Single Stream Recycling Processing
Fact Sheet

When the Atlantic County Utilities Authority's (ACUA) dual stream recycling center opened in 1991, the facility was one of the largest in North America and represented the latest in recycling processing technology.

In 2008, the ACUA took a bold step and switched to a single stream recycling system. Single stream systems make recycling easier by allowing residents, businesses and schools to combine paper, cans and bottles together in one recycling container. Adopting a single stream system also allowed ACUA to reduce costs and improve efficiencies on the collection side of its operation.

Once the ACUA switched to a single stream recycling system, recyclables could no longer be processed at its dual stream recycling center. The material was instead transported to other New Jersey facilities to be sorted and sold to market.

In December 2010, the ACUA entered a 10-year agreement with Hudson Baylor Corporation (HBC), now ReCommunity. This partnership brought recycling to a new level in Atlantic County. The agreement allowed ReCommunity to upgrade the ACUA recycling center to a state-of-the-art single stream facility which can process material collected by the ACUA on site. ReCommunity and the ACUA share in revenues derived from the sale of the sorted materials. The agreement also includes leasing the ACUA's recycling center to ReCommunity for the initial 10-year period. The partnership provides some protection to the ACUA and its customers from the fluctuating commodity prices of the recycling markets.

It cost ReCommunity an estimated $5.5 million to outfit the existing structure with conveyors and sorting stations to handle an annual volume of approximately 37,000 tons of mixed recyclables. In total, the financial benefit to the ACUA is more than $2 million per year at current recyclable material values.

ReCommunity has extensive experience operating different types of recycling facilities, including single stream, dual stream, bottle law and transfer facilities. ReCommunity has multiple year contracts with municipally-owned facilities and works closely with its public partners to upgrade equipment, increase capacity, boost recycling rates and divert material from landfills. Today, a recognized industry leader, ReCommunity operates 32 facilities in 14 states.

ACUA processed approximately 41,500 tons of recyclable material in 2014.

ACUA's recycling center was retrofit by Hudson Baylor Corporation, now ReCommunity, to handle mixed recyclables.

About the ACUA/ReCommunity Single Stream Facility:

Tons /Hour Processed:
The system has a throughput capacity of 25 tons per hour.

Tons/Day Processed:
The equipment is capable of processing 400 tons per day. The amount of material processed per day will depend on the amount of material received. As an example 30,000 tons of material annually would equate to approximately 125 tons processed per day.

As part of its agreement with ACUA, ReCommunity converted and upgraded the ACUA recycling center into a single stream processing facility.

How many personnel are required to run the plant?
ReCommunity's ACUA operation includes a Plant Manager, shift supervisor, 20 sorters, two mechanics, three equipment operators and an Office Administrator.

Where will the sorted materials end up and what will be manufactured?
After the recyclables are processed and separated, they are bound into a large bales weighing between 1,000 and 2,000 lbs. Bales are sold and shipped to end market companies throughout the United States and internationally. Materials are then made into a variety of new products. These products include synthetic fibers, new aluminum cans and new paper products. As recycling experts, ReCommunity is constantly searching for new markets for recyclable commodities and is constantly reexamining how they can recycle more commodities in existing waste streams.

Most of the fiber will be used to produce linerboard, which is used in virtually all packaging materials, i.e. cardboard boxes, cereal boxes, packaging.

Tin and scrap metal are consumed in steel mills and returned to use through manufacturing. Aluminum is melted into ingots and sheets for reuse in all aluminum applications. Polyethylene terephthalate (PET) plastic is ground, washed, pellatized, and consumed primarily as a fiber substitute in carpet and clothing industries, retail packaging, or in the strapping industry. High-density polyethylene (HDPE) plastic is sold to processors who produce recycled pellets which are used by plastic pipe, lumber and packaging manufacturers. Glass is recycled into landfill cover material and also used in asphalt paving material.

The purpose of recycling is to reduce the volume of what is buried in landfills. The key to successful recycling operations is to generate marketable commodities. In order to flourish in the recycling business, it is imperative to provide the highest quality materials to the end markets. Selling commodities captured from the recycling operation is the primary revenue source for a recycler and without this end market, the recycling business cannot survive.

Why is recycling important?
Recycling has a lot of benefits that can help both people and the environment. Its importance can be observed in many different ways. Here are some great reasons why recycling is important:

Recycling Helps the Earth
For example, we know that paper comes from trees and many trees are cut down to produce paper. By recycling paper, we can help reduce the number of trees that are destroyed for this purpose. Take recycling a step further; look for products made from recycled materials when shopping. For example, purchase napkins and toilet paper made from recycled paper. Another great idea; think of ways to minimize the amount of waste you produce in the first place, such as using reusable plates, cutlery and cups instead of disposables, or not purchasing bottled water.

Recycling Saves Energy
It takes less energy to process recycled materials than to process virgin materials. For example, it takes a lot less energy to recycle paper than to create new paper from trees. The energy from transporting virgin materials from the source is also saved. Saving energy also has its own benefits, such as decreasing pollution.

Recycling Helps Mitigate Global Warming and Reduce Pollution
By saving energy in industrial production through recycling, the greenhouse gas emissions from factories and industrial plants are lessened and the use of fuels that emit harmful gasses during production is also minimized. Recycling non-biodegradable waste (rather then burning it) will contribute significantly to help reduce air pollution and greenhouse gases that deplete the ozone layer.

Recycling Reduces Waste Products in Landfills
Landfills are mostly composed of non-biodegradable waste, which takes a long time to decompose. By recycling, we can lessen the amount of waste materials that are placed into landfills, thus extending the life of our landfills, and making the most out of the recyclable materials. If we don't recycle, more and more garbage will go to landfills until they all get filled up.

By switching to a single stream collection system in 2008, ACUA increased both tonnage and participation in the recycling program.