Los Alamos County Recycling Material Audit

Evaluating Recycling Efficiency and Waste Composition Insights

Executive Summary

- 46,653 pounds of material audited, achieving 82.3% clean recyclable material
- Fiber materials old corrugated containers (OCC) and mixed paper comprised nearly 89% of recyclables
- 8,243 pounds of residual indicate contamination impacting diversion performance
- Plastics and metals were present but represent a smaller share of recovered materials
- No recovery of film, office pack (OP1), or plastics #3–#7
- Findings support targeted improvements in collection, education, and program expansion

Introduction and Objectives

Audit Purpose

Evaluate material composition and weight to improve recycling efficiency and reduce waste.

Data Analysis

Analyze weights of recyclables and trash to identify recycling rates and contamination levels.

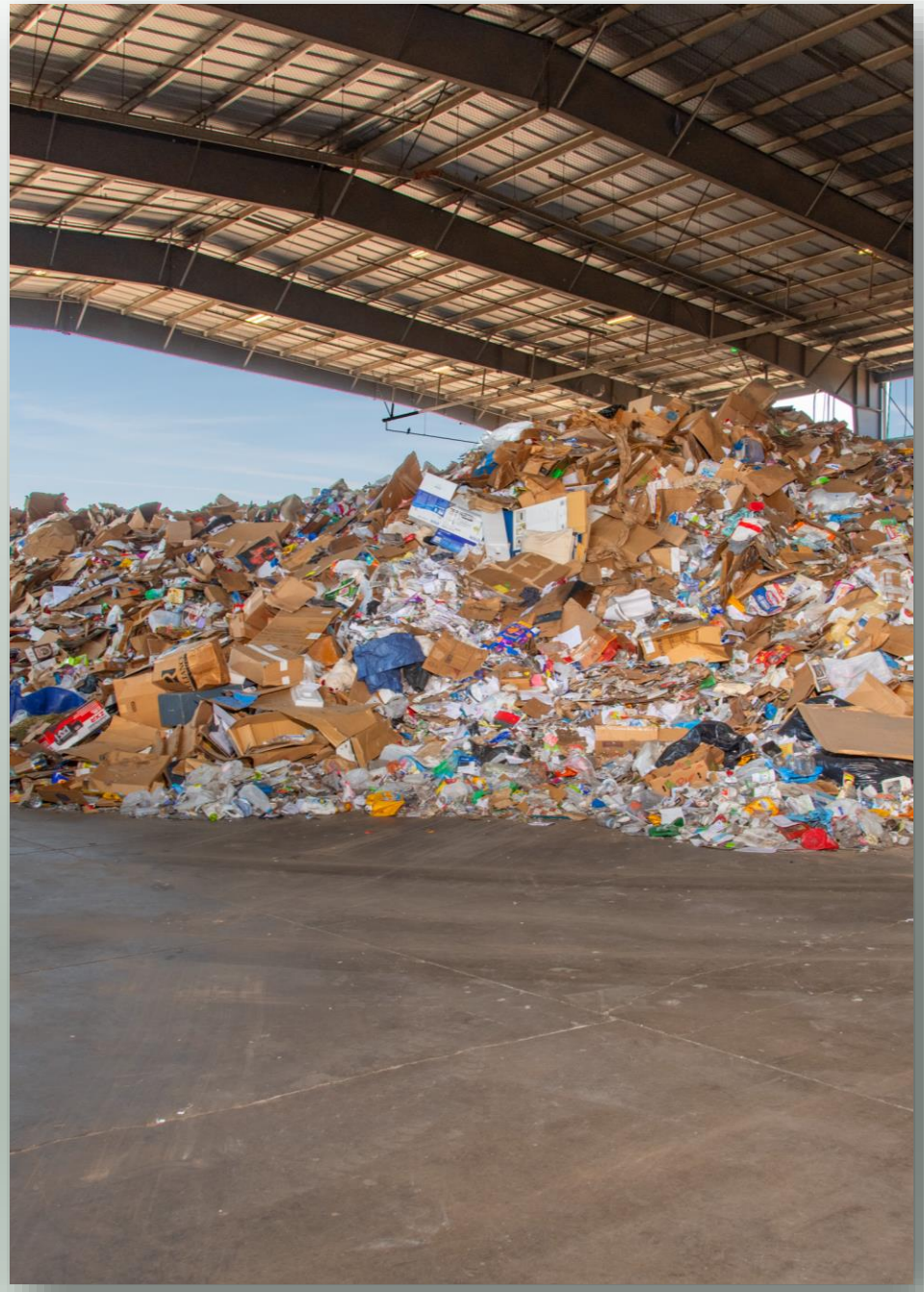
Strategic Planning

Use audit findings to provide data to Los Alamos County to optimize recycling programs, collection routes, and community education.

Audit Overview

Audit Methodology

- Establish a clean, empty bunker for accurate material tracking
- Identify two designated trucks for the audit
- Dump material from both trucks into the bunker
- Run all material through the sorting system
- Sort material by commodity type
- Bale each commodity separately
- Weigh each baled commodity individually and record weights
- Weigh all trash bins and trash room trailer individually
- Weigh all loose material individually
- Record all weights and findings on the audit recap forms



Key Metrics and Summary

Material Weight and Diversion Rate

Total material weighed 46,653 pounds with 82.3% clean recycle materials highlighting effective recycling.

Dominance of Fiber Streams

Fiber streams like OCC and mixed paper made up nearly 89% of recyclables, emphasizing recovery importance.

Plastics and Metals Contribution

Plastics polyethylene terephthalate (PET) and high-density polyethylene (HDPE) weighed 2,275 pounds; metals totaled 1,956 pounds showing material variety.

Areas for Improvement

No collection of film, OP1, or plastics #3-#7 indicates opportunity to improve recycling completeness.

Material Composition Analysis

Recyclable Material Breakdown

MATERIAL	POUNDS	TONS
OCC	17,589	8.795
Mixed Paper	16,513	8.257
PET	1,223	0.612
HDPE Color	711	0.356
HDPE Natural	341	0.171
Tin Cans	630	0.315
UBC (Used Beverage Cans)	734	0.367
Metal (Scrap)	592	0.296
Rigid Plastic	77	0.039
Trash/Residual	8,243	4.122

Recycling Composition

Waste Impact

Residual totaling 8,243 pounds reduces the overall quality of recyclables by contaminating recycling streams and increasing processing cost.

Recycling Composition Performance

A rate of 82.3% shows strong recycling but indicates room for improvement in waste sorting.

Reducing Contamination

Education campaigns, consistent signage, and enforcement improve recycling practices and reduce trash contamination.

Sustainability and Compliance

Maintaining or improving recycling streams is vital for sustainability reporting and meeting waste reduction goals.

Residual from Audit

Residual from Audit

Operational Insights and Recommendations

Operational Observations

Accurate Data Collection

All bales were individually weighed to ensure precise data on recyclable materials and waste quantities.

Recycling Stream Gaps

Absence of certain streams like film, office pack, and plastics #3-#7 indicate gaps in collection or reporting.

Dominance of Fiber Streams

Fiber materials dominate recyclables, showing effective paper and cardboard recovery but less plastic and metal capture.

Contamination and Improvement Needs

Over 8,000 pounds of trash presence reveals contamination requiring better sorting, signage, and public education.

Recommendations for Improvement

Fiber Capture Optimization

Enhance OCC and mixed paper collection routes and improve signage at drop-off points to boost fiber capture efficiency, generating a higher return on single sourced material and reducing processing cost.

Plastics Sorting Efficiency

Introduce dedicated collection bins for PET and HDPE plastics and educate residents on proper sorting to improve plastics recycling.

Contamination Reduction Strategies

Implement education campaigns, community workshops, and enforce recycling guidelines to minimize contamination in recyclables.

Audits and Performance Reviews

Conduct regular audits and reviews to track recycling progress and adjust strategies for continuous improvement.

Recycle Market Update

- **Recovered Paper Market:**
  - Domestic prices stabilized in December after prior declines.
  - Export demand improved, especially from Southeast Asia, boosting OCC.
  - Seasonal factors (holidays, winter weather) influenced transportation and inventory strategies.
- **Market Drivers:**
  - China's import inspections disrupted trade in October/November; situation stabilizing.
  - Mixed paper prices slipped on West Coast; high-grade export demand remains weak.
- **Outlook:**
  - Mills stocking premium grades amid supply challenges.
  - Virgin pulp and plastics remains attractive.
- **Non-Fiber Commodities:**
  - PET and HDPE demand mostly flat to slightly up.
  - Polypropylene (PP) and mixed rigid plastics (MRP) prices flat; PP may face downward pressure in January.
  - UBC and steel can prices increased slightly due to lower winter generation and supply disruptions.
- **Additional Notes:**
  - Emphasis on maintaining bale quality (especially UBC) to avoid rejections.

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