Strategic Plan to Transform the Economics Of Recycling In New Mexico

New Mexico Environment Department Solid Waste Bureau
New Mexico Recycling Coalition

December 2004

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Executive Summary

In an effort to increase the efficient use of resources through recycling, to preserve the useful life of landfills, to reduce the cost and discord of siting new landfills in New Mexico and to attract and retain quality employers in the State of New Mexico, the Legislature passed **House Joint Memorial 5—Develop NM Recycling Plan in** January 2004 (Appendix A)**.** In accordance with that memorial, the New Mexico Environment Department, New Mexico Recycling Coalition and New Mexico Economic Development Department collaborated to create this Strategic Plan to Transform the Economics of Recycling in New Mexico (Strategic Plan).

Recommendations presented herein are based on the research and consensus of the Transforming the Economics of Recycling (TERN) Steering Committee. The Committee included representatives from state and local government, solid waste authorities, non-profit organizations, waste management industry, recycling businesses and solid waste consultants (see Appendix B for a list of steering committee members). Input was gathered during a workshop including 70 industry professionals, at the Statewide Recycling Conference, during open meetings of the steering committee and via web solicitation. Research included assessing the current state of recycling in New Mexico, recycling market development strategies, recycling businesses case studies, and case studies of other states that have increased recycling through legislation, goal setting and alliance building. The results of this research are presented in this Strategic Plan.

Communities and the New Mexico Environment Department (NMED) are challenged to find suitable sites for new landfills in the face of diminishing landfill capacity. Businesses in the recycling industry are challenged by the lack of volume of material to optimize their operations and make cost effective services available. The public is demanding more access to recycling while communities operating independently cannot offer the services economically. The recommendations of this Strategic Plan address all of these concerns.

Recommendations

After careful consideration, the following recommendations are made for an effective first step toward transforming the economics of recycling in New Mexico. Figure 1 below charts the multi-faceted approach that capitalizes on New Mexico's vigorous economic development environment and leverages synergies between the stakeholders in illegal dumping control, solid waste management and recycling to achieve New Mexico's waste reduction and recycling goals.

1. **Adopt the New Mexico Recycling Act to establish the Recycling Alliance and re-allocate the Tire Recycling Grant Fund to support all recycling activities.**

With representation from stakeholders throughout the state, the Alliance will develop strategies to increase recycling in New Mexico. A State Recycling Plan establishing programs and goals will be created by the Alliance and updated every three years to measure progress and modify strategies as necessary. Programs could include accessibility of recycling, education on waste reduction and recycling and increasing diversion of priority commodities. The Alliance will review grant applications for funding through the Recycling Grant Fund. Members of the Alliance will include representatives from state and local government, solid waste authorities, industry waste generators, tribal governments, non-profit organizations, recycling companies, retailers, waste management companies and others. The Alliance would have power to contract for services in order to achieve goals

The Tire Recycling Grant Fund collects $800,000 annually through a $0.50 motor vehicle registration fee. This amount of funding is sufficient to address tire recycling needs and begin to support communities to establish collection and processing capacities that will feed the new in-state markets. Recycling grant fund requests are likely to far out strip the funding available and additional funding sources may be sought in the future as results are produced in this structure.

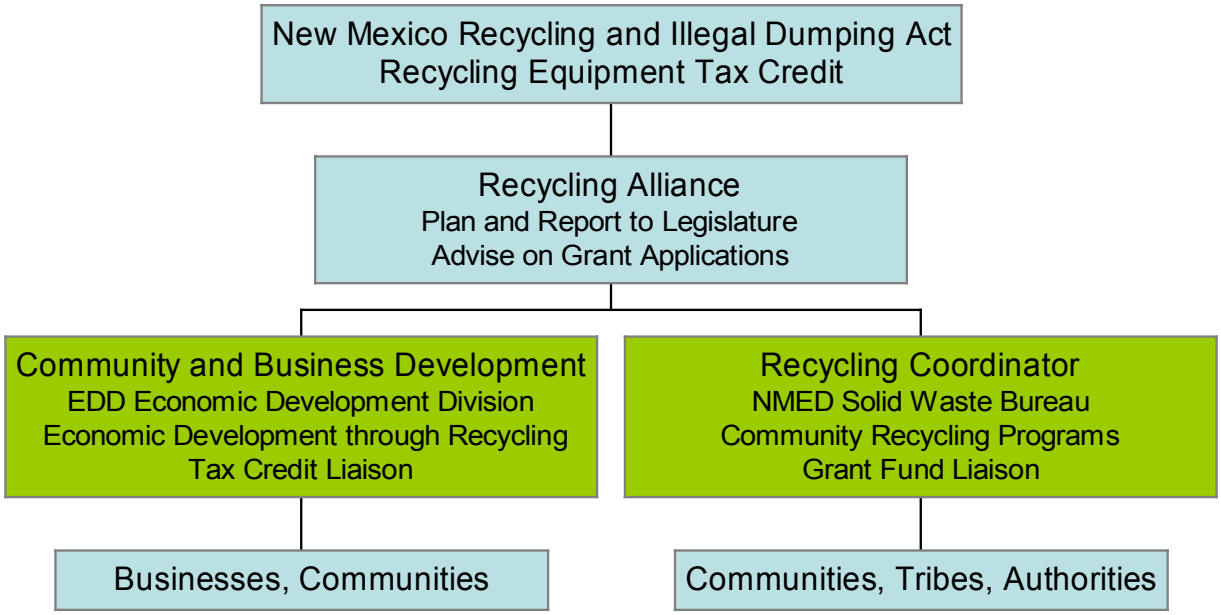

Figure 1. Structure to transform the economics of recycling

2. **New Mexico Economic Development Department, Economic Development Division outreaches to communities, existing recycling businesses and**

new recycling businesses about the opportunity for economic development through recycling.

Increasing the focus on economic development through recycling will result in job creation, accessibility to markets for recyclables and increased recycling rates to control waste management costs in New Mexico. The Economic Development Division has two programs that can stimulate economic development through recycling. One program provides technical assistance to communities to take advantage of funding to increase infrastructure and attract businesses. The second program provides assistance to businesses in New Mexico and those considering locating in New Mexico to capitalize on incentives and opportunities. New Mexico Recycling Coalition and New Mexico Environment Department will partner with these program teams to support communities and businesses to expand economic development through recycling. A representative from the Economic Development Division will have a seat on the Recycling Alliance.

3. **Create a 10% tax credit for the purchase of recycling equipment.**

   Creating a tax credit for the purchase of recycling equipment such as balers, sorting conveyors, glass crushers and equipment to manufacture products from recycled materials will create additional markets and recycling opportunities in New Mexico. Retail stores could utilize this tax credit to purchase cardboard recycling compactors thus reclaiming one of the highest value recyclables in the state of New Mexico. The tax credit could also encourage bringing innovation to reality. RASTRA has an idea for Styrofoam processing equipment that would improve transportation and storage efficiencies so they can collect and use more recycled Styrofoam in their products.

State of Recycling in New Mexico

The amount of waste diverted from landfills in New Mexico is low compared to the rest of the country and compared to the potential waste that could be diverted for recycling. There are a number of large and small recycling programs that can be expanded and duplicated. There is also great potential for increasing recycling in the state due to the interest and dedication of many organizations and residents. There is excellent synergy between key groups such as the NM Recycling Coalition, the NM Environment Department: Solid Waste Bureau, the NM Department of Transportation, the NM Economic Development Department as well as communities, businesses, educational institutions, Native American tribes and non-profits that could be leveraged to increase the amount of recycling in New Mexico.

Regulatory Overview

The New Mexico Solid Waste Act (Act), passed in 1990, charged the NM Environment Department with overseeing the requirements in the Act and developing a comprehensive Solid Waste Management Plan for New Mexico. The plan was created 10 years ago and is scheduled to be updated and revised.

The regulatory mandates from the Act and from the federal Resource Conservation and Recovery Act are implemented through the NM Solid Waste Management Regulations. The Solid Waste Bureau (SWB) of the NM Environment Department is responsible for the development, implementation and enforcement of the Act and Regulations.

Grants to help communities off-set the capital cost of establishing solid waste programs were offered through the Energy, Minerals and Natural Resources Department for recycling, and through the Construction Bureau for solid waste facilities. See Appendix C for a list of community recycling programs many of which were assisted by these grant funds. These grant sources have been depleted. The Recycling Grant, which ended in 1999, came from a fine paid on an environmental infraction. The Solid Waste Facility grant fund was a one-time appropriation from the legislature and ended in 2002. The SWB currently has an active Tire Recycling Grant program funded through a $.50 fee charged on NM automobile registrations. The Litter Control and Beautification Act directs the department of Tourism to participate in education, litter control, prevention and recycling. This directive is funded by $0.50 fee on vehicle registrations. Grants for recycling total less than 1% of the current $600,000 annual grant funding under this Act.

Another mechanism available to communities and businesses developing recycling programs is the Environmental Services Gross Receipts Tax (ESGRT). Incorporated communities may implement a 1/16% gross receipts tax that can be used to fund environmental services such as solid waste, waste water and water. Unincorporated areas can implement an additional 1/16%. Small communities find that the funds generated are inadequate to fund the needs of all environmental programs, including recycling.

There are tax incentives, discussed below, (not specific to recycling) that recycling related businesses can take advantage of. In a survey of recycling related businesses in NM conducted for this report (see below), it was found that few of these incentives are utilized.

Solid Waste Disposal and Recycling Rates

New Mexico has a 39 active landfills with capacity projected to meet New Mexico's needs for 36 years based on current fill rates. The amount of waste disposed in New Mexico landfills has increased 64% since 1992, which corresponds to increases in population. This represents an issue for immediate concern for state decision makers. There is a lack of suitable landfill sites and resources for communities to pursue costly siting and construction projects. District 3, the Southwest corner of the state, has a projected 16 years of permitted landfill capacity and District 2 in the Northeast Corner of the state has 23 years. Reducing the amount of material landfilled through recycling could extend the life of existing landfills and mitigate challenges of finding suitable sites and constructing costly new landfills.

In 2003, 2,150,000 tons of waste were generated in New Mexico, of that 170,000 tons were diverted to recycling and composting. Thus in 2003, 9% of the waste stream was diverted through recycling. Some diversion activities are not included in the calculation of a state-wide recycling rate including on-site reuse of concrete and asphalt in roadbed construction,

biosolids composting and thrift store reuse. See Appendix D for the amounts of waste generated and recycled in New Mexico from 1993 through 2003.

Overview of Recycled Materials and Markets

- **Cardboard** is the most recycled material in New Mexico largely because of the Durango McKinley Paper Mill located in Prewitt, NM. This mill is one of only a few in the Country that makes paper for cardboard with 100% recycled content. Durango McKinley is featured in a business case study later in this report.
- **Newspaper, office paper and mixes of junk mail and magazines** are also commonly recycled due to the mill in Snowflake, Arizona that makes newsprint from old newsprint and magazines.
- **Plastic PET (#1) and HDPE (#2)** have good out of state markets but the volumes generated by most communities cannot be transported or processed economically.
- **Glass** is crushed by some communities and used in local projects. The glass bottling market for recycled glass is out of state and shipping and processing requirements inhibit most communities from accessing that market.
- **Yard trimmings** are chipped and given to residents, used in municipal projects or composted often with **treated bio-solids**. The NMDOT is positioned to become a major market for the compost and mulch produced in the state as they begin to utilize compost instead of straw for roadside revegetation.
- **Aluminum and steel cans, scrap metal, appliances and car batteries** are recycled by many communities and businesses. Off-shore and domestic markets for American metals have been strong lately making metal recycling very economical.
- **Tires** are baled or chipped by most communities. Tire balers have been purchased through the NM Tire Recycling Grant. The bales are used in erosion control projects, to build walls and in other construction projects. Chips can be used as alternative daily cover in landfills.
- **Oil, transmission fluid and anti-freeze** are accepted by convenience centers, landfill and automotive supply stores at no charge since these fluids are widely recycled. Mesa Oil is an in-state company providing collection and processing services.
- **Styrofoam** is reused by RASTRA, a company based in Albuquerque that makes building materials. The biggest challenge to recycling Styrofoam is storage due to the bulk of the material.
- **Electronic waste** is collected and recycled by some communities along with household hazardous waste (HHW). Intel has held a statewide collection event in Albuquerque since 2002.
- **Cell phones and ink jet/printer cartridges** can be sent to a number of companies for recycling.

Recycling Rate

Recycling is currently not mandatory in New Mexico. The New Mexico Solid Waste Act set a goal of diverting 25% of the waste generated in New Mexico from landfills by 1995 and 50% by 2000. New Mexico's 9% diversion rate falls far short of meeting these

goals. The quantities of key materials generated and recycled in New Mexico are shown in Table 1. Those materials with excellent markets could be recycled at rate close to 100%. If paper and metal were recycled at 70% instead of 11%[2] and 47% respectively, that alone would increase the overall recycling rate to 30%. This indicates that there are immediate opportunities to reduce waste disposal and increase the recycling industry in New Mexico and that a goal of 25% is a reasonable target for the overall recycling rate.

Table 1. Potential for Recycling in New Mexico

Material	Volume in NM waste (Ton)	Volume recycled in NM (Ton)	Percentage recycled	Notes
Mixed Paper	685,000	75,000	11%	Excellent in-state markets
Yard trimmings	234,000	11,000	5%	Biomass, NMDOT Revegetation
Food Scraps	218,000	0	0%	
Plastic	213,000	500	0%	Good out of state markets, lack processing
Metals	151,000	71,000	47%	Excellent markets
Rubber, Leather, Textile	136,000	900	1%	
Glass	105,000	900	1%	
Wood	109,000	0	0%	
Other	65,000	9,000	14%	
TOTAL	**1,916,000**	**168,300**	**Overall Recycling Rate 9%**	

Statewide Challenges to Recycling

- Few in-state markets
- Limited funds to capitalize recycling equipment
- Insufficient recycling processing facilities
- Insufficient public education
- Lack of full cost accounting of solid waste operations, which makes landfilling appear less expensive than recycling
- Small volumes of material spread through out the state are expensive to process, transport and market

[2] The national rate of paper recycling is 50%.

Statewide Opportunities in Recycling

- Strong partnerships among the NM Recycling Coalition, the Environment Department Solid Waste Bureau, the Department of Transportation, the Economic Development Department, policy makers, municipalities, businesses, non-profits, educational institutions
- Growing numbers of regional recycling processing facilities under consideration. e.g.: Santa Fe, North Central Solid Waste Authority
- Willingness of the public to recycle
- Research and development capabilities in New Mexico universities and scientific laboratories

Rural versus Urban Issues

Rural communities face greater challenges in recycling than urban communities because of distance to markets and lack of sufficient volumes to justify the costs of processing and transportation. This fact is exemplified by the NMED SWB statistics on recycling rates by District. District 1 that includes the City of Albuquerque has a recycling rate of over 8% while District 2 in North Eastern New Mexico that includes Rio Arriba and San Miquel counties, has a recycling rate of just over 2%. Cooperative efforts can help small communities overcome these barriers. Such efforts can take different forms such as regional recycling processing facilities or cooperative marketing agreements.

Recycling Market Development

Existing Economic Development Incentives

New Mexico has a portfolio of incentives that has been developed to encourage the creation and expansion of high quality job opportunities across the state. Certain incentives target specific industry sectors, such as technology, or regions within the state. Others support businesses in training their workforce, in research, or purchasing capital equipment.[3]

Existing economic development incentives in New Mexico that the TERN Committee reviewed are:

Manufacturer's Investment Tax Credit

Description: Manufacturers may take a credit equal to 5% of the value of qualified equipment put into use in a manufacturing plant in New Mexico, provided the manufacturer meets the criteria of hiring additional workers to earn the credit. To qualify for the credit the manufacturer is required to hire 1 person for every $500,000 in qualified equipment.

[3] Incentives & Assistance; http://www.edd.state.nm.us/PROGRAMS/incentives.html

Opportunity: Recycling companies that manufacture products from recycled material have taken advantage of this tax credit (RASTRA, Durango McKinley). Having these plants operating in New Mexico creates excellent markets for recycled materials increasing the amounts diverted. Both companies stated that they need more material coming into their plants. This credit has not been used by companies collecting or processing recyclables because of the job creation requirement. Recycling equipment at a processing or collection facility may not increase jobs at that plant, but increases the size and total employment in the industry. For instance, if American Furniture purchases a cardboard baler, it may not create a job at American Furniture but it is likely that the increase in recycled material increases jobs in other sectors in the state such as transporting and processing.

Industrial Revenue Bonds

Description: Industrial Revenue Bonds (IRBs) are issued by a government to finance privately-operated development projects. The issuance is a political process and must begin in accordance with local and state laws. The issuing government has ownership of the facility until the bond is paid off. The party to whom the bond was issued agrees to rent the facility thus is not obligated to pay property taxes.

Opportunity: According to companies that the TERN committee talked with, securing an IRB requires intensive overhead reducing the profitability of the approach. Waste Management of New Mexico finds that IRBs are not economical for projects under $3 million dollars. Companies with less access to capital than Waste Management would find smaller amounts to be worth the time investment. The clause for default is also a disincentive to use the IRB.

Rural Job Tax Credit

Description: Employers may earn the rural job tax credit for each qualifying job created. Employers receive a credit of 6.25% of the first $16,000 in wages paid for a qualifying job for a maximum of $1000 per year for four years. Rural New Mexico is any part of the state other than Los Alamos County, Albuquerque, Rio Rancho, Las Cruces, Santa Fe and a ten-mile zone around those select municipalities. The intent of this incentive is to reward employers for establishing jobs in the rural part of New Mexico

Opportunity: This tax credit could be an incentive for a manufacturing plant creating products from recycled materials (such as Durango McKinley located in Prewitt, NM). It is not likely to apply to processing facilities since they are most effectively located in a regional hub such as Santa Fe, Las Cruces or Albuquerque.

Recycled Content Price Preference

Description: New Mexico State procurement code provides for a 5% preference for recycled content goods.

[4] Programs, Industrial Revenue Bonds (IRBs); http://www.edd.state.nm.us/PROGRAMS/pr_irb.html

Opportunity: By encouraging 'Buy Recycled' programs in government, the market for recycled content goods is increased and opportunities for employment in recyclables processing and manufacturing is increased.

Local Economic Development Act

Description: The New Mexico Legislature in 1994, passed this act allowing state, local and regional governments with carefully circumscribed powers to contribute assets to develop projects. The Local Economic Development Act contains the exclusive authority for local and regional government economic development contributions. The Act must be passed by a municipality or county in a referendum.

Opportunity: This incentive could be used for large scale projects such a glass factory making glassware and tile from reclaimed glass bottles.

Qualified Business Facility Rehabilitation Credit

Description: This income tax credit (both personal and corporate) is intended to help create new jobs and to revitalize economically distressed areas. The owner of a qualified business facility may claim a credit equal to 50% of the cost of restoring, rehabilitating or renovating the facility. The credit maximum is $50,000. A qualified facility is a building: located in an enterprise zone; vacant for at least 24 months prior to the project but is suitable for use; and put into use immediately after the project by a person in the manufacturing, distribution or service industries.

Opportunity: This incentive could be used for a new factory or processing center that could be built into an existing building such as an abandoned WalMarts and K-Marts.

Double Weight Sales Factor

Description: This incentive allows a manufacturing company to reduce its tax burden by modifying the income apportioning formula to double weight the sales component over the payroll and property. This incentive is ideal for new manufacturers that invest heavily in plant and equipment in the first few years of incorporation in New Mexico. The benefit of the Double Weight Factor puts a 50% tax burden on sales, reducing property and payroll to 25% apiece thus reducing the tax burden on initial costs of operation. In addition, lowering the % weight of property and payroll factors and increasing its sales factor rather nicely reduces its corporate income tax obligations compared to the standard formula where all the factors are weighted equally at 33.33%.

Opportunity: This incentive could be used by new recycled product manufacturers to reduce their tax liability while they grow their business.

[5] Press Center, New Mexico 9000 Program Attracting Great Interest From New Mexico Business; http://www.edd.state.nm.us/PRESS/news.php?_fn=view&_rn=20001235

New Mexico Recycling Business Case Studies

Businesses currently located in New Mexico that collect, process or manufacture goods from recycled material were interviewed. Each business was asked what economic development incentives they utilized, why they had located in New Mexico, what were their greatest challenges and what assistance they would like.

Roadrunner Paper

The company collects, recycles and shreds sensitive and confidential documents. Roadrunner Paper is headquartered in Albuquerque, collects material throughout the state, has been in business for 10 years and employs 16 people. They chose Albuquerque for the business because it is the owner's home. A concern for the company is International competition coming in from Canada and other countries to establish a business with national agreements and contracts.
What would help: Roadrunner would like to see a statewide program to educate citizens about the importance of recycling paper and shredding sensitive documents.

RASTRA Recycling

The company manufactures RASTRA blocks that are used for building construction. RASTRA is made of recycled Styrofoam held together with cement to create insulated concrete forms for building walls. Buildings built using RASTRA consume approximately half the energy of a conventional building, and will last approximately 1,000 years. The company is located in Albuquerque, has been in business for 3 years and employs 12 people. They chose to locate the business in Albuquerque because of the product market for alternative building materials. The company takes advantage of the Manufacturing Tax Credit. Some significant concerns for the company are finding trained dependable employees, competition from other companies who are not conducting business legally and costs associated with transporting the reclaimed Styrofoam to the factory from remote locations throughout the state.
What would help: The company would be interested in funding or grant money from the State to support recycling efforts. They would also like to see more public education about recycling in order to get more material to the plant.

Durango McKinley Paper

The company collects and processes used paper and cardboard to use in the manufacture of the brown paper used to make cardboard boxes. The company mill is located in Prewitt, New Mexico, employs 100 people and has been in business since 1995. McKinley has collection and processing stations in Albuquerque, El Paso and Phoenix. They also travel throughout the state to pick up recyclable paper. They chose to locate in Prewitt because an electrical power plant located next door supplies water and steam to McKinley Paper. The company takes advantage of the Manufacturer's Investment Tax Credit. McKinley paper recycles approximately 750 tons of paper per day. Some significant concerns for the company are the cost of locating and retaining

skilled employees. The company is also concerned about the cheaper costs associated with conducting the same operation internationally.
What would help: The company would be interested in funding or grant money from the State to support of the recycling efforts. They would also like to see more public education about recycling in order to get more material to the plant.

Nationwide Approach to Increase Recycling

Since the passage of RCRA mandated fully permitted disposal of municipal solid wastes, states have implemented strategies to control solid waste management costs and decrease sightings of new landfills through recycling. Many states have recognized the critical linkage between creating markets and increasing recycling in their states. The recommendations of the TERN committee mirror the approaches that have evolved in many states including Ohio, Arizona, New York, California and many others. Different states utilize different funding such as landfill tipping fees, regulatory fees, general fund allocations instruments to support recycling activities but two things are consistent: the emphasis on economic development through recycling and strategic planning and oversight by a Board with representation from stakeholders. Appendix E presents the details of the State of Ohio's approach that has achieved an increase in the state recycling rate from 10% in 1989 to 40% today.

Appendix A. House Joint Memorial 05

HOUSE JOINT MEMORIAL 05

46th legislature - STATE OF NEW MEXICO - second session, 2004

INTRODUCED BY

Jeannette O. Wallace

A JOINT MEMORIAL REQUESTING THE DEPARTMENT OF ENVIRONMENT TO DEVELOP A STRATEGIC PLAN FOR TRANSFORMING THE ECONOMICS OF RECYCLING IN NEW MEXICO.

WHEREAS, solid waste disposal sites and illegal dumping might potentially harm ground water resources in New Mexico; and

WHEREAS, maintaining and developing new landfills is costly and stressful for local communities; and

WHEREAS, forest thinning projects, the current bark beetle epidemic and the removal of non-native trees along watercourses have created an immediate need to develop markets to encourage the production of value-added products from tree waste; and

WHEREAS, few recycling and waste diversion options are available to communities in New Mexico, as evidenced by the state's recycling rate of under ten percent and waste diversion rate of twenty-five percent; and

WHEREAS, the construction and demolition industry is responsible for thirty percent of the landfill waste in New Mexico; and

WHEREAS, recycling and waste diversion options are limited by the lack of local markets and manufacturing enterprises that use waste commodities as feedstock; and

WHEREAS, integrated waste management planning that emphasizes recycling and waste diversion will develop recycling markets and recycled feedstock manufacturing enterprises and promote job growth; and

WHEREAS, new markets and business opportunities will provide waste diversion options to communities across the state and ultimately support the local tax base; and

WHEREAS, increased recycling and waste diversion will reduce pollution and promote more efficient use of natural resources; and

WHEREAS, the New Mexico recycling coalition developed a preliminary report entitled "Transforming the Economics of Recycling in New Mexico" that identifies resources and methods to promote recycling, waste diversion and market development;

NOW, THEREFORE, BE IT RESOLVED BY THE LEGISLATURE OF THE STATE OF NEW MEXICO that the department of environment cooperate with the economic development department and the New Mexico recycling coalition to develop a written strategic plan for transforming the economics of recycling in New Mexico; and

BE IT FURTHER RESOLVED that the strategic plan for transforming the economics of recycling in New Mexico include a review of resources and methods to promote recycling, waste diversion and market development; and

BE IT FURTHER RESOLVED that the strategic plan include a recommendation of an appropriate agency to implement and administer the methods identified in the plan; and

BE IT FURTHER RESOLVED that the department of environment be requested to present the written strategic plan to the appropriate interim legislative committee by December 1, 2004; and

BE IT FURTHER RESOLVED that copies of the strategic plan be distributed to members of the appropriate interim legislative committee; and

BE IT FURTHER RESOLVED that two copies of the strategic plan be filed with the legislative council service; and

BE IT FURTHER RESOLVED that copies of this memorial be transmitted to the department of environment, the economic development department and the New Mexico recycling coalition.

Appendix B. TERN Steering Committee Members

NAME	ORGANIZATION	PHONE
Cindy Padilla, Co-Chair	New Mexico Environment Department Solid Waste Bureau	(505) 827-2775
Regina Wheeler, Co-Chair	Los Alamos County Solid Waste	(505) 662-8050
Marlene Feuer, Co-Chair	Waste Management of New Mexico	(505) 891-6548
Nancy Judd	New Mexico Recycling Coalition	(505) 983-4470
Camille Bustamante	New Mexico Recycling Coalition, Eberline Services	(505) 672-3656
E. Gifford Stack	New Mexico Environment Department Solid Waste Bureau	(505) 827-2653
Pat Gallagher	New Mexico Recycling Coalition	(505) 667-2278
Patrick Gannon	New Mexico Economic Development Department Office of Science and Technology	(505) 827-2790
Libby Chaplin	New Mexico Recycling Coalition, Environmental Health Associates	(505) 988-1694
Jim Chiasson	Solid Waste Association of New Mexico	(505) 827-2398
Frank Sanchez	Durango McKinley Paper	(505) 873-0440
Dave Anderson	Roadrunner Paper	(505) 473-0999
Robert Haspel	ZERI	(505) 986-3855
John O'Connell	New Mexico Environment Department Solid Waste Bureau	(505) 827-2385
Mark Miller	Daniel B. Stephens	(505) 822-9400 x203
Bryan Evans	Waste Energy Research Consortium (WERC)	(505) 843-4247
Carla Slentz	New Mexico Environment Department Solid Waste Bureau	(505) 827-0129
Justin Stockdale	Santa Fe Solid Waste Management Agency	(505) 424-1850

Appendix C. Recycling Programs in New Mexico Communities

No.	Community	Recycling	Sector	Type	Materials
1	City of Alamogordo	Yes	Commercial/ residential	Drop-off	Metal/ Green Waste/ Motor oil & antifreeze/ Automotive Batteries/ Appliances
2	City of Albuquerque	Yes	Commercial/ residential	Drop-off/ Curbside	Aluminum / Tin cans/ Glass/ Plastics/ Paper/ Cardboard
3	City of Artesia	Yes	Commercial/ residential	Drop-off	Cardboard/ Newpaper/ Metal
4	City of Aztec	Yes	Commercial/ residential	Drop-off	Cardboard/ Newspaper/Plastic/ Glass/ Aluminum
5	City of Bayard	Yes	Commercial/ residential	Drop-off/ Curbside	Cardboard/ Newpapers/ Office paper/Plastic / Metal
6	City of Belen	Yes	Commercial/ residential	Drop-off	Cardboard/ Metal/ Appliances
7	City of Bloomfield	Yes	Commercial/ residential	Drop-off	Paper/ Plastic/ Glass
8	City of Carlsbad	Yes	Commercial/ residential	Collection services	Cardboard/ Newspaper/ Office paper/ Mixed paper/ Plastics/ metal/ Green waste
9	City of Clovis	Yes	Commercial/ residential	Drop-off	Cardboard/ Office Paper/ Metal/ Green Waste
10	City of Deming	In progress	Commercial/ residential	Drop-off	Metal/ Green Waste
11	City of Elephant Butte	No			
12	City of Española	Yes	Commercial/ residential	Drop-off/ Curbside/ Commercial	Cardboard/ Newpaper/ Metal
13	City of Eunice	No			
14	City of Farmington	Yes	Commercial/ residential	Drop-off	Cardboard/ Newspaper/ Office Paper/ Plastic/ Glass/ Metal
15	City of Gallup	Yes	Residential	Drop-off	Plastics Bags/ Paper/ Metal
16	City of Grants	Yes	Residential	Drop-off	Oils/ Automotive
17	City of Hobbs	Yes	Commercial/ residential	Drop-off	Cardboard/ Newspaper/ Office Paper/ Magazines/ Plastic/ Metal
18	City of Jal	No			
19	City of Las Cruces	Yes	Commercial/ residential	Drop-off/ Curbside	Cardboard/ Newspaper/ Office paper/ Plastic
20	City of Las Vegas	Yes	Commercial/ residential	Drop-off	Metal/ Green Waste
21	City of Lordsburg	Yes	Commercial/ residential	Drop-off	Cardboard/ Metal/ Green Waste
22	City of Lovington	Yes	Commercial/ residential	Drop-off	Cardboard/ Newspaper/ Metal/ Green Waste
23	City of Moriarty	No	Residential	Scheduled Recycling	Appliances
24	City of Portales	Yes	Commercial/ residential	Drop-off	Computer Paper/ Mixed Paper
25	City of Raton	Yes	Commercial	Collection	Cardboard/ Green Waste

No.	Community	Recycling	Sector	Type	Materials
				Services	
26	City of Rio Rancho	Yes	Commercial/ residential	Drop-off/ Curbside/ Special Collection	Cardboard/ Newspaper/ Office Paper/ Telephone Books/ Plastic/ Glass/ Metal
27	City of Roswell	Yes	Commercial/ residential	Drop-off	Cardboard/ Office Paper/ Newspaper/ Plastic/ Metals/ Green Waste
28	City of Ruidoso Downs	Yes	Commercial/ residential	Collection services	Cardboard/ Newspaper/ Metals/ Green Waste
29	City of Santa Fe	Yes	Commercial/ residential	Drop-off/ Curbside/ Commercial/ Events	Cardboard/ Office Paper/ Mixed Paper/ Newspaper/ Plastic/ Glass/ Metal/ Green Waste
30	City of Santa Rosa	No			
31	City of Socorro	Yes	Commercial/ residential	Drop-off at landfill	Cardboard/ Newspaper/ Office Paper/ Plastic/ Glass/ Metal
32	City Sunland Park	Yes	Residential	Drop-off	Cardboard/White Paper/Newspaper
33	City of Truth and Consequences	Yes	Commercial/ residential	Drop-off/ Collection Services	Cardboard/ Metal/ Green Waste/ Appliances
34	City of Texaco	No			
35	City of Tucumcari	Yes	Commercial/ residential	Drop-off	Composting Biosolids/ Green Waste
36	County of Los Alamos	Yes	Commercial/ residential	Drop-off/ Curbside/ Commercial	Cardboard/ Newspaper/ Office Paper/ Mixed Paper/ Green Waste/ Biosolids/ Metal/ Oil/ Car Batteries/ Appliances
37	Town of Bernalillo	Yes	Commercial/ residential	Drop-off/ Curbside	Aluminum/ Tin/ Glass/ Plastic/ Paper/ Cardboard
38	Town of Carrizozo	Yes	Commercial/ residential	Drop-off	Cardboard/ Plastic/ Glass/ Metal
39	Town of Clayton	No			
40	Town of Dexter	No			
41	Town Edgewood	No			
42	Town of Elida	No			
43	Town of Estancia	Yes	Residential	Drop-off	Metal/ Green Waste/ Oils/ Automotives/ Tires
44	Town of Hagerman	No			
45	Town of Hurley	No			
46	Town of Lake Arthur	No			
47	Town of Mesilla	Yes	Residential and Commercial	Curbside	Metal/ Newspaper/ Cardboard/ Plastic
48	Town of Mountainair	No			
49	Town Red River	No			
50	Town of Silver City	Yes	Commercial/residential	Drop-off/ Curbside	Cardboard/ Plastic/ Glass/ Newspaper
51	Town of Springer	No			
52	Town of Taos	Yes	Commercial/ residential	Collection Services	Cardboard/ Newspaper/ Office Paper/ Metal/ Glass

No.	Community	Recycling	Sector	Type	Materials
53	Town of Tatum	No			
54	Town of Vaughn	No			
55	Village of Angel Fire	Yes	Commercial/ residential	Drop-off	Plastic/ Metal
56	Village of Bosque Farms	Yes	Residential	Curbside	Paper/ Cardboard/ Newspaper/ Plastic
57	Village of Captain	No			
58	Village of Causey	Yes	Community cleanup day	Drop-off	Metal
59	Village of Chama	No			
60	Village of Cloudcroft	Yes	Commercial/ residential	Drop-off	Cardboard/ Newspaper/ Plastic/ Metals
61	Village of Columbus	Yes	Commercial/ residential	Drop-off	Newspaper/ Metal
62	Village of Corona	No			
63	Village of Corrales	Yes	Commercial/ residential	Drop-off	Cardboard/ Newspaper/ Mixed Paper/ Magazines/ Plastic/ Metal
64	Village of Cuba	Yes	Commercial/ residential	Drop-off	Mixed Paper
65	Village of De Moines	No			
66	Village of Dora	No			
67	Village of Eagle Nest	Yes	Commercial/ residential	Drop-off	Cardboard
68	Village of Encino	No			
69	Village of Floyd				
70	Village of Folsom	No			
71	Village of Fort Sumner	No			
72	Village of Grady	No			
73	Village of Grenville	No			
74	Village of Hatch	No			
75	Village of Hope	No			
76	Village of House	No			
77	Village of Jemez Springs	Yes	Commercial/ residential	Drop-off	Mixed Paper/ Plastic/ Glass
78	Village of Logan	Yes	Commercial/ residential	Drop-off	Metal/ Appliances
79	Village of Los Lunas	Yes	Commercial/ residential	Drop-off	Cardboard/ Metal/ Paper/ Appliances/ Plastic
80	Village of Los Ranchos	Yes	Commercial/ residential	Curbside	Cardboard/ Newspaper/ Plastic/ Metal
81	Village of Loving	No			
82	Village of Magdalena	No			
83	Village of Maxwell	No			
84	Village of Melrose	Yes	Commercial/ residential	Drop-off	Metal/ Appliances
85	Village of Milan	Yes	Commercial	Drop-off	Metal
86	Village of Mosquero	No			
87	Village of Pecos	No			
88	Village of Questa	No			
89	Village of Reserve	No			
90	Village of Roy	No			

No.	Community	Recycling	Sector	Type	Materials
91	Village of Ruidoso	Yes	Commercial/ residential	Drop-off/ Commercial Collection	Cardboard/ Newspaper/ Metal/ Green Waste/ Plastic
92	Village of San Jon	No			
93	Village of San Ysidro				
94	Village of Santa Clara	Yes	Commercial/ residential	Drop-off/ Commercial Collection	Cardboard/ Newspaper/Office Paper/ Metal
95	Village of Taos Ski Valley	Yes	Commercial/ residential	Drop-off	Carboard/ Glass/ Metal (Tin)
96	Village of Tijeras	Yes	Commercial/ residential	Drop-off /Three Clean-up Saturdays	Tires/ Green Waste
97	Village of Tularosa	No			
98	Village of Virden	No			
99	Village of Wagon Mound	Yes	Commercial/ residential	Drop-off	Metal/ Appliances
100	Village of Willard	No			
101	Village of Williamsburg	No			

Appendix D. Waste Generated and Disposed in New Mexico

Solid Waste Generated in New Mexico (1993 – 2003)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	Tons x 1000										
Municipal Waste	984	1,237	1,396	1,789	2,009	2,081	2,261	1,940	1,501	2,021	1,916
Construction and Demolition Waste	650	874	919	990	898	840	776	1,225	996	948	769
Total Waste Generated	**1,634**	**2,111**	**2,314**	**2,778**	**2,907**	**2,920**	**3,037**	**3,166**	**2,497**	**2,969**	**2,685**
Percent Increase over 1993		29%	42%	70%	78%	79%	86%	94%	53%	82%	64%

Solid Waste Disposed in New Mexico (1993 – 2003)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
	Tons x 1000										
Municipal Waste Generated	1,634	2,111	2,314	2,778	2,907	2,920	3,037	3,166	2,497	2,969	2,685
Out-Of-State Waste Disposed in Landfills in NM	209	293	239	305	112	236	241	572	750	378	537
Waste Diverted from Landfills	168	145	151	207	267	263	290	312	167	147	185
Total Solid Waste Disposed in New Mexico	**1,676**	**2,258**	**2,401**	**2,877**	**2,752**	**2,893**	**2,988**	**3,420**	**3,080**	**3,192**	**3,037**
Percent Increase over 1993	**0%**	35%	43%	72%	64%	73%	78%	104%	84%	90%	81%

Appendix E. Case Studies Of Ohio's Approach to Increase Recycling

Legislative Initiative

In 1988 Ohio's General Assembly passed House Bill 592 that directed the Ohio EPA to reduce solid waste disposal rates and create a Solid Waste Plan to address the following recycling goals:

- Reduce reliance on the landfills for management of solid waste
- Establish objectives for solid waste reduction, recycling, reuse and minimization and a schedule for implementing those objectives
- Establish restrictions on the types of solid waste disposed of by landfilling for which alternative management methods are available (such as yard wastes)
- Establish a strategy for legislative and administrative actions to promote markets for products containing recycled materials.
    - House Bill 345 (passed 1994)– Requires Recycling Market Development Plan every two years
    - Program includes a low-interest loan program for market development and for research and development of recycled products and markets
- Establish a statewide strategy for managing scrap tires
- Establish recycling and waste reduction strategies to be implemented in the state government.
- Increase education about solid waste management and recycling

Effect on Recycling Rate

The first Solid Waste Plan was adopted in 1989 and contained a goal to recycle 25% by 1994. By 1995 the state's recycling rate was 33%. A new goal of 50% was established at that time and the current recycling rate in Ohio is 40%.

Solid Waste Advisory Council

HB 592 Established the Solid Waste Advisory Council that has representatives from the following sectors:

House of Representatives and Senate
Townships and Counties
Private Solid Waste Management Industry
Private Recycling Industry
Environmental Liaison
Environmental Advocacy Organizations
Industrial Waste Generators
Public
Health Departments