

**Project Description:**

The applicants (the Baldwin County Commission with its municipalities signed on to the County's Solid Waste Management Plan) are proposing to construct and operate a regional Single-Stream Material Recovery Facility (MRF) located adjacent to the Magnolia Landfill in Summerdale, Baldwin County, AL. It is anticipated that the Baldwin County Commission will construct a Material Recovery Facility to be operated by the Baldwin County Solid Waste Department. Other participating entities will continue to operate collection programs within their respective jurisdictions and provide curbside collection and/or drop-off locations for recyclables at various locations throughout Baldwin County.

Following collection, material will be transported to the proposed Magnolia Recycling Center where it will be sorted using a combination of automated and manual sorting through a single stream system process designed to operate at an initial capacity of 2.5 tons per hour with an ultimate capacity of 8 tons per hour.

The sorting process is expected to yield the following marketable products:

- Cardboard
- Mixed Paper
- Ferrous Metals (steel and tin)
- Aluminum
- #1 and #2 Plastics
- Mixed Plastics (3 through 7)

Following the sorting process the material will be baled and marketed for transport and sale. Residue will be disposed of at the Magnolia Sanitary Landfill adjacent to the Facility.

The following equipment is proposed for grant funding:

<b>Phase 1:</b>	
<b>Equipment:</b>	<b>Purpose:</b>
Metering Bin, Drum, and In-feed conveyor	Control feed rate for optimal processing of material
Initial Manual Sort Line	Remove bulky material and rigid plastic separation
OCC Screen/Ballistic Separator	Carboard Recovery

<b>Phase 2:</b>	
<b>Equipment:</b>	<b>Purpose:</b>
Glass Breaker and Transfer Conveyor	Reduce and re-size glass fraction prior to manual sorting
Cross Belt Magnet	Ferrous Metals
Mixed Plastics Manual Sort Line with Bins and Conveyor	Plastics 1 and 2, Plastics 3-7, Mixed Paper, Residue
Eddy Current Separator	Aluminum
Marathon Baler (Existing)	Material densification and transport

### **Anticipated Revenues:**

Facility revenues will be generated through agreed upon tipping fees and the sale of marketable recovered commodities, which are generated through the sorting facility process. As proposed these are expected to include:

- Cardboard
- Mixed Paper
- Ferrous Metals
- Aluminum
- #1 and #2 Plastics
- Mixed Plastics (3 through 7)

Based on current pricing of marketable material, the Facility is estimated to generate between \$165,000 and \$200,000 annually.

### **Operational Plan:**

As mentioned previously, the Magnolia Recycling Center will be constructed by the Baldwin County Commission on land adjacent to the Magnolia Sanitary Landfill. The facility will be operated by the Baldwin County Solid Waste Department using existing labor forces in combination with Baldwin County Work-Release candidates to complete the sorting process.

The proposed sorting process is described as follows:

1. In-bound material will be emptied onto the tipping floor where Facility personnel will remove bulky and reject material prior to loading into the Metering Bin.
2. Material will be loaded into the Metering Bin for conveyance to the Initial Sorting Line.
3. Facility personnel on the initial sorting line will remove remaining “rejects” and bulky materials which could impact automated processing operations.
4. Material will enter the OCC Screen where cardboard will be separated and conveyed to a cardboard bunker for further processing.
5. Material will be conveyed to a glass breaker for size reduction prior to Primary Manual sorting.
6. A cross-belt magnet will convey ferrous metal into a bunker for accumulation and baling.
7. Plastics 1,2, and 3-7 will be sorted on the Primary Manual Sort Line.
8. Mixed Paper will be sorted on the Primary Manual Sort Line.
9. Eddy current separation will be utilized to sort aluminum which will be accumulated in a bunker for accumulation and baling.
10. Remaining residues will be collected in a “roll-off” bin and transported to the Magnolia Sanitary Landfill for disposal.

### **Consistency with Existing Solid Waste Management and Recycling Infrastructure:**

The proposed plan will work in conjunction with existing recycling efforts noted for the contributing agencies. A primary benefit of the program will be the savings associated with hauling single-stream recyclables out of state for processing.