

#### Waste Characterization Studies at New Mexico Pueblos

## USDA Rural Utilities Funding – Solid Waste Grant USDA

Conduct physical waste characterization sort of municipal solid waste at New Mexico Pueblos

Collaborate with partners to share information

Develop programs or education material based on findings

# USDA Rural Utilities Funding – Solid Waste Grant USDA



Random sample of waste

Sorted anywhere from 150 -750 Ibs of material

#### Why is waste characterization helpful?



Provides a starting point from which to plan programs & measure effectiveness

Shapes education and outreach efforts

Generates quantifiable data to share with community and potential funders

#### **Physical waste sorts**







San Felipe Pueblo

#### **Physical Waste Sorts**



Taos Pueblo



Pojoaque Pueblo



San Ildefonso Pueblo



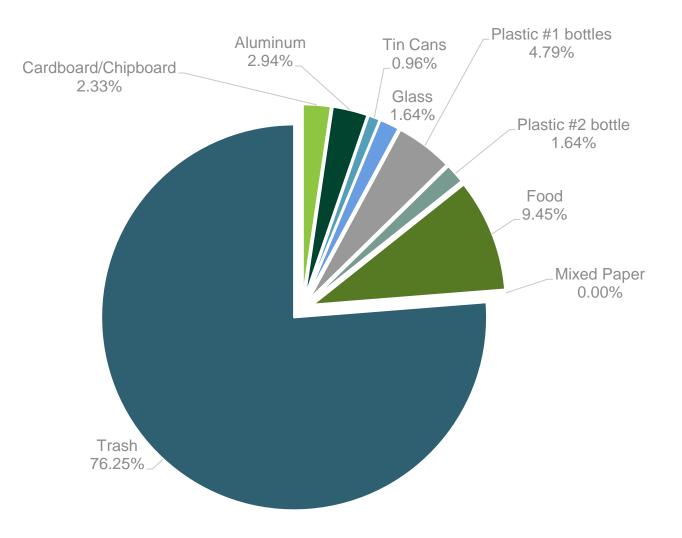
Nambe Pueblo

#### **Technical Assistance**

Commodity	Estimated Volume	Weight (in pound s)	Percenta ge of Total
Cardboard/Chipb	2.55 gallon bags almost		
oard	2 55 gallon bags - almost all chipboard	17	2.33%
Aluminum	3 33 galon bags	21.5	2.94%
Tin Cans	1/2 of 33 gallon bag	7	0.96%
Glass	1/2 33 gallon bag	12	1.64%
	1 33 gallon, 2.5 55 gallon		
Plastic #1 bottles	bag	35	4.79%
Plastic #2 bottle	1 33 gallon bag	12	1.64%
Food	3 3/4 full 33 gallon bags	69	9.45%
Mixed Paper	NONE!	0	0.00%
Trash	22 55 gallon bags	557	76.25%
	TOTAL Weight in Pounds	730.5	

#### **Technical Assistance**

#### San Felipe Pueblo Waste Characterization by Weight

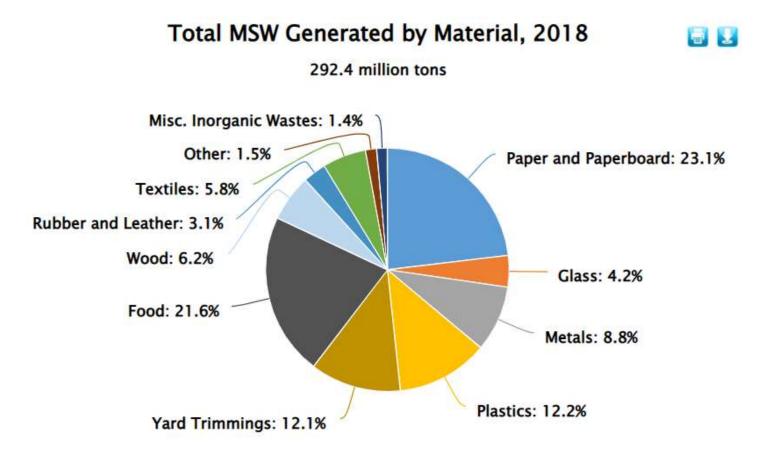




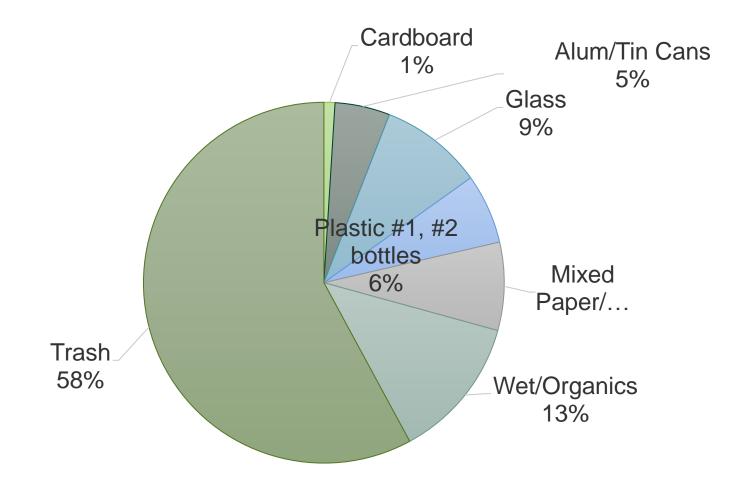
#### **Technical Assistance**

- Assisted San Felipe Pueblo secure nearly \$40,000 in funding from their Recycling and Illegal Dumping (RAID) Grant application to the New Mexico Environment Department: Solid Waste Bureau by providing technical assistance, quantifiable data demonstrating need, and a letter of support.
- Assisted Pojoaque Pueblo secure nearly \$50,000 in funding from their Recycling and Illegal Dumping (RAID) Grant application from the New Mexico Environment Department: Solid Waste Bureau by providing technical assistance, quantifiable data demonstrating need, and a letter of support.

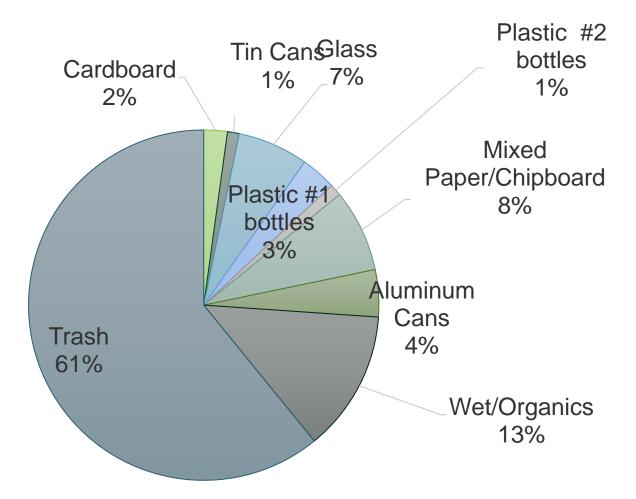
#### Materials



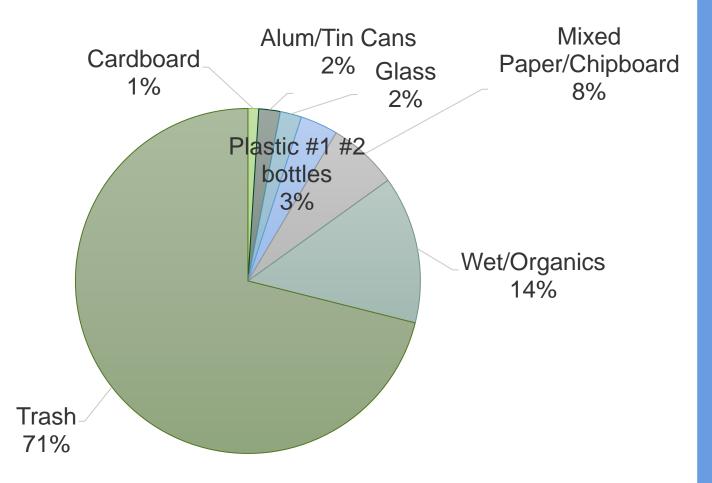
#### **Nambe Pueblo**



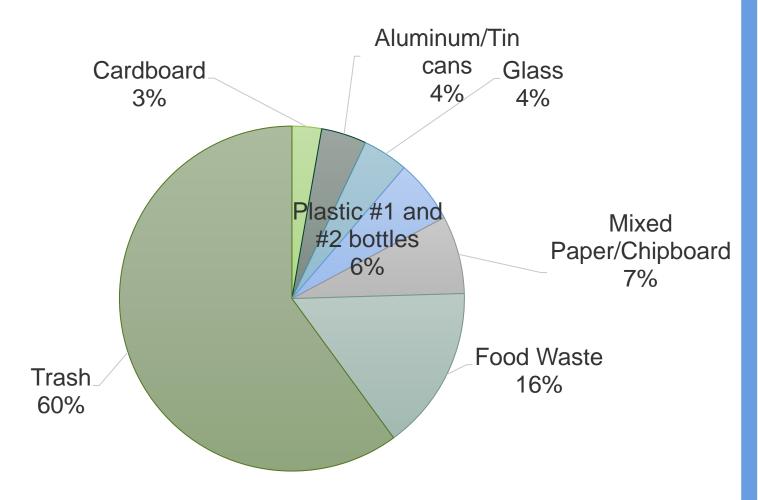
#### **Pojoaque Pueblo**



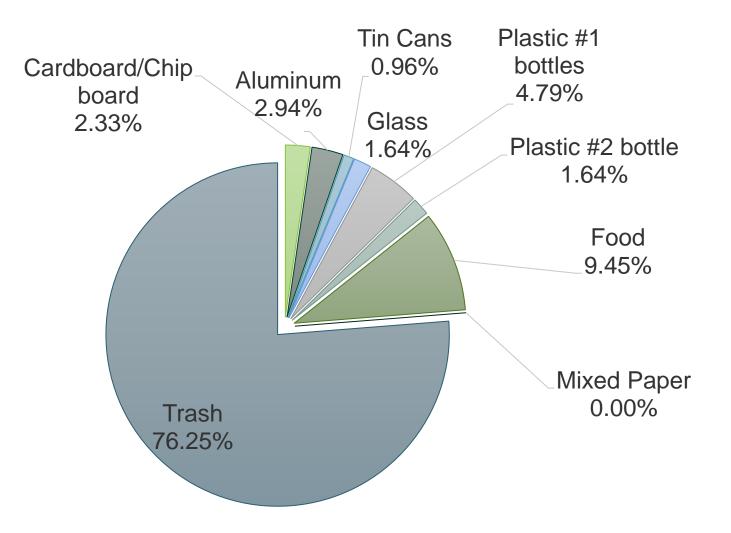
#### **Taos Pueblo**



#### **San Ildefonso Pueblo**



#### **San Felipe Pueblo**



#### **Trends Identified**

- 58-76% of audited material was trash, higher than national trends. 50% Nationally not included organics that could be diverted.
- Evolving Ton is apparent with very little glass or mixed paper found in material in all audits (0% mp at San Felipe!)
- 9-16% of msw consisted of food waste < national average (21.6%)
- Cardboard in msw was 1-3% separate diversion well communicated to residents by station attendants
- Plastic #1 & #2 bottles 3-6% < national average
- Low amount of metals (2-5%) but almost all of it was easily recyclable aluminum cans

#### **Recommendations**

- Launch an aluminum can recycling education and outreach program. The high amount of these materials in the trash is a missed opportunity for recycling as the material is readily recyclable in the Pueblo's existing recycling program.
- Launch a plastic #1 and #2 bottle recycling education and outreach program. The high amount of these materials in the trash is a missed opportunity for recycling as the material is readily recyclable in the Pueblo's existing recycling program.
- Consider partnering with a private food-waste diversion program such as Reunity Resources in Santa Fe, New Mexico or encourage Pueblo residents to conduct their own backyard composting program with trainings resources.
- The majority of the trash audited during the waste audit consisted of Styrofoam take-out food containers, packaging, bathroom trash and to-go, disposable food containers. An opportunity for waste diversion is to launch a source reduction education campaign that encourages residents to use reusable food-service items.

#### **Trends Identified**

### Waste consisted of a lot of nonrecyclable and single use items



#### **Trends Identified**

#### Confusion in labeling – Recyclable vs. Trash



#### Outreach Efforts to Focus on Low Hanging Fruit – Cans & Bottles

#### How to Reduce, Reuse & Recycle at San Ildefonso Pueblo

Everyone has heard the, "Reduce, Reuse, Recycle," slogan for many years. What does it really mean though? This waste management hierarchy is meant to guide residents to better understand how to be conscious consumers and to better care for our environment. When properly followed, "Reduce, Reuse, Recycle," helps us to use less resources and to manage our materials more sustainably.

Reduce is the first step in sustainable materials management. Reduce means to not create the waste or toxins in the first place. It is a form of source reduction or pollution prevention. This is easily transferred into our daily lives. A few simple ways for Pueblo residents to "reduce" include the following:

- Use reusable household items, instead of disposable items. This means using reusable, hard plastic
  or ceramic dishes instead of disposable items like paper or Styrofoam plates.
- Use non-toxic, alternative cleaning products. Conventional cleaning products often contain <u>a large</u> <u>number of</u> potentially harmful chemicals that are volatile, which means that without any prompting, they evaporate from a liquid to a gas when they're exposed to air. These volatile organic compounds, or VOCs, can do significant damage to the human body and the environment. The Environmental Protection Agency (EPA) cites studies that show <u>VOC levels in the average home</u> are up to five times higher than outside, in large part due to the chemical cleaners we use around the



It matters! Separate bottles & cans from your trash

#### San Ildefonso Education & Outreach







#### **Did It Work?**

 We'll find out Sept 29<sup>th</sup> with a follow up waste audit at San Ildefonso Pueblo!



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