Innovative Recycling Techniques at the Perdido Landfill

Escambia County

2008

Escambia County Division of Solid Waste Management Recycling Operations

Presentation by:
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RECYCLING HISTORY
in Escambia County

• 1990-1996* "Dirty" Material Recovery Facility (Dirty MRF). Citizens were told to dispose of all recyclables along with their regular garbage. Some of the garbage trucks were diverted from the Class I landfill to the Dirty MRF at the Perdido Landfill where approximately 30 laborers picked through the garbage and reclaimed recyclables.

• 1995* Blue Bag Recycling.
  - This six month pilot program was conducted in Myrtle Grove. The results were poor. The program was expensive, had low participation and output, and contained high levels of contamination (non-recyclables/garbage.)

• October 1, 1996- present* Drop-Off Recycling Program (current program) started.
  - Program was and is successful and has expanded over the years. The "Dirty" MRF was renovated to a Dual Stream Recovered Materials Processing Facility (RMPF.)
RECYCLING HISTORY
in Escambia County cont.

2008* Landfill Mining: Perdido Landfill begins Landfill Mining pilot.

- Extend the life of Perdido Landfill with minimal expansion of the existing footprint of the overall disposal area avoiding substantial fiscal increases required for closure and maintenance and minimize the funds required by financial assurance regulations.
- Upgrade the unlined trench filled portion of Perdido Landfill to current Subtitle D criteria.
- Increase capacity and volume, with more vertical height and less cover material, in the reclaimed portion of Perdido Landfill.
- Increase methane capture by reducing the number of isolated trench disposal areas, that inhibit gas collection, with fewer but larger disposal cells that will enhance collection efficiency.
- Eliminate contaminated groundwater issues associated with old unlined cells.
- Recover soil from the old trench cell for reuse in future landfill operations reducing the need for mining “new” soil.
RECYCLING HISTORY
in Escambia County  cont.

- **July 9, 2008* Curbside Recycling Program:** Curbside Recycling Pilot program starts in East Hill. The program is a partnership between City of Pensacola and Escambia County (discussed further later in the presentation).

- **2009 Landfill Gas Program:** The Landfill Gas Program will shift from a direct use system to a methane to electricity conversion system allowing Perdido Landfill to transfer energy back to the local power grid.
WHY RECYCLE?

• 2008 Energy Bill (HB 7135) mentions new state recycling goal of 75% by 2020.
• Recycling saves energy;
• Recycling has a direct impact on reducing greenhouse gases;
• Recycling conserves natural resources;
• Recycling reduces problems associated with pollution, trash, and litter;
• Recycling prevents problems that come from landfills;
• It’s the right thing to do!
<table>
<thead>
<tr>
<th>MATERIALS</th>
<th>ENERGY COSTS (NEW (VIRGIN) MATERIALS)</th>
<th>ENERGY COSTS (RECYCLED MATERIALS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEWSPRINT PAPER</td>
<td>30 Million Btu</td>
<td>10 Million Btu</td>
</tr>
<tr>
<td>(1 TON)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PET PLASTIC</td>
<td>98 Million Btu</td>
<td>12 Million Btu</td>
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<tr>
<td>(1 TON)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDPE PLASTIC</td>
<td>98 Million Btu</td>
<td>22 Million Btu</td>
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<td>(1 TON)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GLASS</td>
<td>16 Million Btu</td>
<td>15 Million Btu</td>
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<tr>
<td>(1 TON)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>METALS</td>
<td>Aluminum from Bauxite Ore (1 Ton)</td>
<td>Aluminum from Scrap (1 Ton)</td>
</tr>
<tr>
<td>(1 TON)</td>
<td>250 Million Btu</td>
<td>12.5 Million Btu</td>
</tr>
</tbody>
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Single Stream Curbside Recycling Pilot Program

• Escambia County DSWM and the City of Pensacola Sanitation Services have partnered to offer a pilot single stream curbside program in the East Hill area.

• Initial review of program usage by citizens has revealed approximately a 50% “Set Out” rate per week. This should not be confused with “Participation” rates. The tonnage data collected does support the 50% set out rate when averaged out per household.

• The participation rate is exceeding 50% based on the fact that not everyone puts out their recycling can once a week.

• This new pilot program offers one garbage, one recycling, and one yard trash pick up per week at no additional cost to the customer (the DSWM offers no charge on tipping fees for recycling loads vs. $33.55/ton for MSW).

• Contamination in the recycling loads have been minimal.

• We are not currently accepting glass in the program.

• This program is yet another way to hold down cost to citizens and haulers, add a service that many citizens are requesting, and also help our community reduce its carbon footprint on our environment.
Escambia County Drop-Off Program

• 21 Drop Off Sites in Escambia County.
• We accept:
  • Plastics 1-7 with a narrow neck.
  • Mixed paper, office paper, cardboard, and newspaper.
  • Aluminum and steel cans.
  • Glass.
• For a detailed list of the guidelines and locations go to:
  • www.escambiarecycles.com
END-OF-LIFE ELECTRONICS

- Electronic components contain toxic and hazardous materials and must be disposed of properly. The Division of Solid Waste Management collects and recycles End-of-Life Electronics such as:
  - Computer equipment, stereos, microwaves, speakers, radios, etc.
  - These items can be brought to the Perdido Landfill at No Charge or to our Regional Roundups.
EDUCATION OUTREACH

- Landfill Tours
- School Projects
- Citizen Groups
- Special Events
- Work with School District
ESCAMBIA COUNTY SHOE REUSE & RECYCLE PROGRAM

- Recycling Operations is collecting new and gently used shoes for Escambia County charities in need as well as Soles4Souls a non-profit organization that distributes shoes to those in need nationally and worldwide.
- Shoes will be collected at various sites throughout the county and at shoe drives with different organizations.
- Currently we are collecting shoes at:
  - **Perdido Landfill**, 13009 Beulah Road;
  - **Escambia County Parks and Recreation Department**, 1651 E. Nine Mile Road;
  - **Escambia County Extension Services Office**, 3740 Stefani Road.
- When donating shoes please rubber-band pairs together.
Escambia County Shopping Bag Program

- As part of the plastics recycling program, plastic shopping bags are now being accepted for recycling. Recycling Operations is providing re-useable shopping bags made from 100% recycled material to Escambia County residents in an effort to help Escambia County go green!
- Contact the Perdido Landfill at (850) 937-2160 for your own bag.
- Plastic bags are a petroleum based product. When they are in the trash they blow away and litter trees, roadways, and waterways. They are an environmental hazard and an eye sore.
Escambia County Recycling Programs

- Recovered Materials Processing Facility (RMPF).
- Curbside Recycling.
- Drop Off Recycling.
- End-of-Life Electronics.
- Office Recycling.
- Education Outreach.
- Waste Tires.
- Shoe Reuse.
- Reusable Shopping Bags.
- HHW (fuel, oil, antifreeze, batteries and flammable liquids).
Escambia County Recycling Programs

Reuse and diversion is a major focus at the landfill:

- Landfill Mining.
- Paint Reblending.
- Methane Collection.
- Yard Trash.
- Clean concrete, asphalt, and brick.
- Habitat Restore.
- Swap Shop.
- Volunteer Program.
Escambia County Division of Solid Waste Management

- For more information or to schedule a tour contact us at:
  - 850-937-2160
  - or send Dee Dee an email at:
  - ddgreen@co.escambia.fl.us