

# Recycled Wallboard Products



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# Mid Atlantic Wallboard Market

- 2.14 million tons of drywall sold in NJ, NY & PA 2009
- 20% is wasted during construction
- 428,000 tons of scrap generated
- 35,000 tons (8.2%) recycled



## Wallboard Market Outlook



- Recycling going mainstream
- Wallboard manufacturing down 50%
- Economics favoring C&D recycling
- Landfill limits on Gypsum content in ADC
- Green Building from 15% to 50% by 2015



## Types of Wallboard

- Accepted: New gypsum based wallboard products, including type X fire rated (89%)
- Specialty green, purple or gold board (11%) cannot be recycled
- No painted or demolition



## Transfer Stations & Recyclers

- Transfer stations receive source separated waste
- Recyclers receive co-mingled waste & sort



## Construction Sources

- Haulers
- Scrap out crews
- Pallets



# Wallboard Recycling Facility

- Since 1997
- Activities enclosed
- New General Permit WMGMO38
- Beneficial use & Co-product status de-wastes products



## Process

- Wallboard inspected for contamination and presorted
- Enclosed machinery connected to a "bag house" dust collector
- Magnets remove metal screws



## Products

- 3 primary products
  - Fine pulverized gypsum
  - Granular course gypsum
  - Paper



## Pulverized Gypsum

- Agricultural soil amendment
- Damp or dry
- Needs state license



## Animal Bedding

- Course materials & paper are used for animal bedding
- PA market is 550,000 tons per year for cattle



## Agricultural Gypsum Market

- 3.2 mt used nationally
- Gypsum trucked from Virginia or Indiana to PA
- PA 767,000 tons of lime
- 7 mt of synthetic gypsum



## Why Gypsum For the Soil?

- Calcium & sulfate
- No effect on pH
- Dissolves easily
- Loosens clay soils
- Reduces erosion
- Repairs salt damage



## Evolution Trial & Error

- Early products had dust & spreading pattern problems



## Bedding Products



- Specially formulated gypsum as anti slip barn dry
- Reduces ammonia
- Brightens barns



## Ultra Fine Gypsum

- Further processed gypsum has flour-like consistency
- Process developed by USA Gypsum.



## Granular Gypsum

- Apply with any spreader
- Low dust
- Blend fertilizer.
- Proprietary process



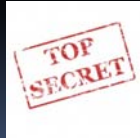
## Golf anyone?

- 60% of golf courses in the NE use gypsum
- No tillage to incorporate
- Reduces salt levels
- Applied to surface or injected into irrigation systems



## Research & Development

Penn State University  
Is researching a new  
industrial  
Product via cost  
sharing grant  
From the Innovation  
Transfer Network



## Wallboard recycling a proven solution!

- Landfills reduce gypsum volume
- Building owners & contractors save money
- Farmers save money

