalities that do not reach a certain recycling rate by a certain date are required to implement PAYT.
- **Landfill Regulation:** Landfill regulation requiring private and municipal haulers to meet certain per capita disposal benchmarks. A regulation could be drafted that requires

benchmarks to be met by certain dates. If benchmarks were not met the hauler or municipality would be subject to increased tip fees or fines. This may be the simplest and cleanest approach. It allows the haulers and municipalities to develop a program that best meets their needs, but it provides an incentive and time frame to do so. No state has implemented this type of regulation, but several states have reviewed the possibility.

- **Individual Municipal Programs:** Allowing each individual municipality to implement their own PAYT program on their own time frame. This is the option taken by most states. It shifts high-level politics to the local level. This is a very slow process and requires a tremendous ongoing education effort.

Creating Pilot Examples in the State of New Mexico. *PAYT is a big ‘change’ because it changes the way individual residents pay for trash. States that have been successful with PAYT have started by creating their own case studies and examples. Municipalities often feel that they are different and unique. Therefore, it would be difficult to tell the City of Albuquerque to implement a program like the City of San Francisco. Their reaction will be ‘we are not San Francisco’. All of the above options would have a greater chance of success by first creating some pilot / test programs that are unique to New Mexico.*

Developing successful municipal-level pilot programs is an important first step towards implementing state-wide PAYT.

Example: The state of MA has been very successful with PAYT. Their approach was to create a cluster effect. In the 80’s they used a few different basic PAYT models. Initial municipalities are now surrounded by clusters of neighbor communities that have adopted similar PAYT programs. For instance, in 2007 Worcester, MA (a PAYT municipality since 1987) had a disposal rate of less than 500 lbs per capita and its neighbor Shrewsbury (not a PAYT municipality) had a disposal rate of about 1000 lbs per capita. Shrewsbury felt comfortable with the change because they knew their neighbor was successful. Today Shrewsbury’s per capita disposal is also 500 lbs per capita.

SECTION 6—STRATEGY TO CREATE SUCCESSFUL PILOT PROGRAMS

Every Municipality is Different. The first step for New Mexico to consider before deciding on any of the above options is to create some ‘homegrown’ success. Ideally, a few different municipal profiles can participate in a PAYT pilot. This will provide local credibility to the concept. This section will outline community profiles and provide steps each community can take to develop effective rate incentive programs. More detailed descriptions are included in Appendix C.

- **Community Profiles.** There are two main community profiles:
 - **Municipally Run System.** The municipally run system collects curbside—both trash and recycling—using municipal employees or a contracted hauler.
 - **Private Hauler in Combination with Drop off.** The municipality is most likely rural and provides little to no program assistance or drop offs. Residents can bring the

waste to a drop off or directly to the landfill, or contact a private hauler. Recycling can be dropped off or possibly collected by a private company.

- **Design and Rate Structure Guidelines.** Based on the two profiles (above) and the corresponding levels of service, there are several options available to build rate structures.
 - **Curbside**
 - **Curbside Automated PAYT.** Municipalities that provide curbside trash and recycling services through automated collection (both with a contracted hauler and municipal employees). This template will address both bag and bin options as the unit-based cost. It will also address conversion or partial conversion from a tax-based or fee collection system to a unit-based system using an enterprise fund. This template will provide options for single-stream recycling and dual-stream recycling as well as an option for communities that have plans to convert to single-stream. [Description with appendix outline attached]
 - **Curbside Automated or Manual Overflow PAYT.** *Municipalities that provides curbside trash and recycling services through automated and manual collection.* This template will address both bin and bag options as a unit-based cost. This rate structure will not change the current tax or fee structure. This option will provide overflow rate structures through an enterprise fund. This template will provide options for both single stream-recycling and dual-stream recycling as well as an option for communities that have plans to convert to single-stream. [Description in appendix]
 - **Drop-off**
 - *Communities that do not provide curbside collection for trash or recycling and have private haulers that pick up both automated and manually.* This template will have options for a tax and fee reduction as well as the elimination of the tip cost to the hauler. The template will also provide suggested rate structure development for the private hauler, including both bag and bin options. [Description in appendix]
 - **Dumpster**
 - *Communities that have a large common dumpster located in various areas for use by multi-family homes and residents to share.* This template will address remote locations with difficult access and rural areas with limited resources waste disposal systems. It is primarily enforced by an honor and peer pressure system. Using colored trash bags allows the appointed dumpster monitor to easily notice improper usage. The monitor can provide verbal warning and/or report non-compliant residents directly to the city. This system is effective because residents are influenced by each other and do not want to appear to be breaking the law.

- **Determining Eminent Need.** The largest driver for PAYT is eminent need. The most common examples of eminent need are major changes that will cause a sudden increase in cost, or a penalty to the municipality:
 1. A pending law or state regulation requiring a certain recycling rate by a certain date;
 2. The closing of a regional landfill;
 3. A severe decrease in landfill capacity that is driving tip rates higher;
 4. A moratorium on landfills or Waste-to-Energy facilities;
 5. Increasing fuel and handling costs;
 6. Solid waste program not covering costs.

PAYT is a great tool for covering the true cost of trash.

The state of New Mexico has relatively low tip rates and minimal pressure from the other factors. The eminent need for the pilot communities could relate to some change in their current system. For instance, are there any communities that are about to change municipal contracted haulers or getting ready to switch to single-stream recycling? Are there any communities building a new drop-off facility or any that will be replacing their old trash bins? Are there communities with near-term landfill closures?

Municipalities with curbside trash, that do not offer curbside recycling, could use a PAYT structure to increase revenue and cover the cost of curbside recycling pick-up or cover the cost of other recycling programs.

Eminent need could also relate to the municipal budget or the need for updated recycling services. Many municipal budgets do not cover the full cost of waste either in a curbside program or in a drop-off program. Whether the cost of waste is covered by general fund taxes or fees, often the trash allotment is underestimated or not updated. PAYT is a great tool for covering the true cost of trash. Instead of raising a tax or a fee across the board to cover the shortfall, a two-tiered PAYT structure could be used to cover the difference. The two-tiered structure would allow residents that use more to pay more of their share. . Municipalities with curbside trash, that do not offer curbside recycling, could use a PAYT structure to increase revenue and cover the cost of curbside recycling pick-up or cover the cost of other recycling programs (hazardous waste collection, reuse centers, glass collection). Likewise municipalities with drop-offs could increase recycling services and cover the cost of the new services through a two-tiered PAYT structure. PAYT is extremely flexible and can be adapted to all municipal situations.

Education and Outreach

Section 4 contains a list of barriers to rate incentive programs, many of which can be mitigated through effective education and outreach programs. It is important that a thorough list of stakeholders be developed so each group can receive the information and guidance it needs to make the rate incentive program a success. Conversely, stakeholder groups will vary for each community—landfill managers, community leaders, and citizens should not assume that their needs will be addressed and should reach out to those in charge of setting up the rate incentive program.

The “Hub and Spoke” Model

PAYT is a great solution to waste diversion; however it is important that the proper infrastructure for recycling be established. New Mexico is a large state with minimal population and it is important that there is a collaborative plan and path forward. The Hub and Spoke model is a solid waste management system with a centralized processing facility (hub) providing services to smaller surrounding communities (spokes). This model promotes strategic placement of recycling infrastructures such as collection trailers or roll-off containers to aid in the recycling of materials in more rural areas.

APPENDIX A – LANDFILL SURVEY QUESTIONS

INITIAL SURVEY QUESTIONS

1. Facility name
2. Facility address
3. Contact name
4. Title
5. E-mail
6. Phone
7. Date
8. List the rates for all waste types accepted by your facility. Note units (e.g., \$/ton).
 - a. Commercial waste
 - b. Construction debris
 - c. Household waste
 - d. Household hazardous waste
 - e. Large items (e.g., mattresses, appliances)
 - f. Yard trimmings
 - g. Other (specify waste type)
9. If known, list the total amount of each waste type collected in 2010. Note units (e.g., tons, cubic yards).
 - a. Commercial waste
 - b. Construction debris
 - c. Household waste
 - d. Household hazardous waste
 - e. Large items (e.g., mattresses, appliances)
 - f. Yard trimmings
 - g. Other (specify waste type)
10. Does your facility provide recycling services?
11. List the rates for all recyclable materials accepted by your facility. Note units (e.g., \$/ton).
 - a. Cans
 - b. Cardboard
 - c. Construction debris
 - d. Glass
 - e. Mixed plastics
 - f. Mixed metals
 - g. Mixed recycling
 - h. Paper
 - i. Tires
 - j. Yard trimmings

- k. Other (specify waste type)
12. If known, list the total amount of each recyclable material collected in 2010. Note units (e.g. tons, cubic yards).
 - a. Cans
 - b. Cardboard
 - c. Construction debris
 - d. Glass
 - e. Mixed plastics
 - f. Mixed metals
 - g. Mixed recycling
 - h. Paper
 - i. Tires
 - j. Yard trimmings
 - k. Other (specify waste type)
 13. How are your facility's rates set (e.g., city council, board). Please explain.
 14. How have your facility's rates changed over the past 10 years, if at all?
 15. What services does your facility provide?
 - a. Residential waste
 - b. Commercial waste
 - c. Special waste
 - d. Recycling
 - e. Other (list other services on separate lines)
 16. How many full time employees does your facility employ? Please break down by service or division, if possible.
 17. What was your facility's total annual revenue in 2010?
 18. What were your facility's total annual expenses in 2010?
 19. Describe any savings your facility realized through subsidies, variances, etc. in 2010.
 20. What services do your haulers provide?
 - a. Residential waste
 - b. Commercial waste
 - c. Curbside pick-up
 - d. Recycling
 - e. Other (list other services on separate lines)
 21. How many full time employees do your haulers employ? Break down by service/division, if possible.
 22. What approach do your facility and/or hauler use to charge customers? Check all that apply.
 - a. Cart based/volume based
 - b. Bag based

- c. Weight based
 - d. Material specific
 - e. Other (please explain)
23. Rate the following approaches in terms of their effect on customer behavior:
 - a. Cart based/volume based
 - b. Bag based
 - c. Weight based
 - d. Material specific
 24. Which approach do you believe has the greatest effect on customer behavior and why?
 25. Do you have any examples of successful strategies used in New Mexico for reducing waste? Please explain.
 26. Do you believe rate incentives are an effective strategy for reducing waste? Please explain.
 27. What do you believe are the primary barriers to enacting rate incentives in New Mexico?
 - a. Customer resistance (e.g., illegal dumping)
 - b. Institutional barriers (e.g., resistance from rate setting authority)
 - c. Other (please explain)
 28. Is your landfill closed or planning to close? If so, when and why?
 29. If your landfill is closed or closing, what are the plans for waste disposal in your region?

FOLLOW-UP QUESTIONS

1. Do you have values for the total amount of each waste type you collected in 2010 (i.e., commercial, residential, C&D)?
 - a. If not, do you have an estimate of roughly the commercial and residential tonnages you collected in 2010?
2. How does your landfill define commercial and residential waste? For instance, is waste that is picked up from multifamily homes using a dumpster and brought by a commercial truck to the landfill considered “residential” or is it mixed with other commercial material and considered “commercial?” Or do different haulers only bring in residential or commercial waste?
3. Do you have values for the total amount of each recyclable material type you collected in 2010 (i.e., cardboard, mixed metals, plastics)?
4. Does your landfill collect yard waste as a separate stream, or would it be mixed with other types of waste (MSW, residential)?
 - a. If you don’t collect yard waste, do you know if the yard waste is going somewhere else, such as a separate compost facility?
5. Do you know the population or number of households that are using the landfill?
 - a. If not, do you know the cities, counties, and/or regions using the landfill?
6. Is residential waste is picked up by haulers, dropped off by residents, or both?
 - a. If both, what is the estimated percentage of each?
7. What is the percentage of residential waste brought to the landfill from automated collection vs. manual collection?

APPENDIX B – LANDFILL SNAPSHOTS

Butterfield Trail Regional Landfill	
Area served	Luna County
Estimated population	32,000
Total waste reported in 2010	55,771 tons
Estimated 2010 per capita disposal rate	1.74 tons/person/year
Facility owner	City of Deming
Rate setting authority	City of Deming ordinance
Rate structure	Weight based
Frequency of rate changes	Unknown
Percentage of customers served by haulers	100%
Percentage of drop-off customers	0%
Collection method	Manual
Recycling services offered	Batteries, cardboard, construction debris, glass, mixed metals, mixed plastics, motor oil, paper, tires, yard trimmings
Number of landfill employees	7
2010 Rates	
• Commercial waste	\$25/ton
• Residential waste	\$25/ton
• Construction & demolition debris	\$25/ton
• Large items	\$25/ton
• Sludge	\$25/ton
• Petroleum contaminated soil	\$33/ton

Caja del Rio Landfill	
Area served	Santa Fe County
Estimated population	143,937
Total waste reported in 2010	157,563 tons
Estimated 2010 per capita disposal rate	1.09 tons/person/year
Facility owner	Santa Fe Solid Waste Management Agency
Rate setting authority	Solid Waste Management Agency Board
Rate structure	Weight based
Frequency of rate changes	Not reported
Percentage of customers served by haulers	Not reported
Percentage of drop-off customers	Not reported
Collection method	Not reported
Recycling services offered	Not reported
Number of landfill employees	41
2010 Rates	
• Commercial waste	\$32.50-42.50/ton (depending on vehicle size)
• Residential waste	\$32.50-42.50/ton (depending on vehicle size)

Caja del Rio Landfill	
• Minimum load charge	\$5/load
• Uncovered load surcharge	\$25/load
• Yard trimmings	\$20/ton

Camino Real Landfill	
Area served	Portions of Las Cruces, El Paso, and Juarez
Estimated population	639,014
Total waste reported in 2010	546,481
Estimated 2010 per capita disposal rate	0.86 tons/person/year
Facility owner	Camino Real Environmental Center, Inc.
Rate setting authority	Not reported
Rate structure	Volume based
Frequency of rate changes	Rates increase annually
Percentage of customers served by haulers	Not reported
Percentage of drop-off customers	Not reported
Collection method	Not reported
Recycling services offered	Cardboard, mixed plastics, mixed metals, paper
Number of landfill employees	23
2010 Rates	
• Commercial waste	\$12.28/cubic yard
• Residential waste	\$12.28/cubic yard
• Construction & demolition debris	\$14.46/cubic yard
• Large items	\$12.28/cubic yard
• Yard trimmings	\$12.28/cubic yard

Cerro Colorado Landfill	
Area served	City of Albuquerque
Estimated population	504,949; 170,000 households
Total waste reported in 2010	402,012 tons
Estimated 2010 per capita disposal rate	0.80 tons/person/year
Facility owner	Albuquerque Solid Waste Management Department
Rate setting authority	City council
Rate structure	Weight based
Frequency of rate changes	Not reported
Percentage of customers served by haulers	100%
Percentage of drop-off customers	0%
Collection method	Automated
Recycling services offered	Office paper, mixed recyclables, glass, yard trimmings
Number of landfill employees	24

Cerro Colorado Landfill	
2010 Rates	
• Commercial waste	\$30/ton
• Residential waste	\$30/ton
• Large items	\$30/ton
• Tires	\$116.48/ton
• Petroleum contaminated soil	\$47.25/ton

City of Socorro Landfill	
Area served	Socorro County
Estimated population	18,092
Total waste reported in 2010	9,217 tons
Estimated 2010 per capita disposal rate	0.51 tons/person/year
Facility owner	City of Socorro
Rate setting authority	City of Socorro ordinance
Rate structure	Hybrid
Frequency of rate changes	Rates have increased slightly for residential pick-up over the past 10 years, but few, if any, changes otherwise
Percentage of customers served by haulers	Approximately 50%
Percentage of drop-off customers	Approximately 50%
Collection method	Automated
Recycling services offered	Cardboard, mixed plastics, motor oil, newspaper, office paper, yard trimmings
Number of landfill employees	10
2010 Rates	
• Commercial waste	\$30/ton
• Residential waste	\$30/ton, city residents pay monthly fee per can
• Construction & demolition debris	\$35/ton
• Large items	\$1/appliance
• Tires	\$1/light-duty vehicle tire, \$3/heavy-duty vehicle tire

City of Truth of Consequences Landfill (Closing)	
Area served	Sierra County
Estimated population	11,900
Total waste reported in 2010	8,097 tons
Estimated 2010 per capita disposal rate	0.68 tons/person/year
Facility owner	Sierra County
Rate setting authority	City
Rate structure	Volume based
Frequency of rate changes	Unknown
Percentage of customers served by haulers	Unknown

City of Truth of Consequences Landfill (Closing)	
Percentage of drop-off customers	Unknown
Collection method	Unknown
Recycling services offered	Mixed metals, tires
Number of landfill employees	11
2010 Rates	
• Commercial waste	\$3.15/cubic yard
• Residential waste	\$3.15/cubic yard
• Construction & demolition debris	\$3.15/cubic yard

Clovis Regional Solid Waste Facility	
Area served	Primarily City of Clovis; also City of Melrose and neighboring counties
Estimated population	73,632
Total waste reported in 2010	91,551 tons
Estimated 2010 per capita disposal rate	1.24 tons/person/year
Facility owner	City of Clovis
Rate setting authority	Revenue rate committee makes recommendations to city council
Rate structure	Weight based
Frequency of rate changes	Rates are evaluated every 2 years and were last changed in 2011
Percentage of customers served by haulers	Majority of customers are served by haulers
Percentage of drop-off customers	Drop-off customers represent a small portion
Collection method	Primarily automated
Recycling services offered	Cardboard, mixed plastics, mixed metals, tires, yard trimmings
Number of landfill employees	8 employees
2010 Rates	
• Commercial waste	\$30/ton
• Residential waste	\$30/ton, \$3/trip for drop-off by City of Clovis residents
• Construction & demolition debris	\$11/ton
• Tires	\$2/tire - \$10/tire or \$200/ton
• Yard trimmings	\$18/ton

Corralitos Regional Landfill	
Area served	Dona Ana County
Estimated population	206,419
Total waste reported in 2010	121,698 tons
Estimated 2010 per capita disposal rate	0.59 tons/person/year
Facility owner	South Central Solid Waste Authority
Rate setting authority	Solid Waste Authority Board resolution

Corralitos Regional Landfill	
Rate structure	Weight based
Frequency of rate changes	Rates have remained the same for over 10 years
Percentage of customers served by haulers	Approximately 80%
Percentage of drop-off customers	Approximately 20%
Collection method	Automated
Recycling services offered	Single-stream recycling, yard waste diversion run by city
Number of landfill employees	11
2010 Rates	
• Commercial waste	\$24.80/ton at landfill, \$30.70/ton at transfer stations
• Residential waste	\$24.80/ton at landfill, \$30.70/ton at transfer stations
• Construction & demolition debris	\$24.80/ton at landfill, \$30.70/ton at transfer stations
• Large items	\$24.80/ton at landfill, \$30.70/ton at transfer stations

De Baca County Landfill (Closing)	
Area served	De Baca County
Estimated population	1,907
Total waste reported in 2010	2,840 tons
Estimated 2010 per capita disposal rate	1.49 tons/person/year
Facility owner	De Baca County
Rate setting authority	County commissioners
Rate structure	Flat fee
Frequency of rate changes	Unknown
Percentage of customers served by haulers	Unknown
Percentage of drop-off customers	Unknown
Collection method	Unknown
Recycling services offered	Mixed metals, waste oil, paint
Number of landfill employees	2
2010 Rates	
• Commercial waste	No charge in 2010
• Residential waste	No charge in 2010
• Construction & demolition debris	No charge in 2010
• Large items	No charge in 2010
• Yard trimmings	No charge in 2010
• Tires	No charge in 2010

Eddy County Sandpoint Landfill	
Area served	Primarily Eddy County
Estimated population	52,706
Total waste reported in 2010	62,273 tons
Estimated 2010 per capita disposal rate	1.18 tons/person/year
Facility owner	Eddy County
Rate setting authority	Eddy County and City of Carlsbad
Rate structure	Hybrid
Frequency of rate changes	Rates are evaluated annually but have remained the same for over 7 years
Percentage of customers served by haulers	Approximately 83%
Percentage of drop-off customers	Approximately 17%
Collection method	Manual
Recycling services offered	Polypipe, scrap metal, tires, yard trimmings
Number of landfill employees	8
2010 Rates	
<ul style="list-style-type: none"> Commercial waste 	\$24/ton for waste generated inside Eddy County, \$36/ton for waste generated outside Eddy County
<ul style="list-style-type: none"> Residential waste 	\$24/ton for waste generated inside Eddy County, \$36/ton for waste generated outside Eddy County, pick-up customers pay a fee per container

Estancia Valley Regional Landfill	
Area served	Not reported
Estimated population	19,000
Total waste reported in 2010	3,868 tons
Estimated 2010 per capita disposal rate	0.20 tons/person/year
Facility owner	Estancia Valley Solid Waste Authority
Rate setting authority	Estancia Valley Solid Waste Authority Board
Rate structure	Weight based
Frequency of rate changes	Rates were recently increased by 30% after construction of a new \$1 million 6-acre cell.
Percentage of customers served by haulers	Approximately 90%
Percentage of drop-off customers	Approximately 10%
Collection method	Automated
Recycling services offered	Mixed metals, tires, yard trimmings
Number of landfill employees	5
2010 Rates	
<ul style="list-style-type: none"> Commercial waste 	\$45/ton
<ul style="list-style-type: none"> Residential waste 	\$45/ton
<ul style="list-style-type: none"> Construction & demolition debris 	\$25/ton

Estancia Valley Regional Landfill	
• Tires	\$300/ton
• Yard trimmings	\$45/ton for commercial, no charge for residential
• Sludge	\$54/ton
• Clean fill	\$10/ton

Lea County Landfill	
Area served	Primarily Lea County
Estimated population served	60,232
Total waste reported in 2010	63,248 tons
Estimated 2010 per capita disposal rate	1.05 tons/person/year
Facility owner	Lea County Solid Waste Authority
Rate setting authority	Lea County
Rate structure	Hybrid
Frequency of rate changes	Not reported
Percentage of customers served by haulers	Approximately 95%
Percentage of drop-off customers	Approximately 5%
Collection method	Manual
Recycling services offered	Tires
Number of landfill employees	5
2010 Rates	
• Commercial waste	\$34/ton
• Residential waste	\$34/ton
• Construction & demolition debris	\$45/ton
• Large items	\$34/ton
• Yard trimmings	\$34/ton
• Tires	\$2/tire, \$5/tire, or \$15/tire, depending on tire size

Los Alamos County Eco Station (Closing)	
Area served	Los Alamos County
Estimated population served	18,150
Total waste reported in 2010	12,281 tons
Estimated 2010 per capita disposal rate	0.68 tons/person/year
Facility owner	Los Alamos County
Rate setting authority	Los Alamos County Council
Rate structure	Weight based
Frequency of rate changes	Sporadically
Percentage of customers served by haulers	Unknown
Percentage of drop-off customers	Unknown
Collection method	Unknown

Los Alamos County Eco Station (Closing)	
Recycling services offered	Cardboard, construction debris, mixed metals, tires, yard trimmings
Number of landfill employees	17
2010 Rates	
• Commercial waste	\$45/ton
• Residential waste	\$45/ton
• Construction debris	\$45/ton
• Household hazardous waste	Free to residents
• Large items	Free to residents
• Yard trimmings	\$37/ton

Mesa Verde C&D Landfill	
Area served	Otero County
Estimated population served	62,776
Total waste reported in 2010	49,458 tons
Estimated 2010 per capita disposal rate	0.79 tons/person/year
Facility owner	Privately owned
Rate setting authority	Landfill owner/operator
Rate structure	Weight based
Frequency of rate changes	Not reported
Percentage of customers served by haulers	Not applicable
Percentage of drop-off customers	Not applicable
Collection method	Not reported
Recycling services offered	Clean construction & demolition debris
Number of landfill employees	1
2010 Rates	
• Construction & demolition debris	\$20.30/ton
• Clean fill	\$11.50/ton

Northeastern New Mexico Regional Landfill	
Area served	Colfax County, Harding County, and part of the City of Las Vegas
Estimated population served	16,507
Total waste reported in 2010	29,168 tons
Estimated 2010 per capita disposal rate	1.78 tons/person/year
Facility owner	Northeastern New Mexico Regional Landfill, LLC
Rate setting authority	Landfill owner/operator
Rate structure	Hybrid
Frequency of rate changes	Rate changes are infrequent. Rates have changed from \$21/ton to \$25/ton since 1998.
Percentage of customers served by haulers	Not reported

Northeastern New Mexico Regional Landfill	
Percentage of drop-off customers	Not reported
Collection method	Not reported
Recycling services offered	None
Number of landfill employees	2
2010 Rates	
• Commercial waste	\$25/ton
• Residential waste	\$25/ton
• Large items	\$4/appliance
• Yard trimmings	\$25/ton
• Tires	\$2/tire, \$4/tire, or \$8/tire depending on tire size, or \$150/ton

Northwest New Mexico Regional Solid Waste Authority (Red Rocks Regional Landfill)	
Area served	All of McKinley and Cibola counties in New Mexico and large portions of Apache and Navajo counties in Arizona
Estimated population served	97,549
Total waste reported in 2010	68,422 tons
Estimated 2010 per capita disposal rate	0.70 tons/person/year
Facility owner	Northwest New Mexico Regional Solid Waste Authority
Rate setting authority	Northwest New Mexico Regional Solid Waste Authority Board
Rate structure	Weight based
Frequency of rate changes	Not reported
Percentage of customers served by haulers	Approximately 60-70%
Percentage of drop-off customers	Approximately 30-40%
Collection method	Primarily automated
Recycling services offered	Mixed metals, tires
Number of landfill employees	46
2010 Rates	
• Commercial waste	\$35/ton
• Residential waste	\$35/ton
• Construction & demolition debris	\$35/ton
• Large items	\$35/ton
• Yard trimmings	\$35/ton

Pie Town Landfill (Closed)	
Area served	Unknown
Estimated population served	Unknown
Total waste reported in 2010	Unknown
Estimated 2010 per capita disposal rate	Unknown

Pie Town Landfill (Closed)	
Facility owner	Catron County
Rate setting authority	Unknown
Rate structure	Flat fee
Frequency of rate changes	Unknown
Percentage of customers served by haulers	Unknown
Percentage of drop-off customers	Unknown
Collection method	Unknown
Recycling services offered	None
Number of landfill employees	Unknown
2010 Rates	
<ul style="list-style-type: none"> Residential waste 	\$72 plus tax per year to residents for unlimited use; no other rates or discounts

Quemado Landfill (Closed)	
Area served	Unknown
Estimated population served	Unknown
Total waste reported in 2010	Unknown
Estimated 2010 per capita disposal rate	Unknown
Facility owner	Catron County
Rate setting authority	Unknown
Rate structure	Flat fee
Frequency of rate changes	Unknown
Percentage of customers served by haulers	Unknown
Percentage of drop-off customers	Unknown
Collection method	Unknown
Recycling services offered	None
Number of landfill employees	Unknown
2010 Rates	
<ul style="list-style-type: none"> Residential waste 	\$72 plus tax per year to residents for unlimited use; no other rates or discounts

Raton Landfill and Proposed Transfer Station (Closing)	
Area served	Raton, parts of Colfax County
Estimated population served	7,500
Total waste reported in 2010	8,944
Estimated 2010 per capita disposal rate	1.19 tons/person/year
Facility owner	Raton City
Rate setting authority	City ordinance
Rate structure	Weight based
Frequency of rate changes	Sporadic
Percentage of customers served by haulers	Unknown
Percentage of drop-off customers	Unknown

Raton Landfill and Proposed Transfer Station (Closing)	
Collection method	Unknown
Recycling services offered	Cans, construction & demolition debris, mixed metals, tires
Number of landfill employees	10
2010 Rates	
• Commercial waste	\$20/ton
• Residential waste	\$20/ton
• Construction & demolition debris	\$10/ton
• Large items	Free
• Yard trimmings	Free
• Tires	\$1/passenger tire, \$5/commercial tire

Rio Rancho Landfill (Closing)	
Area served	Primarily the City of Rio Rancho
Estimated population served	74,188
Total waste reported in 2010	206,694 tons
Estimated 2010 per capita disposal rate	2.79 tons/person/year
Facility owner	Waste Management of New Mexico
Rate setting authority	Waste Management of New Mexico
Rate structure	Weight based
Frequency of rate changes	Annual increase of approximately \$0.50/ton
Percentage of customers served by haulers	Approximately 99%
Percentage of drop-off customers	Approximately 1%
Collection method	Automated
Recycling services offered	Cardboard, city collects curbside recycling
Number of landfill employees	8
2010 Rates	
• Commercial waste	\$30.50/ton
• Residential waste	\$30.50/ton, pick-up customers pay a monthly fee per container
• Construction & demolition debris	\$30.50/ton
• Large items	\$30.50/ton
• Yard trimmings	\$30.50/ton

Roswell Landfill	
Area served	Primarily Chaves County
Estimated population	63,622 people
Total waste reported in 2010	79,847 tons
Estimated 2010 per capita disposal rate	1.26 tons/person/year
Facility owner	City of Roswell
Rate setting authority	City council
Rate structure	Weight based

Roswell Landfill	
Frequency of rate changes	Rates last changed in 2001
Percentage of customers served by haulers	70-75%
Percentage of drop-off customers	25-30%
Collection method	Automated
Recycling services offered	Cardboard, electronic scrap, e-waste, household hazardous waste, mixed plastics, mixed metals, motor oil, newspaper, office paper, paint, wood/mulch
Number of landfill employees	7
2010 Rates	
• Commercial waste	\$25/ton
• Residential waste	\$25/ton
• Construction & demolition debris	\$25/ton
• Yard trimmings	\$25/ton
• Clean fill	\$9/ton
• Asphalt shingles	\$12/ton
• Tires	\$100/ton

San Juan County Landfill	
Area served	Primarily San Juan County
Estimated population	139,127
Total waste reported in 2010	152,112 tons
Estimated 2010 per capita disposal rate	1.09 tons/person/year
Facility owner	San Juan County
Rate setting authority	San Juan County
Rate structure	Hybrid
Frequency of rate changes	Annual increase of several cents per cubic yard, depending on consumer price index
Percentage of customers served by haulers	60%
Percentage of drop-off customers	40%
Collection method	Primarily automated
Recycling services offered	None
Number of landfill employees	10
2010 Rates	
• Commercial waste	\$4.25/loose cubic yard for waste generated in San Juan County, \$5/compacted cubic yard for waste generated in San Juan County, \$5.26/loose cubic yard for waste generated outside of San Juan County, \$6.31/compacted cubic yard for waste generated outside of San Juan County

San Juan County Landfill	
<ul style="list-style-type: none"> Residential waste 	\$4.25/loose cubic yard for waste generated in San Juan County, \$5/compacted cubic yard for waste generated in San Juan County, \$5.26/loose cubic yard for waste generated outside of San Juan County, \$6.31/compacted cubic yard for waste generated outside of San Juan County
<ul style="list-style-type: none"> Construction & demolition debris 	\$4.25/loose cubic yard for waste generated in San Juan County, \$5/compacted cubic yard for waste generated in San Juan County, \$5.26/loose cubic yard for waste generated outside of San Juan County, \$6.31/compacted cubic yard for waste generated outside of San Juan County
<ul style="list-style-type: none"> Large concrete and tree stumps 	\$25/item
<ul style="list-style-type: none"> Animals 	\$4.25/animal - \$26.95/animal depending on size
<ul style="list-style-type: none"> Special waste 	\$16.50/cubic yard
<ul style="list-style-type: none"> Tires 	\$0.78/tire - \$11.29/tire depending on size

Sandoval County Landfill & Composting Facility	
Area served	Primarily Sandoval County
Estimated population	100,790
Total waste reported in 2010	114,209 tons
Estimated 2010 per capita disposal rate	1.13 tons/person/year
Facility owner	Sandoval County
Rate setting authority	County Commission
Rate structure	Hybrid
Frequency of rate changes	Rates changed from volume based to weight based in 2008. Rates are updated based on net operating costs per ton.
Percentage of customers served by haulers	Approximately 90%
Percentage of drop-off customers	Approximately 10%
Collection method	Not reported
Recycling services offered	Cardboard, batteries, electronics, mixed metals, yard trimmings (more recycling services added June 2011)
Number of landfill employees	16

Sandoval County Landfill & Composting Facility	
2010 Rates	
• Commercial waste	\$24/ton for in-county, \$25/ton for non-county, \$18.72/loose ton for in-county commercial haulers, \$12.50/compacted ton for in-county commercial haulers, \$19.50/loose ton for non-county commercial haulers
• Residential waste	Flat rates for residential size loads: \$4.75/level bed load for in-county residents, \$5.25/level bed load for non-county residents, \$9.50/cab level load for county residents, and \$10.50/cab level load for non-county residents. After this, \$24/ton in-county or \$25/ton non-county rates apply.
• Construction & demolition debris	\$24/ton for in-county, \$25/ton for non-county, \$18.72/loose ton for in-county commercial haulers, \$12.50/compacted ton for in-county commercial haulers, \$19.50/loose ton for non-county commercial haulers
• Large items	\$6/item for in-county, \$7/item for non-county
• Special handling (tree stumps, tree trunks, boat shells, etc.)	\$37/ton for in-county, \$38/ton for non-county
• Concrete and clean fill	\$29/ton for in-county, \$30/ton for non-county
• Yard trimmings	\$3.25/load for in-county residents, \$4.25/load for non-county residents, \$15.25/ton for in-county commercial green waste, \$17/ton for non-county commercial green waste
• Televisions	\$12/television

Sierra County Main Landfill (Closed)	
Area served	Sierra County
Estimated population served	11,900
Total waste reported in 2010	8,944
Estimated 2010 per capita disposal rate	1.19 tons/person/year
Facility owner	Sierra County
Rate setting authority	County commissioners
Rate structure	Volume based
Frequency of rate changes	Sporadic
Percentage of customers served by haulers	Unknown
Percentage of drop-off customers	Unknown
Collection method	Unknown
Recycling services offered	None
Number of landfill employees	2

Sierra County Main Landfill (Closed)	
2010 Rates	
• Commercial waste	\$3.15/cubic yard
• Residential waste	\$3.15/cubic yard
• Construction & demolition debris	\$3.15/cubic yard
• Large items	\$5.25/item
• Yard trimmings	\$3.15/cubic yard
• Liquid waste	\$0.07/gallon plus tax
• Tires	\$1.05-10.50/tire, depending on size
• Batteries	\$1.05/item
• Oil	\$0.26/gallon

Southwest New Mexico Regional Landfill	
Area served	Grant County and Hidalgo County
Estimated population	34,960
Total waste reported in 2010	31,168
Estimated 2010 per capita disposal rate	0.89 tons/person/year
Facility owner	Southwest Solid Waste Authority
Rate setting authority	Board comprised of city and county officials and managers
Rate structure	Hybrid
Frequency of rate changes	Last rate change was approximately four years ago. Rates are expected to remain stable.
Percentage of customers served by haulers	Approximately 65%
Percentage of drop-off customers	Approximately 35%
Collection method	Primarily automated
Recycling services offered	Anti-freeze, batteries, cardboard, clean fill, glass, mixed metals, motor oil, paper, plastic bottles, tires
Number of landfill employees	Approximately 21
2010 Rates	
• Commercial waste	\$43/ton
• Residential waste	Silver City residents pay fee based on container size, county residents pay monthly fee to commercial haulers, all residents pay a \$5.25/month landfill user's fee covering up to 2,000 lbs of drop-off per month. After that, the commercial rate of \$43/ton applies
• Construction & demolition debris	\$43/ton
• Household hazardous waste	\$43/ton
• Large items	\$43/ton
• Yard trimmings	\$43/ton

Taos Regional Landfill	
Area served	Taos County
Estimated population	31,507
Total waste reported in 2010	24,908 tons
Estimated 2010 per capita disposal rate	0.79 tons/person/year
Facility owner	Town of Taos
Rate setting authority	Landfill board
Rate structure	Weight based
Frequency of rate changes	No change for over 10 years
Percentage of customers served by haulers	Unknown
Percentage of drop-off customers	Unknown
Collection method	Unknown
Recycling services offered	Mixed metals, tires, yard trimmings
Number of landfill employees	3
2010 Rates	
• Commercial waste	\$33.26/ton
• Residential waste	\$33.26/ton
• Construction & demolition debris	\$33.26/ton
• Household hazardous waste	\$33.26/ton
• Large items	\$33.26/ton
• Mixed metals	\$33.26/ton
• Tires	\$120/ton
• Yard trimmings	\$33.26/ton

Tucumcari Landfill	
Area served	San Jon, Logan, Grady, House, Quay County, Santa Rosa, and Guadalupe County
Estimated population	13,175
Total waste reported in 2010	10,795 tons
Estimated 2010 per capita disposal rate	0.82 tons/person/year
Facility owner	City of Tucumcari
Rate setting authority	City Commission
Rate structure	Hybrid
Frequency of rate changes	Increased in the past two years
Percentage of customers served by haulers	Unknown
Percentage of drop-off customers	Unknown
Collection method	Unknown
Recycling services offered	Cans, cardboard, glass, mixed metals, tires
Number of landfill employees	8
2010 Rates	
• Commercial waste	\$62.28/month (limit of two dumps per week)
• Residential waste	\$12.53/month (limit of two dumps per week)
• Construction & demolition debris	\$35/ton

Tucumcari Landfill	
• Tires	\$1.50-3.50/tire, depending on size
• Yard trimmings	\$35/ton

Valencia Regional Landfill	
Area served	Primarily Valencia County
Estimated population	26,006
Total waste reported in 2010	73,387 tons
Estimated 2010 per capita disposal rate	2.82 tons/person/year
Facility owner	Waste Management of New Mexico
Rate setting authority	Waste Management of New Mexico
Rate structure	Weight based
Frequency of rate changes	Annual increase of approximately \$0.50/ton
Percentage of customers served by haulers	Approximately 85%
Percentage of drop-off customers	Approximately 15%
Collection method	Automated
Recycling services offered	None
Number of landfill employees	4
2010 Rates	
• Commercial waste	\$27.50/ton
• Residential waste	\$27.50/ton, pick-up customers pay a quarterly fee
• Construction & demolition debris	\$27.50/ton
• Large items	\$27.50/ton
• Yard trimmings	\$27.50/ton

APPENDIX C – LANDFILL RATES

Facility Name	Landfilling Rates (\$/ton unless otherwise noted)		Household Recycling Rates (\$/ton unless otherwise noted)	Yard Trimmings	
	Household Waste	Commercial Waste		Method for Handling	Rate (\$/ton unless otherwise noted)
Butterfield Trail Regional Landfill	\$25	\$25	No charge	Recycled/composted	No charge
Caja del Rio Landfill	\$42.50 (vehicles 12,500 - 17,999 lbs GVW); \$32.50 (vehicles 18,000 lbs GVW and over)	\$42.50 (vehicles 12,500 - 17,999 lbs GVW); \$32.50 (vehicles 18,000 lbs GVW and over)	No charge	Recycled/composted	\$20
Camino Real Landfill	\$12.28/cubic yard	\$12.28/cubic yard	No charge	Landfilled	\$12.28/cubic yard
Cerro Colorado Landfill (for commercial haulers only)	\$30	\$30	\$30	Landfilled	\$30
City of Socorro Landfill (permitted)	\$12/month for one can of garbage each week, \$6/month for a second can	\$30	No charge	Recycled/composted	No charge
City of Truth or Consequences Landfill (Sierra County Landfill) (Closing)	\$3.15/cubic yard	\$3.15/cubic yard	Unknown	Not accepted	Not accepted
Clovis Regional Solid Waste Facility	\$30	\$30	No charge	Composted	\$18
Corralitos Regional Landfill	\$30.70 (at drop-off transfer stations); \$24.80 (at Corralitos Regional Landfill)	\$30.70 (at drop-off transfer stations); \$24.80 (at Corralitos Regional Landfill)	No charge	Recycled/composted	No charge (if trimmings can be ground or generated within City of Las Cruces); \$30.70 (at drop-off transfer stations); \$24.80 (at Corralitos Regional Landfill)
De Baca County Landfill (Closing)	No charge	No charge	No charge	Unknown	No charge
Eddy County Sandpoint Landfill	Varies by municipality for curbside collection; \$24 (self-hauled waste)	\$24 (waste generated in Eddy County); \$36 (waste generated outside of Eddy County)	Not accepted	Recycled/composted	No charge
Estancia Valley Regional Landfill	\$45	\$45	Not accepted	Recycled/composted	No charge (residential); \$45 (commercial)
Lea County Landfill	\$34	\$34	Not accepted	Landfilled	\$34
Los Alamos County Eco Station (closing)	\$45	\$45	\$22.50	Unknown	\$37
Mesa Verde C & D Landfill	Not accepted	Not accepted	Not accepted	Not accepted	Not accepted
Northeastern New Mexico Regional Landfill	\$25	\$25	Not accepted	Landfilled	\$25
Northwest New Mexico Regional Solid Waste Authority (Red Rocks Regional Landfill)	\$35	\$35	Unknown	Landfilled	\$35

Facility Name	Landfilling Rates (\$/ton unless otherwise noted)		Household Recycling Rates (\$/ton unless otherwise noted)	Yard Trimmings	
	Household Waste	Commercial Waste		Method for Handling	Rate (\$/ton unless otherwise noted)
Pie Town Landfill (Closing)	\$72/year plus tax for unlimited use	\$72/year plus tax for unlimited use	Not accepted	Landfilled	\$72/year plus tax for unlimited use
Quemado Landfill (Closing)	\$72/year plus tax for unlimited use	\$72/year plus tax for unlimited use	Not accepted	Landfilled	\$72/year plus tax for unlimited use
Raton Landfill and Proposed Transfer Station (Closing)	\$20	\$20	No charge	Composted	No Charge
Rio Rancho Landfill	\$30.50	\$30.50	No charge	Landfilled	\$30.50
Roswell Landfill	\$25	\$25	No charge	Landfilled	\$25
San Juan County Landfill	\$4.25/cubic yard (loose); \$5/cubic yard (compact)	\$4.25/cubic yard (loose); \$5/cubic yard (compact)	Not accepted	Landfilled	\$25.00/unit for large tree stumps
Sandoval County Landfill & Composting Facility	\$24 (county residents); \$25 (non-county residents); rates for commercial haulers vary by hauler	\$24 (county residents); \$25 (non-county residents); rates for commercial haulers vary by hauler	No charge	Recycled/composted	\$3.25/load (self-hauled, county resident), \$4.25/load (self-hauled, non-county resident); \$15.25 (county commercially-hauled); \$17 (non-county commercially hauled)
Sierra County Main Landfill (closing)	\$3.15/cubic yard	\$3.15/cubic yard	Not accepted	Landfilled	\$3.15/cubic yard
Southwest Solid Waste Authority (Southwest New Mexico Regional Landfill)	\$43	\$43	Not accepted	Unknown	\$43
Taos Regional Landfill	\$33.26	\$33.26	Not accepted	Recycled/composted	\$33.26
Tucumcari Landfill	\$12.53/month - maximum of two dumps per week	\$62.28/month - maximum of two dumps per week	No charge	Landfilled	\$35
Valencia Regional Landfill	\$27.50	\$27.50	Not accepted	Landfilled	\$27.50

APPENDIX D – PILOT PROGRAM STRATEGY DESCRIPTIONS

Curbside Collection Design and Rate Structure Guidelines [Manual, semi-automated and fully automated]

Rate Options

Rate options can be proportional or two-tiered with both bags and containers. In either case, it is recommended to create a rate that is as linear as possible in order to maximize waste reduction.

- *A proportional rate structure* takes all of the costs of the program, both fixed and variable, and builds them into the rate structure. A proportional rate is a good choice in an area of high home ownership. The rate is more risky as waste decreases over time (if your goal is zero waste) as many of the fixed costs remain the same. Therefore, in a proportional rate, the cost will increase as households reduce their waste generation. Rate structure is specifically related to municipal costs, not just tipping cost.
- *A two-tiered rate structure* keeps the fixed costs of the program in the tax base and creates a unit based cost to cover the variable expense (tipping costs) of the program. A two-tiered rate is a good choice in communities with low home ownership rates. The two-tiered rate leaves part of the cost on the homeowner and shifts the portion of the cost directly related to the user onto the home occupant. The two-tiered rate is flexible; the fixed costs of the system remain in the taxes, so that as the resident reduces trash generation, their costs also decrease. The two-tiered rate ensures that baseline costs are met regardless of the level of waste diversion. The base rate, either in the general tax fund or in a fixed fee, eliminates the risk of underfunding the program. Below are sample two-tiered rate options.

Municipalities that offer curbside collection of trash and recycling have three design options

1. Bags

- With bags, residents pay as they go for what they use.
- Creating a two-tiered rate for each household by charging a bag fee and reducing the tax or fee by the tipping expense (only) would incentivize residents without changing the overall cost of disposal significantly. If residents recycle more and pay as they go for one bag per week, their overall cost would have minimal change. The average household spends approximately \$50 in actual tipping expense in New Mexico [this is a rounded average and will vary from landfill to landfill – but it is an easy number to use for demonstration purposes]. For example, if the household tax was reduced by approximately \$50 in a two-tiered bag system, the residents would be asked to purchase weekly bags to cover the cost of their actual trash generation.
- In manual and semi-automated systems, bags are an easy, cost-effective way to get started. There is no need to incur a large expense by investing in new containers.
- A bag system can be achieved by using a proportional or two-tiered rate structure.

- The municipality could also set a two-tiered rate without reducing the fee or tax associated with the variable cost of trash. Instead, the municipality could retain the additional revenue to offset any current budget shortfall.
- **Residential Rate Structure – Suggestions for Bags.** The cost of the trash bag should be determined based on the cost of the bag itself plus the cost to dispose of the contents within, based on weight. Based on an average of \$31.50 per ton disposal rate in New Mexico and a 25 cent (bag and distribution) cost, and assuming the average bag weight is 23 lbs (EPA standard), the average cost of the trash bag will be around 70 cents (round up to 75 cents). This would cover the cost of disposal and the cost of the bag. The cost of bags will be higher than a normal store-bought trash bag. The price point should be just high enough to incentivize change.
 - In this example, if the household cost were reduced by \$50 and each household used one bag per week for trash and recycled more, the cost to the household would be 75 cents x 52 weeks = \$39, a net savings of \$11 per household.
 - Sample simplified cost structure:

Average cost per ton disposal	\$31.00
Average cost per pound [cost per ton divided by 2000 lbs]	\$0.02
Average cost per bag [manufactured and distributed to muni office or direct to retail location]	\$0.25
Total suggested bag cost [based on 23 lb weight] 33-gallon bag	\$0.70

- Bags could also be used with fully automated collection using 96-gallon containers. Installing a camera on the truck to monitor bag compliance during pick up is a less expensive option than the expense of new, smaller containers.

2. Containers

- Similar to the two-tiered bag rate structure, a two-tiered container structure could be developed by reducing the tax or fee to the household by the approximate \$50 annual tipping expense and leaving the fixed costs covered through taxes. The households would then be required to choose a container size that suits their needs. The container cost should be based on the assumption that all or most homes would choose the smallest container size of 32 gallons. Those choosing this size would have approximately the same annual overall cost as the prior system. However, those that choose a larger container would pay more. Therefore, homes have an incentive to choose a small container and recycle more.
- In semi-automated and fully-automated collection systems, changing container sizes as part of a PAYT program is initially more costly, but over a 10-year period containers are a more cost effective option than the bag approach.
- A container system can be achieved using a proportional or two-tiered rate. The two-tiered rate requires less change and can give residents an incentive to reduce their waste without significantly changing the overall cost of disposal.

- The municipality could also set a two-tiered rate without reducing the fees or tax associated with the variable cost of trash. Instead, the municipality could retain the additional revenue to offset any current budget shortfall.
- In this example, if the household cost is reduced by \$50 and each household chose the small container for trash and recycled more, the cost to the household would be approximately the same (\$50 rebate from tax or fee in exchange for choosing the \$50 annual container option).
- Sample simplified cost structure:

	32-Gallon	64-Gallon	96-Gallon
Container cost amortized over 4 years	10	15	20
Estimated annual cost per container of trash	36.5	73	109.5
Sub total	46.5	88	129.5
Round up to cover replacement or damaged carts, billing, collections and cart inventory	50	100	150

3. Hybrid or Overflow Design Option

- All households receive one 32-gallon trash container for no fee or charge.
- There is no rate structure change. The only change is the reduction in the container size.
- All residents are required to purchase a special color overflow bag for additional trash or the household must request a larger container at a substantial fee. The fee suggestions are similar to those described above.
- All households receive a larger container for recycling. Generally, municipalities will use the old waste receptacles for recycling by simply adding a sticker. This saves money on the purchase of recycling containers. Using a small trash container creates an automatic shift in waste and recycling tonnages.
- Municipalities that are ready to purchase new containers or are switching from dual stream to single stream recycling have an opportunity to use an overflow program. A hybrid overflow system is a great way to make a transition to PAYT without a lot of rate structure changes.
- There is also an added benefit to the municipality, as the hybrid program will decrease waste at a municipal level without decreasing cost to the individual household. Thus, the municipality is able to use the savings within the department for other services such as education.
- The hybrid program can also be used in programs with no curbside recycling.

Drop-off Communities with Multiple Haulers Design and Rate Structure Guidelines

Program Characteristics

Two basic design variations:

- 1. Municipalities where the majority of households are bringing trash to the drop-off or landfill can easily shift to PAYT through an overflow bag or a sticker program**
 - Each participating household is provided with 52 free special colored trash bags or stickers/coded tags. This allows each household one bag of garbage per week for free [included in the current rate structure].
 - If a municipality is not currently covering their solid waste costs the municipality could charge for all bags instead of providing free bags. The additional revenue would cover the cost of the current shortfall.
 - Households that need additional space for trash may purchase a special bag or sticker at the town hall or a participating retail location.
 - The bag makes it easier for the landfill attendant to monitor compliance. However, for very small communities a bright colored official sticker can work just as well.
 - This process allows residents an opportunity to recycle more without incurring additional expense.
 - Private haulers would be monitored and based on a benchmark per capita disposal. They would have the freedom to develop their own PAYT strategy, but if their annual benchmark were not met they would no longer be eligible for a permit [see hauler compliance suggestions].
 - This system will provide a reduced tip expense to the municipality; most households are expected to decrease the quantity of waste they set out for collection by approximately 45% (*2009 New England Study*).
 - Additional revenue from sales of extra bags or stickers can be used for recycling education and outreach or additional recycling programs.

- 2. Municipalities where the majority of households use private haulers for pick up can also easily shift to PAYT with a bag or a container program**
 - *Bag Program:*
 - a. Official municipal bags are easy to identify because of their color. This allows both drop-off customers and hauler customers to use the same bag.
 - b. If a tip cost is currently charged to the hauler upon entry to the landfill it would need to be eliminated. Instead, the bag revenue will cover the tip cost.
 - c. If the households are currently charged a tax or a fee for landfill drop-off, this would also need to be eliminated.

- d. If municipality is not covering their solid waste costs the tax or fee could remain the same and the additional revenue would be used to cover the deficit.
 - e. Bag revenue would go directly to municipality or landfill to cover the cost of tipping.
 - f. All homes within the municipal area sending trash to the landfill through hauler or drop-off would need to purchase special colored bags for disposal.
 - g. Haulers would be required to monitor bags as they drop in their trucks. In manual and semi-automated equipment, this can be monitored directly by employees. In fully automated equipment, a camera may need to be installed to monitor effectively. Should this be required, the municipality should cover the initial cost, not the hauler.
 - h. Hauler loads should be monitored by landfill floor attendants. Non-compliant bags would be the responsibility of the hauler. Municipality would need to assist in enforcing when residents are repeat offenders.
- *Container Program for haulers:*
 - a. Where the majority of trash is being handled by the hauler and not taken directly to the drop-off or landfill by the resident, and where the haulers are 100% automated, a container program could be implemented. Each hauler could have the option of creating their own rate structure. Generally haulers do not like sharing this information with the municipality. Haulers would be able to develop their own structure based on container size. Haulers would need to meet a specific per capita benchmark [see hauler compliance section below].
 - b. Residents not using hauler services and bringing trash to the drop-off or landfill could use a sticker system similar to the above option.

Determining the Rate Structure

Municipalities will need to create an enterprise fund or similar account for the collection of the bag or sticker fees. It is critical to determine municipal per capita disposal rate (waste only) before deciding on a rate strategy. Ideally, this should be determined by hauler as well as by landfill drop-off sites. The more detail municipalities are able to obtain on residential disposal rates, the better-informed their rate structure will be. If this detail is not available, use the landfill and drop-off tonnages combined.

To determine per capita disposal (waste only) isolate the following:

1. Total population participating.
 - a. Determine the number of households bringing trash to the landfill or drop-off directly. This could be determined by the number of sticker or permits sold or by a best guess or estimate.
 - b. Determine the population by hauler. Ask haulers to share the number of participating households. This could be done through the hauler permitting process. When a hauler registers for an annual permit, a requirement could be added that the hauler register the number of participating households.

- c. A population number can be determined from the household number using the average number of persons in the household based on Census information.
2. Total residential tonnage waste disposed.
 - a. Combine the total waste brought to the landfill and drop-off locations to obtain a total residential (only) waste tonnage. It is important to use only the residential waste tonnage.
 3. Total per capita disposal.
 - a. Divide the total waste tonnage by the participating population. The national average per capita is approximately 1100 lbs. Make sure you exclude the multifamily participants that are being recorded as commercial.

Residential Rate Structure - Suggestions for Bags and Stickers

The cost of the trash bag should be determined based on the cost of the bag itself plus the cost to dispose of the contents within, based on weight. Based on an average of \$40 per ton disposal rate in New Mexico and a 25-cent (bag and distribution) cost, and assuming the average bag weight is 23 lbs (EPA standard) the average cost of the trash bag will be around 71 cents (round up to 75 cents). This would ensure that the municipality covers the cost of disposal and the cost of the bag. There may also some drop-off and administrative costs currently included in residents fees that would also need to be included in the official bag cost. To factor these in, take current drop-off and administrative costs and divide by the number of tons disposed and add to the cost per ton. The bag or sticker cost will be higher than a Glad or Hefty brand trash bag. The price point should be just high enough to incentivize change without making people feel like they are being unfairly taxed.

Sample cost structure

Average cost per ton disposal	\$40.00
Average cost per pound [cost per ton divided by 2000 lbs]	\$0.02
Average cost per bag [manufactured and distributed to muni office or direct to retail location]	\$0.25
Average cost per sticker [manufactured and delivered]	\$0.03
Total suggested bag cost [based on 23 lb weight] 33 gallon bag	\$0.71
Total suggested sticker cost [based on 23 lb weight] 33 gallon bag	\$0.49

Rate structure Assumptions

- If the tax or fee is lowered by 100% then the per unit charge should also include the fixed municipal costs. The tax or fee could be lowered only in proportion to direct tip cost and therefore would not need to be added to the unit cost [in this case there would still be a small tax or fee to the resident].
- If the tax or fee is not lowered at all, the municipality will have a surplus at the end of the first fiscal year.

- In design option 1, where free bags are provided by the municipality, the startup cost of the bags should be covered by the reduction in overall tip expense at the landfill. However, every case is different so this should be verified when designing the structure.
- In design option 1 the bag cost for the overflow trash after free bags are used should be structured as in the above table.
- In areas where incorporated and unincorporated areas are disposing at one common landfill the above options could apply to the entire landfill disposal radius.

Hauler Compliance Suggestions

Haulers opting to create their own PAYT rate structures should be required to meet per capita benchmarks equal to the average municipal per capita. This will encourage them to create a rate structure that is fair to residents, but that also provides an incentive to reduce waste. In order to determine benchmarks, haulers must be required to report the number of households using their services. The municipality can determine an official per capita disposal annually for each hauler by dividing the participating population by the total tonnage the hauler delivers to the landfill. If haulers pick up residential and commercial in the same truck, all commercial waste must be averaged and taken out of the load.

Community Dumpster System - Haulers Pick up from Group

The dumpster system is somewhat unique to New Mexico and may be more difficult to enforce PAYT compliance. However it is possible. New York City has a similar predicament. While New York City does not currently have PAYT, they do have a high recycling and disposal compliance rate. Each multi-family building has an appointed resident trash and recycling monitor. It is primarily enforced by an honor and a peer pressure system. The appointed monitor is asked to provide verbal warning and even report non-compliant residents [directly to the city]. This system is effective because no one wants their neighbors to know that they are not following the rules.

The New Mexico community dumpster program could be handled similarly by appointing a community monitor to watch over local dumping. This position could change annually. In PAYT programs we find that most residents comply with the rules immediately, regardless of being watched. Colored bags would make the process especially easy. Any resident that is seen dumping in an inappropriate bag by a neighbor will feel ‘some’ guilt that their neighbor has paid and followed the rules. New Mexico could also spot check at the landfill when loads arrive from dumpster routes. Landfill attendants could look through non-compliant bags to find out who dumped. If a particular route or neighborhood has excessive non-compliance a compliance officer could be sent out to inspect the dumpsters. If a household is caught with a non-compliant bag, the resident could be fined heavily [like a litter or illegal dumping fine].

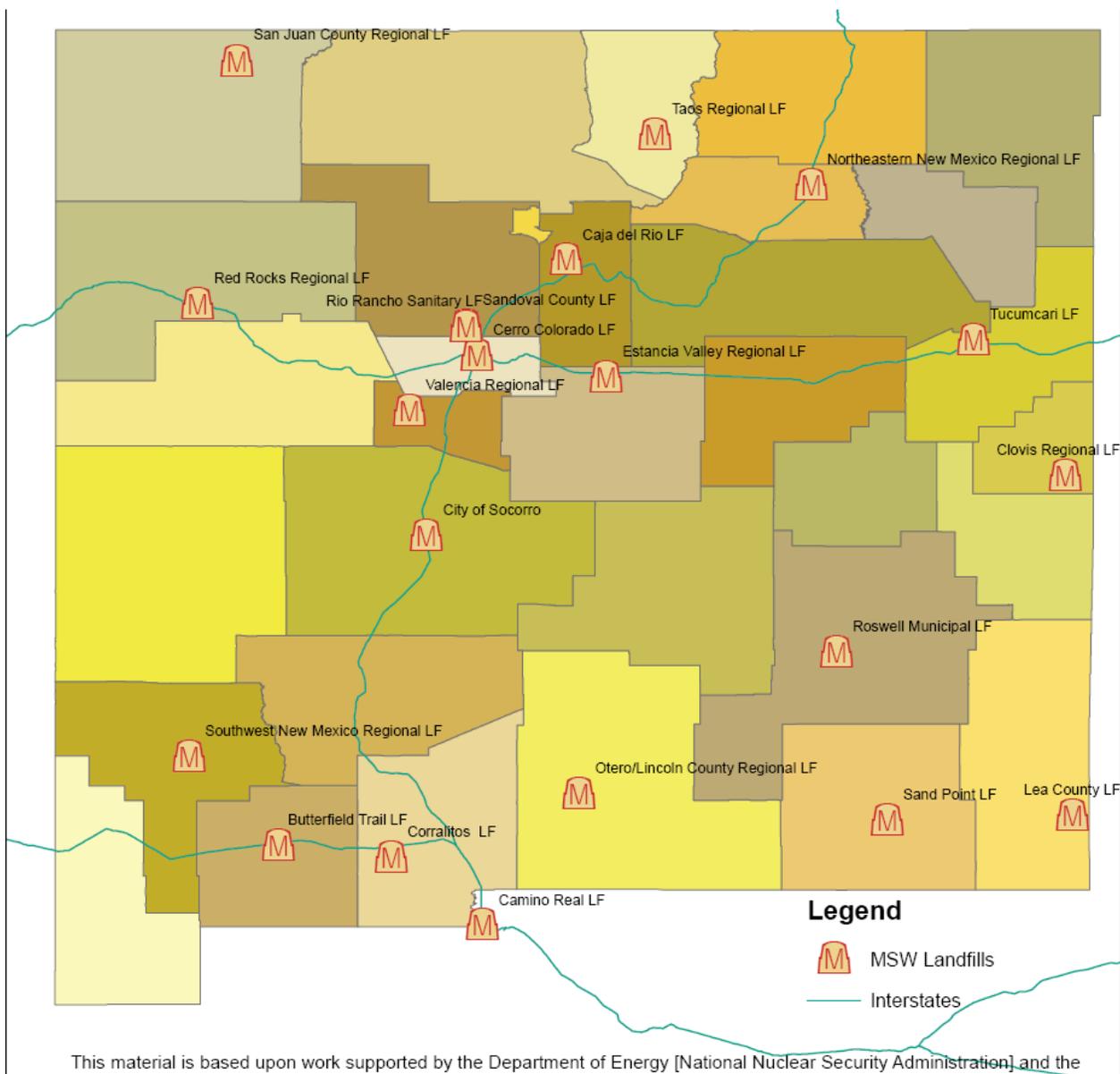
Two-bag system options could be used in group dumpster situations

- 52 free bags per year; or
- A reduced fee/tax and a bag charge for each bag; or
- No reduction in fee/tax and a charge per bag.

Additionally, the community could concurrently change to a volume-based cart system for waste disposal (and possibly add recycling collection during implementation) at the same time as transitioning to PAYT. The cost to upgrade the equipment is built into the PAYT rates.

Rates structures should be determined following the “Drop-off Communities and Multiple Hauler guidelines.”

APPENDIX E – NEW MEXICO LANDFILL MAP



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