Producing Yard Debris into Compost to enhance the Environment & Community

Arborist Association Meeting
September 25th 2017
Material Acceptance

• DeKalb Sanitation collects yard debris weekly in unincorporated DeKalb and the Cities of Brookhaven, Dunwoody, Lithonia, Tucker, Stonecrest
• DeKalb Landfill accepts yard debris from Avondale Estates, Chamblee, Clarkston, Decatur, Pine Lake, Stone Mountain
• Sanitation manages on average 80,000 tons annually with 2001 – 5 million tons due to Ice Storm
Compost Production

- **Compost**: The material is produced by shredding separated yard trimmings in tub grinders (3”-) and then utilizing small and large windrows to produce a clean organic reusable material.

- Generally takes two months to produce the material that is ready to be used by the General Public, Commercial or as Landfill Cover.
Compost Operations

- Seminole only accept clean materials in its processing operation. No plastics – loose and biodegradable paper bags
- Large Windrows are generally 40 feet in height and 500 feet in length
- The material is stored, compacted and allowed to natural decompose over time. Compaction is the most important factors to minimize compost fires
Mulch being placed in Windrows
Processing into Compost
In–Place Densities of Garbage

• 1977 to 1981 used shredded waste as Cover
  ○ Material would not compact ≤ 1,200 lbs. density

• 1982 to 1998 used Scrapers and Soil Materials as Cover
  ○ Could not control thickness ~800 lbs. density

• 1999 to 2001 used Off Road Trucks and Heavy Dozers to place Soil as Cover
  ○ Good compaction ±1,000 lbs. density

• January 2001 – 5 Million Tons of Woody Material from Historic Ice Storm Event
2002 could not adequately manage the enormous amount of Woody Materials with efficiency

2002 used Off Road Trucks and Light Weight Dozers to place Soil & Compost as Cover
  - Better compaction $\geq 1,200$ lbs. density

2003 Obtained first permit in Georgia to use Compost as Alternate Daily & Intermediate Covers in lieu of Dirt

2003 to 2017 used Off Road Trucks and Dozer to place compost as Cover
  - Excellent compaction $\geq 1,850$ lbs. density
Expansion of Landfill and Compost Facility

- 2004 expanded the landfill from 18 years to over 100 years
- 2004 expanded the Composting and Processing Area from 10 acres to 100 acres
- In 2005 Sanitation began a recycling program for Residents in the Service Area.
- As of 2015 with the 40% recycling residents the estimated Closure Date remains in excess of 100 years.
- In January 2018 Sanitation is cooperation with the National Compost Council plan a demonstration project at Seminole to compost more items including: Food Waste, Sludge and Manure
General Public Locations

- 4 locations for General Public to hand collect materials (Landfill, Tax Office – Memorial Drive, North and East Transfer Stations) – no cost to General Public to collect by hand, no commercial operations allowed at any GP Locations
- Sanitation delivers to any resident in DeKalb County’s service area 10 cubic yards at $75.00 – Supervisors must approve
- Departments can be loaded at the Compost Facility as long as they bring a County owned Commercial Truck at no cost
- State Agencies, Commercial Businesses can be loaded at $7.50 per cubic yard at the Compost Site - Appointment
Utilizing excess Compost as Daily & Intermediate Covers

- Soil creates Differential Settlement – Compost creates Universal Settlement
- More efficient Soil Management
- Soil creates Perched Water – Lateral Gas and Storm Water Migration
- Soil Reduces Density – 1,200 lbs. / cubic yard
- Compost Increases Density – 1,850 lbs. / cy
- Reduces Vectors – do not remove cover in the morning
- Reduces Litter – covers stay in place for next waste deposits
- Decreases expenses of Operations
- Creates better Gas Production & Leachate Collection
- Reduces Odors – Organic Carbon Absorbs Odors
Compost Customers

- Need more outlets for Compost to be reused for Local and Community Gardens
- Reestablishing community top soils around Residential Houses and Commercial Businesses
- Compost Islands assist rainfall to restore Ground Water
Questions?

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