Fall 2015
Waste Audit
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Solid Waste Reduction
Solid Waste Reduction: Waste Audits

Purpose: Maintain efficient, sustainable waste management processes by developing & analyzing recycling systems

- Adaptable
- Maximize proper reuse & recycling practices
- Minimize recycling contamination
- Thereby minimize amount of waste sent to the landfill
- Frequent surveillance of effects of different environmental conditions on contamination rates
Goals & Objectives

- Cold weather data (avg. 28.8) vs. Warm weather data (avg. 62.3)
- Old 2-bin cluster design vs. New 3-bin cluster design
Bin Locations
Methods

• Data Collection:
  - 5 weeks (2x: Monday and Friday)
  - Each bag weighed and sorted for contamination
  - Contamination rate calculation:

\[
\left( \frac{\text{Incorrect Items in Recycling}}{\text{Total Recycling}} \right) \times 100 = \text{Recycling Contamination Rate}
\]
Results

• Old 2-bin design vs. New 3-bin design:
  
  **GPM**
  - (3-bins) 24.7% < 44.3% (2-bins)
  **PC**
  - (3-bins) 38.5% < 59.8% (2-bins)

• Warm weather vs. Cold weather
  
  **GPM**
  - 3 Bins: (warm) 24.7% > 21.3% (cold)
  - 2 Bins: (warm) 44.3% > 10% (cold)
  
  **PC**
  - 3 Bins: (warm) 38.5% > 15% (cold)
  - 2 Bins: (warm) 59.8% < 62.6% (cold)
Conclusions

• 3-Bin Design vs. 2-Bin Design:

3-Bin Design = lower contamination

• Warm Weather vs. Cold Weather:

Cold Weather = lower contamination
ANY QUESTIONS?