

NM LOCAL USE OF GLASS RECYCLING GUIDE



Produced by the
New Mexico Recycling Coalition



This guide is also available online at www.RecycleNewMexico.com

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Special thanks to the communities that provided case studies and background information on their efforts. Many of the secondary use information came from the Alaska Manufacturing Extension Partnership research. Credit is also due to the Clean Washington Center who has a myriad of glass recycling and usage resources at their website: www.cwc.org. Many thanks to Keep New Mexico Beautiful for funding the printing of this guide. Cover photos courtesy of Village of Angel Fire.

GLASS RECYCLING OVERVIEW

New Mexico Recycling Coalition

The New Mexico Recycling Coalition (NMRC) is a non-profit statewide professional membership organization that has a mission to lead New Mexico to value waste as a resource. This goal is reached primarily through education and advocacy projects. With 260 recycling members, the organization supports itself from dues, trainings and conference revenue. Several special projects are funded by grants and sponsor partners. Joining NMRC helps support efforts such as this, to educate professionals and the public about the value of recycling.

State of Glass Management in New Mexico

In 2011, the New Mexico Environment Department: Solid Waste Bureau reported 3,083 tons of glass were recycled for either end-market recycling or using it locally for beneficial purposes. These beneficial uses include using glass locally for public works, roads or landfill projects.

Nationally, glass comprises 4.6% of the waste stream by weight. This percentage may vary by community depending on the local economy, tourism establishments and other variables. In 2010, the U.S. recycled 33.4% of glass containers. NM has a 1.5% glass recycling rate.

If New Mexico communities collectively recycled 25% of the glass waste stream, that would divert 25,000 tons of material per year from our landfills. In total, it can be estimated that annually New Mexicans generate a little more than 100,000 tons of glass each year.

Why Divert Glass from Landfills

- ◆ Extend landfill life span.
- ◆ Divert a heavy material that has local beneficial uses.
- ◆ Effective product that can be used in place of aggregate or sand products that may be more costly to procure.
- ◆ Customers often request glass recycling options.
- ◆ Supports local economic development opportunities for small-scale recycled glass businesses.

Why is it Tough to Sell NM Glass to End-Markets?

First off, there are no large-scale glass end-markets in NM. There is a burgeoning company called Growstone in Albuquerque, but it is not ready to accept material widely yet. End-markets in Colorado and Texas that recycle glass bottles into glass bottles often have color separation requirements. Transportation of glass is a challenge as well. With sorted, crushed glass being purchased at \$10/ton exclusive of transportation, a community may end up

GLASS RECYCLING OVERVIEW

having to pay the transportation of this very heavy payload. A logical solution for many NM communities is to collect, process and use the material locally.

What is Secondary or Beneficial Use of Glass?

Secondary use of glass provides value for the material in the local community or region. The community either is responsible for the crushing and screening of the glass or a partnership can be created with say a local aggregate or cement company that can reduce the material and use it beneficially in their business.

Examples of Recycled Glass Uses

According to the Glass Markets Information System there are eight main categories of glass uses:

- ◆ Bottle Applications
- ◆ Building Materials
- ◆ Concrete Applications
- ◆ Construction Aggregates
- ◆ Industrial Mineral Uses
- ◆ Insulation Applications
- ◆ Paving Applications
- ◆ Remelt Applications
- ◆ Misc Applications

The majority of recycled glass sold to end-markets is used to make new containers. The demand for quality, sorted by color cullet is greater than the supply as glass manufacturers have made commitments to use more and more recycled-content glass material in their containers. High-quality cullet sold to end-markets can also be used for abrasives, aggregate substitute, bead manufacturing, decorative applications, fiberglass, frictionators (match tips), and fluxes in metal foundry work.

Lower-quality, unsorted cullet can be used to create such products as fiberglass insulation, in the manufacture of roadbed aggregate, driving safety reflective beads, and decorative tile, as well as many of the secondary uses outlined in this document.

Regulatory Requirements for Local Glass Projects

All recycling facilities are required to file a registration form with NMED: Solid Waste Bureau. If you add glass recycling and processing to your program you are required to update your NMED registration. It is also recommended to check your local ordinances, as well as NMED: Air Quality and OSHA to ensure compliance with any glass crusher machinery considered for purchase.

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Glass Crushing Equipment and Safety

There is a wide range of glass crushing equipment available in the market place and many options to consider.

Before purchasing, be sure to review and answer the following questions:

- ◆ Tonnage to be processed (now and future)
- ◆ What end-products or applications would you like to create? What particle sizes are needed for those projects?
- ◆ Do you need a machine or screening system that can create different sized glass particles?
- ◆ Do you want to create a sand-like product?
- ◆ Where you will place crushing equipment
- ◆ Electrical availability and needs
- ◆ Your budget
- ◆ Screening requirements
- ◆ What screens are needed to achieve consistency and a clean product?
- ◆ Consider air/dust particulate control from the machine
- ◆ Will the machine be placed inside a building or outside?
- ◆ If placing on north side of building consider freezing issues
- ◆ What safety equipment and training is required for operators?

For more detailed guidance on glass processing system assessment and selection, please refer to the Clean Washington Center's Best Practices in Glass Recycling online resources at http://www.cwc.org/glass_bp_list.htm

Calculating Cost Savings and Return on Investment

The economics of glass recycling are challenging in New Mexico where selling to an end-market may not be a viable option. Investing in your own glass crushing equipment also must be quantified with the beneficial effects to the community and residents. An entry-level glass crusher can cost \$40,000 and requires annual maintenance, repair and labor for its upkeep.

Chances are that your community will find plenty of beneficial uses for the recycled glass cullet in public works and roads projects. Being able to calculate the savings of avoided landfill costs and avoided purchase of new materials is an important factor in the decision to start recycling and processing glass.

You will also need to consider how to collect glass, as it must remain separate from other recyclables and can pose safety risks in handling to operators.

CAUTION: Do not start collecting glass or purchase equipment until you have a firm plan on how you will use the glass and know the usage specifications

USES FOR RECYCLED GLASS

Glass Recycling Calculations to Consider

Start-Up Costs

- Cost of Glass Crusher
- Purchase or Build Further Screens
- Glass Collection Equipment Costs
- Education and Outreach

Annual Costs

- Annual Cost to Maintain and Repair
- Screen Replacement
- Operation and Collection Labor

Avoided Costs

- Recycled Tons of Glass x Landfill Tip Fee
- Reduced Transportation If Landfill Far Away: # Tons Avoided Divided by # of Tons Per Usual Truckload. Then multiply that number by Cost Per Truckload.
- Cost Savings of Displaced Aggregate: # of tons x cost of aggregate

Creating Local Specifications and Seeking Approvals

To ensure proper installation and that the use of recycled glass is approved within your municipality or with a construction project manager, you will need to provide written specifications and guidelines of how the glass will be used. There are several online resources that can provide further detailed guidance. If your community needs to formally adopt the specification, ensure this process is completed first. Be sure to work with your public works or roads departments to educate them on the product and gain their buy-in to the process.



Photo Courtesy Santa Fe SWMA

USES FOR RECYCLED GLASS

Using Recycled Glass as an Aggregate

One of the most common local, secondary uses of recycled glass is in aggregate form. The following table outlines the basics on aggregate type and recycled glass specifications.

	Maximum Cullet Content (%)	Maximum Debris Level (%)	Minimum Compaction Level (%)
Structural Applications:			
Roadway Base Course	15	5	95
Roadway Sub Base	30	5	95
Embankments	30	5	95
Static Structural Loads	30	5	95
Fluctuating Load	15	5	95
Nonstructural Fill	100	10	85
Utility Bedding Backfill	100	5	90
Drainage:			
Retaining Wall	100	5	95
Foundation Drainage	100	5	95
Drainage Blanket	100	5	90
French Drain	100	5	90

Source: "Cullet What You Will: In The Aggregate, It's Fine." Robert Kirby

Using Recycled Glass in Road Construction

Another possible application of locally-generated recycled glass cullet is in the use of road construction. Research has proven that roads that are located in freeze-thaw climates remain stable with the recycled glass additive.

The New Mexico Department of Transportation has developed a specification for the use of recycled glass aggregate in base course. The specification

USES FOR RECYCLED GLASS

outlines allowable materials in base course aggregate to include “processed glass aggregate” that meets all requirements of AASHTO M 318 “Glass Cullet Use for Soil-Aggregate Base Course.”

This specification can be found online at www.recyclenewmexico.com/glass.htm

Using Recycled Glass for Traction

Recycled glass when refined down to smaller, sand-like specifications can be used on roadways to gain traction. In Taos, recycled glass has been used for traction on snow and ice-covered roads.

Using Recycled Glass in Portland Cement

Glass cullet may also be used as an additive to Portland cement concrete.

Using Recycled Glass for Filtration

Using the material for filtration mediums has proven successful as well. The recycled glass can be used in alternative septic drain fields, water well packing sand, sub drains, French drains, wastewater sand filtering, and swimming pool filtration.

Using Recycled Glass for Abrasives

Recycled glass may also be used as a sand blasting abrasive and water jet cutting medium. If your area has businesses working in these fields, discuss with them opportunities to partner.



Photo Courtesy Santa Fe SWMA

NM GLASS USAGE CASE STUDIES

Los Alamos County Environmental Services

Project Details

Contact Person: Tom

Nagawiecki

Phone/Email: 505-662-8383 or

tom.nagawiecki@lacnm.us

Community Size: 18,222

Materials Accepted: Residential and Business Glass Containers

Program In Place Since: Sept 2012

Uses Thus Far: Glass cullet was mixed with top soil for ditch water retention. Glass was substituted for pea gravel in drainage project. Also offered to residential landscaping and art projects.

Collection Method: 4 dumpsters placed around community

Equipment: The County owns a Model H100VT glass pulverizer manufactured by Glass Aggregate Systems with a 5/8" screen

Start-Up Costs: \$56,000 direct costs

Avoided Costs: \$43/ton at landfill

Material Tonnage Handled: 30 tons in past 6 months



Photo courtesy of Los Alamos County

Collection and Processing

Los Alamos County has a glass drop-off recycling program. There are four yellow dumpsters located throughout the community where residents can drop off glass bottles and jars of all colors for recycling. Once full these dumpsters are serviced by a fork truck. An empty dumpster is dropped off and the full dumpster is brought back to the Eco Station. Once at the Eco Station the glass dumpster is taken off the fork truck and picked up by our loader. The dumpster on the loader is positioned over the hopper for the glass pulverizer machine. The dumpster has a custom fabricated door in the back that is slid open and glass is fed into the hopper. The glass then goes up a conveyor belt and is fed into the glass pulverizer. The pulverizer contains a 5/8 inch screen, resulting in a finished glass cullet product that is 5/8 inch and smaller.

Secondary Uses of Recycled Glass

So far 20-25 tons of glass cullet was mixed with top soil for water retention in a retention ditch at the new Municipal Building. When mixed with top soil, glass cullet can assist with water absorption and percolation. Five tons of glass cullet was used as a substitute for pea gravel in drainage when installing frost-proof water hydrants. Glass cullet is given away to residents for use in landscaping and art projects. There are a couple of upcoming County projects where we are looking to utilize the cullet as a substitute for pea gravel.

Continued on next page

NM GLASS USAGE CASE STUDIES

Los Alamos County Environmental Services continued

Lessons Learned

The glass pulverizing equipment can be labor intensive, so just be ready for that when you start the program. The machine is pretty simple to fix, but problems do come up frequently. Make sure you develop a system that enables you to “touch” the glass the least amount of times. The more you “touch” it the higher your costs.

Labor and Operational Costs

At Los Alamos County we were able to utilize current staffing to cover this new program, and therefore there is no direct labor cost. Having said that our Transfer Station laborer spends around 1 hour to process a 4 cu. Yd dumpster of glass bottles. We process about a dumpster every day and when you factor in pickup of the dumpster and maintenance of the machine we spend about 2-3 hours per day on glass recycling operations for 5 days per week. The program is still pretty new and there is opportunity to improve efficiencies. Collection costs are relatively low given that it is a drop-off program and the small size of Los Alamos County. By having enough dumpsters to bring an empty one out and swap it for a full one we are able to greatly reduce fuel usage and costs. We service one of the dumpsters about every day but it is only located about a mile from the Eco Station. We have two other bins that are a little further away but those are serviced at most once per week.

Start-Up and Launch Costs

The major upfront cost for the program was the purchase of the glass pulverizer at \$41,127. For collection we reutilized old dumpsters, performed some special fabrication and painted them yellow. The fabrication and painting time is about 8 hours per dumpster. Fabrication was done using current staff. We have created 5 dumpsters to date. To prepare the Eco Station for the new equipment some electrical work was needed. The electrical work cost \$5,000, but included preparation for a cardboard baler along with the glass pulverizer.

Outreach and education was done via newspaper ads, press releases, posting information on websites, local presentations and word of mouth.

Around \$2,500 was spent on these avenues of outreach.

Also, we posted info on the side of our trash trucks. We were able to print signs at our County print shop and place them behind

some fiberglass. The other big PR piece was the purchase of 1,000 18-gallon yellow glass recycling totes to be given away to the public. These totes cost \$7,600.



Photo courtesy of Los Alamos County

NM GLASS USAGE CASE STUDIES

Southwest Solid Waste Authority

Project Details

Contact Person: Terry Timme

Phone/Email: 575-519-8987 or
terrytimme@gmail.com

Community Size: 29,380 in Grant County

Materials Accepted: Residential and
Business Glass Containers

Program In Place Since: Glass collected
for 15 years. Recent utilization project in
place since September 2011.

Secondary Use: Aggregate mixed with
gravel for road base course

Collection Method: Curbside in separate
container, special pick-ups for bars and clubs and drop-off at landfill's recycling
center

Equipment: Glass is taken to a private entity, Fowler Brothers Construction in
Hurley and reduced in a rock crusher.

Start-Up Costs: None

Avoided Costs: \$43/ton at landfill

Material Tonnage Handled: 98 tons in 2012 (8% of their recycling stream)



Photo courtesy of SWSWA

Collection and Processing

Glass is collected from residents and businesses within the town of Silver City by curbside collection. Residential curbside recycling is single stream for everything except glass. The residents and most businesses are asked to have their glass in a separate container beside their recycling bin. The glass goes in the rear compartment of the collection truck and is taken to the landfill and dumped in a 40 yd roll-off. Large commercial sources of glass (bars and clubs) are asked to keep the glass bottles in their original cases and it is picked up using a flat bed trailer. It is taken to the landfill and manually emptied into the roll-off. Glass from county residents is collected at a drop-off location at the recycling center at the landfill and collected in 2-3 yd tip bins that are also dumped in the roll-off. When the roll-off bin is full it is taken to Fowler Brothers Construction near Hurley. They mix it with gravel in their rock crusher.

Secondary Uses of Recycled Glass

New Mexico DOT specifications allow use of recycled glass cullet mixed with gravel to be used for base course in roadways.

Locate the NMDOT specifications online at www.recyclenewmexico.com/glass.htm

Continued on next page

NM GLASS USAGE CASE STUDIES

Southwest Solid Waste Authority continued

Lessons Learned

Convincing construction firms with the rock crushers that it can be done and that it is acceptable for use in roads is the most difficult impediment. Also they must become comfortable with a certain amount of contamination with labels and lids. The biggest contamination problem is probably boxes and plastic bags. Those should be removed at the source. The issue is not with contaminating the base course it is that such contamination blinds the screens used to separate the materials in to the correct band widths to meet specifications for DOT base course. This can shut down operations for hours and cost the contractors adding the glass big money. These crushers are several million dollars and have several men running them so an hour or two of not operating is expensive.

Start-Up and Operational Costs

The cost of glass collection is not tracked independently as it occurs with regular recycling pick-up. Starting the program did not have any up-front costs besides making the partnership with the private entity. The transportation of the glass to Fowler Brothers occurs in conjunction with a trip to the nearby Tri-city transfer station to pick up a roll-off with trash.



Flat bed truck used to collect glass from commercial sources (bars, restaurants and clubs). Photo courtesy Southwest Solid Waste Authority.

NM GLASS USAGE CASE STUDIES

Santa Fe Solid Waste Management Agency (SFSWMA)

Project Details

Contact Person: Lisa Merrill

Phone/Email: 505-820-0208 x420 or lmerrill@sfswma.org

Community Size: 145,648

Materials Accepted: Residential and Business Glass Containers

Program In Place Since: 2006

Uses Thus Far: Pipe bedding aggregate, landfill liner cover, sales to Growstone, local art collective, residential use

Collection Method: Curbside in separate container and drop-off at Buckman Road Recycling and Transfer Station and Santa Fe County drop-offs

Equipment: SFSWMA owns an Andela Products Model GP-1 glass pulverizer with a trammel, 4 cu yd surge hopper, in-feed and out-feed conveyors and cross belt magnet. Loaded with front-end loader. Two screens: 1/8" and 3/8".

Start-Up Costs: \$190,000

Operational Costs: \$13.26/ton (go to www.recyclenewmexico.com/glass.htm)

Avoided Costs: \$32-42/ton at landfill. Purchase of aggregate.

Material Tonnage Handled: 1,942 tons in 2011

Collection and Processing

SFSWMA only accepts non tempered glass for recycling in the shape of bottles and jars. Light bulbs, auto glass, and Pyrex are not accepted. Residents and businesses must place their glass in a separate container for recycling. The City collects glass in a separate compartment in the recycling truck during their routes. The County collects glass in a separate roll off container located in the recycling area of their Transfer Stations. The glass is then brought to the Buckman Road Recycling and Transfer Station (BuRRT) operated by SFSWMA. Once here, the glass is processed through the glass crusher and crushed into two sizes, coarse and fine, and then stockpiled for later use. The output pile (bottle caps and labels) from the glass is thrown away. The glass crushing operators wear OSHA approved PPE that is provided by SFSWMA. Glass crushing is stopped when the machine is not working properly or when weather (mostly wind) interferes.



Photo courtesy of SFSWMA

NM GLASS USAGE CASE STUDIES

Secondary Uses of Recycled Glass

SFSWMA uses the crushed glass for local facility improvements like pipe bedding aggregate for culvert pipes and landscaping. Any resident or business can come collect crushed glass for free if they load it themselves or we charge \$5/ton to load it for them. We only load 10+ cubic yard trailers. The New Mexico Experimental Glass Workshop collects glass for their glass projects. GrowStone out of Albuquerque has purchased our crushed glass. In the upcoming year, we have a permit to beneficially reuse the crushed glass for the lining of the new landfill cell to collect the leachate. This will avoid having to source and purchase crushed rock.



Details on the project can be found online in the SFSWMA presentation.

In 2014, the Caja del Rio landfill will use recycled glass for the landfill liner cover in the creation of a new cell. Specifications for the coarse gravel that the recycled glass will play a role in are included in the presentation online.



Specifications for Glass Applications

The pipe bedding project for the creation of a landfill gas collection system utilized the recycled glass produced with the 3/8" or less screen. The glass met the standard specifications for aggregate with size, no clays and minimal clay content.

Further detailed information at www.recyclenewmexico.com/glass.htm

Lessons Learned

The glass crusher breaks down a lot and it can be very costly to run a glass program, especially if you do not have a market and you end up stockpiling it. I would say if it is possible to find your market or use and know the necessary specs first, then start your program according to those specs.

Photos courtesy of SFSWMA

NM GLASS USAGE CASE STUDIES

Village of Angel Fire (VAF)

Project Details

Contact Person: Scott Gibson

Phone/Email: 575-377-6967 or
sgibson@angelfirenm.gov

Community Size: 1,204 in village, up to 10,000 in tourism

Materials Accepted: Residential and Business Glass Containers

Program In Place Since: 2010

Uses Thus Far: Residential, fill for gravel roads

Collection Method: Drop-off at Transfer Station and Recycle Park, with collections from some bars and restaurants

Equipment: VAF owns a Glass Aggregate Systems Model H-100VT glass pulverizer with a 3/8" screen

Start-Up Costs: \$41,500

Avoided Costs: \$85/ton (tip fee and transportation)

Material Tonnage Handled: 47 tons in 2012



The glass is fed inside the building into the hopper and then conveyed to the crusher placed outside.

Collection and Processing

Glass bottles are collected in 55 gal. plastic drums at the Transfer Station and in 3yd³ bins (modified dumpsters) at the Recycle Park and some bars and restaurants. When a sufficient amount of material has been collected in the bins they are brought to the Transfer Station and staged outside the building. Each bin is picked up with a forklift or a backhoe with fork attachments and positioned over the receiving hopper on the glass crusher. Then a small "door" located on the back of the bin is opened allowing the glass bottles to fall into the hopper. Unwanted material is picked out by hand usually using two workers; one on either side of the hopper. Larger glass bottles that tend to jam sideways on the conveyor belt are manually broken with a hammer. After the glass bottles are crushed, the crushed glass falls into a 55 gal. plastic drum which when full is removed and emptied onto a stockpile behind the Transfer Station. Future plans include obtaining a conveyor that will take the crushed glass directly to the stock pile from the crusher. This will be much more efficient than our current system. We also hope to obtain a larger capacity skid-steer tractor capable of lifting the full glass bins, thus freeing up our backhoe for other duties.

Continued on next page

NM GLASS USAGE CASE STUDIES

Secondary Uses of Recycled Glass

The crushed glass is available to all residents free of charge. Some collect 5 gal. buckets to use for arts and crafts projects. Others shovel larger amounts into pickup trucks or small trailers. Public Works employees use a backhoe or front-end loader to pick up a bucket full to use on gravel roads in the area, such as small eroded spots or muddy areas. No records are kept on amounts taken, only as it is produced.

Lessons Learned

Always try to buy the largest capacity glass crusher you can possibly afford. Also, make sure you have equipment that can handle the bulk and weight of glass as it is very heavy. The glass crusher is a high-maintenance piece of equipment that needs regular attention to keep it running optimally. Consider the seasonal effects of temperature and wind on choosing a location for the glass crusher. There is a constant amount of liquid associated with the glass bottles deposited for recycling and with freezing temperatures they will jam up the glass crusher.

Have the manufacturer do the installation, set-up, and training. We saved some money initially by doing all of that ourselves, but we made a mistake on the electrical hook-up that had a motor running backwards, which delayed getting into full production.

As with all recyclables, contamination is always a problem. As the contamination rate goes up, the production rate drops off and the labor/disposal costs go up. Education and outreach to the public needs to be an on-going effort, especially if you have un-manned collection points.



Start-Up and Operational Costs:

Our collection costs are minimal. About one-third of the tonnage is dropped off at the Transfer Station and the other two-thirds are deposited in bins at our Recycle Park and a few restaurants and bars. The collection bins are picked up and transported to the Transfer Station by our Packer Truck which is less than a 5 minute trip. Two employees can process two collection bins or 6 yd³ loose glass into 1,600 lbs. of ground glass in approximately 1 hour. Obviously, contamination rates can greatly affect productivity. The skid-steer and backhoe are equipment we already had in-house for processing solid waste and other recyclables. The glass crusher was obtained through a NMED grant.

We designed and had built 6 dumpster-style bins to use for collecting glass bottles, which cost \$5,000. Site prep and electrical cost \$2,500. It was fairly seamless to add glass bottle recycling into our existing Recycling Program. The public had asked for it for many years and greatly supported our grant application. Information on proper recycling of glass bottles is included in all of our outreach and education efforts, including flyers, store posters, mailers, community group talks, and school programs.

APPENDIX A: RESOURCES

All resources listed on this page can be found linked on the New Mexico Recycling Coalition Glass Recycling Resource Web Page.

www.recyclenewmexico.com/glass.htm

NMDOT Specs for Recycled Glass Aggregate in Base Course

New Mexico Department of Transportation Supplemental Specifications for Base Course (Non QC/QA) Section 304.

Outlines allowable materials in base course aggregate to include “processed glass aggregate” that meets all requirements of AASHTO M 318 “Glass Cullet Use for Soil-Aggregate Base Course.”

Alaska Glass Recycling Information

“Potential Recycled Glass Products for Manufacturing in Anchorage, Alaska”. A report prepared for the Municipality of Anchorage Solid Waste Services, February 2010 by the Alaska Manufacturing Extension Partnership. <http://www.centralrecyclingservices.com/Recycledproductssales.html>

Alaska Glass Recycling Resources <http://www.docstoc.com/docs/132991661/Potential-Recycled-Glass-Products-for-Manufacturing-in-Anchorage>

Clean Washington Center

Great case studies and in-depth resources on using glass for secondary purposes. <http://www.nmenv.state.nm.us/swb/compostingmulch.htm>

EPA Glass Recycling Resources

“Reuse/Recycling of Glass Cullet for Non-Container Uses” by John Reindl, July 2003: <http://www.epa.gov/wastes/conserve/tools/greenscapes/pubs/glass.pdf>

<http://www.epa.gov/osw/conserve/materials/glass.htm>

Glass Packaging Institute: www.gpi.org

NMRC Recycling Conference Presentations on Local Use of Glass

“Glass Recycling Efforts” PowerPoint presentation, June 2010, Randy Watkins, Santa Fe Solid Waste Management Agency. On NMRC Glass page.

Assistance to Implement a Glass Recycling and Secondary Use Program

NM Environment Department: Solid Waste Bureau: Tim Gray, tim.gray@state.nm.us or 505-827-0129. NMED can provide technical assistance as well as offers an annual Recycling and Illegal Dumping Grant program that could assist in funding equipment for glass collection or processing.

NM Recycling Coalition: English Bird, english@recyclenewmexico.com, 505-983-4470



New Mexico Recycling Coalition
"Leading New Mexico To Value Waste as a Resource"

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