APPENDIX A. Stakeholders in Solid Waste Management Plan Development

Cecilia Abeyta	NM Farm & Livestock Bureau
Darla Aiken	NM Environment Dept Special Projects
Chuck Akeley	NM Environment Dept/Solid Waste Bureau
Michael Alexander	National Recycling Coalition
Francisco Apodaca	Community/Tribal Liaison, NMED
Auralie Ashley-Marx	Santa Fe County SW, NM Environment Dept/Solid Waste Bureau
Greg Baker	NM Environment Dept/Solid Waste Bureau
Shirley Bailey	Zia Consultants
Steve Barela	Northwest NM Regional Solid Waste Agency
Julia Barnes	NM Public Facilitator Office
Deborah Begel	Citizen
Betty Behrend	Village of Los Lunas
James Benally	Navajo Nation
Ubaldo Benavidez	Southwest Solid Waste
Jim Benenson	NM Environment Dept
English Bird	NM Recycling Coalition
Frederick Bitsoi	Navajo Nation Solid Waste Management Program
Cassandra Bloedel	Navajo EPA
Misty Braswell	NM Environment Dept Office of General Counsel
Gretchen Brewer	NM Environment Dept/Solid Waste Bureau
BJ Brock	NM Wool Growers
John Buchser	Sierra Club
Todd Burt	Citizen
Camilla Bustamante	Northern NM College
Diana Bustamante	Colonias Development Council
P. Luigi Caiani-Chiani	NM State University/WERC
Margret Carde	NM Legal Aid, Inc
Veronica Carmona	Colonias Development Council
Gloria Castillo	Citizen
Gerald L. Chacon	NM State University Coop Ext Service
Jack Chappelle	SWANA Road Runner Chapter
Margaret Chavez	Santo Domingo Pueblo Utilities
Jim Chiasson	NMED Construction Programs
Gus Cordova	NM Association of Counties
David Coss	NM State Land Office
Aaron Covarrubias	NM Environment Dept/Solid Waste Bureau
Caren Cowan	NM Cattle Growers
Mary E. Day	NM Environment Dept Environmental Justice Liaison
William DeGrande	City of Santa Fe
Toni Duggan	NM Environment Dept/Solid Waste Bureau
Joseph Ellis	Estancia Valley Solid Waste Authority
Bianca Encinias	SNEEJ
Joy Esparsen	NM Association of Counties

Charles Ferguson	NM Environment Dept/Solid Waste Bureau
Erin Ferguson	Bernalillo County Environmental Health
Marlene Feuer	Waste Management, Inc
Mike Foster	Sandoval County
Orlando P. Gallegos	Intel Corp
Maureen Gannon	PNM
Patrick Gannon	NM Economic Development Dept
Juan Garcia	UNM Physical Plant Dept
Mike Garrett	PNM
Callie Gibson	Senator Pete Domenici's office
Barry Gober	Town of Taos
Jerry Goldstein	JG Press
Nora Goldstein	JG Press
Keith Gordon	Gordon Environmental, Inc
Betty Haagenstad	LCC, Ojo Caliente
Harvey Haagenstad	LCC, Ojo Caliente
Kristin Haase	NM State Land Office
Edward Hansen	NM Environment Dept/Solid Waste Bureau
Molly Harris	NM Dept of Transportation
Vern Hershberger	University of NM
Jill Holbert	City of Santa Fe Solid Waste
Lorraine Hollingsworth	Domenici Law Firm
Kyle Hoodenpyle	Dairy Producers of NM
Tracy Hughes	NM Environment Dept Office of General Counsel
Debra Ingle	Lincoln County Solid Waste Agency
James M Jackson	NM State Land Office
Michael Jago	Holloman Air Force Base
Earl James	NM Environmental Law Center
Louis Jenkins	City of Deming
Brian Johnson	NM Energy, Minerals & Natural Resources Dept
Jim Jordan	JEI
Jerry Kamieniecki	Gordon Environmental, Inc
Dr. Joe King	Camino Real
Randall Kippenbrock	Santa Fe Solid Waste Management Agency
Klaus Kemmer	City of Las Cruces Solid Waste
Sylvia Ledesma	Kalpulli Izkalli/South Valley Partners for EJ
Leane Leith	NM Public Interest Research Group
Kim Leslie	Raymond Communications, Inc
Joe Lewandowski	North Central Solid Waste Agency
Clarence Lithgow	City of Albuquerque Solid Waste
Jim Littlesinger	Navajo Nation Solid Waste Management Program
Joe Lobato	New Mexico Clean & Beautiful
Sharon Lombardi	Dairy Producers of NM
Dan Lorimier	Sierra Club, Rio Grande Chapter
Selby Lucero	NM General Services Dept/Bldg Svc Div
Patty Lundstrom	Northwest NM Council of Governments

Adrian Marrufo	City of Gallup
Sara Martinez	NM Environment Dept/Solid Waste Bureau
Sofia Martinez	Concerned Citizens of Wagon Mound
Linda McCormick	University of NM
Kim McKibben	Bernalillo County
Doug Meiklejohn	NM Environmental Law Center
Mark Miller	DBS&A
Tim Mings	Acme Iron & Metal
Richard Moore	SNEEJ
Vicki Mora	Associated General Contractors
Stan Morris	City of Albuquerque Solid Waste
Jay Morrow	Citizen
Paul Nelson	Durango McKinley Paper Co
Chuck Noble	NMED Office of General Counsel
Jim Norton	NM Environment Dept
Ruben Nunez	Colonias Development Council
John O'Connell	NM Environment Dept/Solid Waste Bureau
Lisa Oppenheimer	Concerned Citizens of Wagon Mound
Desbah Padilla	Northwest NM Regional Solid Waste Agency
Joyce Pankey	NM State Land Office
Larry Parker	City of Roswell
Tom Parker	Camp, Dresser, & McKee
Hoyt Pattison	NM Dairy Association
Juston Patty	City of Roswell Landfill
Patrick Peck	City of Las Cruces
Deborah Petrone	Conservative Use, Resources, Environment (CURE)
Alex Puglisi	Pueblo of Sandia
Harold Quintana	NM Environment Dept/Solid Waste Bureau
Tom Ransburg	Sierra Club
Martha Reyes	Durango McKinley Paper Co
Kitty Richards	Bernalillo County
John Richardson	Placitas Recycle
Michael Richardson	Waste Systems Supply
Carol Richman	Taos Wastewatch
Paul Robinson	SW Research & Information Center
Robby Rodriguez	SWOP
Henry Romero	Intel
Regina Romero	NM Municipal League
Rufus Safford	Citizen
Frank Sanchez	Durango McKinley
Elizabeth Shields	New Mexico Wool Growers Association
Jerold Schmider	Acme Iron & Metal
George Schroeder	Bernalillo County
Cliff Serrano	NM Environment Dept/Solid Waste Bureau IT
Marla Shoats	Shoats & Weaks
Domonic Silva	NM Retail Association

David Simpson	NM General Services Dept/Bldg Services Div
Gary Smith	UNM Physical Plant Dept
Kariann Sokulsky	Southwest Solid Waste Authority
E. Gifford Stack	NM Environment Dept/Solid Waste Bureau
L. R. Stephens	Placitas Recycle
Justin Stockdale	Santa Fe Solid Waste Management Agency
Karen Sweeney	Citizen
Bob Sweeney	Citizen
Jocelyn Torres	NM Environment Dept Office of General Counsel
Ramona Torres-Ford	City of Albuquerque Solid Waste
Dana Vackar Strang	NM State Land Office
Rafael Valdepena	Southwest Landfill
Hector Valverde	Master Fibers
Michelle Vattano	Pollution Prevention Program, NM Environment Dept
Harry Wang	City of Clovis
Daniel Weaks	Shoats & Weaks, Inc
Phillip Westen	Los Alamos County Solid Waste
Regina Wheeler	Los Alamos County Solid Waste
Robert Witt	Capital Scrap Metals
Steve Witt	Capital Scrap Metals
Brett Woywood	NM State University
Debra A Yazzie	Navajo Nation Solid Waste Management Program

APPENDIX B. Glossary of Terms

Act — The Solid Waste Act, NMSA 1978, §§ 74-9-1 through 74-9-42.

Agricultural Wastes — Solid wastes of plant and animal origin, which result from the production and processing of farm or agricultural products, including manures, orchard and crop residues, which are removed from the site of generation for solid waste management, or treated on site. Agricultural wastes are not regulated in New Mexico under the Solid Waste Act.

Aluminum Can or Aluminum Container — Any food or beverage container that is composed of at least 94 percent aluminum.

Asbestos — Fibrous forms of various hydrated minerals, including chrysotile (fibrous serpentine), chrocidolite (fibrous reibecktite), amosite (fibrous cummingtonite-grunerite), fibrous tremolite, fibrous actinolite, and fibrous anthrophyllite.

Beneficial Use — Use of waste materials as a substitute for a virgin material. Applies to materials that are solid waste before being beneficially used. Includes any activity that provides measurable environmental, economic or other benefits from the alternative use of a municipal solid waste that would otherwise require disposal. The material used for such a purpose must perform by meeting or exceeding the generally accepted specifications of the natural or commercial product that it is replacing, and in a manner consistent with all applicable laws. The material or product must also be safe in that use, it will not pollute the land, waters or ambient air of the State, nor constitute a hazard to health or welfare, nor create a nuisance. Beneficial use occurs in a manner that does not constitute recycling, and it is not disposal.

Beverage Containers — Glass, aluminum, steel, plastic, or paperboard containers with liquid contents intended for human consumption, such as milk, juice, or water.

Bottles — Plastic or glass containers with narrow necks or mouth openings smaller than the diameter of the container bodies. This category also includes containers with integral handles.

Buy-Back Recycling Center — A facility that purchases source separated recyclables from the public on a weight basis according to going market prices.

Capital Costs — The direct costs of acquiring real property assets (e.g., land, buildings, building additions, site improvements, machinery, and equipment).

Cell — A confined area engineered for the disposal of solid waste.

Closed Facility — Any solid waste facility that no longer receives solid waste; and for landfills, those closed in accordance with the regulations in effect at the time of closure.

Compost — The end-product, actually a range of soil amendment products depending on input materials, from composting processes.

Composting — Controlled microbial decomposition of organic wastes, which yields various types of soil amendment products depending on various blends of carbon and nitrogen materials. Carbon, or brown, sources include wood wastes (e.g, brush and tree trimmings) and dried leaves. Nitrogen, or green, sources include grass clippings, food wastes, and manures.

Composting Facility — A solid waste facility at which organic materials are composted to produce a safe and nuisance-free soil amendment product.

Composting Program — A composting program targets organic wastes such as yard trimmings and landscaping debris for landfill diversion by transforming them into reusable soil amendment products. Composting can be done on a large scale, such as an entire city, or at the household level, such as backyard composting. Composting processes can be active, with frequent turning, moistening, and aeration of piles to accelerate decomposition; or passive, with static piles left to break down at nature's own rate. Wind-row composting is a slower, low-cost, outdoor method requiring a large space, while in-vessel composting is a more capital-intensive, accelerated, containerized process requiring a small amount of space.

Conditionally Exempt Small Quantity Generator (CESQG, sometimes referred to as "Cee-Squeegee") — Persons or enterprises which produce less than 220 pounds of hazardous waste per month. Exempt from most regulation, they are required merely to determine whether their waste is hazardous, notify appropriate state or local agencies, and ship it by an authorized transporter to a permitted facility for proper disposal. Includes automotive shops, dry cleaners, photographic developers, and many other small businesses.

Construction and Demolition (C&D) Debris — Materials generally considered to be not water soluble and non-hazardous in nature, including, but not limited to, steel, glass, brick, concrete, asphalt roofing materials, pipe, gypsum wallboard and lumber from the construction or destruction of a structure or project, and includes rocks, soil, tree remains, trees and other vegetative matter that normally result from land clearing. If construction and demolition debris is mixed with any other types of solid waste, it loses its classification as construction and demolition debris. Construction and demolition debris does not include asbestos or liquids, including, but not limited to, waste paints, solvents, sealers, adhesives or potentially hazardous materials.

Convenience Center — In New Mexico "convenience center" typically refers to a drop-off facility where citizens can deposit solid waste to be picked up for disposal at another location. Convenience centers usually are located in rural areas with scattered, sparse populations where household trash collection is not economically feasible.

Cooperative Association — A refuse disposal district created pursuant to the Refuse Disposal Act, NMSA 1978, §§ 4-52-1 through 4-52-15, or a sanitation district created pursuant to the Water and Sanitation District Act, NMSA 1978, §§ 73-21-1 through 73-21-54, a special district created pursuant to the Special District Procedures Act, NMSA 1978, §§ 4-53-1 through 4-53-11, a Solid Waste Authority created pursuant to the Solid Waste Authority Act, NMSA 1978 §§ 74-10-1 through 74-10-100, or other such association created pursuant to the Joint Powers Act, NMSA 1978 §§ 11-1-1 through 11-1-7.

Corrugated Container — A paperboard container fabricated from two layers of kraft linerboard sandwiched around a corrugated medium. Kraft linerboard means paperboard made from wood pulp produced by a modified sulfate pulping process, with a base weight ranging from 18 to 200 pounds, manufactured for use as facing material for corrugated or solid fiber containers. Linerboard also may mean that material which is made from reclaimed paper stock. Corrugating medium means paperboard made from chemical or semi-chemical wood pulps, straw or reclaimed paper stock, and folded to form permanent corrugations.

Cost-Effective — Means "economic" in terms of tangible benefits produced by money spent.

Discards — The municipal solid waste remaining after recovery for recycling and composting. These discards are usually disposed of in landfills, although some municipal solid waste is littered, stored, or illegally dumped, particularly in rural areas.

Disposal — The management of solid waste through landfilling, incineration, or transformation at permitted solid waste facilities.

Diversion Alternative — Any activity that results in diverting materials from landfills, through reuse, source reduction, recycling or composting. See also Beneficial Use.

Double Handling — A general material handling concept indicating unnecessary steps and inefficient workflow in collecting, processing, transferring, shipping, or otherwise handling all waste stream components, including recyclables, compostables, or other discard materials. Double handling causes wasted time, energy, labor, and expense. For example, a recyclable material is dropped down a chute to a ground level bunker and then picked up again and loaded into a dumpster. Placing the dumpster directly under the chute removes the extra step, eliminates one instance of double handling, and streamlines the process.

Drop-Off Recycling Center — Means staffed or un-staffed depots where the public can place source-separated materials into designated bins for the purpose of recycling or composting.

Electronic Waste — Also called E-Waste or E-Scrap, this term refers to discarded computers, CRTs, TVs, VCRs, faxes, cell phones, and similar electronic products.

End-Products — Refers (in the recycling field) to new, finished products manufactured with part or all reclaimed post-consumer material content.

End-Use Industries — Refers to manufacturers such as paper mills and steel mills that utilize recycled materials as feedstocks for new products; these are the actual *recyclers* in the original sense of the word.

Environmental Improvement Board (EIB) — Is responsible for environmental management and consumer protection in New Mexico in order to ensure an environment that in the greatest possible measure will confer optimum health, safety, comfort and economic and social well-being on its inhabitants; will protect this generation as well as those yet unborn from health

threats posed by the environment; and will maximize the economic and cultural benefits of a healthy people [§ 74-1-2 NMSA 1978]. The basic authority for environmental and consumer protection management in New Mexico is provided through the State Environmental Improvement Act (§§ 74-1-1 et seq., NMSA 1978). This law establishes the EIB and specifies its duties and powers.

Environmental Justice (EJ) — Consistent with the Environmental Justice Executive Order 2005-056, the State of New Mexico is committed to affording all of its residents, including communities of color and low-income communities, fair treatment and meaningful involvement in the development, implementation, and enforcement of environmental laws, regulations, and policies regardless of race, color, ethnicity, religion, income or educational level.

Energy, Minerals, and Natural Resources Department (EMNRD) — Is a state department created in 1987 through a merger between the Natural Resources Department and the Energy and Minerals Department. EMNRD has six divisions: Administrative Services, Energy Conservation and Management, Mining and Minerals, Oil Conservation, State Forestry and State Parks. In addition, the Secretary has administrative oversight of the Waste Isolation Pilot Plant Transportation Safety Coordinator, the New Mexico Department of Game and Fish, the Game Commission, and the Youth Conservation Corps.

Environmental Protection Agency (EPA) — The Federal agency, established in 1970, charged with protecting human health and the environment.

Environmental Services Gross Receipts Tax (ESGRT) — Pursuant to the Municipal Local Option Gross Receipts Taxes Act, a local option excise tax equal to one-sixteenth of one percent (.0625%) of the gross receipts reported imposed on any person engaging in business in the municipality. Revenue from the municipal environmental services gross receipts tax must be used for the acquisition, construction, operation and maintenance of solid waste facilities, water facilities, wastewater facilities, sewer systems and related facilities.

Ferrous Metal — Any iron or steel scrap that has an iron content sufficient for magnetic separation.

Food Waste — All animal and vegetable solid wastes generated by food facilities or residences that result from the storage, preparation, cooking, or handling of food.

Generation — Means the amount (broken down by weight, volume, or percentage) of materials and products discarded into the overall waste stream and available for subsequent recycling, composting, other diversion methods, or disposal.

Glass Containers — This classification includes glass carbonated beverage bottles and other glass bottles and jars. Most markets require glass to be color-sorted into flint (clear), amber, or green. Recycling uses exist for mixed-color glass, but markets are very limited. Other glass products that are contaminants to container glass recycling include: pyrex, plate glass, automotive glass, light bulbs, mirrors, drinking glasses, ceramics, etc.

Household Hazardous Wastes — Wastes from products purchased by the general public for household use that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may pose a substantial known or potential hazard to human health, or the environment, if improperly treated, disposed, or otherwise managed. Examples are cleaning solvents, sprays, insecticides, herbicides, pharmaceuticals, etc.

Household Hazardous Waste Collection — Refers to a program through which household hazardous wastes are brought to a designated collection point for temporary storage and ultimately, recycling, treatment, or disposal.

Industrial Solid Waste — Refers to solid waste originating from mechanized manufacturing facilities, factories, refineries, construction and demolition projects, and publicly operated treatment works, and/or solid wastes placed in debris boxes.

Inert Solids (Inert Wastes) — A non-liquid solid waste including, but not limited to, soil and concrete, that does not contain hazardous waste or soluble pollutants at concentrations in excess of water-quality objectives established by a regional water authority, and does not contain significant quantities of decomposable solid waste.

Intermediate Processing Facility (IPF) — A facility that receives and processes for market recyclable materials diverted from the waste stream by residential and drop-off collections. Typically, curbside participants have pre-sorted designated materials for pick-up in compartmentalized trucks so the facility performs limited sorting, and chiefly bales or otherwise packages materials to meet market specifications. Over time, the distinction between an IPF and a MRF has blurred. See also Material Recovery Facility.

Landfill — A solid waste facility that receives solid waste for disposal.

Locked Gate — "Locked facility" means any solid waste facility which has permanently stopped receiving solid waste, recyclable materials, or compostable materials, but has not yet met the requirements of 20.9.1.500 NMAC.

Material Recovery Facility (MRF) — Refers in its original meaning to a specialized facility designed for sorting and processing an input stream largely composed of co-mingled recyclable materials that have been collected separately from compostables and other solid wastes. Although some solid waste contamination will be present in the form of residues from the container stream, or materials mistakenly placed by participants in recycling containers, solid waste residuals from a true MRF generally fall below 10 percent of total throughput. See also Intermediate Processing Facility.

Mixed Paper — Refers to a mixture, unsegregated by color or quality, of at least two of the following paper wastes: newspaper, corrugated cardboard, office paper, computer paper, white paper, coated paper stock, or other paper waste. Mixed paper definitions vary by receiving mills.

Metric Ton — A metric ton (spelled “tonne” in some European countries) is a unit of weight equal to 2200 pounds and the measurement typically used material transactions for export. See also Ton.

Mulch — Typically refers to chipped or shredded woody materials used for ground-cover, moisture retention, weed control, and preventing soil erosion.

Municipal Landfill — A discrete area of land or an excavation that receives household waste and that is not a land application unit, surface impoundment, injection well or waste pile as these terms are defined under 40 CFR 257.2. A municipal landfill may also receive other types of RCRA Subtitle D waste such as commercial solid waste, nonhazardous sludge, small quantity generator waste, industrial solid waste, construction and demolition debris and other special wastes as defined in § 105.BZ *New Mexico Solid Waste Management Regulations* 20 NMAC 9.1 October 27, 1995 (NMSWR). A municipal landfill may be publicly or privately owned and may be existing, new or a lateral expansion.

Municipal Solid Waste (MSW) — Refers to all solid wastes generated by residential, commercial, and institutional sources, and all solid waste generated at treatment works for water and waste water, which are collected and transported under the authorization of a jurisdiction, or are self-hauled. Municipal solid waste does not include construction and demolition (C&D) wastes, agricultural crop residues, animal manures, mining wastes and fuel extraction waste, forestry wastes, and ash from industrial boilers, furnaces and incinerators.

Municipality — Any incorporated city, town or village, whether incorporated under general act, special act or special charter, incorporated counties and class H counties.

New Mexico Environment Department (NMED) — Is a state department created in 1991 under the provisions set forth in the Department of the Environment Act. The Department’s mission is to provide the highest quality of life throughout the state by promoting a safe, clean, and productive environment. The Department’s programs include Air Quality, Construction Programs, DOE Oversight, Drinking Water, Environmental Health, Food Program, Ground Water Quality, Hazardous Waste, Information Technology, Liquid Waste, OSHA, Petro Storage Tanks, Pollution Prevention, Radiation Control, Solid Waste, and Surface Water Quality.

New Mexico Recycling Coalition (NMRC) — Is a non-profit 501c (3) organization, with the mission to improve the quality of recycling and waste reduction in New Mexico by leading the state to value waste as a resource.. Members represent cities, counties, state agencies, Indian tribes, federal government, businesses, non-profit organizations and individuals. NMRC is an affiliate of the National Recycling Coalition (NRC).

Non-Ferrous Metals — Any scrap metals that have value and are derived from metals other than iron and its alloys in steel. Non-ferrous metals include aluminum, copper, brass, bronze, lead, zinc, and other metals. A magnet will not adhere to non-ferrous metals.

Non-Renewable Resource — A resource that cannot be readily replenished, such as those resources derived from fossil fuels.

Old Corrugated Cardboard (OCC) — Corrugated containers recovered and marketed to mills for use in manufacturing new corrugated containers.

Old Newspaper (ONP) — Includes all reading material printed on "groundwood" paper, such as newspapers, newspaper inserts, advertising mailings, many catalogs and magazines, and many government publications and forms. Groundwood is produced by mechanical grinding to break down lignin fibers when pulping the wood. It is identified by sight, touch, or application of a test chemical. Many glossy publications like magazines are groundwood coated with clay for better color and photographic reproduction. Modern de-inking processes can reclaim newspaper and glossy stock for manufacture of new newsprint or other paper products such as brown paper towels, egg cartons, or cereal boxes that are gray on the inside surface. However, not all mills have the capability to process mixed stock or heavily soiled newspaper. Specifications should be checked in advance, and can change depending on other market forces.

ONP #7 (old newspapers, de-ink quality) — A category of newspapers collected for recycling, defined as sorted, fresh, not sunburned newspapers. May contain magazine paper (OMG). No prohibitives are allowed, and less than .0025 outthrows.

Open Landfill — Any landfill that is not in at least a Locked Facility status, is not a 108C, is constructed and operating, and is open to the public.

Operational Costs — Those costs incurred while maintaining the ongoing operation of a program or facility, and do not include capital costs.

Organic Waste — Solid wastes originating from living organisms and their metabolic waste products, such as yard wastes and food wastes, and which are biologically decomposable by microbial and fungal action into the constituent compounds of water, carbon dioxide, and other simple organic compounds.

Participating Organizations — As discussed in the diversion strategy in Chapter 4, this term refers to counties, cities with populations over 3,000 people, tribes and other organizations electing to provide access to recycling for their service populations.

Plan — The Solid Waste Management Plan of 1993 and this revision, as required by the Solid Waste Act, NMSA 1978, §§ 74-9-4 through 74-9-7. The Plan is required to include the priorities of first, source reduction; second environmentally safe transformation; and third, environmentally safe landfill disposal; and the following elements: waste characterization, source reduction, recycling, composting, solid waste facility capacity, education and public information, funding, special waste and household hazardous waste, and siting.

Plastics:

Film Plastics — Highly flexible sheetings of various thicknesses that do not hold their shape against the pull of gravity (as opposed to rigid plastics). Most common resins, including PET, HDPE, LDPE, PP, and PVC, can be formed into film. Plastic film is used for agricultural

coverings, greenhouse roofing, grocery bags, food industry wraps, dry cleaning bags, trash bags, etc. Film can be opaque or clear, and has a very low weight to volume ratio.

High Density Polyethylene (HDPE) — One of the most widely used materials for rigid plastic containers that are generally translucent or solid in color (e.g., milk containers, household cleaning solution bottles, base cups of large beverage bottles, etc.). Rigid HDPE containers carry the triangular recycling symbol with a 2 inside. Besides bottles and wide mouth containers, HDPE is used extensively for crates, drums, recycling set-out containers, refuse carts, toys, irrigation pipe, and many other applications. HDPE can also be blown into film for grocery bags, trash bags, and similar applications. Some HDPE film items are voluntarily coded #2.

Low Density Polyethylene (LDPE) — A flexible PE used chiefly for film applications like bread and dry cleaning bags, but also in squeezable products like honey bears and restaurant ketchup and mustard bottles. LDPE is also used in some durable products needing flexibility and resistance to tearing, such as wash basins and buckets. Rigid LDPE containers carry the resin code #4. Some film LDPE products, such as grocery bags, are voluntarily coded #4.

Linear Low Density Polyethylene (LLDPE), a variant of LDPE — A very thin, but strong variant of LDPE. Its most dominant film application is as stretch (shrink) wrap for pallets and overwraps of paperboard packaging. LLDPE is also used for semi-rigid applications such as swimming pool and car wash hoses.

Other Plastics — This category includes high-end durable and engineering plastics, as well as miscellaneous rigid containers coded #7 because they are multi-resin or multi-material combinations, or plastics other than the six most common resins classified in the rigid container coding system. Examples of items that would carry the #7 code are: water cooler bottles and multi-resin layered snack bottles

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Polyethylene Terephthalate (PET or PETE) — The plastic most commonly used for beverage bottles, and containers for products like spring water, salad dressings, pudding cups, dish washing liquids, cough syrups, clear carry-out clamshells, and microwave meals. PET softdrink bottles are identified by always being transparent and usually green or clear in color. The bottles do not have seams, and the bottoms have a small nipple, or blow-molding nub. Most microwaveable trays and plates are also PET. Rigid PET containers are coded with the triangular recycling symbol with a 1 inside of it. PET film is used as the seal on microwave dinners, and for boil-in-bag foods. PET also has non-packaging applications such as pallet strapping, rope or twine, fiberfill, and textiles (polyester).

Polypropylene (PP) — A very sturdy, weather-proof plastic widely known for its use in outdoor furniture. PP has been called "the living hinge" because in semi-rigid products like videocassette cases it is highly resistant to fatigue or cracking from being flexed. PP can be film or rigid form and is used in many functions including: auto battery cases, prescription bottles, some dairy tubs, deli containers, cereal box liners, bottle labels and caps, rope and strapping, combs, snack wraps, and bags. Rigid PP containers are marked with the resin code #5.

Polystyrene (PS) — Rigid polystyrene containers coded #6 include yogurt cups and tubs, and high impact items like audiocassette cases and vitamin bottles. PS is also used for cookie and muffin trays, disposable cutlery, and lids for carry-out cups. Foamed polystyrene, commonly known by Dow's tradename Styrofoam™, is used for meat and produce trays, egg cartons, and carry-out (clamshell) containers. Expanded polystyrene (EPS) is used for hot cups, packing peanuts, packing shapes for electronics like TVs and computers, and building insulation sheets and other products. High impact PS (HIPS) also appears in durable products including housings for some office equipment, e.g., computers, printers, copiers.

Polyvinyl Chloride (PVC or V for Vinyl) — A highly versatile plastic used primarily in durable applications, such as building materials, furniture, flooring, wire and cable, and imitation leather accessories like shoes, suitcases, and purses. PVC is used to a limited extent for bottles, mainly for imported mineral waters, store brand salad dressings and vegetable oils, floor polish, and many auto maintenance products such as waxes and cleaners. Most bubble packs and blister packs, as for batteries and hardware items, are made of PVC. PVC containers have a seam down the side, and clear items have a faint blue or gray cast. PVC rigid containers carry the #3 resin code.

Polyvinylidene Chloride (PVDC) a relative of PVC — Known by its trade name "saran," PVDC is used in film or sheet form as a heat seal wrap for fresh meat and produce, and a stiffer wrap for cheese, bacon, and other perishables requiring the oxygen barrier action of this resin.

Post-Consumer Plastic — Denotes used plastic items from residential, commercial, or institutional sources that would normally be discarded after use. These items generally carry a certain degree of contamination such as food or soap residues, paper labels, printing inks, etc.

Post-Consumer Resin (PCR) — A term adopted by plastic manufacturers to refer to recycled plastic feedstocks (usually flakes or pellets) derived from plastics diverted from residential, commercial, and industrial waste streams. PCR is post-use material destined for disposal unless intercepted for reclamation and reuse.

Putrescible Wastes — Organic materials such as animal and vegetable food scraps which, by their composition and moisture content, are subject to rapid decomposition, or putrefaction, and generally cause unpleasant odors and off-gassing. In the solid waste management industry, the term “garbage” specifically refers to putrescible wastes.

Recovered Material — Means material that has been retrieved or diverted from disposal for the purpose of recycling, reuse or composting. "Recovered material" does not include those materials generated from and reused on site for manufacturing purposes.

Recovery — Removing materials from the discard stream for the purpose of reuse, recycling, or composting. Recovery does not automatically equal recycling and composting. For example, if markets for recovered materials are not available, the materials that were originally separated from the waste stream for recycling may simply be stored or, in rare cases, sent to a landfill.

Recycling — Technically, the processes at the end of the recovery sequence in which post-consumer and other post-use materials are converted into new raw materials or manufactured into finished products. In general, recycling has come to have a broader meaning denoting all steps from collection to end-use manufacture. For purposes of the Solid Waste Management Plan of 2007, recycling is defined more broadly to include composting and beneficial use methods that divert discards from disposal, as well as traditional material recovery.

Recycling and Illegal Dumping Act (RAID) — NMSA 2005, §§ 74-13-1 to 74-13-20.

Recycling Program — A program that enables citizens, businesses, and other entities to set aside targeted materials to be recovered and returned to manufacturing processes as economically valuable commodities, and thus be diverted from landfill disposal. Recycling programs typically include public education to elicit participation; use curbside, alley, drop-off, or buy-back collection, and include processing/shipping of materials to brokers or end-use industries.

Regulations — The Solid Waste Management Regulations, 20 NMAC 9.1

Residential Solid Waste — Solid waste originating from single-family or multiple family dwellings.

Resource Conservation and Recovery Act (RCRA) — The Resource Conservation and Recovery Act, an amendment to the federal Solid Waste Disposal Act, was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. RCRA provides, in broad terms, general guidelines for the waste management program envisioned by Congress and the EPA Administrator with the necessary authority to develop specific requirements that implement the law. The goals set by RCRA are: to protect human health and the environment from the potential hazards of waste disposal, to conserve energy and natural resources, to reduce the amount of waste generated, and to ensure that wastes are managed in an environmentally sound manner. RCRA also lays out the basic framework for hazardous waste management. [40 CFR Part 257-258 (Solid Waste) and Part 260-279, various sections (Hazardous Waste)]

Reusability — The ability of a product or package to be used more than once in its same or a closely similar form.

Reuse — Means the use, in the same or a closely similar form as it was produced, of a material or product which might otherwise be discarded.

Rubber — An amorphous polymer of isoprene derived from natural latex of certain tropical plants or from petroleum.

Salvage — The controlled removal of solid waste materials at a permitted solid waste facility for recycling, reuse, composting, or transformation.

Seasonal — Refers to those periods of time during the calendar year that are identifiable by distinct cyclical patterns of local climate, tourism, trade or commerce.

Service Center — as defined in the diversion strategy in Chapter 4, an entity in the Participating Organization's area that collects or accepts each of the materials targeted for recycling as listed on the Tier chosen by the organization.

Sewage Sludge — Any residual solids and semi-solids resulting from the treatment of waste-water; it does not include waste-water effluent discharged from such treatment processes.

Sludge — Any solid, semi-solid, or liquid waste excluding treated effluent generated from a municipal, commercial, or industrial waste water treatment plant, water supply treatment plant, or air pollution control device.

Small Exempt Landfill — Any new or existing municipal landfills or lateral expansion that dispose of less than 20 tons of solid waste daily, based on an annual average, and that are exempt from the design requirements in Subpart III of the NMSWR.

Small Transfer Station — A transfer station with a total operational rate of 120 cubic yards or less per day of solid waste that does not include separated recyclable materials.

Solid Waste — Any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations and from community activities.

Solid Waste Annual Reports (SWARs) — A report, as required by the Solid Waste Management Regulations, 20 NMAC 9.1, § 109.C. Owners or operators of solid waste facilities and operations requiring registration must submit an annual report to the Secretary for each facility or operation, within 45 days from the end of each calendar year describing the operations of the past year. The report must include: the type and weight or volume of solid waste received; for a landfill, a description of the capacity used in the previous year and the remaining capacity; for a landfill, a description of the acreage used for disposal, the acreage seeded, the acreage where vegetation is permanently established and a narrative of the owner's or operator's progress in implementing the closure plan; the type and weight or volume of special waste received; a summary of all monitoring results; written notice to the Secretary if any change in operation has occurred that will reduce the active life of the facility by 25% or more; weight or volume of materials recycled during the year; final disposition of materials not stored or recycled; amount of leachate generated and treated; and financial data.

Solid Waste Association of North America (SWANA) — A national professional association which sponsors an annual conference, conducts training, and awards credentials for solid waste management professionals. Also the local New Mexico affiliate, the Roadrunner Chapter.

Solid Waste Bureau (SWB) — The office within NMED charged with developing, implementing, and enforcing the Solid Waste Act and Regulations, and the comprehensive solid waste management program as set forth in the New Mexico Solid Waste Management Plan.

Solid Waste Facility — Any public or private system, facility, contiguous land and structures, location, improvements on the land, or other appurtenances or methods used for processing, transformation, recycling or disposal of solid waste, including landfill disposal facilities, transfer stations, resource recovery facilities, incinerators and other similar facilities.

Solid Waste Facility Grant Fund (SWFGF) — Created by § 74-9-41 NMSA 1978. The New Mexico Legislature authorized issuance of $10,000,000 in bonds in 1995, and an additional $7,500,000 in bonds in 1996 to fund grants for the program. Investments generate additional income for the fund. The purpose of the fund is to make grants to counties and municipalities, individually or jointly, for the establishment or modification of solid waste facilities. However, currently no funds are available.

Source Reduction — Any action that causes a net reduction in the generation, volume, or toxicity of solid waste. This approach is based on the concept of minimizing or eliminating waste up front, through interventions in production and use cycles. Source reduction promotes a broad variety of changes in product design and manufacture, supply and purchasing choices, public awareness, and utilization and disposal patterns, in order to reduce the quantity, toxicity, or other environmental impacts of material goods at any point prior to their entry into the waste management system. Examples of source reduction include:

- Redesigning products to extend product life, be reusable, or be more recycling-friendly
- Light-weighting packages or products by using less material
- Pollution prevention measures by industry such as changes in manufacturing processes and product composition to decrease the amount and/or toxicity of component materials
- Revised purchasing programs emphasizing environmentally preferable alternatives, such as reusable rather than disposable products
- Changes in distribution and supply systems, such as just-in-time inventory, to minimize surpluses and outdated stock that may later need disposal.

A principle component of successful source reduction programs is education to raise public awareness of simple, everyday actions individuals can take to reduce the amount of waste they generate, such as resisting impulse buying; donating reusable discards to thrift shops; or following the old adage, “Use it up, wear it out, make it do, or do without.”

Source Separation — Refers to a conscious choice by the individual at the moment of discarding an item no longer of use to him or her, to segregate the item from other wastes so that it can be captured for some form of material recovery, such as recycling, reuse, or composting, or for special handling, as mandated for hazardous or medical wastes. Source separation also refers to specialized collection systems designed to make it easy and convenient for individuals to sort discards into all categories designated for recovery or special handling.

Steel Can, Steel Container — Any food, beverage, or other container that is composed of steel with a thin tin coating. Commonly referred to as "Tin can" or "tin container." Depending on markets, steel cans may also include steel aerosol cans.

Tin Can or Tin Container — See Steel Can.

Tires and Rubber — Products of an amorphous polymer of isoprene derived from natural latex of certain tropical plants, or synthetic rubber derived from petroleum.

Ton — A unit of weight in the U.S. Customary System of Measurement equal to 2,000 pounds. Also called a short ton or net ton, in contrast to a metric ton (tonne) which is 2200 pounds.

Transfer — The handling and storage of solid waste for reshipment, resale, or disposal, or for waste reduction or resource conservation.

Transfer station — A facility managed for handling and storage of solid waste in large containers or vehicles for transfer to another facility**.**

Transformation — Incineration, pyrolysis, distillation, gasification or biological conversion other than composting.

Universal Wastes — Defined by the federal Universal Waste Regulations (40 CFR 273), which amend the Resource Conservation and Recovery Act (RCRA) regulations to allow for streamlined collection and management of certain widely generated hazardous wastes, including universal waste batteries, pesticides, mercury-containing equipment (which encompasses thermostats), and lamps. This rule was adopted by New Mexico in 2005.

Volume — A three dimensional measurement of the quantity of space taken up by an item, commonly expressed in terms of cubic yards or cubic meters.

Waste Characterization Study — A waste sampling and sorting study that identifies constituent materials that compose solid waste generated in a given population unit, and projects total waste quantities generated over a given period of time. It should be statistically representative and should, ideally, represent seasonal and other variations relevant to that locale. The constituent materials should be measured by weight, volume, percentage, material type, generation sources, generation rates, and delivery methods. Generation rate is usually measured in terms of weight or volume of each material per person over a specified time period. Waste characterization studies are tools used to plan integrated waste management systems for residential, commercial, institutional, industrial, governmental, and other sources. Waste characterization studies are also used to evaluate the results of recycling, composting, and other waste reduction programs over time.

Waste Diversion — Means to divert solid waste, in accordance with all applicable federal, state and local requirements, from disposal at solid waste landfills for recycling, reuse, composting, or beneficial use.

Waste Generator — Means any person or entity that produces solid waste in the course of routine activities or processes.

Waste Reduction — In contrast to source reduction, which occurs **before** materials enter the waste management system, waste reduction refers to efforts **after** materials enter the waste

management system to divert them for recovery rather than final disposal in a landfill. Waste reduction includes recycling, composting, and salvaging operations — both source separation programs designed to intercept materials from generators at the point when they are being thrown away, and “end of the pipe” extraction programs designed to retrieve recyclables, reusables, or compostables from the solid wastes delivered to a disposal facility.

White Goods — Discarded, enamel-coated major appliances, such as washing machines, clothes dryers, hot water heaters, stoves and refrigerators.

White Ledger Paper — White office bond paper, laser printer paper, and non-colored photocopy paper with presentation quality fiber content and consistency.

Wood Waste — Includes tree trunks, stumps, and large limbs from landscaping activities; transport products such as wood pallets and shipping crates; discarded furniture and other manufactured wood products; and dimensional lumber and wood debris from construction and demolition activities. In the industrial sector, wood waste refers to solid waste consisting of wood pieces or particles generated from harvesting, processing, or storing forest products, or manufacturing of wood or wood-derived products.

Yard Waste — Any wastes generated from the maintenance or alteration of public, commercial or residential landscapes including, but not limited to, grass and yard clippings, leaves, tree trimmings, prunings, brush, and weeds.

APPENDIX C. Detailed Working Group Recommendations by Chapter

CHAPTER 3. WASTE CHARACTERIZATION ELEMENT

The Waste Characterization Working Group recommends the following:

- **Recommendation**: Develop and implement systematic methods to obtain and properly quantify waste generation and diversion rates:

  - Revise and modify the existing SWAR form
  - Include detailed and specific instructions for preparation and submission of data
  - Mandate use of a new form, preferably an online questionnaire that can be completed electronically
  - Implement use of the new form for reporting 2006 tonnages
  - Implement a more robust, comprehensive database allowing integrated management of all SWB information — SWARs; recycling, composting, and diversion reports; waste characterization data; permit, compliance, and enforcement records; illegal dumping reports; and so on.
    - Implement required use of the Waste Characterization Data Collection Forms included in Appendix H.
    - Provide technical support by NMED staff to assist operators with systematic collection and reporting of waste disposal and diversion activities.

- **Recommendation**: Include training modules in the Certification Courses for Landfill, Transfer Station, Composting, and Recycling Facility operators on proper data collection and reporting methods, as well as waste characterization instruction and hands-on field exercises.

- **Recommendation**: Assure consistency of waste collection data by requiring that all facilities install scales for weighing waste by 2008; and/or obtain scale data for wastes delivered from disposal sites (landfill).

  - In lieu of scaled weights, all waste disposal or diversion data must be converted from volume to tons using an approved formula on the annual report form provided by NMED. Methods used to obtain volume data must be specified by the operator and reviewed in the field by NMED staff
  - For facilities or municipalities that report data inconsistent with the best available population-based waste generation data, details must be provided on why the discrepancy exists, and what corrective measures will be taken to resolve data collection problems.
  - Obtain authorization from the State Legislature or Governor to establish a Solid Waste Infrastructure Grant program that will allow qualifying municipalities to obtain funds to purchase and install appropriate waste scales
  - Issue the first grants and have scales installed and operational within the next five years.

- **Recommendation:** Improve waste characterization database.

  - Within the next three years every MSW facility (landfill, transfer station, recycling facility) shall have completed at least one, and preferably two, waste characterization efforts
  - Data shall be compiled and evaluated by NMED staff and a report of waste characterization findings prepared
  - Within five years, secure state funding and conduct a formal statewide waste characterization study.

- **Recommendation**: Include in revised Regulations a requirement that all recycling, composting, and other diversion efforts report annual recovery data to NMED.

  - Within the next three to five years establish reporting requirements for all public and private sector entities engaged in diversion activities in New Mexico to provide data to NMED on tonnages of all materials diverted from landfill disposal
  - Within three years promulgate revised Regulations to establish the above reporting requirements
  - Within five years implement data systems and reporting methodologies to capture public and private sector diversion activities.

CHAPTER 4. DIVERSION ELEMENT

The Diversion Working Group recommends the following:

- **Recommendations on Grants and Reporting**:

  - The Alliance will consider the following when it looks at grant protocol Grants and Incentives
    - The grant fund should be as large as possible
    - Grants should be awarded on an annual cycle
    - Grants should be given only to those Participating Organizations providing an economically viable and sustainable plan for providing access to recycling
    - Grants should be prioritized so that entities seeking to reach Tier 1 status are given first preference; entities at Tier 1 status are given second preference; entities at Tier 2 status are given third preference; etc
  - NMED should look at other sources of funding for grants (such as the tire recycling fund and water quality grants) in order to provide the largest listing of resources possible.
  - Recycling Access Reporting
    - Participating Organizations required to provide SWARs will complete additional information sections documenting access to recycling. For Participating Organizations not already required to submit SWARs, SWB will provide a short form for reporting the necessary data. Participating Organizations will provide requested information on an annual basis. They will list all known services offered in their area that accept each item identified for recycling or diversion (including composting and beneficial use), and provide diverted tonnage data.
    - SWB shall work to:
      - Ensure that reporting forms can be, and are encouraged to be, submitted electronically
      - Create a mechanism so that data can be compiled automatically when received
      - Compile the information on Participating Organizations' Community Recycling Plans, performance in providing access to recycling and/or diversion, and diverted volume data, and make this information available to the public.

- **Recommendation:** Overhaul reporting and data systems with thought given to methodologies, models, and databases already developed and tested to capture recycling and diversion information from the private sector, as well as small recycling operations and reuse programs.

- **Recommendation:** Capture diversion volumes from all composting operators in the state, including home composting.

- **Recommendation:** Review and possibly modify the Regulations on calculating the state solid waste diversion rate to allow for capturing information on non-MSW materials diverted for *beneficial use*.

For example, the Regulations exclude bio-solids composting from the diversion rate, because EPA does not classify these fractions as MSW. However, beneficial use diverts these materials from landfill disposal, extends the life of expensive landfill space, and helps avoid the costly and sometimes contentious process of siting new landfill capacity.

- **Recommendation:** Research C&D material reuse and recycling potential. Although EPA does not count C&D recovery as MSW diversion, this material is almost one-third of wastes sent to New Mexico landfills. Key stakeholders urge following the example of other states (e.g., CA, OR, MN), and revising New Mexico standards and the Regulations to allow C&D recycling and reuse to be counted as diversion.

C&D is often generated in large quantities, concentrated at the point of generation, and has the potential to be reused locally, which can simplify logistics for rural areas and small towns, as well as urban areas. Composition studies elsewhere have found that over 75 percent of C&D materials are recyclable. Developing C&D recycling markets and counting C&D recovery in the state diversion rate bear further evaluation.

- **Recommendation:** A concerted effort should be made to promote and document existing and potential *source reduction* programs in New Mexico. SWB should coordinate with the NMED Green Zia education and recognition programs in helping to expand private sector efforts to reduce quantities and toxicities of solid waste. Also, reuse programs that intercept discards before they actually enter the solid waste stream should be among the activities tracked as *source reduction*.

- **HHW Program Recommendations**:

  - Educational Efforts
    - Prepare a public outreach campaign stressing "Buy Only What You Need—Find Safe Products" to reduce the amount of HHW purchased
    - Increase citizen understanding of proper management and disposal for latex paints, which can be disposed of in landfills if allowed to harden before disposal
    - Encourage formation of a waste exchange network for reuse of HHW materials.
    - State purchasing policy shall be changed to include policies for the procurement of recycled commodities such as re-refined oil
    - State contracts should be developed to allow local communities, cities, and counties to procure HHW services under a state bid contract
    - Include HHW training module in transfer station and landfill certification courses
  - Funding Mechanisms
    - Expand the scope of SWFGF to include funding or low interest loans for HHW collection programs in New Mexico
    - Consider establishing a HHW/CESQG Grant Fund to help communities off-set collection program costs

- **CESQG Recommendations:** As precedent exists in New Mexico to regulate several specific wastes such as used motor oil, lead-acid batteries, and liquids, and as mercury-containing lamps are currently listed as a Universal Waste, and as these wastes have not been previously addressed, it is recommended that the Regulations be amended to include requirements for these wastes.
- **Mercury Containing Lamps Recommendations:** All businesses are strongly encouraged to recycle their-mercury-containing lamps. The NMED is instructed to prepare and maintain a current list of lamp recyclers.

- **Other Recommendations:**

  - Establish a HHW and CESQG Fund based on a Legislative Appropriation to help implement management, collection, and recycling programs for hazardous items.
  - Conduct a study and evaluate management data within three years to determine current status of the problem and possible impacts. Focus on rural areas. Results will assist with a determination to potentially ban of these materials with a curbside hauler exemption during the next Plan review period.
  - Coordinate with, and scale up efforts through the Green Zia Program to include more businesses in training and recognition programs for properly managing hazardous wastes.
  - Include a waste quality, screening, and segregation training module in landfill and transfer station certification courses.
  - Expand and enhance NMED education and outreach efforts to the affected community.

CHAPTER 5. FACILITIES ELEMENT

The Facilities Working Group recommends the following:

- **Solid Waste Facility Siting Recommendations:**

  - The Regulations have been effective at protecting the environment, but smaller population centers are experiencing the greatest cost impacts
  - The Regulations should foster and simplify the siting of recycling and composting facilities to achieve waste diversion objectives listed in the Act, and to extend the life of expensive remaining landfill space

- The Regulations should also facilitate siting of transfer stations and convenience centers to reduce the cost and complexity of solid waste management for smaller communities
- Funding sources should be identified for smaller communities closing local landfills and transitioning to transfer to offset increased infrastructure and transportation costs
- Funding sources should be identified for recycling and composting initiatives.

❖ **Solid Waste Capacity Recommendations**:

- Recommendations regarding capacity focus on the data that is available to monitor the status of each facility, and to identify regional capacity shortfalls in advance. However, the data collected and compiled by NMED in the SWAR process is inadequate to make this evaluation. Therefore, improve the uniformity and validity of the data reported by each facility, and simplify the reporting process
- Develop additional tools to assist NMED in compiling and evaluating the data (i.e., electronic database, "waste shed" mapping, metrics, etc.)
- Identify funding sources to upgrade the data collection and analysis effort.

❖ **Other Recommendations:**

- Develop an updated, forward-looking inventory of landfills, transfer stations, convenience centers, recycling, composting, and other diversion facilities. This matrix (see sample format Tables 5.1 and 5.2) will identify data with regard to permit status, capacity, longevity, waste receipt rates, etc., necessary to meet the 10-year and 20-year planning windows. The analysis focuses on facilities that are expected to outlive the mandatory closure requirements of the proposed regulatory revisions. This task will also include the development of uniform definitions (e.g., permit capacity vs. ultimate capacity). Table 5.1 illustrates the lack of uniformity of the reported data, and highlights the need for improved data collection.
- Prepare a Solid Waste Facilities Map (see sample format Figure 5.1 in the Plan) that identifies site locations as well as service areas, or "waste sheds." This map connects transfer stations and public convenience centers with destination disposal sites. Boundaries would be estimated in order to evaluate population equivalents, haul distances, etc; and most importantly, highlight areas that require new facilities and/or financial assistance. This is a more functional approach than using the six NMED Solid Waste Districts, which were established for enforcement purposes, not to reflect disposal market conditions.
- Prepare a Solid Waste Diversion Map (see sample format Figure 5.2 in the Plan) showing locations of recycling, composting, and other diversion operations (e.g., reused building material outlets), and indicating the flow of recovered materials to processing facilities, markets, and end-use manufacturers. This map will show which areas of the state offer access to recycling, as recommended by the Diversion group, and which areas will need technical, funding, or other assistance to implement diversion capabilities.
- Improve the value and applicability of the current database on solid waste facilities as updated by SWARs submitted by each government unit or waste management entity. This will include several initiatives:
  - Revise the SWAR Form
  - Make the SWAR Form more user-friendly (e.g., allow electronic completion/ filing; furnish historic site-specific data online, etc.)
  - Require that reporting for waste receipts at major disposal sites, to the extent practical, be recorded in actual weights to promote uniformity of data
  - Mandate in the Regulations that annual reporting documentation submitted by each solid waste facility be authenticated by the operator using, for example, certification by a knowledgeable landfill operator (certified by NMED), or a registered professional engineer with specific knowledge of the facility
  - Expedite preparation and distribution of the required SWAR by SWB
  - Provide funding for implementation of the above, as well as updates to data collection and analysis programs.
- Promote the siting of recycling, composting, and transfer facilities in furtherance of statewide waste management and waste reduction goals.
  - The Regulations should foster and simplify the siting of recycling, composting, and transfer facilities
  - Funding sources should be identified for communities which are transitioning from landfill to transfer to offset increased infrastructure and transportation costs.

Table 5.1 New Mexico Solid Waste Facility Inventory - Landfills

Facility Name	Permit Status Issued : Expires	2004 Data (draft)							
		2004 Reported Beginning Capacity (SWB) (cy)	2004 Reported Used Capacity (SWB) (cy)	2004 Tons Accepted (SWB) (tons)	2004 Reported Remaining Capacity (SWB) (cy)	2004 Facility Daily Usage Rate (SWB) (cy)	Years Remaining (SWB table) (yrs)	Years Remaining (via calc.) (yrs)	2004 Facility Daily Intake Rate (SWI (tons)
Subtitle D Landfills									
Caja Del Rio	6/27/1995 : 06/27/2015	6,375,191	317,566	210,690	6,057,625	870	19	27	1,1
Camino Real	3/5/1997 : 3/5/2007	7,573,179	978,315	568,850	6,594,864	2,680	7	9	3,1
Cerro Colorado	6/22/2000 : 6/22/2020	81,392,000	1,080,092	533,730	80,311,908	2,959	74	104	2,9
Clovis	6/15/1998 : 6/15/2018	1,682,881	135,374	88,800	1,547,507	371	11	16	4
Corralitos	8/9/1995 : 8/9/2015	16,762,937	335,037	134,020	16,427,900	918	49	69	7
Lea County	12/17/1997 : 12/17/2017	3,965,198	128,656	73,160	3,836,542	352	30	42	4
Northeastern NM Regional	3/26/1997 : 3/26/2007	5,417,500	53,960	32,270	5,363,540	148	99	139	1
Northwestern NM Regional	10/12/1995 : 10/12/2015	0	0	96,980	0	0	NP		5
Otero/Lincoln Regional	10/4/1993 : 10/4/2013	83,893	8,067	76,990	75,826	22	9	13	4
Rio Rancho	4/29/1994 : 4/29/2004	4,531,465	435,395	354,220	4,096,070	1,193	9	13	1,9
Roswell	5/21/1997 : 5/21/2017	1,419,372	196,213	87,760	1,223,159	538	6	9	4
Sand Point	3/2/1994 : 3/2/2014	2,590,630	111,137	69,570	2,479,493	304	22	31	3
Sandoval County	6/17/2005 : 6/17/2025	0	0	252,150	0	0	NP		1,3
SW NM Regional	12/19/1994 : 12/19/2014	1,829,833	67,296	28,040	1,762,537	184	26	37	1
Taos	8/16/2001 : 8/16/2021	3,038,000	72,800	36,340	2,965,200	199	41	57	1
Torrance/Bernalillo County	6/18/1997 : 6/18/2017	4,357,349	58,057	24,950	4,299,292	159	74	104	1
Tucumcari	5/31/2005 : 5/31/2025	0	0	2,700	0	0	NP		
Pending Permits (currently registered)									
De Baca County		0	0	2,150	0	0	NP		
Deming		923,000	108,800	37,370	814,200	298	7	11	2
San Juan County		0	0	121,490	0	0	NP		6
Socorro		0	0	15,980	0	0	NP		
Valencia Regional/Tri-Sect		9,918,750	0	17,850	9,918,750	0	NP		
Vaughn		0	0	1,060	0	0	NP		
C & D Landfills									
Magdalena C & D	08/7/2000 : 8/7/2020	not listed	not listed	not listed	not listed	not listed			not listed
Mesa Verde C & D	3/12/2001 : 3/12/2021	450,966	15,911	5,150	435,055	44	27	38	
Southwest	5/8/1997 : 5/8/2007	1,378,415	301,531	189,840	1,076,885	826	4	5	1,0
Permitted Sp. Waste (only) Landfills	**Permit Issued**								
Keers Asbestos (2)	7/16/93								
Lea Land Industrial (2)	2/27/96								

Notes:
(1) NP = not provided on SWB table
(2) Source: SWB Permit Section

Table & estimates courtesy of Gordon Environmental, Inc, 200

Table 5.2 New Mexico Permitted Transfer, Recycling, and Composting Facilities (Draft - To Be Completed)

Facility Name	Permit Status Issued : Expires	Design Capacity	Annual Waste Receipts (2004 Annual Report)	Service Area (2004 Annual Report)	Waste Destination
Transfer Stations					
Artesia	3/16/1995 : 3/16/2015				
Cibola County	1/23/1996 : 1/23/2016				
Deming	11/11/2001 : 11/11/2021				
Don Reservoir	8/24/2000 : 8/24/2020				
Eagle Rock	8/7/2000 : 8/7/2020				
East Mountain	12/2/2002 : 12/2/2022				
Las Vegas	10/19/1999 : 10/19/2019				
Los Lunas	11/17/1999 : 11/17/2019				
McKinley County	1/23/1996 : 1/23/2016				
Montessa Park	5/11/1998 : 5/11/2018				
Ruidoso (Gavilan Canyon)	12/19/1994 : 12/19/2014				
Santa Fe	5/7/1996 : 5/7/2016				
South Central SWA	11/2/1995 : 11/2/2015				
Recycling Facilities					
Cerro Colorado IPF	8/5/1999 : 8/5/2019				
Environmental Control	1991 : 2001				
Master Fibers	11/15/1996 : 11/15/2006				
Durango-McKinley Fiber Co.	4/17/1996 : 4/17/2006				
Composting Facilities					
Albuquerque	8/5/1999 : 8/5/2019				
Artesia	9/17/1993 : 09/17/2013				
Los Alamos	1/3/1996 : 1/3/2016				
Sandoval	6/17/2005 : 6/17/2025				

Table courtesy of Gordon Environmental, Inc, 2006

CHAPTER 6. EDUCATION ELEMENT

The Education Working Group recommends the following:

❖ **Program Recommendations:**

- How to Set Up a Community Recycling Program
- Create Online Recycling Market Directory
- Outreach Program for Elected Officials
- Reduce and Reuse Awareness Campaign Aimed at Citizens

❖ **Other Recommendations:**

- Identify partners
- Identify priorities
- Create marketing product with unified message
- Provide funding to maintain list of resources
- Identify target audiences and distribute marketing product to them
- Identify verification measures to confirm that education strategies are working (messages are heard)

CHAPTER 7. FUNDING ELEMENT

❖ **Funding Discussion:** The Funding Working Group has not reached consensus on what funding mechanisms could be used to create the $1,500,000 annual budget dedicated to support the Statewide Programmatic Initiatives Fund described above. The group discussed several ideas.

- Secure an additional $1.5 million annually from the general fund to support program priorities
- Seek a legislatively funded trust that would provide interest sufficient to provide $1.5 million in interest income for program priorities
- Ask the legislature to enact a surcharge on some identified item, such as a per-ton fee on waste sent to landfills, or a tax on plastic retail bags, and dedicate the resulting revenues to a solid waste management/diversion fund. NOTE: It was very important to some group members to ensure that a surcharge, if imposed, contain limits that preventing the fee from being increased for other purposes later.
- Add an additional percentage to the ESGRT in general to fund program priorities
- Bottle bill – Though this type of legislation has been introduced a number of times before in NM, reportedly the earlier bills and redemption programs they set forth were poorly designed. The Hawaii and California redemption systems (bottle bills) offer good models to follow in crafting a sound bill
- Ask the legislature to enact disposal fees on tires or other problem waste items, with the resulting monies earmarked to a solid waste management/diversion fund. NOTE: A disposal fee on tires could allow the state to recoup "disposal fees" tire dealers are already charging to customers, but that are presently being retained by dealers rather than actually going to support tire disposal, as legislators and others believe.

After evaluating the current funding situation, the Funding Working Group reviewed requests from the other working groups and developed the following recommendations:

❖ **Capital Outlay Revolving Fund Recommendation**

- Within the next three years, a capital outlay revolving funding source should be created. Capital outlay expenditures that are within the control of NMED should come out of this revolving funding source. The funding criteria should contain both sustainability and accountability components.
- Examples of existing revolving funds that could be looked at as models include:
  - Water Trust Fund
  - EPA Clean Water Revolving Fund
  - Mortgage Finance Authority or New Mexico Finance Authority funds as sources
  - Revolving loans funds as used in other states to build recycling industry capacity.

❖ **Statewide Programmatic Initiatives Fund Recommendation**

- Within the next three years, an on-going source of funding should be enacted that is dedicated to support the program priorities listed below, and is separate from the capital outlay revolving funding source. The fund should have an annual budget of $1,500,000 to support these priorities:
  - Data projects
    - Installation of scales at all solid waste disposal, composting, and other discard management facilities for accurate reporting of materials handled by weight
    - Upgrading of the NMED SWAR form and database to improve the accuracy and reliability of information needed to assess current solid waste management activities statewide, project future capacity needs and plan accordingly
    - Support for interim waste sampling surveys at landfills, transfer stations, recycling/ composting facilities, and other discard handling operations over the next three years
    - Conduct a statewide waste composition study within the next 3-5 years yielding waste generation quantities and projections by population and other relevant factors as a basis for sound planning.
  - Technical assistance to participating organizations working on diversion goals in the Plan and working towards integrated solid waste management systems, including:
    - Technical assistance and training on the interim waste sampling protocol
    - Technical assistance and training on the new SWARs
    - Technical assistance, training, and information resources on setting up recycling and composting programs, marketing materials, building public participation, etc.
  - Support educational goals established in the plan:
    - Implement a statewide message campaign (see Chapter 6)
    - Foster public awareness of recycling, reuse, reduction, correct disposal of HHW, illegal dumping abatement, and other diversion activities in which people can participate on their own, even before an organized recycling program may be available in their community.
  - Support a program to assure that EJ interested parties have access to, and participation in, solid waste management planning and decisions, including support for a public participation process in developing the next Plan.

❖ **Funding Criteria Recommendation**

- When NMED has funding for the Statewide Programmatic Initiatives Fund for the purposes listed above, NMED should require that funding requests contain assessment plans to evaluate program performance, sustainability, and accountability. NMED should review its existing criteria for funding that are in place now and ensure that they have sustainability, accountability, and evaluation components. Applicants proposing diversion projects should include projections of waste reduction and diversion quantities expected as a result of project implementation.
- For the Capital Outlay Revolving Loan Fund to establish waste disposal and diversion capacity infrastructure projects, applicant local planning bodies should also include program evaluation measures. Criteria to be considered for this fund include:
  - Provision of local match funds
  - An advance feasibility analysis projecting long-term sustainability and accountability of proposed projects
  - Parameters and methods for evaluating and reporting project performance at the conclusion of the funding cycle. For example, waste reduction and diversion programs should report diversion rates achieved compared to projected diversion
  - A repayment schedule and evidence of ability to repay loans
  - Government units applying for funds from future capital outlay funding programs should first demonstrate that they have fully utilized the Environmental Services Gross Receipts Tax (ESGRT) for local needs.

CHAPTER 8. ENVIRONMENTAL JUSTICE COMPONENT

The Environmental Justice Working Group recommends the following:

- **Recommendation**: Work with NMED EJ Policy Committee on these and other recommendations to ensure effective implementation of the Executive Order mandates.

- **Recommendation:** Upon implementation of the Regulations, evaluate EJ outcomes and coordinate uniform standards:

  - Within three years, evaluate how the Regulations are working for all EJ stakeholders
  - Consider the evaluation as part of the planning process for the next update of the Plan
  - Coordinate among all bureaus within NMED to develop uniform standards for the assessment of cumulative effects that may arise from the concentration of regulated facilities in vulnerable communities

- **Recommendation:** Implement EJ training and assistance:

  - Make training available for local governments, tribal entities, non-governmental organizations, community groups and rural areas on solid waste management strategies and emergency response issues regarding solid waste matters.
  - Provide technical support by NMED staff to assist local planning and zoning entities regarding EJ guidance and training in order to inform local zoning officials about the environmental protection of vulnerable communities.

- **Recommendation:** Within one year of the approval of the Plan, develop and implement an outreach and technical assistance program to assist local governments and communities with strategies to limit illegal dumping. Those strategies shall include, but are not limited to:

  - The development of more transfer stations, citizen convenience centers, recycling facilities, and composting operations as recommended in Chapter 5 of the Plan ("Facilities Element")
  - Initiatives regarding intergovernmental cooperation for the development of regional solid waste disposal facilities are encouraged. This is consistent with recommendations in Chapter 5 and 6, the Facilities and Education Elements respectively, of this Plan including the mandatory closure of landfills that cannot meet modern standards
  - Providing educational materials which include information on illegal dumping and the location of solid waste facilities
  - Providing financial and technical assistance to local governments and communities, with priority given to low income communities, in order to limit illegal dumping

- **Recommendation:** Implement website postings consistent with EJ:

  - Within one year of the approval of the Plan, SWB shall post links to public health and environmental databases, and a comprehensive list of community resources (in English and Spanish).
  - NMED and the SWB shall seek adequate funding and within 6 months of receipt of this funding, SWB shall publish on the NMED website, and make available, Spanish language translations of the Executive Order, the Plan, and the Regulations
  - NMED shall evaluate strategies to make information available including posting information on the website, and providing a hard copy for the public for review related to permits, annual reports and applications. SWB shall consider the information posted by the Hazardous Waste Bureau as a template.

- **Recommendation:** Explore options to provide technical assistance from a neutral source for affected communities and the public.

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APPENDIX D. Solid Waste Management Plan Stakeholder Process

To develop the Solid Waste Management Plan (SWMP), the Solid Waste Bureau conducted a year-long series of meetings with stakeholders representing local governments, state agencies, business, the agriculture sector, waste management officials, recycling professionals, environmental and community organizations, citizens, universities, and others. Over 140 individuals participated in the planning process through public meetings, working groups, and email updates.

Phase 1

From December 2004 to May 2005, the Bureau held Brainstorming meetings to focus and prioritize efforts on the Plan elements specified in the Solid Waste Act. This led to creation of five volunteer Working Groups:

- Diversion — addresses source reduction, recycling, composting, special waste and household hazardous waste (HHW) program planning
- Education — reviews existing and needed outreach and information resources supporting diversion, illegal dumping abatement, and environmentally safe waste disposal
- Facilities — surveys solid waste and diversion facilities in New Mexico, and projects capacity needs
- Waste Characterization — determines the types, quantities and sources of waste generated in the state
- Funding — appraises existing funding sources, looks at mechanisms used in other states, and identifies funding options for additional support to promote an integrated waste management strategy including the above-listed elements.

Phase 2

The Diversion, Education, Facilities, and Waste Characterization groups met from May till November 2005, to gather findings and develop recommendations. During Phase 1, the Bureau also held two progress meetings with all stakeholders. When the Recycling Alliance was appointed in August 2005, the Diversion group transferred its recommendations to the Alliance for review and further development.

Phase 3

With stakeholder input added, draft sections of the SWMP were posted on the Bureau's website in early December. At this point, the Funding group reconvened to evaluate funding resources, needs, and strategies to implement the components proposed by other working groups.

Also at this point, the Bureau organized a sixth committee, the Environmental Justice Working Group, to create an EJ component for the draft Plan. This group includes 16 volunteers from the stakeholder process, and additional participants recruited from the EJ Listening Sessions.

Table 1.1 Planning Process and Timeline

December, 2004-May, 2005	Brainstorming Meetings
May, 2005 – November, 2005	Working Group Meetings: Diversion/ Recycling Alliance Education Facilities Waste Characterization
June 10, 2005	Progress Meeting #1 for all stakeholders
Late November, 2005	Working group proposals completed and posted
December 7, 2005	Progress Meeting #2 for all stakeholders
Dec 14, 2005 – Jan, 2006	Funding Working Group Meetings (2-3)
February, 2006	Draft Plan ready and posted on Bureau website
February – April, 2006	Environmental Justice Group Meetings (2 -3)
February, 2006 – end of April, 2006	Public input meetings held in various locations throughout the state on the final SWMP including EJ component

Appendix E. Recycling Goals and Progress U.S. States 2005

State	Recycling or Reduction Goal	Reduction Goal Only?	Most Recent Recycling Rate	How Calculated	LF Diversion or Per-capita Waste Reduction	Recycling BUDGET	Mandatory Recycling?	Source of Funds	Commercial Recycling Mandated?
ALABAMA	25%	No	17%	NA	NA	$90,000 (Oct.1-Sept. 30, 2005)	No		No
ALASKA	25%	No	10% - 12%(2002) (latest available)	Commercial	10%-12% (est)	NA	No	N.A.	Local
ARIZONA	None (local targets)	NA	18.5%	EPA method - MSW only - not including waste to energy (except for used oil, which is considered HW	30.3% (1999)*	$2.2 million	No		No
ARKANSAS	40% by 2005, 50% by 2010	No	39%- 2003	C&D waste, industrial waste, ash, and commercial	NA	$3.5 million	No	2,3,4	No
CALIFORNIA	50% diversion	No	Don't track recycling rates - diversion rate only Diversion 47% in 2003	C&D waste, industrial waste, and commercial	47% in 2003	$149.5 million (2004-05)	Yes. Counties must reach goal	3,4	Local
CONNECTICUT	40%	No	**25%	Some commercial	NA	$800,000 (2002-03)	Yes. Counties must mandate	6	Yes
DELAWARE	*30% by 2007	No	13% residential recycling (2002)	C&D waste, sludge, ash, and commercial	NA	$4 million (2003-04)	No	3	No
D.C.	45%	No	13% (2004)	includes residential only and no commercial	13% (est)	$4.7 million (2003)	Yes, not enforced	3	No
FLORIDA	*30%	No	28%	C&D waste, ash, and commercial	28% (2002)	$13,000,000 (2003-04)	Yes. Counties must implement	7	Local
GEORGIA	NA	NA	**23%	NA	NA	NA	No	N.A.	No
HAWAII	35% by 2005	No	25%- 2001	Commercial	NA	NA	No	County	Local

State	Recycling or Reduction Goal	Reduction Goal Only?	Most Recent Recycling Rate	How Calculated	LF Diversion or Per-capita Waste Reduction	Recycling BUDGET	Mandatory Recycling ?	Source of Funds	Commercial Recycling Mandated?
IDAHO	None	NA	**13%	NA	NA	None	No	4	No
INDIANA	50%	No	39% (2002)	Commercial	18% - 1993	$2 million (2004-05)	No	2,3	No
IOWA	50% (2000)	Yes	32.5%	Some commercial	32.5% (2002)	$6.35 million	Yes	7	Yes
KANSAS	None	NA	15% to 18% (2001)	Partial commercial	NA	*$1.5 million (2005)	NA	7	No
KENTUCKY	NA	NA	20% (2003)	Commercial	15% (est)	$25 million (06) recyc & HHW	No	2, 3	No
LOUISIANA	30%	Yes	18% (2004 est.)		15% (2202 est.)	NA	No		No
MAINE	50% (2003)	No	39%	NA	65,000 tons (2003)	$450,000 (2005)	NA	2	NA
MARYLAND	40% recycling by 2005	No	39.6%- 2003	Commercial	NA	$268,123 (2004-05)	Yes	2,4	Local
MASSACHUSETTS	NA	Yes	47%- 2000	Commercial	6,790,000 tons in 2002	$3.5 million (2004)	Yes. Source separation	6	No
MICHIGAN	20%-30% by 2005	No	18%	NA	NA	$200,000 (2004-05)	No	7	No
MINNESOTA	30%	No	46.5%- 2001	Commercial	NA	$12 million	No	2,4	Local
MISSISSIPPI	25%	No	14% (2002)	NA	5% (est)	$500,000 (2003)	No	3,4	No
MISSOURI	40%	Yes	45% using EPA methodology for municipal solid waste portion of Missouri's waste stream (approx. 60% total)	Commercial	45%	$7.5 million	No	1,2	No
MONTANA	25%	NA	15%	Sludge, and commercial	12%	$84,000 (2004-05)	No	3,4	No
NEBRASKA	50%	No	25%- 2002	Commercial	NA	$5 - 5.5 million (2004-05)	No	1,4,5	No

State	Recycling or Reduction Goal	Reduction Goal Only?	Most Recent Recycling Rate	How Calculated	LF Diversion or Per-capita Waste Reduction	Recycling BUDGET	Mandatory Recycling ?	Source of Funds	Commercial Recycling Mandated?
NEVADA	NA	NA	19%	NA	19%	$350,000 (2004-05)	No	2, 7	Yes
NEW HAMPSHIRE	40%	Yes	**21%	Commercial	23% (2001)	$60,000 (2003)	Yes	2	No
NEW JERSEY	50% MSW	No	54% (total) MSW rate 34% (2002)	Commercial	54%	$ 8 million (2004-05)	Yes. Source separation	7	Yes
NEW YORK	50% (1999)	No	29./8%	Commercial	29.8%	$1-2 Millions	Yes	2,7	Yes
NORTH CAROLINA	40% (2001)	Yes	**25%	NA	25%-30% (2001 est.)	$1.6 million (2002-03)	Yes. Source separation	2,4	Local
NORTH DAKOTA	NA	NA	26%- 2002	NA	NA	NA	No	3	No
OHIO	50% by 2005	Yes	**20%	C&D, industrial, sludge, commercial	51% incl. commercial & industrial	$12.5 million ((2003-04)	25% MSW, 50% industrial, 50% combined	1,7	No
OKLAHOMA	NA	No	14% (2002)	NA	8% (2003 est.)	NA	mandates for cities over 10,000	NA	No
OREGON	45% by 2005 50% by 2009	No	47.3% (includes 2% credits as defined by statute)	C&D, commercial	NA	$1.1 million (2002-03 est)	Yes	2,3	No
PENNSYL-VANIA	25% by 1997	No	36.1% (2001)	Ash, commercial	21.8% (cumulative since 1989)	$54 million	Yes. Counties to develop source sep.	3	Yes
RHODE ISLAND	NA		16%- 2001 15% - 1999	NA	20%	$920,000	Yes Separation of recyclables.	1	Yes
SOUTH CAROLINA	35% by 2005	Yes	22.4% (2004)	Industrial waste, commercial	43% (all solid waste generated)	$6.3 million (2004-05)	No	4	No

State	Recycling or Reduction Goal	Reduction Goal Only?	Most Recent Recycling Rate	How Calculated	LF Diversion or Per-capita Waste Reduction	Recycling BUDGET	Mandatory Recycling ?	Source of Funds	Commercial Recycling Mandated?
SOUTH DAKOTA	NA	NA	37% (2001)	local	37%	NA	only one program	NA	No
TEXAS	40% by 1994	No	35% (1998)	C&D, industrial, commercial	35% (1997 est.)	NA	No	2,4,6	No
UTAH	None	NA	12%-15% (average annual rate)	No established method	15% (est.)	$50,000 (2003-04)	No	NA	No
VERMONT	50% (diversion goal by 2005)	No	31 % (2003)	Commercial	31% (2003)	$428,000 (2004-05)	Yes	3	Local
VIRGINIA	25%	No	30.3% (2003 - EPA method)	Commercial	NA	$1.2 million (2004)	Yes	5	Local
WASHINGTON	50% by 2007	No	38% (2001)	Commercial	47% (2001)	$17.8 million (2003-05)	No	5	No
WEST VIRGINIA	50% by 2010	No	39.42% (2001)	Commercial	5% (est)	$1.5 million (2004)	No	3	No
WISCONSIN	40% (Diversion goal)	NA	32% (2003)	Landfill data/waste sort/generation	40.4% (2003 - 180% increase over 1990)	$30.2 million (2004)	No	NA	No (de facto due to landfill bans)
WYOMING	NA	NA	NA	NA	NA	NA	NA	NA	NA

**Chartwell Rate, 2002

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NOTE: Used by permission for New Mexico Solid Waste Management Plan.

1 = State Solid Waste Management fund 2 = State General Fund 3 = Tip fee surcharge 4 = Surcharge on tires or other item 5 = Tax on business or some other entity 6 = Bonds 7 = Grants 8 = DOE oil overcharge N.A. = figures not available from this survey; SOURCE: Most from SRLU 2000 state recycling manager survey; where we could not get a response, we used some data from the 11th Annual Biocycle Nationwide Survey and the Northeast Recycling Council. = source: *Biocycle* April 1999. =source: Northeast Recycling Council web site, www.nerc.org/recycling, 08/10/2000.

ANY STATES THAT HAVE NOT BEEN LISTED DID NOT HAVE ANY UPDATED INFORMATION FOR THIS FISCAL YEAR. PLEASE REFER TO OUR 2004 REPORT FOR DETAILS ON THESE STATES.

APPENDIX F. RECYCLING PROGRAM INVENTORY BY COUNTY
is a separate Excel spreadsheet file.

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APPENDIX G. New Mexico Compost Facility List
(UPDATED NOVEMBER 2006)

Albuquerque, City of
(Pilot Composting Facility)
7401 Access Road NW
Albuquerque, NM 87102
4201 2nd St. SW (WWTP)
Albuquerque, NM 87105
Contact: Steve Glass, Technical Prog. Mgr.
e-mail: sglass@cabq.gov
Phone: 836-8713 or 873-6255
Feedstocks: 20% solids (municipal biosolids), waste horse stable bedding, pulverized green waste, bark fines & chips. The City is now also producing compost produced from yard trimmings only.
Quantity produced: 45,000 cy/yr capacity; Actual production Jan-Apr. '95 was 8,990 cy (27,000 cy/yr).
Types of Equipment: Scarab Model 18, two Sludge Systems International compost mixers, Wildcat Model 6-160 trommel screen, two Michigan l-120 loaders, two dump trucks, tractor with sweeper & vacuum attachments.
Application: City Parks & medians, school campuses, Kirtland AFB turf, Veteran's Administration hospital turf, private applications via marketing contract & associated retail outlets.

Artesia, City of
P.O Drawer 1310
Artesia, NM 88210
Contact: Joe Smith
Phone: 746-9651
e-mail: awwtp@plateautel.net
Feedstocks: drying bed biosolids
Quantity: 50-110 metric tpy
Application: Chase Farms (Pecan Trees)
Equipment: Brown Bear Turner
(Facility is permitted for composting WWTP biosolids with yard trimmings, however they are only composting biosolids).

Barela Landscaping
7713 Bates
Albuquerque, NM 87105
Contact: Eddie Barela, owner
e-mail: cb0513@myway.com
phone: 877-8522
Feedstocks: yard trimmings, steer manure, dairy manure, chili peelings
Quantity produced: 40,000 cy/yr

Barela Timber Management Co.
Contact: Ralph Barela
Las Vegas, NM
Phone: 617-1966 or 425-2885
Quantity produced: 60,000 cy ???

Carlsbad, City of
P.O. Box 1569
Carlsbad, NM 88221
Contact: Art Sena
Phone: 887-5412
e-mail: wastewater@carlsbadnm.com
Preparing permit for Biosolids/Yard trimmings compost facility
Applications: Land application Pecos Valley, homes & gardens, City golf course greens & fairways, parks, sod farm, tree nursery
Equipment: Tubgrinder, Erin Star Screen, Brown Bear
Quantity: 180 cy/yr

Desert Rock
2600 Idalia
Rio Rancho, NM 87124
Contact: Steve or Terri Espinosa
Phone: 892-9865
e-Mail: tpe05@msn.com
Quantity: 400 cy/yr (6 mo./yr)
Applications: Homeowners, landscapers

Dick Laronge Composting
1005 Cimmaron Ave.
Aztec, NM 87410
Phone: 334-7230
e-mail: rjl@cpt.com
Feedstocks: Yardwaste

Earth Wipp
P.O. Box 431
Los Lunas, NM 87031
Contact Person: Andres & Nancy Abeyta
Phone: 864-9159
Feedstocks: yard trimmings, leaves & grass, horse manure (drop off for free), grass
Quantity Produced: 100 cy/yr
Types of Equipment: Massey Ferguson 204 w/ PTO & 6' x 8' manually powered sifter
Application: To be determined

Garcia Landscape Materials
Los Luceros, NM
Phone: 852-2569

Gardner's Turf Grass, Inc.
Dave Landess, Farm Manager
Phone: 915-422-8200
e-mail: susieturf@aol.com
5590 Mc Nutt Rd.
P.O. Box 18
Santa Teresa, NM 88008
Applying to grass. Some compost is sold.

High Desert Worm Ranch
PO Box 600
McIntosh, NM 87032-0600
Contact Person: Kate Heath, Owner
Phone: 384-5302
e-mail: Kate@HighDesertWorms.com
Feedstocks: Stable Bedding(horse manure with limited straw), newspaper (Owner is looking for sawdust)
Quantity Produced: 40 Beds @30 cu.ft./bed = 1800 cu ft/yr or 70 cy/yr
Equipment: trommel screen
*Worms & castings available for sale.

Holloman Air Force Base
49 CES/CEV
550 Tabosa Ave.
Holloman AFB, NM 88330-8458
Contact Person: Mike Jago or Tony Lucero
Phone: 475-3931
e-mail: Lucero711@msn.com
Feedstocks: Yard trimmings, tree trimmings, & scrap lumber
Quantity Produced: 240 tpy
Types of Equipment: Olathe Tub grinder, large Vermeer grinder & Bobcat Model 753
Application: On Base

Las Cruces, City of
P.O. Box 20,000
Las Cruces, NM 88004
Contact: Klaus Kemmer, Dir. of SW
Phone: 528-3543
e-mail: klaus.Kemmer@lascruces.org
Comments: Biosolids at WWTP are still going to the sludge injection site. Most yard trimmings are chipped & then used as erosion control for old landfill closure or composted via windrows/static piles.
Feedstocks: yardwaste, grass
Quantity received: 5000 tpy
Quantity compost produced (finished): approx. 2000 tpy
Comments: soon to purchase or lease large trommel screen
Application: general public & City projects

Las Comunidades
P.O. Box 130
El Rito, NM 87530
Contact: John Ussery
Phone: 581-4550
e-mail: john@ussery.biz or john@lcdn.org
Feedstocks: old sawmill sawdust, bark
Quantity Available June 2005 = 20,000+ cy

Lincoln County Composting
Contact: Harlan & Rhonda Vincent
e-mail: Rhondita@charter.net

Lincoln County Composting (con't)
Phone: 378-8538
Ruidoso, New Mexico

Los Alamos, County of
901 Trinity Drive
Los Alamos, NM 87544
Contact: Regina Wheeler
Phone: 662-8050
e-mail: wheelerr@lac.losalamos.nm.us
Feedstocks: yard trimmings, biosolids, stable waste
Quantity produced: 50 tpy (finished) April-October only due to cold temperature in Winter. Biosolids will be increasing 5-10x (may need carbon source) in coming year due to improvement of effluent. Going from 60-16% solids so more moisture as well. Los Alamos building new security entrance so they are relocating facility. Probably will require a new permit or modification.
Equipment: Morbark Hog Grinder, loaders, mechanical brush for cleaning roads
Application: Class A Biosolids/yardwaste compost, 30% given away to general public, 30% sold @ $28/ton to landscapers, 30% to Parks & Recreation

Midwest Bio-Systems
3333 Majestic Ridge -207B
Las Cruces, NM 88011
Contact: Greg Berry
Phone: 521-3692 Fax: 521-3699
e-mail: gberry@totacc.com
Applications: Composting systems, microbe applications & Aeromaster turning equipment, Compost & balanced soil fertility consulting.

Nature's Way Compost
(bought out Miller's Compost)
750 S. Bosque Loop
Bosque Farms, NM 87068
Contact: Rick Cox
Phone: 869-1051 Cell: 249-1357

Nature's Way Compost (con't)
e-mail: tchadcox@abq.com
Feedstocks: Dairy manure, sawdust, straw & hay
Quantity produced: 4,000 cy/yr
Equipment: Sandberger tractor pulled turner
Application: landscapes, gardeners, farmers

Mountain Rich Soils
HCR 74, Box 22612
El Prado, NM 87529
Contact: Dave West
Phone: 505-758-4150
e-mail: growfoodnow@tierralucero.org
Feedstocks: alfalfa, forest waste, manure, straw, humates,
Production: approx. 10,000 cy/yr

New Mexico Compost
(bought out by Soilutions, Inc.)
Alameda, NM
Contact: Dave Harris, owner
phone: 898-4346
Feedstocks: stall waste, grass, leaves
Quantity produced: 2000-3000 cy/yr
Types of Equipment:
Application:

New Mexico State University
NMSU-PPD
MSC- 3545
P.O. Box 30001
Las Cruces, NM 88003-8001
Contact: Brett Woywood
Phone: 505-646-5957
e-mail: woywood@nmsu.edu
Feedstocks: yard trimmings, pecan hulls & pecan prunings, manure, grass, cafeteria food scraps
Quantity: 180 tpy
Type of Equipment: Olathe tub grinder HD-8, Bobcat skid loader model 763H multi material handling bucket, model G-30 Auger Dog (Midwest Auger) compost turner (attaches to Bobcat), 3 yd. case loader

New Mexico State University (con't)
Application: Campus turf & landscaping
Comments: The University wants to demonstrate the value of an integrated approach to solid waste management by recycling industrial & agricultural organic waste back onto the campus & by supporting a composting research program.

Recon, Inc.
Contact: Larry Shafkind
Phone: 602-437-4393
Fax: 602-957-6885
e-mail: mail@recon-phx.com
Address: 3104 East Camelback Road #507
Phoenix, AZ 85016
Feedstocks: forest products, sawmill waste
Quantity Available for sale: They do not produce compost. Procure from other vendors.
Equipment Used: Discs, rototiller, some crimped straw for application
Comment: Company is only a vendor. Completed several successful jobs with NMDOT. Passed NMDOT specs.

Sandoval County Landfill
Contact: Mike Foster
Phone: 867-0816
e-mail: waynefoster@sandovalcounty.com
Feedstocks: Greenwaste, cow manure, horse manure, future feedstocks to include biosolids & municipal solid waste
Quantity Produced: to be determined
Equipment: 5 in-vessel aerated static piles designed by Renewable Carbon Mgmt, expansion to 25 digesters planned
Application: county projects, general public

Santa Fe Racing: Ferti-gro
(operation inactive)
27475 I-25 West Frontage Road
Santa Fe, NM 87505
Contact: Bruce Bolan

Santa Fe Racing: Ferti-gro (con't)
Feedstocks: Old low-nitrogen stall bedding & stable waste-high carbon content only
Quantity produced: 30,000 cy/yr
Types of Equipment:
Application: inactive

Santa Fe Solid Waste Mgmt. Agency
Caja del Rio Landfill
149 Wildlife Way
Santa Fe, NM 87507
Contact: Justin Stockdale, Recycling / Special Projects Mgr
e-mail: jstockdale@cajadelrio.com
Phone: 424-1850 or 780-0628
Feedstocks: ground green waste & horse manure / stable bedding
Qty Produced: Actual 2004 = 10,000 Tons
Types of Equipment: 2 Bandit 3680 grinders, 2 Cat 950G Loaders, Duratech 7216 Trommel Screen.
Application: DOT Erosion Control Compost

Sierra Contracting, Inc.
P.O. Box 935
Alto, NM 88312
Contact: Paul Wetzel
Phone: 378-1091
e-mail: vanpatton4923@yahoo.com
Feedstocks: Green waste, slash
Application: FINISHED COMPOST 2500 yds. to Village Parks & Rec, 10,000 cy to Highway 70, Mesilla Valley 5000-6,000 cy. Incoming waste 60,000 cy/yr taken in or 600 trucks @ 100 cy
Quantity Produced: Finished Compost 12-16,000 cy/yr

Sierra Vista Growers
P.O. Box 225
Chamberino, NM 88027
Contact: Kent Halla or Steve Kaeppler
Phone: 589-3924 or Kaeppler Cell @ 644-2874

Sierra Vista Growers (con't)
e-mail: **chamberino@starband.net** or **laayudaani3@earthlink.net**
Feedstocks: Horse bedding with sawdust, chips etc., from training stables, manure, alfalfa, switching to chicken manure for less salt content in windrows, dairy manure will be composted in digesters to dilute salts & methane produced will heat greenhouses
Quantity Produced: 15,000 cy/yr
Equipment: HCL Machine Works Digesters (4) @ 200 feet each, currently windrowing as well
Application: Some used on site & some sold to landscapers

Soil Foods, Inc.
P.O. Box 787
El Rito, NM 87530
(Site is presently in El Rito--moving to Nambe Pueblo by August 2004)
Contact: Terry Moffitt, President (Northern NM contact)
Phone: 888-393-7845
e-mail: soilfoods@yahoo.com
Feedstocks: Primarily dairy manure
Quantity produced: 3,000-5,000 tpy in NM
Equipment: Self-propelled 10 & 12' Fletcher Simms turners, Massey Ferguson 3 yd. Loader, International 32' end-dump, Case Loader
Application: landscapers, home gardeners, small organic farms, nurseries

Soilutions, Inc.
P.O. Box 1479
Tijeras, NM 87059
9008 Bates Road., SE (no zip - Delivery address)
Contact: Jim Brooks or Misch Lehrer
Phone: 505- 877-0220 or 281-8425
e-mail: soilutions@aol.com
Feedstocks: Yard trimmings, selected animal manures, stall bedding, agricultural

Soilutions, Inc. (con't)
residues & surplus, food processing residuals
Quantity Produced: in startup phase - expect 10-20,000 cy/yr
Types of equipment: Front end loader/ backhoe, screen, brush grinder
Application: Erosion control & food production
Method: Static Piles
Products Available: "New Mexico Compost", Vermi-Compost, Vermi-Compost Worms, Soil Blends & Mulches, Permaculture Tools & Supply, Erosion Control
Comments: Company is actively pursuing nitrogen sources as well as distributorships in New Mexico**.**

Tucumcari, City of
Box 1188
Tucumcari, NM 88401
(facility next to WWTP)
Contact: Joe Ramirez, WWTP Superintendent
Phone: 461-4542
e-mail: jramirez@cityoftucumcari.com
Feedstocks: yard trimmings, WWTP biosolids, small amt. of water
Quantity Produced: 40 cy/mo. projected
Application: golfcourse, parks, mulch to citizens, ball fields, cemetery
Equipment: Haybuster model 8 Tubgrinder, Bobcat loader 7753 with industrial grapple, processing concrete slab with drains to sludge drying beds.
Comments:

Western Organics
9000 Bates SE
Albuquerque, NM 87105
Contact: David Hanchett, Division Mgr., or Jeff Adams
phone: 505-877-8670 or 1-800-955-3245 or 505-877-8672 for wholesalers

Western Organics (con't)
email: jadams@westernorganics.com
Feedstocks: yard trimmings, stall bedding, sawmill waste, bark, dairy manure, zeolites - custom designed mixes (blending & processing facility).
Company markets compost produced from Albuquerque Co-Composting facility as *Rio Grande Compost (Rowlands Nursery)* & as *Omni (Lowes, Home Depot, Wal-Mart).*
Quantity Produced: 300,000+ cy/yr
Types of equipment: extensive
Application: Wholesale, retail, golfcourses & other turfgrass applications, etc.

Compost facilities near New Mexico

Back to Nature (Slaton, TX – just east of Lubbock)
Phone: 806-745-1833

Soil Menders Products
Contact: Greg Birkenfield, Owner
Phone: 1-800-441-2498 or 806-627-4276
Tulia, Texas
Product is dairy manure & cotton gin trash
www.soilmender.com

Encouraging Ideas
Compost Information for Colorado
P.O. Box 1323
Arvada, CO 80001-1323
Contact: Thomas C. (Chris) Merkl, Pres.
Phone: 720-371-6607 Off. Fax: 303-927-7586
e-mail: tcmerkl@yahoo.com

Mountain Valley Lumber
PO Box 405
Saguache, CO 81149
Contact: John Baxter, Owner
Phone: 719-655-2400 Off. Fax: 719-655-2401

Natural Fertilizer Company
(West of Amarillo)
P.O. Box 61
Wildorado, TX 79098
Contact: Shannon Leavitt
Phone: 806-426-3320
e-mail: leavittsix@cs.com
STA Approved-Interested in supplying compost to NMDOT

Rocky Mountain Soils
4903 South Hwy 17
P.O. Box 514
Alamosa, CO 81101
Contact: Bobby Garcia 852-2569 or Bob Cook 719-589-9337
or Wilder Landscaping, Santa Fe Greenhouses, Wal-Mart
Product is Mushroom Compost 2-4-2 high iron & micronutrients
$15 per ton at Alamosa

Southern Colorado Farms
PO Box 416
Center, CO 81125
Contact: Amy Kunugi or Phil
Phone: 719-754-2940 Off. 719-754-2946
Fax 719-588-0227 Cell

If you would like to update, add, delete, or correct information included in this listing or need information on Compost Operator Certification Classes, contact Greg Baker at the New Mexico Environment Department, Solid Waste Bureau 827-2780 e-mail: Greg.baker@state.nm.us

Appendix H. Waste Characterization Data Collection Forms

The following three forms are to be utilized to obtain basic information on the characterization of the solid waste being delivered to your facility. The information below provides a description of the procedures to follow in the utilization of the attached forms.

Driver Interview – Form 1

The collection of waste characterization data is divided into three steps. The first step is the driver interview. Form 1 will be utilized for this purpose. Begin the interview process by selecting a collection vehicle to interview. Your selection should be based on the materials in the truck and the number of trucks that you plan to interview. The number of collection vehicles you should interview and study should be no less than five. The collection vehicles can be either residential collection, commercial collection, or combination. If your facility receives a large number of roll-offs that come from convenience or drop off centers, try to study at least one of those vehicles. All of the information on Form 1 should be gathered. If your facility does not have a scale, obtain the estimated volume of the truck.

Load Survey Table – Form 2

The second step involves the use of Form 2, Load Survey Table. Once the interview process is over, the collection vehicle should be directed to the tipping area or working face. The driver should be directed to unload the vehicle in an area adjacent to the working area. This will allow for inspection of the load without impacting the operation of the facility. Once the vehicle is unloaded and has left the area, the load should be inspected. The inspection will involve utilization of the “walk around” method. This method involves walking around the full load in a clock-wise manner and then reversing direction and walking around the full load in a counter-clockwise manner. During both tours you should look at the full load noting items as directed on Form 2. It is suggested that you take at least four photos of the load to further document the inspection.

Estimate Table – Form 3

The third step involves estimating the amount of materials in the load. This is accomplished utilizing Form 3, Estimate Table. This process involves making estimates of the amount of each item identified in Form 2. Form 3 describes how to make these estimates. Once you have estimated the total size of the load, enter that amount on the form. Then determine the size of each of the materials noted in the load, divide each of these amounts by the total size of the load. Multiply the resulting number by 100 and enter this number in the “% of load” column.

Instructions and Forms 1-3 Courtesy of Engineering Solutions & Design, Inc

Form 1 – Collection Vehicle Driver Interview

FACILITY		DATE	
TRUCK OWNER		TRUCK NO	
TYPE OF TRUCK	Rear Packer __ Front Loader __ Side Loader __		
TRUCK TIME IN		NET WEIGHT	
SERVICE AREA			
TYPE OF WASTE	Residential – Single Family __ Residential – Apartments __ Commercial – Retail __ Commercial Offices/Businesses __ Commercial – Specific: _____ Mixed (Residential + Commercial) __		
DRIVER OBSERVATIONS:			
INTERVIEWER OBSERVATIONS:			
QUANTITY OF LARGE ITEMS OBSERVED IN LOAD AND TYPE			
Computer Parts		TVs	
Carpet Rolls		Dead Animals	
Carpet Pieces		Lumber	
Scrap Tires		Gypsum Wallboard	
Wood Pallets		Concrete	
Appliances		Wood	
Lead-Acid Batteries		Furniture	

Form 2 - Load Survey Table

Date: _____Truck # _____ Truck Owner: _____

Material Category	Present in Load	Seam	Isolated
Cardboard			
Office Paper			
Newspaper			
Magazines			
Other Paper			
Aseptic & polycoated pkgs			
Plastics Soda Bottles			
Plastic Milk Bottles			
Plastic Containers			
Plastic Wrap			
Other Plastic			
Yard Waste			
Aluminum Cans			
Metal Cans			
Other Metals			
Lumber			
Wood			
Wood Furniture			
Chairs & Sofas			
Textiles			

How to use the table: Utilizing the "walk around" method, take two tours of the pile of solid waste. Put a check mark in each of the boxes under "Present in Load" for the corresponding material found in the load. See the instruction sheet for a discussion of the walk around method and a description of each material category. If there appears to be a significant amount of a specific material in an area, this is a seam, so note it in the appropriate box. If there is not a lot of a specific material, it is considered isolated, and the appropriate box should be checked. In case the material is dispersed throughout the load, check both boxes.

Form 3 - Estimate Table

Date: _____ Truck #_____ Truck Owner:_____

Size of Load: _____ Cubic Feet *

Material Category	Amount of Material ** (Cubic feet)	% of Load
Cardboard		
Office Paper		
Newspaper		
Magazines		
Other Paper		
Plastics Soda Bottles		
Plastic Milk Bottles		
Plastic Containers		
Plastic Wrap		
Other Plastic		
Yard Waste		
Aluminum Cans		
Metal Cans		
Other Metals		
Lumber		
Wood		
Wood Furniture		
Chairs & Sofas		
Textiles		

* Size of Load Calculation: Length of Load x Height of Load x Width of Load
Measure length and width by counting number of paces to walk length of load and width of load and then multiply each number by 2.5 to obtain length in feet.
Measure height of load by standing adjacent to the load and identifying the average height of the load. Then utilize your height to estimate the average height of the load.

** Estimate amount of material utilizing a tape measure and assume depth of material to be equal to two-thirds the total of the two lengths measured (height and width).

Sector	Subgroup	Activity	Description
Commercial waste			**Waste disposed by businesses, industries (factories, farms, etc.), institutions, and governments (schools, highways, parks, etc.) that is collected and transported by contracted, franchised, and municipal haulers**
Residential Waste			**Waste disposed by households that is collected and transported by contracted, franchised, and municipal haulers**
	Single-family residential waste		Waste that is collected from either single-family residences or buildings that include no more than four living units
	Multifamily residential waste		Waste that is collected from multi-unit buildings with greater than four living units
Self-hauled waste			**Waste hauled by individuals, businesses, or government agencies that haul their own garbage; includes waste delivered by anyone other than a contracted, franchised, or municipal hauler**
	Commercial self-hauled waste		Waste that is hauled to a disposal site by a commercial enterprise (e.g., landscaper, contractor, etc.) even if waste is from residential dwellings
		Construction, demolition, and remodeling waste	*Waste generated during the construction, remodeling, or demolition of buildings by construction professionals*
		Landscaping waste	*Waste generated as part of landscaping and other yard care activities by landscaping professionals*
		Roofing waste	*Waste generated during the installation or replacement of roofs, including tear-off, by roofing professionals*
		Other commercial and industrial self-hauled waste	*All waste generated at businesses or institutions and hauled by these businesses that is not construction/remodeling/ demolition, landscaping, or roofing waste*
	Self-hauled residential waste		Waste that is hauled to a disposal site by a resident from his/her home

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APPENDIX I. Links for Selected Waste Characterization Studies

1. Comprehensive study by RW Beck of Pennsylvania cities and counties, includes multiple seasons and takes into account rural, suburban, and urban variations in waste generation

http://www.dep.state.pa.us/dep/deputate/airwaste/wm/RECYCLE/Waste_Comp/Study.htm

2. 2002 Oregon Waste Characterization and Composition Final Report

http://www.deq.state.or.us/wmc/solwaste/wcrep/wccr2002.htm

3. 1992 Washington State Waste Characterization Study

http://www.ecy.wa.gov/programs/swfa/solidwastedata/waste.asp

4. Waste Calc computer model for quantifying/updating waste composition studies

http://www.dep.state.fl.us/waste/categories/recycling/pages/WasteComp.htm

5. 2000/01 Toronto waste composition study, residual residential study, many other excellent resources

http://www.city.toronto.on.ca/wes/techservices/involved/swm/net/bg.htm

6. Composition study at South Hilo landfill on Big Island c 2002

http://www.hawaii-county.com/env_mng/iswmp_final_update.htm

7. Alameda County, CA waste characterization study, 2000

http://www.stopwaste.org/home/index.asp?page=590

8. City/County of Los Angeles, CA study includes C&D, landscaping, residential, more

http://www.ci.la.ca.us/SAN/wcqs-2002.pdf

9. Minnesota 2000 Waste Composition Study (statewide sampling includes analysis of waste from residential and commercial/industrial sources)

http://www.moea.state.mn.us/policy/wastesort.cfm

10. US EPA 2003 MSW Facts & Figures Report and Data Tables in pdf, also prior year reports

http://www.epa.gov/epaoswer/non-hw/muncpl/msw99.htm

11. California's 2003-2004 statewide waste composition study.

http://www.ciwmb.ca.gov/Publications/default.asp?pubid=1097

12. Description of comp study data measurement methods and links to prior year studies

http://www.ciwmb.ca.gov/WasteChar/

13. Links to recent state waste characterization studies
http://www.epa.gov/jtr/state/wstchrac.htm

14. New York City 4 season waste characterization study Quarterly Reports, 2005
http://www.nyc.gov/nycwasteless

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APPENDIX J. WASTE GENERATION BY COUNTY
is a separate Excel spreadsheet file.

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APPENDIX K. E-Waste Task Force Recommendations

REPORT TO LEGISLATURE
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE
SJM 9 – A Joint Memorial Requesting the Secretary of Environment to Appoint a Task Force to Assess the problem of Electronic Waste and Make Recommendations for Recycling and Disposal
November 21, 2005

BACKGROUND

Senate Joint Memorial 9, passed in the 2005 legislative session, recognized that e-waste is increasing in volume and contains dangerous substances such as lead, mercury, and polychlorinated biphenyls that can pollute air and water. The memorial also recognizes that technical support from national organizations and private sector businesses are possible resources to help New Mexico build e-waste diversion programs.

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¶

Senate Joint Memorial 9 requests the Secretary of the New Mexico Environment Department (NMED) appoint a task force to assess the problem of electronic waste in New Mexico and make recommendations for the development of a statewide disposal and recycling program. The memorial requests that the task force be composed of the Environment Department, local governments, recycling coalitions, local solid waste authorities, the private computer industry, the City of Albuquerque, and the National Laboratories.

Senate Joint Memorial 9 directs the task force to report its findings and make recommendations to the appropriate committee of the Legislature by December 1, 2005.

NMED conducted several preliminary meetings around the state to assess local issues with e-waste, acquire reaction to the Memorial's statements, and discuss potential task force members. The Task Force was officially convened in August with 24 members (see attached roster). The Task Force continued the discussion developed in the preliminary meetings and held its final meeting in November where it approved this report.

TASK FORCE FINDINGS

WHAT IS ELECTRONIC WASTE (E-WASTE)?

The Task Force determined that establishing a consensus-derived definition of electronic waste was of paramount importance in discussing potential alternatives for the development of responsible electronic waste handling infrastructure in the state of New Mexico. In exploring established e-waste programs, it was found that there is several definitions of e-waste used both nationally and on the local level in New Mexico.

Definitions range from the exceptionally broad to the scientifically discreet. Some organizations have defined e-waste as anything with a plug. Others have refined their definitions to include only materials that may represent environmental risk. The US Environmental Protection Agency (EPA) has defined e-waste as:

> "…electronic products being discarded by consumers. These include a wide range of items, such as: televisions; computers and computer peripherals; audio and stereo equipment; VCRs and DVD players; video cameras; telephones; cellular phones and other wireless devices; fax machines; copy machines; and video game consoles."

The New Mexico Task Force discussed these definitions, as well as several others that encompass all aspects of e-waste. The Task Force agreed that for the purposes of this report the EPA definition would be used. The Task Force, however, recognizes that collection and recycling efforts may not be able to manage all materials included in this definition. Therefore, the Task Force recommends that the programs concentrate on e-waste that can be easily managed and has cost effective markets, e.g., such as central processing units, computer monitors, and peripherals.

POTENTIAL ENVIRONMENTAL RISKS OF E-WASTE

Not all computer related e-waste presents an environmental risk. Different constituents represent very different potentials.

Manufacturers generally use significant quantities of lead to make color Cathode Ray Tubes (CRTs) that are the basic operating component of computer monitors and televisions. Colored CRTs contain an average of four pounds of lead per unit (the exact amount depends on size and make). If the CRT is crushed, the lead may pose an environmental risk. According to a study of CRTs published by the University of Florida, the average concentration of lead in leachate from colored CRT glass, using EPA's Toxicity Characteristic Leaching Procedure (TCLP), was 22.2 milligrams per liter (mg/l). This level is considerably above the regulatory level of 5 milligrams

per liter that is used to classify lead-containing wastes as hazardous (40 CFR 261.24(b)). For monochrome CRTs the average lead leachate concentration was only .03 mg/l, suggesting that black and white CRTs are non-hazardous by definition. Other hazardous constituents present in CRT glass are mercury, cadmium, and arsenic. However, these constituents are found in very low concentrations that are unlikely to exceed the TCLP concentration limits.

TCLP protocol does not address uncrushed material. The TCLP only evaluates the toxic potential for items placed in a landfill. The lead found in CRTs is in a powder form that is highly portable when the CRT is damaged, and is not modal when the CRT remains intact. Televisions also utilize CRTs. However, televisions CRTs are *pressurized*, while computer monitors are typically under a vacuum. Computer monitors can therefore be dismantled without presenting an explosion hazard. According to e-waste recyclers on the Task Force, televisions do need to be handled properly to minimize the risks associated with their potential to explode during de-manufacturing. As a result, televisions are typically less likely to be included in e-waste collection events, and when they are, customers are likely to be charged a fee due the required special handling.

Flat panel displays (FPDs) and digital technology have emerged in the marketplace as a replacement for conventional CRTs. According to a 2005 Consumer Electronics Association report, the aesthetic and environmental appeal of flat-panel TV monitors is evident. Since 2002, sales of flat-panel equipment have approximately doubled each year. FPDs are lighter, smaller, and more portable. They consume less energy and generally do not contain lead, but do contain encapsulated mercury in small amounts that presents another set of risks.

E-waste is also known to present other potential hazards if mismanaged. In all cases, the potential for e-waste to become an environmental hazard is directly related to how it is handled.

REGULATORY CONSIDERATIONS

As early as 1995, the international community recognized the environmental consequences of mishandling e-waste. Since then, the regulatory, electronic manufacturing, waste management, and recycling industries have been inundated with information suggesting that some e-waste components may present hazards when mismanaged.

The federal government's regulatory approach to e-waste is contained in the all-encompassing Resource Conservation and Recovery Act (RCRA), Subtitle C, hazardous waste regulations. These regulations prescribe that businesses, collectors, transporters, and recyclers or reuse companies of e-waste are subject to RCRA Subtitle C, with notable exceptions.

The EPA determined that used whole circuit boards are considered scrap metal when sent for reclamation and therefore exempt from RCRA regulation. EPA also provided exclusion for shredded circuit boards being reclaimed, provided they meet certain requirements. In contrast, however, EPA determined that CRTs when broken may be "characteristic hazardous waste" under RCRA Subtitle C. Conversely, intact CRTs are unlikely to present environmental risk.

Businesses and organizations are subject to more stringent requirements for e-waste management than they are for other hazardous waste, in comparison to the regulatory burden placed on household generators. If the waste comes from business or industry, the waste can only be disposed of in a municipal solid waste landfill if the generator is a Conditionally Exempt Small Quantity Generator (CESQG). CESQGs are non-household generators of less than 100 kilograms (220 pounds) of hazardous waste and less than one kilogram (2.2 pounds) of acutely hazardous waste in a calendar month. CESQGs are not subject to most RCRA Subtitle C hazardous waste management requirements (40 CFR 261.5).

Those businesses and organizations that generate a higher volume of hazardous materials than are allowed for under CESQG rules are subject to the full complement of RCRA Subtitle C regulations. These rules require significant record keeping, as well as mandating approved forms of disposal.

Collectors and handlers of e-waste can be exempted from current EPA rules provided they do nothing more than receive and ship whole units. A collector reclaiming or disassembling color CRTs is likely to be subject to full RCRA regulation. This is important to note as this interpretation makes recycling programs possible.

The regulatory climate surrounding e-waste generally favors recycling, however these rules and how they are to be interpreted is commonly misunderstood by potential partners in e-waste recycling programs. In fact, some New Mexico communities have avoided involvement in e-waste recycling programs due to the unclear nature of these regulations.

A separate regulatory challenge limiting the recycling of e-waste management involves the State Procurement Code. The General Services Department governs the disposition of all obsolete, worn-out, or unusable tangible personal property for state and local government agencies in New Mexico. The governing sections of the State Procurement Code (sections 13-6-1 and 13-6-2) are prescriptive. They stipulate how a tangible item is declared obsolete, worn out or unusable; who has to be notified that the item(s) have been declared obsolete, worn out or unusable; who has the first right of refusal to all items; and specifies that if an item can not be sold or donated, the property is to be destroyed or otherwise permanently disposed of in accordance with applicable laws. Giving the obsolete, worn out or unusable item to a for-profit recycler is not acceptable, unless there is an approved contract allowing for that disposal method.

QUANTITY CONSIDERATIONS

In 1998, the EPA estimated that e-waste was approximately 4% of the total solid waste stream in the United States and was projected to grow two to three times faster than any other component of the waste stream. In 2002, the EPA estimated that every day Americans dispose of 3,000 tons of computers alone. According to the Consumer Electronics Association, in 2003 the e-waste component of the municipal solid waste stream was 1.5%.

The EPA estimates that 57 million replacement televisions and computers are sold annually to households and businesses in the United States. The EPA also estimates that 20 to 24 million old

computers and televisions are added to storage each year, rather than being discarded. The EPA's explanation is that consumers tend to store old equipment rather than discard it.

According to a Consumer Electronics Association study released October 19, 2005, "most unwanted consumer electronics go to secondary users, not into America's waste stream. Nine out of ten computers and PC notebooks, eight out of ten televisions, and seven out of ten cell phones were donated, recycled or sold in the last 12 months. Charities (34%), friends (28%) and family members (26%) were the biggest beneficiaries of hand-me-down products."

Statistical data from New Mexico e-waste collection events indicate that state agencies and local governments store a large quantity of computer and computer component e-waste. Furthermore, it appears that New Mexico households and businesses may be storing the equivalent of three to four computers per household.

Regardless of the explanation, according to industry and EPA publications it is anticipated that e-manufacturing and sales exceed the rate of e-waste disposal. These sources also predict continued growth in the sales of electronic equipment, and therefore a growing demand on appropriate diversion options. The Task Force concluded that there is no reasonable or accurate way to discuss the actual volume of e-waste needing to be managed.

LEGISLATIVE APPROACHES

Many states have recognized the potential hazard and opportunities created by e-waste and have introduced legislation to manage, recycle and/or ban e-waste from landfills. According to various reports e-waste related legislation has been introduced in at least 28 states. In general, the legislation addresses the development of e-waste recycling programs, program funding mechanisms, and some legislation includes statewide landfill bans on specific e-waste items.

Three states - Maine, Maryland and California - have used legislation to establish e-waste recycling fees or other recycling systems to support environmentally responsible disposal and recycling systems. In California the mechanism is an Advanced Recycling Fee paid by the consumer. Maryland requires computer manufacturers to pay a fee or take back the products. Maine requires producers to take back their products. Due to their recent implementation, these laws cannot yet be evaluated for their effectiveness.

A greater number of state legislatures have pursued banning certain e-waste components from landfills in direct response to their environmental risk. It is critical to note, however, that in these instances the bans have proven to be extremely difficult to implement in the absence of developed alternative management programs.

A federal response has been explored that involved a series of stakeholder meetings involving retailers, manufacturers, recyclers and government officials. This dialogue, the National Electronic Product Stewardship Initiative or NEPSI, ended in 2003 after the parties could not reach consensus on many issues of the problem. The failure of this process clearly demonstrates the challenge of finding a universally acceptable solution to the e-waste problem.

MARKET CONDITIONS

There are a multitude of e-waste collection programs currently operating in New Mexico. Albuquerque, Los Alamos, and Santa Fe hold both government and commercially sponsored collection events. E-waste entrepreneurs say they are collecting e-waste from businesses, school districts, as well as city and county governments. Both Sandia and Los Alamos Laboratories recycle an extremely high percentage of computers, albeit in a very controlled, highly monitored fashion. Even computer manufacturers offer recycling service for replaced systems (typically for a small shipping and handling fee).

Existing programs continue to demonstrate that there is a ready and cost effective marketplace prepared to handle collected materials. In fact, these programs report that the costs associated with computer e-waste recycling have declined significantly in the past four years. The most recent e-waste collection events in New Mexico saw competitive bids at zero cost to transport and process materials. This is in sharp contrast to contracts two years ago that charged up to $0.50 per pound. Today, several e-waste processors are offering their services at minimal costs, and barring unforeseen changes in market conditions, expect the market to remain competitive for the foreseeable future.

There does exist a well-publicized problem with the e-waste processing and recycling marketplace. The practice of exporting e-waste to processors in various third world countries continues to present tremendous environmental challenges. In several well-documented cases, American firms have shipped (and continue to ship) e-waste to export markets that use dangerous practices and systems to reclaim materials from e-waste.

It is important to note that many export markets are not only environmentally responsible but represent a critical outlet for the reuse of e-waste components. To ensure only reputable and responsible export markets are utilized, the Task Force suggests community's perform significant due diligence when selecting a processor.

The Task Force also identified a significant variance between rural and urban potential e-waste tonnages. The volume of e-waste collected in a large municipal program is greater than in rural settings. How much is collected impacts vendor transportation and processing costs. The less populated counties either do not currently hold e-waste events, or hold events much less frequently because it is not economically feasible for vendors to participate in low volume collections. The less populated counties would, therefore, benefit from a program that would allow them to consolidate their smaller volumes of e-waste with that of other counties or municipalities. Doing so would then produce a large enough volume to be attractive to the e-waste recycler.

TASK FORCE RECOMMENDATIONS

The Task Force recommends a voluntary statewide e-waste collection and recycling program be implemented, first as a pilot program, then statewide. Mandatory recycling should be considered if voluntary approaches do not achieve estimated results. Also, mandatory recycling now is not considered a preferred approach due to the lack of existing infrastructure to collect the e-waste.

The Task Force believes a voluntary collection program should be based on a regional concept taking into consideration population densities, housing units, and proximity to major transportation routes.

The Task Force recommends that the legislature fund a voluntary e-waste collection pilot program. The pilot program would: 1) identify collection sites, 2) enable the Solid Waste Bureau of the NMED and communities to standardize e-waste collection operations, 3) establish a best practices procedure, 4) develop an educational package tailored to rural and urban communities, 5) validate that a regional "hub and spoke" approach is most functional, 6) determine if volumes and participation match previous collection events, 7) help evaluate if computer e-waste stored throughout the region is reduced, 8) provide an opportunity to query participants (and perhaps non-participants) on a wide-range of e-waste collection issues, 9) generate data and statistical information that will be used to establish a baseline for subsequent collections, and 10) help identify unanticipated problems and provide time to implement solutions.

Voluntary e-waste recycling can be implemented quickly and is supported by professional solid waste and recycling businesses and organizations such as the Solid Waste Association of North America and the New Mexico Recycling Coalition. Voluntary e-waste recycling already is established in New Mexico. It could be expanded efficiently with the cooperation of the above-mentioned organizations and those businesses involved in e-waste collection/processing. Currently most e-waste collection events are associated with city sponsored Household Hazardous Waste collection events and special events arranged specifically for e-waste (e.g., City of Albuquerque).

The Task Force recommends that the amount of e-waste recycled through the voluntary program be reported via the Solid Waste Bureau Annual Report Questionnaire. This questionnaire is an established reporting process for all permitted and registered solid waste facilities in the state.

The Task Force recommends that an educational component accompany the pilot voluntary e-waste recycling program and that the Solid Waste Bureau manage the education activity. The Solid Waste Bureau, through its Outreach Section, conducts community education and regional summits for a variety of solid waste disposal options. With additional FTEs, the Outreach Section could develop and coordinate the education efforts and provide oversight of the e-waste program. The Task Force recommends that the Legislature fund this educational activity.

The Task Force recommends that the Hazardous Waste Bureau of the Environment Department provide a guidance document for local public bodies clarifying hazardous waste rules related to

the collection and management of e-waste destined for recycling and resale. Such a document may help diminish local communities' concerns regarding the collection and transportation of hazardous components in e-waste.

The Task Force recommends that electronic retailers (local and national corporations) provide their customers with information regarding the voluntary e-waste recycling program. Further, some members of the Task Force suggested that computer manufacturers might be able to assist in various ways such as informational and financial.

The Task Force recommends that state purchasing rules and regulations be revised to enable recycling as a statewide disposal option.

The Task Force recommends that a state e-waste recycling contract be developed by the General Services Department (Purchasing Division). This contract would enable local public bodies, State agencies, school districts and other governmental entities to participate in e-waste recycling using one contract. This will relieve local communities from having to undergo the cost of researching and developing specifications of a recycling contract. It would provide standardization and a means of accurate reporting throughout the state for e-waste recycling. A single state contract may also provide the means to negotiate more favorable contract terms.

Applicable Rules and Regulations

- Title 40 Code of Federal Regulations, parts 258, 260, and 273 et al.
- New Mexico Statutes Annotated (NMSA) 1978, Chapter 13 - Public Purchases and Property, Article 6, Section 1 thru Section 4, Disposition of obsolete, worn-out or unusable tangible personal property, NMSA 1978, Chapter 74-9, Articles 4 (Hazardous Waste Act) and Article 9 (Solid Waste Act).
- New Mexico Environment Department (NMED), Solid Waste Management Regulations 20 NMAC 9.1, October 27, 1995, Subpart II.
- NMED, Hazardous Waste Management Regulations 20.4.1 through 20.4.3, 1995-2003.

PREPARED BY NEW MEXICO ENVIRONMENT DEPARTMENT, SOLID WASTE BUREAU, FOR THE E-WASTE MEMORIAL TASK FORCE, NOVEMBER 21, 2005. CONTACT: E. GIFFORD STACK, ACTING BUREAU CHIEF, 827-2653

Appendix L - 2005 Review & Renewal Status for Solid Waste Facilities

	Permitted Landfills ****RCRA Subtitle D Facilities***	**Permit Issued Date**
*1	Caja del Rio	6/27/95
*2	Camino Real	3/5/97
*3	Cerro Colorado	6/22/00
*4	Clovis	6/15/98
*5	Corralitos	8/9/95
*6	Lea County	12/17/97
7	Magdalena C&D	8/7/00
8	Mesa Verde C&D	3/12/01
*9	Northeastern NM Regional	3/26/97
*10	Northwestern NM Regional	10/12/95
*11	Otero/Lincoln Regional	10/4/93
~~12~~	~~Rhino~~ (*remanded by the NM Supreme Court*)	~~1/30/02~~
*13	Rio Rancho	4/29/94
*14	Roswell	5/21/97
*15	Sand Point	3/2/94
*16	Sandoval County	8/5/98
	Renewal	6/17/05
*17	Southwest	5/8/97
*18	SW NM Regional	12/19/94
*19	Taos	8/16/01
*20	Torrance/Bernalillo County	6/18/97
*21	Tucumcari (*not currently active)*	5/31/05
	Permitted Sp. Waste (only) Landfills	
*1	Keers Asbestos	7/16/93
*2	Lea Land Industrial	2/27/96

	Permitted Processing Facilities	**Permit Issued Date**
1	Stericycle	7/15/94
	Permitted Recycling Facilities	
1	Camino Real	3/5/97
2	Cerro Colorado IPF	8/5/99
3	Environmental Control	1991
4	Master Fibers	11/15/96
5	Durango-McKinley Fiber Co.	4/17/96
	Permitted Composting Facilities	
1	Albuquerque	8/5/99
2	Artesia	9/17/93
3	Los Alamos	1/3/96

Source: Solid Waste Bureau Permit Section

Appendix L - 2005 Review & Renewal Status for Solid Waste Facilities (SWFs) - continued

Permitted Transfer Stations		**Permit Issued Date**
1	Artesia	3/16/95
2	Cibola County	1/23/96
3	Deming	11/11/01
4	Don Reservoir	8/24/00
5	Eagle Rock	8/7/00
6	East Mountain	12/2/02
7	Las Vegas	10/19/99
8	Los Lunas	11/17/99
9	McKinley County	1/23/96
10	Montessa Park	5/11/98
11	Ruidoso (Gavilan Canyon)	12/19/94
12	Santa Fe	5/7/96
13	South Central SWA	11/2/95

Source: Solid Waste Bureau Permit Section

Appendix M - Active Registered Landfill Status - 2005

	Registered Landfills	Registration Date
1	Coyote/Youngsville (6)	11/6/81
2	Deming (3)	5/10/78
3	Raton	9/14/83
4	San Juan County (1) (2)	1/21/88
5	Socorro (1) (2)	5/9/80
6	Valencia Regional (2)	9/25/87
7	Clayton (5)	No Record
8	DeBaca County (2) (5)	3/24/81
9	Glenwood (5)	12/24/74
10	Los Alamos (5)	12/6/74
11	Pie Town (5)	12/24/74
12	Reserve (5)	12/24/74
13	Sierra County	3/18/87
14	T or C	8/12/87
15	Vaughn (2)	4/9/85
16	White Sands Main Post (4)	1982

KEY

1 = RCRA Subtitle D facility design proposed
2 = Permit application submitted for current site
3 = Permit application submitted for new site
4 = Permit application submitted for C & D and Asbestos Landfill
5 = Closure plan submitted
6 = Locked

Source: Solid Waste Bureau Permit Section

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Appendix N. EMNRD Recycling Project and Education Funding, 1990-1997

CYCLE	RECYCLING EDUCATION FUNDING			TOTAL RECYCLING PROGRAM FUNDING			TOTAL EDUC % OF TOTAL RECYCLING FUNDS
	EMNRD Funding	Local Match	Projects Funding	EMNRD Funding	Local Match	Program Funding	
I (1990)	$141,500	$72,000	$213,500	$858,597	$462,215	$1,320,812	16.2%
II	$154,810	$47,430	$202,240	$904,810	$1,232,117	$2,136,927	9.5%
III	$0	$0	$0	$663,000	$635,818	$1,298,818	0.0%
IV	$0	$0	$0	$325,000	$537,584	$862,584	0.0%
V	$142,000	$211,790	$353,790	$465,000	$421,354	$886,354	39.9%
VI	$0	$0	$0	$215,000	$577,888	$792,888	0.0%
VII (1997)	$40,000	$55,500	$95,500	$250,000	$730,913	$980,913	9.7%
	$478,310	$386,720	$865,030	$3,681,407	$4,597,889	$8,279,296	10.4%

Appendix N. EMNRD Recycling Grants (Continued)

RECYCLING PROGRAM

This activity provides funding for municipal solid waste management planning, waste reduction and recycling education, recycling implementation or marketing of recyclables. Seventy-three projects have received funding through Cycle VII since 1990.

OFFEROR	PROJECT TITLE	EMNRD FUNDING	LOCAL MATCH	TOTAL PROJECT COST
CYCLE I				
Grant, Luna, Hidalgo, Catron Counties	Southwest NM Solid Waste Plan	$49,000	$21,069	$70,069
San Juan, McKinley Counties/NW NM COG	Regional Solid Waste Plan	98,200	64,000	162,200
Sandoval County	Sandoval County Solid Waste Plan	45,187	21,560	66,647
Curry, DeBaca, Guadalupe, Harding, Quay, Roosevelt, and Union Counties/Eastern Plains COG	NE NM Regional Solid Waste Plan	56,000	20,000	76,000
City of Las Cruces	Southern NM Regional-Environmental Education Program	50,000	62,000	112,000
Dona Ana County/South Central COG	Southern NM Regional-Environmental Education Program	50,000	0	50,000
City of Roswell	Recycling Education	41,500	10,000	51,500
La Clinica del Pueblo de Rio Arriba, Tierra Amarilla	Drop-off Recycling	25,000	8,088	33,088
Placitas Recycling Association	Drop-off Recycling & Processing	24,688	14,984	39,672
City of Las Cruces	Drop-off Recycling & Processing	71,149	25,000	96,149
City of Roswell	Drop-off Recycling & Processing	83,875	33,600	117,475
City of Santa Fe	Curbside Recycling	100,000	50,000	150,000
Pueblo of Zuni	Zuni Solid Waste Recycling Center	75,998	51,545	127,543

GRANTEE	PROJECT TITLE	EMNRD FUNDING	LOCAL MATCH	TOTAL PROJECT COST
Village of Ruidoso	Drop-off Recycling & Processing Center	88,000	80,469	168,469
TOTAL CYCLE I		**$858,597**	**$462,215**	**$1,320,812**
CYCLE II				
South Central COG/ Dona Ana, Sierra Counties	Planning	$50,000	$300,000	$350,500
SENM Economic Development (Roswell), Chaves, Eddy, Lea, Lincoln, Otero Counties	Planning	50,000	30,000	80,000
Tri-County/Torrance, SE Santa Fe, NE Bernalillo	Planning	20,000	62,000	82,000
City of Las Vegas/Colfax, Mora, San Miguel Counties	Planning	25,000	61,000	86,000
City of Albuquerque	Planning	55,000	45,000	100,000
Town of Taos/Taos, portion of Colfax County	Planning	20,000	44,000	64,000
Village of Los Lunas/Socorro, Valencia Counties	Planning	30,000	37,000	67,000
University of New Mexico	Office Paper Recycling	41,277	60,967	102,244
City of Socorro	Curbside Recycling	76,000	66,300	142,300
Village of Corrales	Drop-off Recycling	34,940	6,672	41,612
Roadrunner Recycling/Taos	Drop-off Recycling & Processing	71,500	15,000	86,500
Los Ranchos de Albuquerque	Curbside Recycling	25,500	22,500	48,000
City of Carlsbad	Drop-off Recycling, Processing & Yard Waste Mulching	65,000	347,248	412,248
County of Los Alamos	Composting	50,000	33,000	83,000
Village of Jemez Springs	Drop-off Recycling & Processing	55,885	9,000	64,885

OFFEROR	PROJECT TITLE	EMNRD FUNDING	LOCAL MATCH	TOTAL PROJECT COST
Town of Silver City	Curbside Collection & Processing	79,898	45,000	124,898
County of Los Alamos	Education	40,000	8,600	48,600
Village of San Ysidro	Education	16,000	7,630	23,630
Town of Silver City	Education	33,810	17,000	50,810
City of Albuquerque	Education	65,000	14,200	79,200
TOTAL CYCLE II		**$904,810**	**$1,232,117**	**$2,136,927**
CYCLE III				
Town of Silver City	Horizontal Baler & Processing	$59,844	$48,800	$108,644
City of Truth or Consequences	Drop-off Recycling	15,000	15,000	30,000
City of Alamogordo	Wood Chipper	12,225	20,168	32,393
Southwest Public Recycling Association of Santa Fe	Transportation/ Marketing Cooperative	115,523	15,000	130,523
New Mexico State Parks Division	Composting/Wood Chipper	16,000	8,300	24,300
Sandoval County	Regional Processing Project	44,500	31,980	76,480
City of Farmington	Drop-off & Processing	163,900	280,400	444,300
Lincoln County Solid Waste Authority	Processing Equipment	45,008	10,000	55,008
Eastern New Mexico University, Cities of Clovis & Portales	Regional Processing Facility	150,000	140,069	290,069
City of Socorro	Processing	41,000	66,101	107,101
TOTAL CYCLE III		**$663,000**	**$635,818**	**$1,298,818**
CYCLE IV				
Village of Angel Fire	Drop-off & Processing Facility	$39,500	$33,000	$72,500
Ganados del Valle	Tire Recycling	25,000	10,000	35,000
Cibola County	Drop-off & Processing Facility	46,000	36,000	82,000

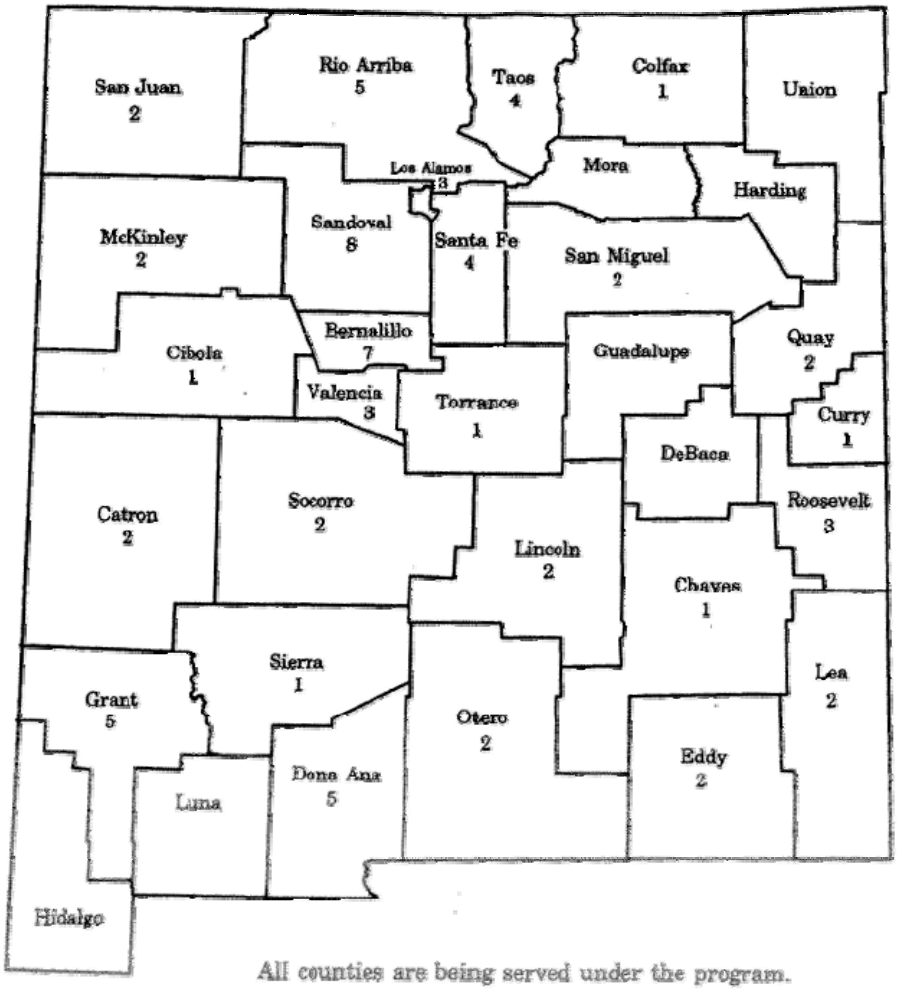
OFFEROR	PROJECT TITLE	EMNRD FUNDING	LOCAL MATCH	TOTAL PROJECT COST
University of New Mexico	Paper Baling	35,000	11,450	46,450
City of Tucumcari	Composting/Tub Grinder	40,000	16,510	56,510
Los Alamos County	Cardboard Baling	12,000	10,000	22,000
Pueblo of Zuni	Steel Can Recycling	15,000	3,906	18,906
City of Portales	Composting/Wood Chipper	35,000	98,129	133,129
Los Lunas Hospital	Processing Facility	30,000	250,000	280,000
City of Socorro	Baling	15,000	55,589	70,589
Lincoln County Solid Waste Authority	Baling	32,500	13,000	45,500
TOTAL CYCLE IV		$325,000	$537,584	$862,584
CYCLE V				
University of New Mexico	Collection Truck	$35,000	$9,464	$44,464
Lincoln County Solid Waste Authority	Curbside Recycling/Dumpsters	56,500	55,100	111,600
New Mexico State University	Recycling & Baler	68,500	70,000	138,500
Eastern Plains Council of Governments	Vertical Conveyer	10,000	5,000	15,000
Southwest Public Recycling Association	Recycling Market Development	63,500	27,000	90,500
City of Tucumcari	Front End Loader/Composting	18,000	18,000	36,000
Eastern New Mexico University	Recycling Containers	48,500	0	48,500
City of Socorro	Dumpsters/Education	47,000	69,290	116,290
City of Los Alamos	Truck/Residential Yard Waste Collection	23,000	25,000	48,000
Town of Silver City	Composting Education	30,000	40,500	70,500
Roadrunner Recycling, Inc.	Roll-off Containers/Education	65,000	102,000	167,000
TOTAL CYCLE V		$465,000	$421,354	$886,354

OFFEROR	PROJECT TITLE	EMNRD FUNDING	LOCAL MATCH	TOTAL PROJECT COST
CYCLE VI				
City of Alamogordo/Otero County	Drop-off Recycling Bins	$35,000	$22,000	$57,000
Chama	Drop-off Recycling	15,000	6,690	21,690
Taos County	Drop-off Recycling	18,000	10,000	28,000
Los Lunas Hospital and Training School/ Valencia County	Horizontal Baler	35,000	158,580	193,580
City of Hobbs	Processing Equipment	50,000	140,218	190,218
City of Las Vegas	Processing Equipment	50,000	216,400	266,400
Southwest Public Recycling Association	Cooperative Marketing	12,000	24,000	36,000
TOTAL CYCLE VI		**$215,000**	**$577,888**	**$792,888**
CYCLE VII				
New Mexico Junior College, Hobbs	Collection bins - paper and aluminum	8,000	45,900	53,900
Otra Vuelta, Los Ojos	Recycled tire mat market development	16,500	11,500	28,000
Jicarilla Apache Tribe	Drop-off recycling	12,400	22,900	35,300
New Mexico Recycling Coalition	Public information and education	20,000	45,500	65,500
Keep Rio Rancho Beautiful	Bins - paper recycling	7,000	6,260	13,260
Grant County	Trailers, bins and public education	28,000	98,000	126,000
New Mexico State University, Las Cruces	Tub grinder - composting	35,000	52,750	87,750
City of Carlsbad	Tub grinder - composting	50,000	312,000	362,000
City of Socorro	Antifreeze recycling unit, testing equipment, oil filter crusher, waste oil recycling	12,000	7,175	19,175

OFFEROR	PROJECT TITLE	EMNRD FUNDING	LOCAL MATCH	TOTAL PROJECT COST
Bernalillo County	Baler and hoppers - drop-off recycling	31,100	46,928	78,028
City of Santa Fe	Collection bins for multi-family apartment buildings	10,000	72,000	82,000
Southwest Public Recycling Association	Scrap steel cooperative marketing and education of landfill operators	20,000	10,000	30,000
TOTAL CYCLE VII		**$250,000**	**$730,913**	**$980,913**
GRAND TOTAL - CYCLES I - VII		**$3,681,407**	**$4,597,889**	**$8,279,296**

RECYCLING PROGRAM

Number of Projects and Location of funding Recipients



All counties are being served under the program.

Appendix O. EDUCATIONAL PROGRAMS, RESOURCES AND PARTNERS

OUTREACH			
Resources/ Partners	**Audience**	**Resource Provided**	**Website**
Keep America Beautiful	Professionals Public	Coloring book Outreach programs Grants Keep America Beautiful month Waste: A Hidden resource	www.kab.org
Waste Management, Inc.	Elem. school	Story of Garbage Earth Savers	www.wm.com
New Mexico Clean and Beautiful	K-12 Public	Curriculum	www.nmcleanandbeautiful.org
Project Learning Tree	High School	Solid waste curriculum	www.plt.org
Trade Organizations: Rechargeable Battery Recycling Corp. Can Recycling Instit. American Plastics Council		Curricula for recycling batteries, plastics, cans	www.rbrc.com www.cancentral.com www.plastics.org
New Mexico Recycling Coalition	K-12 Public	NM Recycling Awareness Month Talkin' Trash presentation	www.recyclenewmexico.com
National Recycling Coalition	Professionals	Facts, Media, Curriculum, social marketing research	www.nrc-recycle.org
State Land Office	Public	Don't Trash the Trust	www.nmstatelands.org
Various Orgs	Public	Earth day	
Bureau of Land Management		Public Lands Day	www.blm.gov
Local Access Television	Public	Advertising and education	
Wise Recycling	Public K-12	facts on website - aluminum	www.wiserecycling.com
EPA	Public K-12	Information on regulations, free materials, curriculum, Waste Wise Program	www.epa.gov/oswer
Environmental Education Association of New Mexico	Public	Resources for teachers, educators and environmental professionals, List Serve	www.eea.nm.org
Cooperative Extension Center	Public	Master Gardener Master Composter Field Days	www.cahe.nmsu.edu/ces/
Social Marketing		Aceti Associates – present case studies on successful recycling marketing programs, pilots and programs	http://www.acetiassociates.com/publications.html - http://www.acetiassociates.com/resources.html
NMED SWB	Public	PSA promoting recycling; website	www.nmenv.state.nm.us

PROFESSIONAL EDUCATION AND PROFESSIONAL PRESENTATIONS			
Resources/ Partners	**Audience**	**Resource Provided**	**Website**
NMED	Professional	Certification class for recycling, composting, transfer station and landfills, Waste Screening Class	www.nmenv.state.nm.us
NMRC	Professional	Co-sponsors recycling and compost classes	www.recyclenewmexico.com
SWANA	Professional	Co-sponsors transfer station and landfill classes	www.nmswana.com
Environmental Education Association of New Mexico	Public	Resources for teachers, educators and environmental professionals	www.eea.nm.org
Waste Energy Research Consortium (WERC)	College	Environmental Contests, research, Scholarships	www.werc.net
NMCB		Train the Trainer	www.nmcleanandbeautiful.com

PERIODICALS & LIST SERVES		
Resources/ Partners	**Resource Provided**	**Website**
NATIONAL		
Waste News	Monthly newspaper	www.wastenews,com
Biocycle	Monthly magazine	www.biocycle.net
American Recycler	Monthly newspaper	www.AmericanRecycler.com
Refuse News	Monthly newspaper	KBRefnews@aol.com
Chartwell Solid Waste Group	Weekly e-newsletter	www.wasteinfo.com
Resource Recycling	Monthly magazine	www.resource-recycling.com
KAB	Keep American Beautiful	www.kab.org
Recycling Today	Free e-newsletter	www.recyclingtoday.com
JTRnet	Jobs Through Recycling list serve	jtrnet-Owner@lists.epa.gov
Nat'l Waste Prevention Coalition (NWPC)	Forum on waste prevention	www.nwparchive.org
GreenYes	List serve	GreenYes@googlegroups.com
National Recycling Coalition	E-newsletter Mobius	www.nrc-recycle.org
STATE		
NMRC	Scraps e-newsletter and in Jan 2006 Recycling Listserv	www.recyclenewmexico.com
SWANA	Quarterly newsletter	www.nmswana.org
New Mexico Environmental Health		www.nmehc.net
LOCAL		
Santo Domingo	Pipeline	

CLEAN UPS			
Resources/ Partners	**Audience**	**Resources Provided**	**Website**
NATIONAL			
Keep America Beautiful	Public	Keep America Beautiful Great America Cleanup	www.kab.org
STATE			
NMED	Public	Illegal Dumping Summits And Manual	www.nmenv.state.nm.us
New Mexico Clean and Beautiful (NMCB)	Public	TREK for trash	www.nmcleanandbeautiful.org
Department of Transportation (DOT)	Public	Adopt a Highway Toss no Mas	www.nmshtd.state.nm.us
	Public	Dia Del Rio	www.rioweb.org
Bureau of Land Management	Public	Public Lands Day	www.blm.gov
LOCAL			

HOW TO SET UP RECYCLING SYSTEMS			
Resources/ Partners	**Audience**	**Resource Provided**	**Website**
NATIONAL			
EPA	Professionals, community	WasteWise, other online resources	www.epa.gov/oswer
STATE			
NMRC	Community, professionals	NMRC Recycling Conference	www.recyclenewmexico.com
NMED	Community, tribes	Technical assistance, referrals to education and other contacts (organizations and county)	www.nmenv.state.nm.us
NMED: Pollution Prevention	Industry, commercial	Commercial recycling, toxicity reduction, waste reduction	www.nmenv.state.nm.us
New Mexico Energy, Minerals and Natural Resources	Industry, community	Energy generation from organic wastes	www.emnrd.state.nm.us
SWANA	Professionals	Solid waste system set-up, management advice	www.nmswana.com
Waste Energy Research Consortium (WERC)	Industry	Pollution Prevention	www.werc.net

WASTE REDUCTION & REUSE			
Resources/ Partners	**Audience**	**Resources provided**	**website**
NATIONAL			
EPA	Public, professionals	Online information and resources	www.epa.gov/oswer
FreeCycle	Public	List serve for free exchange of reusable items	www.freecycle.org
STATE			
Habitat for Humanity Restore	Public, industry, commercial	Home and Construction recycling store	www.habitat.org
NMRC	Public	Waste Exchange	www.recyclenewmexico.com
NMED Solid Waste Bureau	Public, professionals	Technical Assistance and Referrals	www.nmenv.state.nm.us
NMED Pollution Prevention	Businesses Government entities	Commercial waste reduction	www.nmenv.state.nm.us
WERC	Industry	Pollution Prevention	www.werc.net
Cooperative Extension Center	Public		www.cahe.nmsu.edu/ces/
LOCAL			
Keep Santa Fe Beautiful	Public	"Trash to Treasures" in Sunday paper	www.ksfb.org

IDEAS TO FOLLOW UP ON WITH MORE RESEARCH			
	Audience	**Benefit**	**Website/Contact Info**
Amnesty Days	Public		
Household Hazardous Waste & Electronic Waste Days			
Recycling End Markets Directory	Professional	List end market contacts online for easy access; reduce research time	
Community cleanups			
Acequia Cleanups			
Recycling Fashion Show			
Recycling Days			
Tours of facilities			
PSAs			
Look at shared resources that are free from other states and organizations			
Social marketing research			
Extension center resources			
Illegal dumping resources			

Appendix P. Overview of Integrated Waste Management Funding Mechanisms

The Funding group expressed interest in looking to other states for ideas on how to fund integrated waste management priorities. The following list summarizes funding mechanisms most commonly used to support waste management and recycling.

1. LANDFILL SURCHARGES

New Jersey was the first state to adopt landfill surcharges (circa 1983), and many other states, large cities, counties, and metro regions have followed this example, including MN, CA, MA, IL, OH, OR, MI, PA, AZ, NE, IA, WI, Portland Metro Region (OR), Alameda County (CA), AR.

The landfill surcharge is a per ton fee normally set by legislation and charged to owners or operators of landfills and other disposal facilities, such as transfer stations and incinerators. The fee may be charged to the private firm operating a disposal facility for a jurisdiction, in which case the firm normally includes the surcharge in its contractual fees charged to the government unit.

Funds from surcharges are typically placed in a dedicated fund for supporting the various components of an integrated waste management system established by legislative guidelines, such as preparing an integrated waste management plan; implementing recycling programs; implementing waste reduction and recycling education campaigns; etc. As local governments move through the various steps in the process mandated by the surcharge law, they may apply for and receive monies from the integrated waste management fund. Funds are usually awarded as grants or performance contracts. Typically, such programs are evaluated against policy goals set by the enabling legislation, such as meeting increasing diversion targets.

Examples

a. A survey on the JTRNet (Jobs through Recycling Network) list serve sponsored by the US EPA posted the following sampling of landfill tip fee surcharges reported by respondents in 2000:

Sampling of Landfill Tip Fee Surcharges in 2000

JURISDICTION	PER TON SURCHARGE	COMMENTS
Alameda County (CA)	$ 6.00	
CA	1.34	Local govts may levy add-on
GA	1.00	
IL	0.95	
IN	0.50	
KS	1.00	

MN	14.00	
PA	2.00	
San Jose (CA)	13.00	
TX	1.25	
WI	3.00	

b. According to an April 2005 article in *Waste Age*, "Recent proposals in two Great Lake states aim to increase landfill surcharges. Ohio Gov. Bob Taft, faced with a $4 billion budget deficit, has proposed increasing the state's landfill surcharge from $2 per ton to $4.75 per ton to help fund the Ohio Environmental Protection Agency's (EPA) programs. Meanwhile, the state of Michigan is considering a more ambitious plan to raise its surcharge from $0.21 per ton to $7.50 per ton, a more than 35-fold increase."

2. PAY AS YOU THROW (PAYT) OR UNIT PRICING

In 1990, Seattle, WA, pioneered the first PAYT system in the US. According to the US EPA, by 2003, over 5,000 municipalities across the country had followed Seattle's example and implemented PAYT or unit-pricing.

Seattle's solid waste department is set up as a public utility and charges for trash collection based on the number and size of trash receptacles each living unit uses, with the cost per receptacle increasing for each additional receptacle the residence requests. In other words, the first bin may cost $6 per month, the second $9 per month, the third $12 per month, and so on.

The Seattle Solid Waste Utility provides the trash receptacles to residents, and also offers a range of smaller-sized, less expensive trash bins for households reducing their waste by separating materials for recycling or composting. At the same time, the Utility provides each household with separate bins for recyclables and green waste, and does not charge for weekly collection of these bins. Thus, the more waste a household discards, the greater the cost, while the more they recycle or compost, the lower the cost. This provides Seattle residents a direct financial incentive for increasing participation in diversion services offered.

See information on PAYT from EPA: http://www.epa.gov/epaoswer/non-hw/payt/

3. FEES FOR SERVICE

Sanitation or trash pick-up fees charged as by a utility. Example: Minneapolis, MN charges $19.25/month per dwelling unit for trash, yard waste, and recycling collection for 100,000 households.

Unlike PAYT, this system charges a flat fee per dwelling unit regardless of residents' recycling or green waste separation activities. Hence it provides no financial incentive for diversion activities.

4. ADVANCE DISPOSAL FEE (ADF)

Metro Region (Portland, OR) definition: "A fee on a product that is intended to capture the cost of waste disposal of that product."

Florida had a state law creating ADFs in effect for about 5 years in the early 1990's. An earlier law in California (1980s) also functioned like an ADF, and created the state's first grant fund for recycling program start-ups.

California has implemented an ADF for electronic wastes through a law passed in 2004. Fees are charged to manufacturers of electronics, and they are given the responsibility of setting up a recovery system for discarded e-waste.

A number of states charge ADFs or SDFs (special disposal fees) on problem wastes such as tires or automobile batteries, or litter-prone items such as fast food packaging. See examples in Appendix E. *Recycling Goals and Progress US States 2005*, Raymond Communications, Inc.

5. LITTER REDUCTION AND RECYCLING FEES

Through Legislative Bill 120 (1979) Litter Reduction and Recycling Act, Nebraska created the Litter Reduction and Recycling Grant Program, which provides grant funding for public education, cleanup, and recycling projects and programs. Funds are collected through a litter fee assessed on manufacturers, wholesalers, and retailers of products commonly found in the litter stream.

Nebraska has an impressive line-up of funding programs to grow the recycling industry, and assist recycling, waste reduction, illegal dump clean-up, and other waste abatement programs.

6. PRODUCT STEWARDSHIP PROGRAMS (ALSO CALLED EXTENDED PRODUCER RESPONSIBILITY, OR EPR)

Like the ADF, a product stewardship program places the financial responsibility for disposal or end-of-life recovery on product manufacturers, otherwise called brand-name owners. Programs in Europe and Canada widely follow this funding mechanism, which levies fees according to the amount of waste created by a product and the complexity of recycling the product and its packaging.

British Columbia, CN has the most advanced Extended Producer Responsibility program in North America. Ontario has a version of this by way of an industry-funded recovery system, including grants to municipalities.

The key concept in Product Stewardship or Extended Producer Responsibility programs is that corporate producers of goods and packaging are theoretically prevented from externalizing the costs of waste disposal (or recycling) to taxpayers, and must bear the financial burden themselves. In the German Green Dot program and the French Eco Emballages program, brand

owner industries are required to capitalize and operate recovery systems for all their products. For example, in Germany a citizen may purchase an item, unwrap it, and leave the packaging behind at the store for the retailer to route into the Green Dot recovery system. The same goes for the item he/she bought. When it reaches end-of-life, the citizen can return the item to the store where it was purchased and the Green Dot program takes responsibility.

Interestingly, the Green Dot and Eco Emballages programs — by holding brand owners responsible for recycling of packaging materials — have produced a noticeable decrease in the amount and complexity of consumer goods packaging. When the companies themselves were faced with recycling difficult-to-recycle packages and packages with hazardous constituents, such as inks and adhesives, they became motivated to design more recycling-friendly packaging.

7. LANDFILL DIVERSION CREDITS OR REBATES

A reimbursement paid by municipalities or other government units to operators of recycling, composting, or other programs diverting materials from landfills. The credit or rebate is set at a per/ton rate usually representing part of the tip fee that government avoids paying by virtue of diversion benefits provided.

Example: Chicago Streets and Sanitation paid 3 recycling companies in Chicago a $35/ton diversion credit for all materials sold to recycling markets and kept out of landfills from 1985 to 1996.

8. ENVIRONMENTAL GROSS RECEIPTS TAX (EGRT)

Another possible mechanism for New Mexico communities and businesses developing recycling programs is the Environmental Gross Receipts Tax (EGRT). Incorporated communities may implement a 1/16 percent 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 percent. According to the 2004 TERN Report, small communities find that the funds generated are inadequate to cover the needs of all environmental programs, including recycling.

9. COSTS PAID THRU GENERAL FUND

An example is the Solid Waste Facilities Grant Fund (SWFGF) created in New Mexico by a one-time allocation of funds. The SWFGF is now depleted.

10. FRANCHISE FEES

Franchise fees are fees charged by local governments — on an exclusive or non-exclusive basis — for the privilege of doing business within all or part of a jurisdiction. For instance, a city may charge a private hauler a contractual fee, usually 10 to 20 percent of gross receipts, in exchange for the revenue-earning opportunity of providing residential or commercial waste collection, recycling, and disposal service within the city limits as a whole, or in a specified service district within the jurisdiction. For example, Portland, OR, divides the city into districts and contracts

with a separate hauler to provide trash and recycling collection from residential and commercial generators in each of the districts.

Local jurisdictions can utilize franchising to set policy priorities, such as ranking recycling as preferable to landfilling of solid wastes. A number of cities use franchise agreements to hold their haulers responsible for providing recycling collection from households, marketing materials to brokers and mills, and sharing earned revenues with the host municipality to help support recycling services.

11. ENFORCEMENT DEDICATED TO RECYCLING

The New York City plan *Reaching for Zero, 2005*, recommends a variety of funding mechanisms to support recycling and education. For example:

The Plan recommends that fines generated from enforcement of recycling violations be dedicated to fund recycling education. Similarly, fines on waste carting trucks for on-street idling and queuing are identified to be increased and dedicated to finance cleaner vehicle/fuel conversions.

Also the New York City plan recommends a new system of commercial waste collection franchises, in which carters would pay a fee for the opportunity to obtain a franchise for servicing a commercial waste district. Revenues from franchise fees would be dedicated to finance education and technical assistance services to support commercial zero waste programs.

12. BOTTLE BILL

The following overview is excerpted from the Container Recycling Institute's Bottle Bill Guide at: http://www.bottlebill.org.

Bottle Bills, or beverage container deposit-redemption programs, have been instituted by law in 11 US states and 8 Canadian provinces. The first US Bottle Bill was passed by Oregon in 1971, followed by Vermont, New York, Michigan, Connecticut, Iowa, Massachusetts, Maine, Delaware, California, and Hawaii. Over one-fourth of the US population has access to recycling, litter abatement, and other environmental programs funded through Bottle Bills.

Under Bottle Bills, beverage distributors and retailers are required by law to collect small deposits (usually a nickel) on certain packaged beverages — typically carbonated soft drinks and beer. Five states (Maine, California, Iowa, Vermont, and Hawaii) require deposits on one or more other types of beverages in addition to beer and soft-drinks. When the consumer returns these beverage containers to a retailer or redemption center, the deposits are refunded. Deposits offer citizens a financial incentive for recycling beverage containers.

When a consumer chooses not to return a deposit container, the deposit money is considered "unredeemed" or "unclaimed." Bottle Bills vary from state to state in terms of the portion of unredeemed deposits retained by state governments to fund recycling and other programs.

Currently California, Massachusetts and Michigan collect 100% of the unclaimed deposits, although the mechanism for retaining these deposits varies. In California and Hawaii, the state collects the deposits from distributors when the beverages are sold to retailers. The bottler or distributor pays the deposit directly into a state-managed fund and collects the deposit from the retailer. The retailer then collects the deposit from the consumer. Any unclaimed deposits simply remain within this state-managed fund.

In Massachusetts, distributors and bottlers are required to turn over all unclaimed deposits to the state. The unclaimed deposits are said to "escheat" to the state. Michigan escheats 75% of unclaimed deposits, and allows retailers to keep the other 25% as a way to offset their handling costs. In all other deposit states, distributors and bottlers keep all of the unclaimed deposits. In 2000, unclaimed deposits amounted to $84.7 million in New York, $28.5 million in Massachusetts, and $23.5 million in Michigan.

Redemption systems can generate substantial funding for recycling, diversion, public education, litter clean-up, and related programs. For example, Raymond Communications, Inc. reports that the California Bottle Bill and landfill surcharge funds combined gave the state a recycling budget in 2002 of $149.5 million, most of which was returned to local governments to support diversion programs.

13. LANDFILL BANS

Several states have implemented bans on landfilling various materials that could be recycled, or on special wastes targeted for diversion from landfills. This approach can generate recycling funds if, as in North Carolina, disposal fees are charged when banned recyclable materials are sent to landfills. Minnesota has bans in place for green waste, recyclables, and special wastes.

In general, landfill bans should be implemented only in conjunction with comprehensive, well-established recycling, HHW, and other diversion programs for a majority of the population. In New Mexico, this approach is not advisable as diversion programs are still developmental, and bans could increase the state's illegal dumping problem.

14. RECYCLING MARKET DEVELOPMENT ASSISTANCE

Over a dozen states offer various types of economic development services and financial assistance to encourage manufacturers to utilize recycled feedstocks in their production processes and thereby strengthen local markets for recovered materials. California and two other states have Recycling Market Development Zones where secondary material processors and end-use manufacturers located in designated areas can qualify for low interest loans, tax breaks, and other financial incentives.

A number of states have Recycling Business Assistance Centers and Recycling Economic Development and Market Development agencies that help recycling industries tap into a variety of financial and technical assistance resources.

State Recycling Market Development Funding Mechanisms

State	Funding Source	Recycling Budget
Colorado	No formal recycling market development program or annual budget for recycling. Some grant money is available under a couple of state programs (e.g., Office of Management and Conservation, Colorado Commission on Higher Education, Department of Local Affairs).	n/a
Delaware	Charges a surcharge on landfill disposal.	$3 million
Illinois	There is a $2.22/ton landfill tipping fee, of which $0.475 goes to recycling programs.	$6.5 million ($2.2 million budgeted for recycling market development)
Indiana	Generated from a $0.50/ton solid waste surcharge. Half goes to recycling market development.	n/a
Kansas	$1.00/ton fee assessed on all municipal solid waste disposed in a Kansas landfill or transferred through a permitted solid waste transfer facility that is transported out of state.	$5.9 million
Kentucky	$25 million bond issue plus $1.75/ton landfill surcharge funds grants for recycling and HHW collections.	$25 million +
Maine	No formal recycling market development program. Funding for the State's recycling program, which provides technical assistance to municipalities and regions, is derived from a solid waste fund that is supported by disposal fees levied on waste delivered to landfills, as well as a fee levied on the purchase of new automotive tires and batteries. Public infrastructure development is supported by grants using funds received through bonds approved by voters.	$320,000

State	Funding Source	Recycling Budget
Maryland	A general fund is set up to support statewide recycling programs. Maryland gives its counties authority to develop their own recycling programs. Each county sets its own recycling goals, establishes its own recycling program, and hires its own recycling coordinator.	$371,617
Missouri	Generated from tipping fees.	$850,000 maximum
Montana	Provides tax incentives for recycling market development. Solid waste fees fund a Recycling and Market Development Specialist position within the state's Air, Energy, and Pollution Prevention Bureau.	n/a
Nebraska	Receives 50 percent of a $1.25/ton tipping fee, two business fees, and a $1 fee on all new tires sold in the state.	$5 million
Nevada	Funded by a $1 tire tax assessed on the retail sale of all vehicle tires in Nevada.	$250,000
New Jersey	Charges a $1.50/ton tipping fee surcharge.	
New York	There are two main funding sources in New York. A general fund is used to allocate funds for the Empire State Development's Environmental Services Unit, which is charged with recycling market development. The second funding source is through New York's Real Estate Transfer Tax (RETT), which is used for the Environmental Protection Fund (EPF).	$6.5 million (changes annually)
North Carolina	Charges a tipping fee for disposal of recyclable materials banned from landfills. Aluminum cans, household appliances, tires, yard waste, used motor oil, and lead-acid batteries are banned from landfills statewide. Local municipalities have the jurisdiction to ban other recyclables from landfills.	n/a
Ohio	Imposes a two-tier tax on Ohio corporations. The first tier is a surcharge to the state's franchise tax. The second is a tax on manufacturers of plastic and glass products.	$7.2 million

State	Funding Source	Recycling Budget
Pennsylvania	Charges a $2/ton surcharge on all waste processed at resource recovery facilities and for waste disposed at landfills.	$66 million
Virginia	Collects litter control, recycling, and waste tire taxes. The litter control and recycling taxes are imposed on businesses.	$4.3 million
West Virginia	State recycling grant programs, open dump cleanup programs, and other environment-oriented programs are funded by an $8.25 waste assessment fee, collected at the landfills. The state charges a $1/ton tip fee surcharge to help fund its recycling market development programs.	$1.3-1.8 million
Washington, DC	General fund.	$4 million
Wisconsin	$3.00/ton solid waste surcharge.	$24 million

Last updated on Wednesday, January 11th, 2006
Source: http://www.epa.gov/jtr/state/funding.htm

The above table lists a sampling of states' recycling funding mechanisms and budgets. Profiles of all US states can be found at:

http://www.epa.gov/jtr/state/index.htm

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Appendix Q. Existing Economic Development Incentives in New Mexico

(Source: Excerpted from *The Strategic Plan for Transforming the Economics of Recycling in New Mexico Report*, TERN Steering Committee, 2004)

New Mexico has a portfolio of incentives that have 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 workforce training, research, or purchasing capital equipment.[1]

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.

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 increased recycling of OCC and Styrofoam™. 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, this may not create a job at American Furniture, but it is likely that the overall growth in recovery will increase 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. Issuance is a political process and must begin in accordance with local and state laws. The issuing government retains ownership of the facility until the bond is paid off. The party to whom the bond was issued agrees to rent the facility, and thus is not obligated to pay property taxes.

Opportunity: According to companies the TERN committee interviewed, securing an IRB requires intensive overhead that reduces the profitability of the approach. Waste Management of

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

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. However, the clause for default is also a disincentive to using IRBs.

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 $1,000 per year for 4 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 rural parts 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.

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 are 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 as a glass factory making glassware and tiles 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 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 WalMart or K-Mart.

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 a company's 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.