# Single Stream Recycling

## In a Nutshell

Single stream recycling refers to a recycling system in which all materials including paper, cardboard, plastic bottles and containers, glass bottles and jars, metal food and beverage cans, and food and beverage cartons are mixed within the same bin. These materials are collected, and then sorted by like material and sold to manufacturers to make new products.

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## The “How To”

The following six items are collected as part of a single-stream recycling system:

1. **Paper**-typically this includes all grades and colors, windowed envelops, magazines, and newspaper. Staples and tape can be left on the paper when placed into recycling bin. Paper products that cannot be recycled include paper towels, napkins, paper cups, and paper plates.
2. **Cardboard**- flattened to make space in the bin, this includes cereal and food boxes, soda cartons, and paper bags.
3. **Plastic bottles and containers**- these include bottles for milk, juice, water, beverages, cleaning agents, and detergents. These must be thoroughly rinsed and dry. You can leave the tops on the bottles, including spray and squirt tops. This does not include toys, furniture, styrofoam, plastic bags, or wraps.
4. **Glass bottles and jars**- all colored glass is accepted they must be rinsed clean. This does not include window glass, kitchenware glass, or light bulbs.
5. **Metal food or beverage cans**- must be thoroughly rinsed. This does not include cookware, hangers, or aerosol cans.
6. **Food and beverage cartons-** must be rinsed clean. These include milk and juice cartons.

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## Planning & Zoning

Single stream recycling ordinances can fit into a few categories. These categories include:

1. A list of accepted recyclable materials
2. Possible procedures for how municipalities are to recycle on a county-wide or regional scale
3. The responsibilities of participants of the recycling program must be specified
4. Requiring that a new site plan or proposal must include a recycling plan
5. Banning the collection of solid waste that is mixed with recyclable materials
6. Requiring construction, demolition, or renovation projects to submit a Designated Recyclable Materials plan

7. Penalties for violating the ordinance

The City of Edwardsville, Illinois has several ordinances dealing with recycling. If you type "recycling" into the search bar, several sections of the code come up. Chapter 98 is the chapter that sets general provisions for the recycling program in the city.

# Case Studies

## City of St. Louis Single Stream Recycling

### Contact

Todd Waelterman

### Description

The program consisted of the city instituting an $11/month fee for trash and recycling collection for residents. Since August 2010, 5,600 large blue bins have been placed in alleys within the city. In addition to these blue pins, 20,000 wheeled recycling carts have been distributed for individual households. Cameras were also installed in many locations in order to discourage illegal dumping.

Before the recycling program, an average of about 2 percent of the city's solid waste was diverted to recycling. In February of 2012, 11.5 percent of the city's solid waste was being recycled.

### Cost

The program called for the institution of an $11/month trash and recycling collection fee. In its first fiscal year, the program brought in $15 million in revenue. This sum was achieved not only through the money brought in through the fee, but also savings from the city not sending as much material to a landfill. The City of St. Louis must pay a $35 fee for every ton of waste send to a landfill, and the savings from the recycling program totalled approximately $500,000 in 2011. In 2012, the City also saved $300,000 by selling recyclable materials to Waste Management.

### Lessons Learned

The City of St. Louis learned after implementing its program that its fleet of collection trucks was not sufficient to complete the task at hand properly. The City has realized that the only solution to the aging fleet of vehicles is to replace the entire fleet, spending millions of dollars in the process.

## KC Recycles

### Contact

Kansas City Public Works Department - Solid Waste Division
816-513-2627
pubworks@kcmo.gov

**Address**

414 E. 12th Street - 20th Floor - Kansas City, MO 64106

**Description**

KC Recycles is a voluntary curbside recycling program that operates in Kansas City, MO. Households and apartment buildings with less than six units can choose to participate in KC Recycles by purchasing blue recycling bins and setting them out on the curb on regular weekly trash pick-up days. All recyclable materials can be co-mingled in the same bin. Although glass cannot be collected in the blue bins, there are still local recycling drop-off centers where glass can be taken. There is no limit on how much can be recycled – multiple blue bins can be purchased or residents can set extra recyclables in boxes next to the bins for collection.

KC Recycles – Your Curbside Recycling Program

Kansas City Public Works Department – Waste Management Guide

**Cost**

Costs for KC Recycles are minimal as the recycling program expenses are absorbed into the city's general solid waste management program. Collection trucks only have to stop at households with blue recycling bins out for pick-up, and the bins are purchased by residents for $9 each.

**Lessons Learned**

City officials are optimistic that the voluntary KC Recycles program will catch on quickly as similar programs have in other cities. Since the programs is single stream and offers curbside collection, the ease and convenience of recycling may convince more residents to participate. And with fees in place for residents who exceed the weekly 2-bag/80-pound weight limit on landfill waste, this will provide an extra incentive to recycle and divert that waste to recycling bins. Kansas City has already seen success with the program, with roughly 19,000 tons of recyclable materials being collected in 2009 alone.

## Midwest Fiber Single-Stream Recycling

**Contact**

Marie Streenz
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**Address**

422 S. White Oak Road - Normal, IL 61761

**Description**

Midwest Fiber Recycling is a full-service, single-stream, recyclable Materials Recovery Facility (MRF) serving central Illinois that has been in business since 1990. Midwest Fiber has facilities in Bloomington, Champaign, Decatur, Springfield, and Peoria, IL that serve 14 municipalities and a large portion of Illinois. Midwest Fiber serves businesses and individual residents, as well as local municipalities that already have single stream recycling programs in place and need an MRF where they can send their collected materials. Midwest Fiber collects comingled recyclable materials at its MRFs, where it is sorted and processed. Salvaged materials are then baled and re-sold. The company also offers other services, such as composting and electronics recycling.

Midwest Fiber Single-Stream Recycling

**Cost**

Midwest Fiber recently completed a new MRF in Normal, IL at a cost of $8 million. The facility is technologically advanced, spans 84,000 square feet and will serve as the central hub for the company's single stream recycling services. This facility now processes over 1 million pounds of single-stream recyclable materials every week.

**Lessons Learned**

It has been advantageous for Midwest Fiber to use a single-stream recycling process because single-stream programs tend to have more success. Because single-stream recycling is easier and more convenient for consumers, it typically results in better participation and more materials being recycled. Location has also been key to Midwest Fiber's success. All five of the company's facilities are located towards the center of the state, with close access to multiple interstates, which makes transportation of materials to and from the MRFs much easier and cheaper.

## Southern Illinois University - Edwardsville (SIUE) Single Stream Recycling

**Contact**

Steve Brandenburg
Assistant Director, Grounds & Building Services
sbrande@siue.edu

**Address**

State Route 157 - Edwardsville, IL 62026

**Description**

Southern Illinois University - Edwardsville (SIUE) implemented its single stream recycling program in 2009. The university's Facilities Management department now handles the program. Recycling bins are provided at all facilities across campus, including offices, computer labs, dining halls, and dorms. In addition, the recycling program at SIUE encourages faculty and students to also reduce and reuse their waste through related

programs. For example, dining halls sell reusable coffee mugs to help reduce the number of disposable cups being used. The university is also committed to reducing the amount of paper used by making the change to issuing electronic bills, news reports, and grades. Information and resources on recycling print cartridges and electronics are also provided to further encourage recycling of these materials, which are not included in standard single stream recycling.

SIUE Sustainability: Waste Management

University Housing's Energy and Conservation Report

**Cost**

SIUE continually strives to negotiate a waste management contract that is fiscally responsible.

**Lessons Learned**

Although creating a recycling system that is effective and efficient has been a priority at SIUE for several years, results of the program have varied at different times. Maintaining a quality waste management contract is key. Finding new ways to encourage and increase recycling is also important. For example, in 2011 SIUE's Facilities Management team changed the schedule and procedure for collecting recycling in offices on campus to make it simpler and easier. The result was a 40% increase in the amount of paper recycled within two months.