



# University of Missouri-Rolla

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## Solid Waste Reduction Program

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# University of Missouri-Rolla Environmental Management System

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- Campus-Wide EMS
- Developed & Implemented in 1998
- Environmental Policy Commitments:
  - Prevention of Pollution
  - Regulatory Compliance
  - Continual Improvement
- EMS Prompted the Need for a Campus-Wide Solid Waste Audit

<http://campus.UMR.edu/ems>





# UMR Solid Waste Audit

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- Conducted in April 2002, by Mr. Dennis Siders of Midwest Assistance Program
- Conducted with funds provided by the MDNR Solid Waste Management Program (Waste Assessment Grant)
- Audit Objectives:
  1. To determine what solid waste is generated on campus
  2. To determine the actions necessary to reduce both the volume and costs of solid waste generated on campus



# Components of The Waste Audit

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- Description of the current waste being generated
- Waste composition study
- Current waste reduction and recycling
- Current purchasing procedures and their effect on the waste stream
- The current cost of waste collection and reduction
- Summary of findings
- Recommendations



# Waste Volume Analysis

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- Total of 54 containers at 32 collection locations on campus
- Most containers emptied daily/collected by the City of Rolla

## Key Findings:

- 404 yards of capacity per week
- 285 yards of waste actually collected

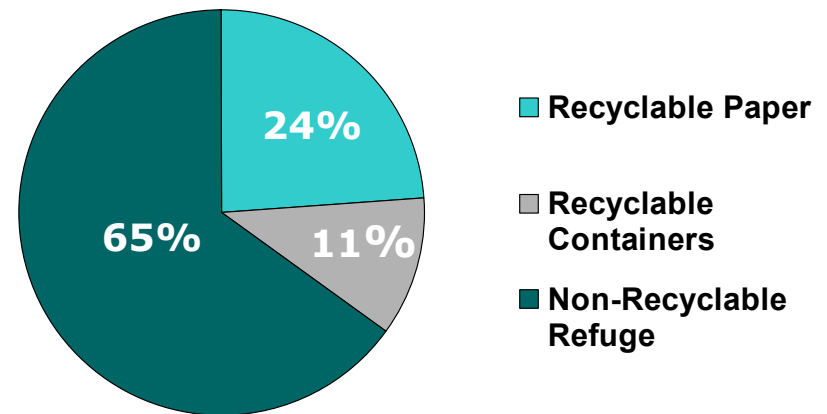
# Waste Composition Study

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- Academic & Administrative Buildings
- Sports & Special Events Buildings
- Residence Halls & Apartments
- Food Service Operations



## Campus Average:





# Waste Reduction & Recycling Activities

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## Findings:

- UMR is currently recycling paper, cardboard, aluminum from campus buildings
- Residence Halls recycling 24,480 pounds solid waste/year
- 95% of all yard waste is composted

# Recycled Paper Collected by the City

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# Recycled Cardboard Collected by the City

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# Campus Compost Area

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# Not all Recyclable Paper is Recycled

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# Not all Cardboard is Recycled

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# Waste Reduction & Recycling Activities

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## Key Findings:

- 35% of UMR Solid Waste is Recyclable Material
  - 24%-Recyclable Paper
  - 11%-Plastic Containers



# UMR Solid Waste Reduction Program

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Established in May 2002

## Objective:

Reduce solid waste disposal costs and improve campus recycling opportunities

## Targets:

- 10% reduction in total solid waste disposal costs
- Develop campus-wide awareness program
- Obtain funds to support improved recycling



# 2002 Accomplishments

## Solid Waste Reduction Program

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- 16% reduction in total solid waste disposal costs in Fall 2002
- Established a campus recycling committee & developed a recycling web site to raise awareness
- Plan Implementation grant from MDNR to purchase recycling containers for 40 campus buildings
- Additional funds from O.R. Solid Waste Management District to purchase desk-side paper recycling containers for every campus employee

# Solid Waste Reduction Program- 2003

| Proposed Objective   | Target  |
|--|---|
| Purchase paper and aluminum recycling containers for the campus to raise awareness and reduce solid waste. | Place containers in 40 campus buildings. Divert approximately 151 tons of waste into recycled material. |
| Reduce solid waste by recycling various components from the HIS building demolition.                       | Recycle/reuse an estimated 85% of the construction debris.<br><b>Complete</b>                           |
| Obtain external funding to support UMR recycling program.  | \$20,000 plan implementation grant from Missouri Department of Natural Resources.<br><b>Complete</b>    |



## Other Environmental Improvements

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- Increased Requirements for UMR Contractors (Bookstore/Vending)
- Increased Student Involvement:
  - EMS Advisory Committee
  - UMR Recycling Committee
  - Earth Day Planning Committee



# Conclusions

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- Waste Audit-a valuable management tool for improved environmental performance
- Assisted in raising recycling awareness on campus
- Resulted in:
  - Reduced operating costs
  - Raised environmental awareness
  - Improved campus recycling

# Questions?

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