

INSTITUTE FOR TRIBAL ENVIRONMENTAL PROFESSIONALS
TRIBAL SOLID WASTE EDUCATION AND ASSISTANCE PROGRAM
Implementing and Managing Tribal Recycling Programs

Sheraton Uptown (2600 Louisiana Blvd NE)
Albuquerque, New Mexico
November 27-29, 2018


November 27, 2018

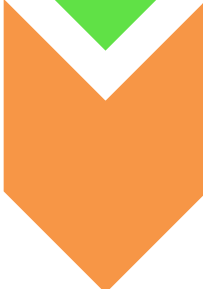
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Current Recycling Markets – Challenges and Opportunities

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- Where are we currently with recycling markets, especially given the changes with China and the effects this is having?

- 
- The importance of understanding local markets and vendors, following current trends, and planning to make your operations as successful as possible.

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- Being creative in your approaches to markets, transportation, finances, and other concerns.

Current Recycling Markets

Grade	Description	Previous Month Pricing (per Ton unless noted)	Current Market Pricing (Nov) (per Ton unless noted)
SMP #1	Soft Mixed Paper (aka Mixed Paper)	\$0 - \$5	\$5 - \$10
PS #56	Sorted Residential Papers (New Grade Consists of sorted newspapers, junk mail, magazines, printing and writing papers and other acceptable papers generated from residential programs (such as residential household and apartment collections and drop-off centers) sorted and processed at a recycling facility. Material should be free of containerboard and brown grades (OCC, Kraft bags, boxboard and Kraft carrier board). Prohibitive Materials may not exceed 2%, Outthrows may not exceed 3%)	\$20-\$25	\$20-\$25
OCC #11	Old Corrugated Containers (aka Cardboard)	\$85 - \$90	\$90 - \$95
SOP #37	Sorted Office Paper (aka Office Pack)	\$200 - \$215	\$200 - \$215
PET	Polyethylene Terephthalate (Baled, cents/lb, picked up)	0.145 - 0.215 /lb. (HS = \$430/Ton)	0.145 - 0.25 /lb. (HS = \$500/Ton)
Natural HDPE	High Density Polyethylene - Natural (Baled, cents/lb, picked up)	0.38 - 0.40 /lb. (HS = \$800/Ton)	0.40 - 0.42 /lb. (HS = \$840/Ton)
Colored HDPE	High Density Polyethylene - Colored (Baled, cents/lb, picked up)	0.13 - 0.165/lb. (HS = \$330/Ton)	0.165 - 0.19/lb. (HS = \$380/Ton)
Comingled Plastics	Comingled #1-#7 (Baled, cents/lb, picked up)	0.00 - 0.03 /lb. (HS = \$60/Ton)	0.00 - 0.03 /lb. (HS = \$60/Ton)
Comingled Plastics	Comingled #3-#7 (Baled, cents/lb, picked up)	0.00 - 0.02/lb. (HS = \$40/Ton)	0.00 - 0.02/lb. (HS = \$40/Ton)
Aluminum Cans	Sorted (Baled, cents/lb, picked up)	0.60 – 0.65/lb. (HS = \$1300/Ton)	0.60 – 0.65/lb. (HS = \$1640/Ton)

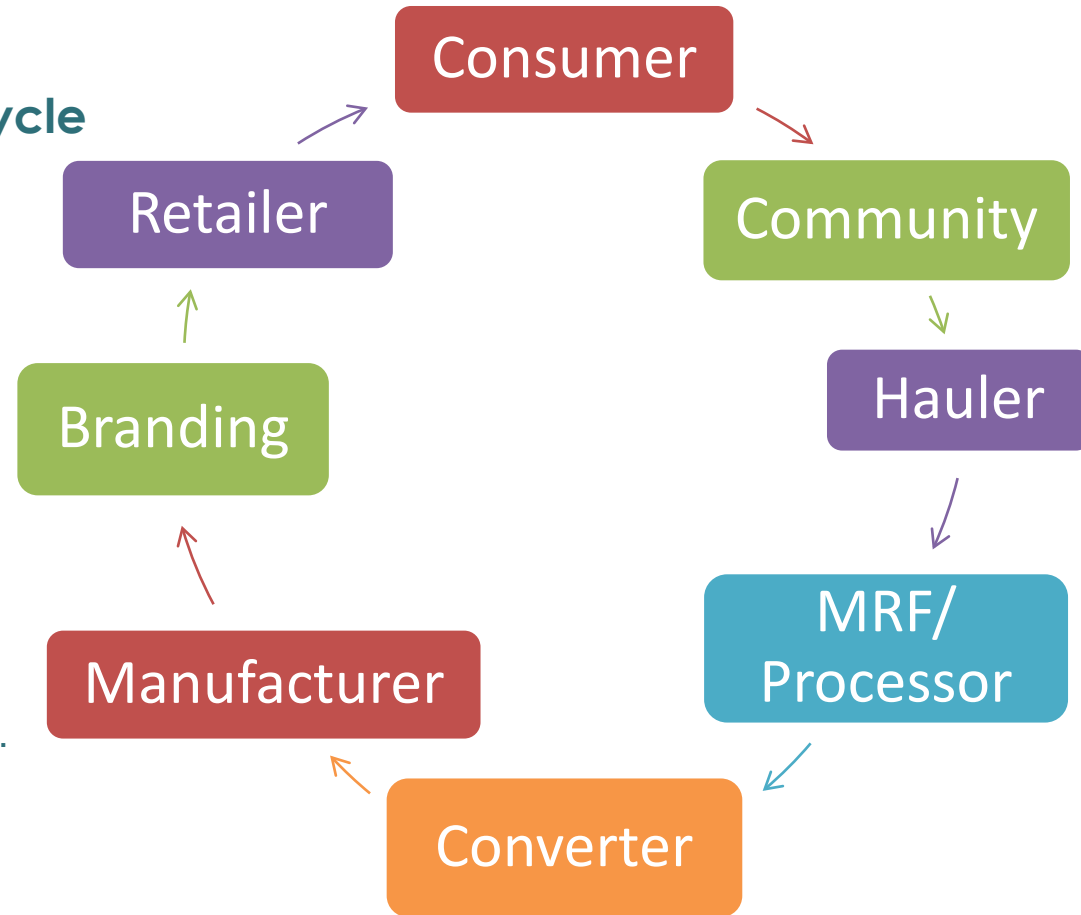
All Secondary Materials Pricing is compiled and managed by Recycling Data Management Corporation, a division of Recycling Markets Limited. More information can be found at www.recyclingmarkets.net

Current Recycling Landscape

Only half of Americans can recycle at home as easily as they can throw something away.*

Those that can recycle easily are only recycling half of what they could.**

* 2015-16 Centralized Study on Availability of Recycling.
<https://recycle.com/spc-recycling-access-study/>
** 2016 State of Curbside Report



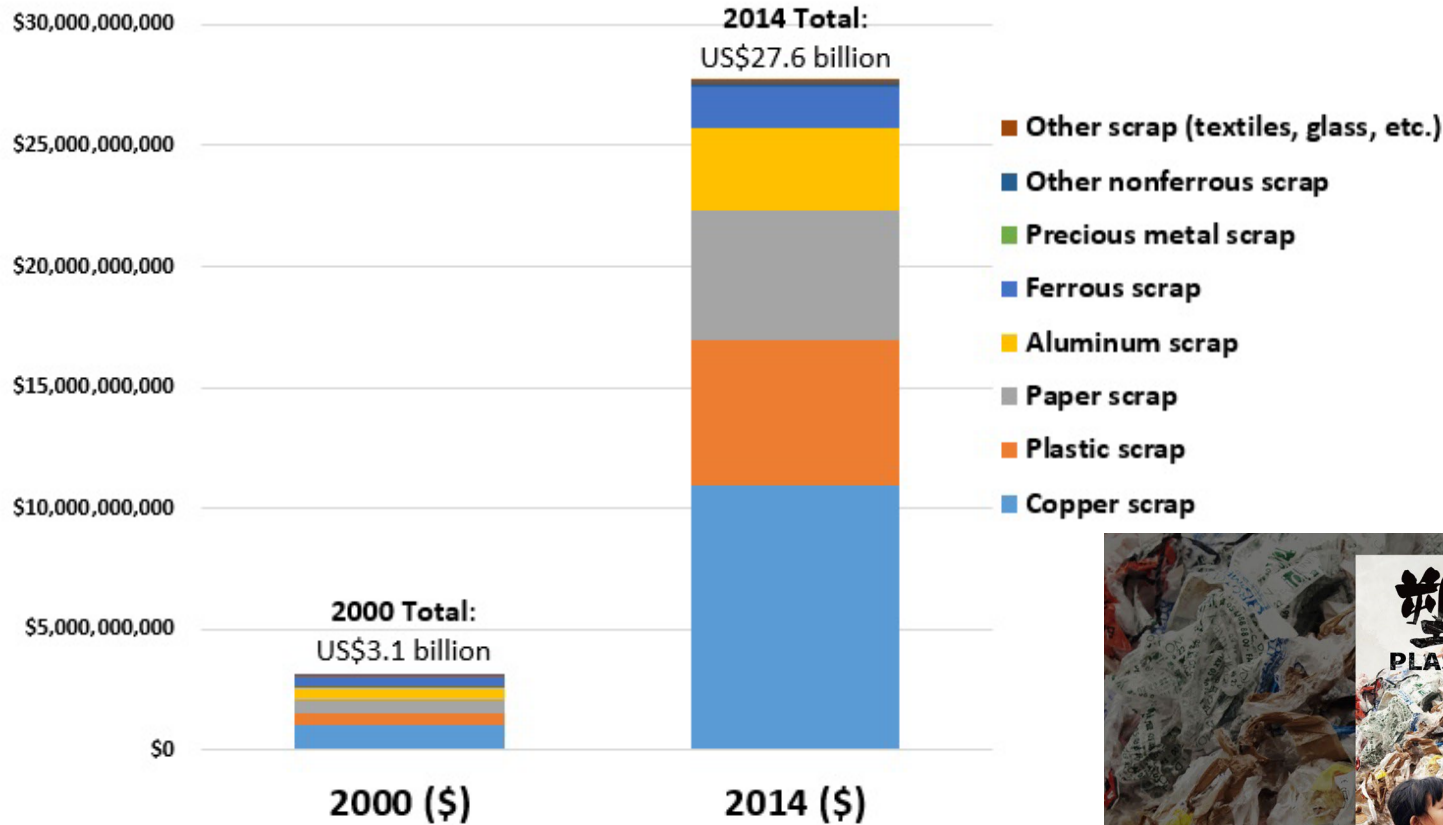
National Sword & China



National Sword & China

Value of Chinese Scrap Imports from All Origins (US\$)

Source: UN Comtrade Database



What does this mean for US States?

State	Disposal Ban	Landfilling	Accepted Materials Change	Effects	Contamination Work?
Alabama	N			Noticable	
Alaska	N	Y	Y	Heavy	
Arizona	N	Y	Y	Heavy	Y - in Phoenix
Arkansas	N		Y - at drop-off	Minimal	
California	Y - Partial, not full	Y - Composting	Y - at some drop-offs	Heavy	Y
Colorado	N		Y	Noticable	Y
Connecticut	Y			Noticable	Y - Workshops
Delaware	Y			Noticable	
District of Columbia	Y			Noticable	
Florida	N	Y	Might be in future	Noticable	Y - campaigns
Georgia	N		Y	Noticable	Y
Hawaii	N		Y	Heavy	Y
Idaho	N		Y	Heavy	
Illinois	N			Noticable	Y
Indiana	N		Y	Noticable	Y
Iowa	N	Y	Y	Noticable	Y
Kansas	N			Noticable	
Kentucky	N			Minimal	
Louisiana	N			Minimal	
Maine	N		Y	Noticable	Y - campaigns
Maryland	N		Y	Noticable	
Massachusetts	Y		Y	Heavy	Y - TRP Recycling IQ Kit

- 13 states “Heavy”, 28 states “Noticeable”, 10 “minimal”
 - Strongest Impacts is on Western States

National Sword & China

- Some landfilling (14 states)
- Accepted materials lists changing (26 states)
- Other SE Asian Countries, but that is shifting



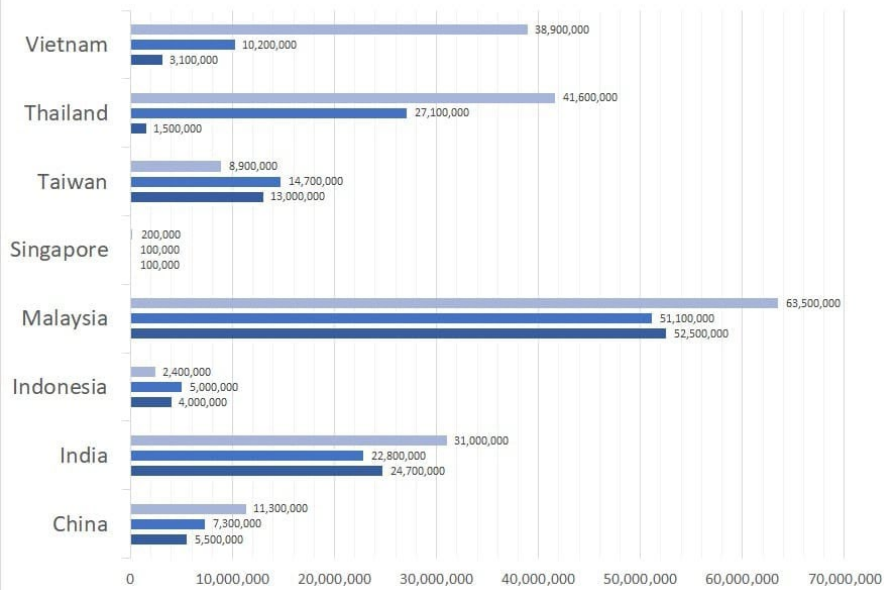
What's Happening and Where?

- 0.5% prohibitives on scrap material sold (was a total ban for month of May)
- 25% tariffs now in place for OCC, steel, paper, plastics; 50% on aluminum
- ISRI estimates this will affect 676,000 metric tons of material, worth approximately \$278 million, for 2018. An additional 85,000 metric tons, worth more than \$117 million, will be affected in 2019.

Where is it Going?

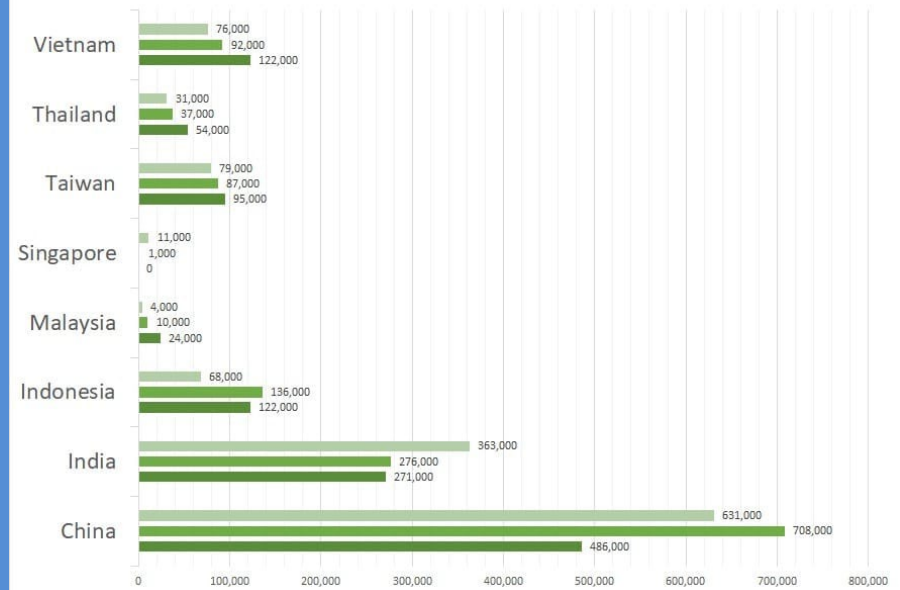
2018 U.S. scrap plastic exports
(in pounds)

■ May ■ June ■ July



2018 U.S. recovered paper exports
(in short tons)

■ May ■ June ■ July



What does this mean for urban New Mexico?

- Las Cruces, Albuquerque and Santa Fe have all updated their contracts with the MRF to allow for increased operating costs. This = approximately \$750k in additional expenses for Santa Fe and ~\$2 million in additional expenses for Abq
- Exploring the idea of bringing piece of legislation into the 2019 session as a “recycling relief”, one-time assistance to help with these unbudgeted expenses and to help with 2019 budgeting
- All urban areas are dedicated to continue their recycling programs
- Focusing on “Recycle Right” campaigns – working on a unified message along the Rio Grande Recycling Corridor (e.g. Don’t Bag Your Recycling)
- El Paso, TX and Las Cruces, NM combining contamination fighting effort – oops tags, route walk throughs, etc – Abq looking to do the same

What's in Your Recycle Cart, ABQ?

**TOP 10
IN
YOUR CART**

1. Cardboard
2. Milk/Juice Boxes
3. Food Boxes
4. Household Jugs
5. Junk Mail
6. Paper Egg Cartons
7. Newspaper
8. Aluminum Cans
9. Tin Cans
10. Plastic Bottles

RECYCLE THESE ITEMS IN A DIFFERENT WAY.

PLASTIC BAGS
Take to the grocery store to be recycled.

GLASS
Take glass to City of Albuquerque drop off sites.

CLOTHING
Donate to charities.

To learn more about Albuquerque recycling:
www.cabq.gov/solidwaste or call 311 for any questions

What does this mean for rural New Mexico?

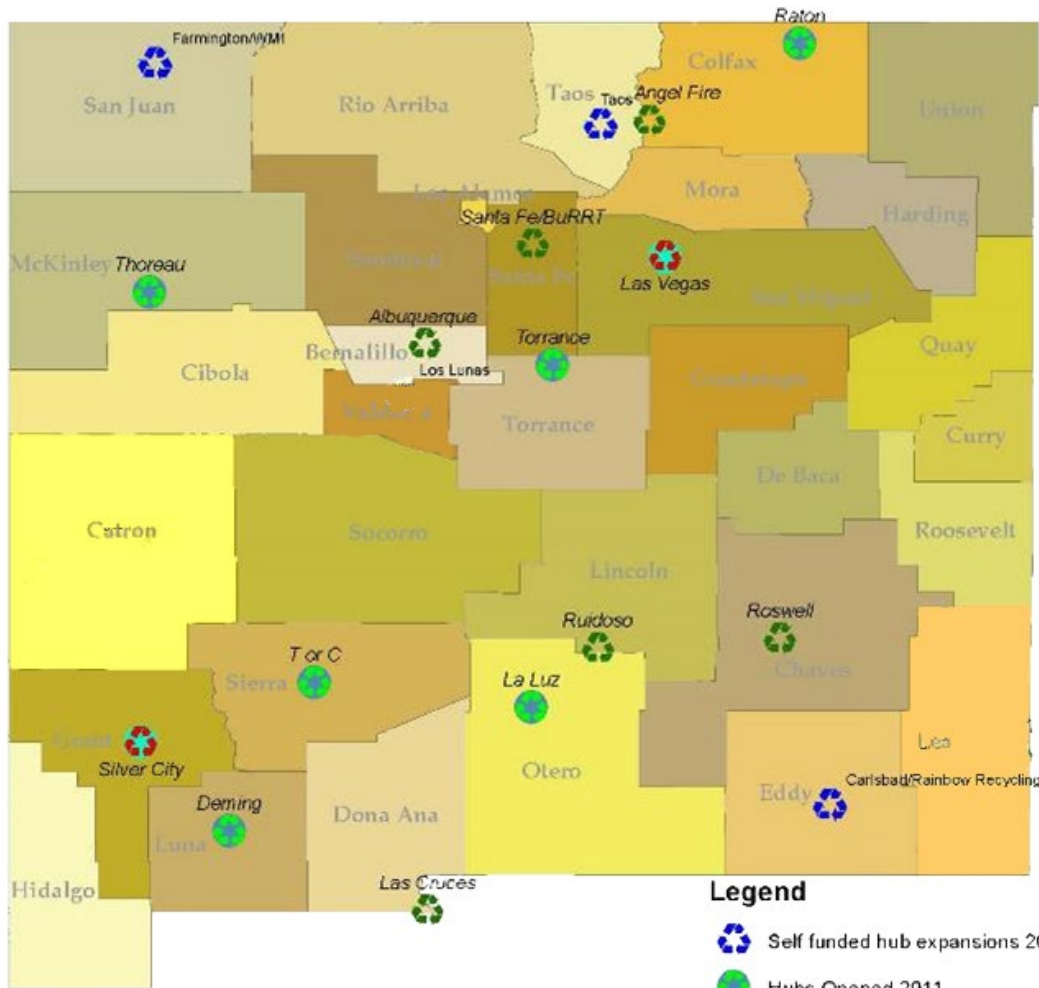
How did NM's rural hub and spoke systems consistently boost tonnages, even amid market challenges?

- Production of high-quality, source separated material
- Development of strong relationships with end markets
- Establishing solid waste rates that helped pay for recycling operations
- Included cost avoidance when evaluating expenses
- Continued outside funding efforts to improve programs
- Increasing spoke locations and services (cardboard business collection)



Above: New recycling container for additional spoke locations at area schools that will feed into the Thoreau Recycling Hub

New Mexico Hub and Spoke Recycling



Thoreau/Red Rocks – Secured state funding to build a new recycling building that will house their baler and conveyor and will increase their capacity. Continue to service 20+ hubs and have added additional hubs and area schools. Found new markets for their source separated materials. Control contamination by having spokes staffed or somewhat controlled like behind a locked fence at a school.

Deming– Still servicing drop off locations located throughout town. No longer servicing hubs in the County. Noticed slight increase in tonnage recently.

RATON – Reported that the volume recycled this year compared to last year seems comparable despite a population loss in the City. Hasn't had to move a plastics load yet since National Sword, like everyone else they saw big hit in paper pricing (moved it in March for \$5/ton) but getting a lot of assistance from volunteers that help with quality control, which helps to keep their operating costs down. Recently added new spoke at the large Vermijo Park Ranch that has already brought in over 100 trailers loads of cardboard and it is very clean. This summer they added plastic #1 and #2, mixed paper to the list of recyclables from the new spoke.

Alamogordo/Otero County – Reports that volume is down this year compared to 2017, but this not due to low participation, but to the fact that loads were stored unprotected outside during a construction project and got contaminated. Maintains a long list of spokes that feed into the hub. Plastics #1 and #2 are comingled and currently has a load read to be sold. Building new building for solid waste (through two Colonias Grants and GRT bond) which will be done this winter. New building and loading design will improve efficiencies and reduce the trips to the landfill by 400%. This will allow staff to have more time to focus on recycling. The new building will also include new recycling infrastructure, such as an aluminum and tin separator and conveyor for the recycling operations.

NM's Rural Hubs and Spokes – where are we today?

National Sword – all of the source separated hubs are operating as usual, the two single stream hubs have had to make adjustments, but are still recycling!

- **Silver City** – May 2018 – town receives a surprise bill for \$4000 from Tucson MRF that processes their material. Prior to that the City received a check for the recyclables
 - June 2018 – The Tucson MRF informed the city they would no longer accept the Town's recyclables
 - July 2018 – After much searching and negotiations, the Town found a new outlet for their recyclables in El Paso at a cost of \$25 a ton. To cover the cost, the town raised the landfill fee for Silver City residents an additional 90 cents.
- **Estancia Valley SWA** – June 2018 – Announced it will no longer accept mixed paper and plastics, returning from single stream to source separated recycling of metal cans and cardboard only. Service almost 66,000 people.
 - Maintain detailed records of everything they do – easy to measure success. In 2017 collected 3372 tons of MSW, 194 tons of recycling, 163 tons of C7D, 20 tons of ash, 2974 gallons of oil, 63 lead acid batteries, 171 tons of brush and 4100 tires
 - EVSWA was recycling about 14-16 tons per month single stream, reduced to 7-8 tons per month. Has noticed increase in MSW going into landfill cells, however large storm event in July of 2018 that produced large volume of debris

Tons MSW	2017	2018
July	296	346
August	320	359

- **Big success now is swap shop at their local transfer station/recycling center - donate large quantity of items each day, do not track tons, but it is very popular with the community**

Know Your Markets

- Grade #52
- Paper Stock Industry (PSI) granted a new commodity grade, #52, for aseptic and gable-top cartons
- Currently, there are four paper mills that process cartons in the US and 10 total in North America.
- ReWall uses recycled containers to make construction sheets with plants in Des Moines, Houston and soon to be in Colorado



Understanding Local Markets – Go See Them



Why Does It Matter?

Recycling Creates Jobs, Helps the Environment and Builds Strong Communities

500K+ jobs
direct, indirect
across the US

=

\$34B
annual wages,
benefits

10% increase in
capture of recyclables in
homes that are **already**

=

10% More Materials
10% More Jobs

What Does It Really Take To Recycle Right?

94%
WANT TO
RECYCLE

Carton Council

Yet many don't know what
"RECYCLE RIGHT" means.



Up to 40%

said one or more
core recyclables
were **not recyclable**



80% carts had plastic bags

Recycling Partnership 2017 Study in Chicago

But I Hear Recycling Is Dead, Broken, In Crisis

**THE RUMORS
OF
RECYCLING'S
DEATH HAVE
BEEN GREATLY
EXAGGERATED.**

Big investments in domestic paper recycling.

More than \$1B invest in domestic plastics recovery in the last 10 years.

Communities upgrading programs and fighting contamination.

So what do we do?

Many
Communities
are focusing
on **RECYCLING**
RIGHT and
Education
Campaigns



If something has recycling arrows, is it absolutely recyclable? NO! The numbers and arrows don't tell you if something is recyclable. Check locally. #RecyclingMatters #WednesdayWisdom

How do we convey our message?

**The Average Person's Attention Span
is8 Seconds**

**People can remember up to 7 things
as a sequence**

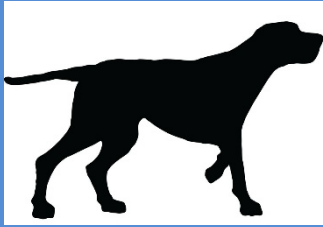
Try it Now...Memorize 7 things in 8 Seconds

- **Fish**
- **Deer**
- **Cow**
- **Horse**
- **Dog**
- **Mouse**
- **Eagle**

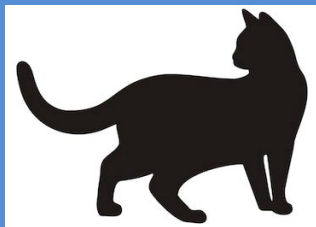
Can you name the 7 things?

- **Fish**
- **Deer**
- **Cow**
- **Horse**
- **Dog**
- **Mouse**
- **Eagle**

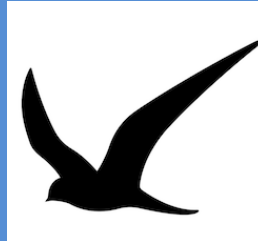
Does this help – Repetition & Images help with memory



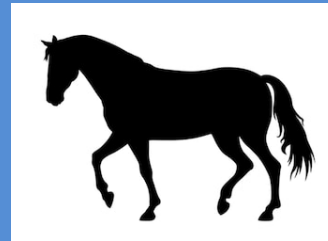
Dog



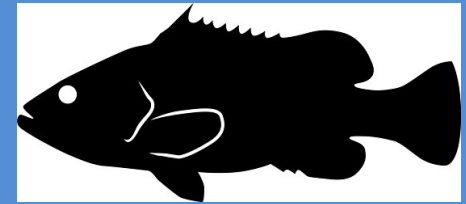
Cat



Bird



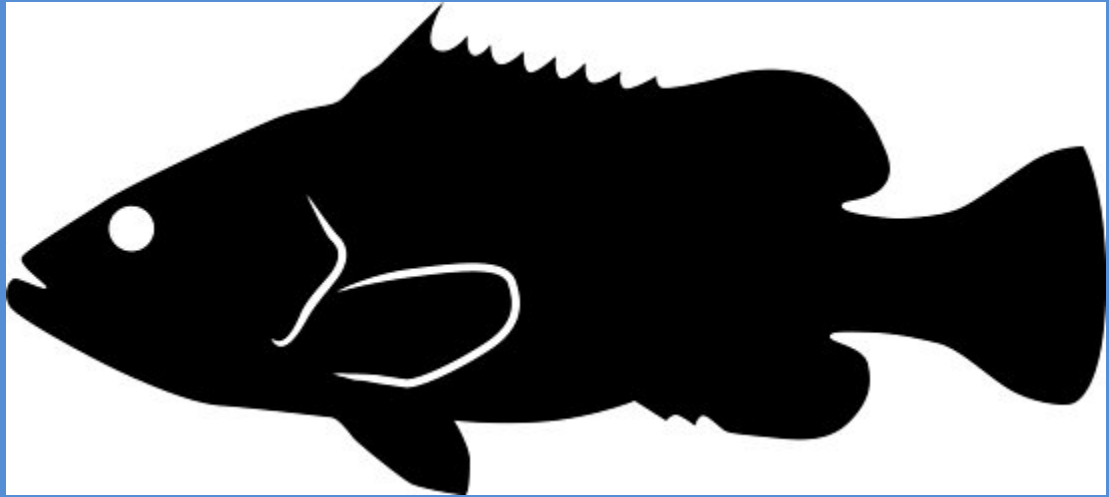
Horse




Fish

Can you name the 5 things?

For Important Messages Keep it Really Simple



Can you name the ONE thing?



Don't Bag Your
Recyclables

Recycle Your
Cans



Recycle Smart

Don't
Contaminate

Keep it Simple

Messaging needs to be simple and clear! Tell them what TO DO.

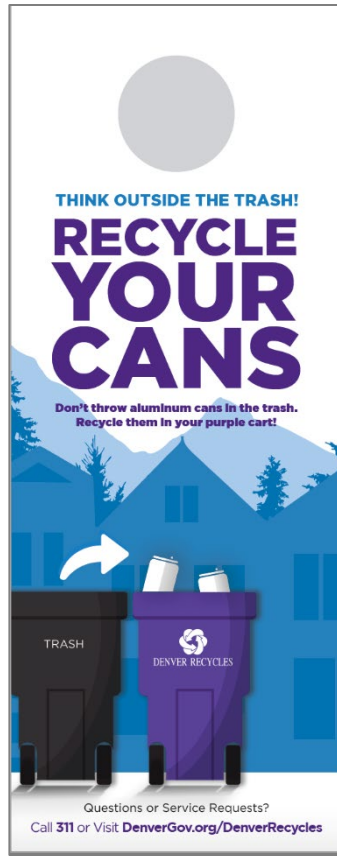
The Recycling Partnership Spearheaded Education Campaigns & Measured the Results



BEFORE



AFTER



↑ **25%**

THINK OUTSIDE THE TRASH!

RECYCLE YOUR CANS



Don't Recreate the Wheel



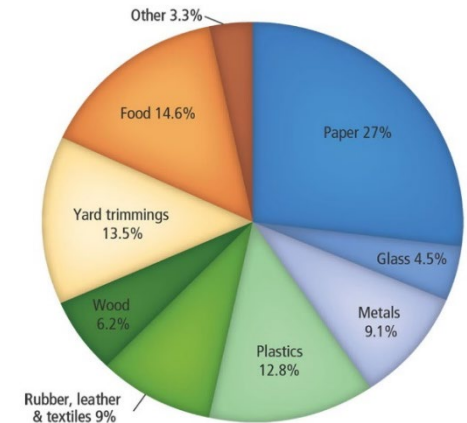
<https://recyclingpartnership.org>

Has numerous free, online tools, such as a social media kit with posts for the whole year, customizable contamination reduction kits, etc

Where do you start? Know what you have

Why Do A Waste Composition Study?

- Understand the "stuff" you are throwing away -- what kind, how much, when, and why.
- Identify areas of cost savings -- through landfill diversion, new sources of revenue, redirecting operations, and streamlined purchasing.
- Determine realistic waste reduction goals.
- Communicate accurate data to stakeholders (especially for municipalities struggling with trying to extend landfill life).
- National waste composition is known, but does your local program follow national trends?



Total MSW Generation (by Material), 2013
254 Million Tons (before recycling)

Tons of Waste Managed in 2013 3,120,271 Tons

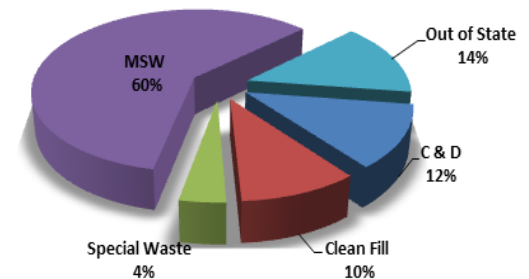


Figure 1. Solid Waste managed in New Mexico, 2013. (Source: SWB data)

Waste Audit Best Practices

1. Pre-Audit Prep

- Check the records – review current waste hauler records, determine current annual disposal costs
- Review purchasing records – to best understand what and how much material is brought into your facility

2. Designate an Audit Team

- Consider involving members from all areas of the facility

3. Determine methodology

- How much trash will you sort, where will it come from, how long will you collect trash to be sorted, etc
- What categories will you sort into?

4. Gather Supplies

- Proper PPE is essential, gloves, plastic bags, tarp, scale, etc
- Receptacles for sorted material – recyclables should get recycled!

• Conduct the Audit

- Place a tarp on the ground, have labeled containers, sort and weigh
- Recycle or dispose of material once all materials have been recorded or weighed

• Follow Up

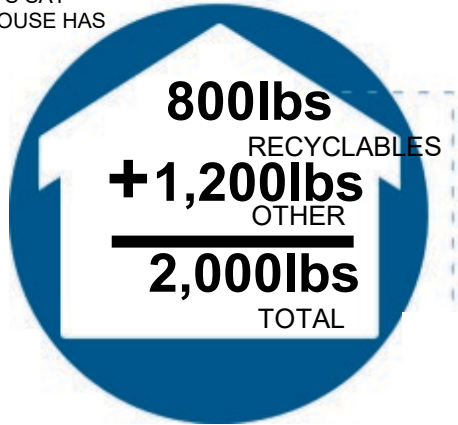
- Share results, newsletter articles, staff information, etc
- Reduce and Reuse – with information gathered from the waste audit review purchases to reduce waste
- Recycle – recycle items that can be recycled in your area, research avoided disposal costs, find a market for your materials
- Educate Staff – staff must know about any new waste management programs
- Track and Evaluate Program



Capture Rates vs Recycling Rates

RECYCLING RATE: How much of all MSW is getting recycled?

LET'S SAY
A HOUSE HAS



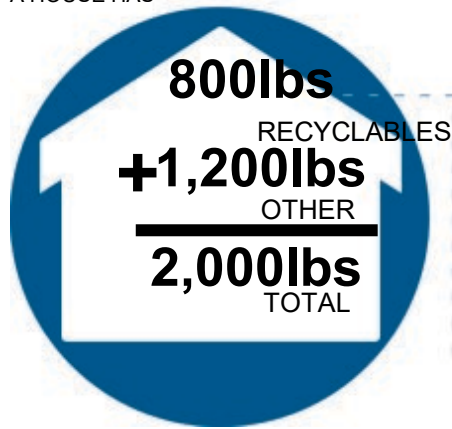
AND
400lbs
RECYCLABLES
GO INTO
RECYCLING
 \div
2,000lbs
TOTAL

=



CAPTURE RATE: How much of recyclables are really going where they should?

LET'S SAY
A HOUSE HAS




AND
400lbs
RECYCLABLES
GO INTO
RECYCLING
 \div
800lbs
RECYCLABLES

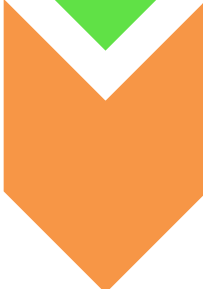
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