



# The Knoxville Recycler

KRC is a member of Knoxville's Chamber of Commerce and



## Plastics #1-7 Can Now Be Recycled in Knox County!

### Inside this issue:

KRC Business Update	2
Story of Styrofoam continued	2
KRC Joins Together with AmeriCorps	3
New Box Truck Driver	3
SunTrust Bank Donates to Charities	3
Remember your R's this Holiday Season	5
What has Market Square saved by recycling cardboard?	6

About a month ago, Knox County Convenience Centers/Recycling Centers began accepting plastics numbered 1 through 7 (except Styrofoam). This is very exciting for avid recyclers. No more frustration of having to throw plastics in the trash/landfill.

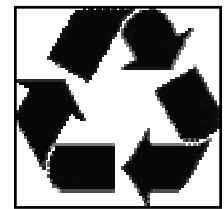
The reason for the change is the increase in demand for plastic. The market is good and is expected to stay steady. The price of recycled plastic is creating a sustainable economy for the material. So keep buying plastics with recycled content.

After you put your plastic in the bins at the recycling centers, the bins are brought to Advanced Polymer Recycling

(APR). There the workers sort the different plastics. Then the plastic is shredded or bailed to be transported to processing facilities, located all over the world.

If you do not see signs, it is still okay, the signs will be coming. So, yes you can put plastic bags, yogurt containers, berry containers, etcetera. Additionally, you do not have to remove the plastic tops off of plastic containers. But no Styrofoam. Please read the article in this newsletter about why you can't recycle Styrofoam.

The city of Knoxville will start collecting all plastic December 11th, please check the city's website for updates on that (recycling is located under residential).



## The Story on Styrofoam

Styrofoam, the name Dow Chemical Company has branded blown polystyrene, has been a popular invention for many years now. It has had its fair share of criticism, but it still plays a role in many of our lives. It is hard to buy a "fragile" product without Styrofoam packaging. Our houses often have a few different forms of Styrofoam insulation. And it takes a conscious effort not to buy polystyrene cups, plates, take-home containers, egg cartons, and meat or veggie trays.

Why should we avoid these products? According to the American Chemistry Council, Styrofoam is efficient (in production and thermally), economic, sturdy, sanitary, and convenient. These are true statements, which is why it is a popular material, but you have to examine the other side also, the waste. It is not economical to recycle, reuse is minimal,

burning is potentially hazardous, and even though it's weight is less than one percent of landfills, its volume is much more, up to 30% according to one source.

There are two types of polystyrene or #6 plastic. There is Styrofoam which is polystyrene that has been blown with gas and air to give it its light weight and protective qualities. When discussing recycling Styrofoam it is broken into two categories, food service packaging and transport/protective packaging. Polystyrene also comes in the form of non-packaging, non-durable polystyrene materials, such as audio/video cassettes, CD jewel cases, insulation board, and more. The latter is recycled more.

Like all other plastics, polystyrene is made from non-renewable resources (unless there are recycled contents). One of the components used in polystyrene production is benzene which is

extracted from coal and oil. It is a sweet smelling liquid. Exposure to benzene can be in the form of cigarette smoke and car exhaust. It is a carcinogen. 75% of the benzene extraction goes to polystyrene-it is added to styrene to make it non-brittle. Styrene, another component, is extracted from petroleum, which creates a \$20 million dollar industry. It too is a sweet smelling liquid. Low levels of styrene have been found in many foods. There is controversy over whether or not it is natural or has been absorbed into the environment from petroleum products, such as from fertilizers. Styrene is a mutagen, carcinogen, and considered a neurotoxin. In 12 studies, 75% discovered styrene in breast milk. Both are toxic chemicals, potentially dangerous to humans at the extracting and manufacturing levels, and possibly any exposure to benzene can be harmful according to some scientists.

### Special points of interest:

- Compost Bin Sale, pg 4
- America Recycles Day on Nov. 15, pg 4
- Secure Paper Collection on Nov. 10, pg 4
- KRC says Thank You, pg 4
- Sign-up to be a KRC Member, pg 5
- View KRC's Boo at the Zoo Scarecrow, pg 6



Styrofoam food packaging creates a lot of waste that isn't recyclable for Knoxville.

"Recyclable materials separated from garbage should not be viewed as waste, but as a raw material or feedstock for industries to use in making new products." - American Chemistry.com

Styrofoam continued...

CFC are no longer used as the blowing agent to make Styrofoam, now HCFCs and ethylene are combined as the replacement. CFC or chlorofluorocarbons were found to be depleting the ozone, in turn, contributing to global warming. Ethylene is a gas that becomes a liquid at low temperatures. It is found naturally in plants as a hormone; it helps with plant growth. It is safe at low concentrations, but high levels can have health effects. Here are some other facts:

- There are few Styrofoam manufacturing plants in the US, so products travel far to get to us.
- Styrofoam takes 500+ years to break down (in the landfill, most items can take this long, too)
- By volume it fills 25-30% of land fill
- The US throws away 25 million Styrofoam cups a year.
- Burning Styrofoam releases over 90 different hazardous chemicals.

Others say that there are not hazardous chemicals released when burning, and there is a significant amount of energy gained in the form of heat.

#### Recycling and Alternatives

There has been an increase in solid waste reduction with polystyrene, but the majority is due to the efficiency of manufacturing. More polystyrene can be made now with the amount of energy it took 20 years ago. Also, there's been an in-

crease in recycling of non-packaging non-durable polystyrene materials in the past 20 years. A sustainable market for the material was created. Plus, with no food contamination, no cleaning is required. Products that have incorporated recycled-content polystyrene include: foam egg cartons, lunch trays, transport packaging, audio and videocassette cases, office supplies, and building materials. Loose fill Styrofoam packaging peanuts are being reused at a rate of up to 50% according to the "Peanut Hotline", which is a number to call to find out where to take your peanuts nationwide (none are listed in our area). Additionally, some molded Styrofoam packaging is shredded up for use as fill or loose packaging.

Basically recycling Styrofoam is about the economics. There is not a sustainable market for the material. Food packaging containers are easily contaminated, the volume is much greater than the weight, and the recover process is not cost effective, so it is more economic to use raw materials. The industry tried to increase recycling of this material 20 years ago, but still there is not a demand for Styrofoam for recycling. But also note that disposable paper packaging products for food service is not recycled at a high rate.

There are alternatives to Styrofoam. For food use products there are corn-based products, that are 100% biodegradable. They can replace almost all Styrofoam products and work just as well, but they need to be composted to reduce waste

from landfills. MIT has created a straw insulation product that is much safer and renewable. Some Styrofoam products such as packaging molded polystyrene can be broken up to be used as stuffing.

The best plan is to try and avoid Styrofoam to begin with, but it can be complicated. If you use biodegradable products, like just mentioned, they need to be composted. Other plastics need to be recycled if used, such as #6 plates and cups. Currently in Knox County and soon to be the city of Knoxville, all plastics (except Styrofoam) are being accepted for recycling. Using strong, sturdy, reusable/washable containers for drinking or leftovers is great, but you have to remember to bring them with you to restaurants, sit down only, avoid fast food. Buy meat, eggs, and veggies with packaging that is recyclable or buy local. And try asking when you purchase a product that comes in a box if it has Styrofoam in it. If buy it or not make sure to call the company and complain- tell them you want an alternative that is recyclable (luckily air blown bags are being used more.) Finally, being creative never hurts- try building something with your Styrofoam- see what you can create!

Sources:

1. [http://www.americanchemistry.com/s\\_plastics/sec\\_pfbg.asp?CID=1422&DID=5214](http://www.americanchemistry.com/s_plastics/sec_pfbg.asp?CID=1422&DID=5214)

2. Cradle to Grave:  
The Life Cycle of Styrofoam®  
By Andrea Kremer

## KRC's Business Recycling Update



We hope to have our box truck painted like this in the near future. We are in the mist of looking for a sponsor. Interested....call us.

Calls are coming in all the time from local businesses asking about our recycling services. People want to know how they can recycle at work. Sometimes it is the managers calling, other times it is an employee wanting to know how they can get their employer to start a program. Recycling is not a new concept, but with the increased concern for global warming, people know recycling is something we can all do to help the planet. For businesses that means saving money also.

Businesses generate a lot of recyclables. Paper use is especially big in offices, particularly for delivery and engineering/architecture companies. Paper makes up 40% of the U.S. waste stream. Paper is a

valuable resource that does not need to be wasted.

KRC's business has been reflective of that belief. From January to September this year compared with last year, sales are up 27.5%. Since May we have added 15 new recycling customers and 14 customers have added services. This usually means they have added plastic and aluminum recycling service. For some businesses, they have realized they can't just recycle paper, they need to recycle the cans and bottles from the lunch room, too.

KRC is picking-up 1,114 95 gallon bins a month!

We also have a few restaurants that are our customers. They are recycling all the cardboard used for food and paper/plastic products packaging.

It is a good feeling for us to go into a business to get the recycling bins and the employees are happy to see us. You can tell that they are pleased to be recycling, proud even.

Call us if you know of a business interested in starting service. 525-9696, ask for Traci or talk to any of us if she's not in.

## KRC Joins Together with AmeriCorps

Back in August a CAC AmeriCorps member started his 10-month year of service with KRC. Micah Reynolds will be doing outreach and education to complete his 1700 hours of service. We are very happy to have the privilege of working with CAC to improve recycling in the Knoxville/Knox County area.

Micah graduated from Clemson University with a BA in History and a minor in Education. For two years at Clemson, Micah was Assistant in Operations of Clemson's Recycling Facility. The position entailed working with a crew in receiving, sorting, bailing, and shipping of recycling materials. He is very interested in increasing recycling rates because he knows the benefits are well worth it. He was also President of the Outdoors Club,

leading people on camping trips, at events, and at meetings.

Last summer Micah volunteered with Jonathan Overly at East Tennessee Clean Fuels Coalition. Micah is the proud driver of an 85 Mercedes that runs on biodiesel. He is very conscious of the use of using clean fuels, and being energy efficient to help slow global warming.

Recycling and climate change are strong passions of Micah's and he is good at casually convincing others why they should be too. He has jumped right into "Get Things Done", right in-suit with the AmeriCorps logo.

We are excited to have him here and know that our recycling education efforts

will be doubled, if not more, this year.

If you know of anyone interested in having a presentation on recycling, or have a church or organization in need of a waste audit or info on how to start recycling, give Micah a call. He will be great help.



Micah Reynolds with his biodiesel run 85' Mercedes.

## New Box Truck Driver/Recycler

We have a new box truck driver to collect our paper, aluminum, cardboard, plastics, and computers from businesses for recycling.

Tiffany Hartung has been working for non-profits here in Knoxville for quite a few years now. The past two years she was the Regional Coordinator for Tennesseans for Fair Taxation. Before that she was the Community Organizer for four years at Save Our Cumberland Mountains. Tiffany also was the Campus Organizer for Massachusetts Public

Interest Research Group in Holyoke, MA.

Tiffany has a B.S. Environmental Studies and Applications from Michigan State University in East Lansing, MI. Additionally she is certified in Project WILD and Project WET.

Tiffany enjoys riding her bike, helping her husband with his bicycle shop, Tennessee Valley Bicycles, and playing with her dogs.

Even though Tiffany's main job is truck

driver and recycler, her knowledge from past experiences is very welcomed here at KRC. It has already been a pleasure to have her here.



Our new box truck driver, Tiffany Hartung.

## SunTrust Will Donate to KRC with Your Help

SunTrust has made community involvement an important part of the relationships they have in the communities they serve. They recently launched the My Cause promotion designed to help raise money for nonprofit organizations just like KRC.

From Aug. 6 through Oct. 12, clients who open a new SunTrust Personal or Business Checking account, accept a new SunTrust Visa® Check Card, make any purchase using the card, and complete

and submit an online redemption form by November 15, 2007, can **donate \$100 to their favorite nonprofit organization** (it must be a 501(c)(3) organization as recognized by the IRS).

If you plan to open a checking account, we encourage you to consider becoming eligible for SunTrust's My Cause promotion and request that they donate \$100 in your name to KRC. We ask that you help spread the word to your friends, family, and personal and business con-

tacts. The more people who are aware of the program and its offering, the greater the opportunity for us to receive donations from you and the rest of the community. Much like the name "My Cause" implies, contributing to a charity is a personal decision.

We are thankful that you would consider us as your cause. We appreciate your continued support. For more information please visit [suntrust.com/mycause](http://suntrust.com/mycause).



## Compost Bin Sale October 20th at Earth Fare



The Earth Machine Compost Bin

Composting is the best way to keep food and yard matter out of the waste stream. Food scraps make up 11.9 % of America's solid waste, and yard trimmings 13.1 %. There are a couple places to take yard waste for composting in Knox County or it can be picked up by the city, but food scraps can be more difficult to divert from the garbage. Owning a compost bin is a wonderful way for a family to compost their food and yard scraps while gaining healthy soil to use on gardens or for flowers. Composting is not hard to do with a Earth Machine compost bin.

The compost bin sale, put on by the City of Knoxville, will be held **October 20th at Earth Fare's parking lot** in Turkey Creek; 10903 Parkside Drive. The sale will start, rain or shine, at **9am and go till 4pm** or while supplies last. The cost

of the Earth Machine will be **\$40** (tax included) by cash or check (that is a great price). If you miss the sale, KRC will be selling these bins on a continuous basis while supplies last. Call us at 525-9694. For more info on the City's sale, call 311 or visit their website at: <http://www.ci.knoxville.tn.us/solidwaste/events.asp>

A quote from Mayor Bill Haslam: "We are offering the Earth Machine at a discounted price to encourage residents to compost table scraps, grass and leaves so that we can reduce the volume of yard debris and trash that is picked up and taken to the landfill."

**Composting Materials-** (A composting book does come with the bin.) Carbon, or brown, dry material, consists of items such as: leaves, bark, wood-chips, twigs, and

paper. As a rule of thumb, about 50-75% of the material in a compost pile should be carbons and 25-50% should be nitrogen. Nitrogen, or green material, consists of items such as: grass clippings, fruits and vegetable wastes, coffee grounds, and egg shells. The compost pile should be kept damp and warm, not saturated and have the feel of a well wrung sponge. Do not let it get to hot and dry, but it should be warm. Keep the bin in a convenient, well drained location near a water source. Layer the different materials. Water every few layers. For speedier decomposition, it is good to occasionally turn the pile over; mixing it. The Earth Machine has a door to take some of the hummus from the bottom of the pile for use. There are plenty of books and internet sites to learn more.

## Quarterly Secure Paper Collection to be held November 10th



This quarter's Secure Paper Collection will be at Middlebrook United Methodist Church at 7234 Middlebrook Pike. You can get there by going north on Vanosdale Road from the West Town Mall. It will be held from 10am till 2pm. Please bring your

personal documents, such as medical or tax records, to be securely disposed of and recycled. You may also bring cell phones and printer cartridges. For more info call 525-9694 or visit our website [www.knoxvillerecycles.org](http://www.knoxvillerecycles.org).

The last collection on August 28th at the John O'Connor Senior Center brought in 1000 lbs of paper for destruction and recycling. People were very thankful for the service.

## November 15th is America Recycles Day

America Recycles Day (ARD) is the only nationally recognized day dedicated to encouraging Americans to recycle and buy recycled products. Since its inception in 1997, the ARD campaign has grown to include millions of Americans pledging to increase their recycling habits at home and work, and to buy products made with recycled materials. Year after year, residents in every state of the nation participated in America Recycles Day events.

On November 15<sup>th</sup> each year, millions of people have become better informed about the importance of recycling at home and work, and about buying recycled products as a result of the national America Recycles Day campaign.

In addition to the President of the United States declaring November 15<sup>th</sup> America Recycles Day, many state and local governments issued proclamations and resolutions in support of the national recycling day.

On November 15th, from 11-2 in Market Square there will be an exciting display of the average American's trash that shouldn't be missed. There will also be various recycling groups with booths set up. Learn more about recycling in Knoxville. Please visit our website to get the details on Knoxville's America Recycles Day event: [www.knoxvillerecycles.org](http://www.knoxvillerecycles.org).

## Many thanks to our Board Members and Membership Members



### Here are our current Board Members:

Eddie Bales-President  
Derek Senter  
Debbie Dillener  
Karen Anderson  
Catherine Wilt  
Meredith Leahy  
Chris Miles  
Melony Jones

### Here is a list of our current members:

Ann Lamb  
Tom McClain  
David Sims  
Knox County Council of Garden Clubs  
Edward Richardson  
Cash4Cartridges Tennessee  
Henry Krogh  
Nancy N. McGalliard  
William and Rebecca Schneider

Betty Wasserman  
Susan Becker  
Rudy P. Anderson  
Neil and Elizabeth Peebles  
Our lifetime member: Ann Preston

If you do not see your name on the list give us a call to find out if it is time for your renewal. Thanks so much.

**We appreciate all of your support! Thank you.**

## Remember your R's this Holiday Shopping Season

### Reduce, Reuse, Recycle.

Whether you want to think about it or not, you know the holiday shopping season isn't far off. I bring it up, not to remind you, but to let you think ahead and give some thought about how you can reduce your consumption this year.

It's funny, but so many people often complain about having to buy gifts for the holidays. Well don't if you don't want to. There are alternatives and its better for the planet too. Make treats instead. It may take more time, but it is often less stressful than shopping. Make cookies or candy, teas, jams, salsas, bath oils, etc. People can enjoy the love you put into them rather than the money. And you can reuse containers to give them in.

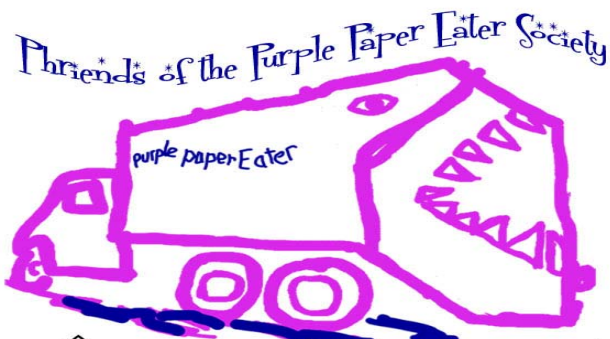
Use a live tree or plant this year. Donate the plant to a charity after so they can plant it or keep it as a house plant. You can use it for other holidays too. In the summer large plants look nice with white lights. Plastic trees are good for reusing too. And if anything make sure you check the city's website about where and when to take your tree for becoming compost or mulch.

Try using cloth gift bags instead of wrapping paper. If you Google "cloth gift bags" you have many options for places to purchase them. If you are ambitious, sew some with old cloth you have or buy some old holiday table cloths at your local thrift store. It could be fun for the family to swap bags over the years.

Save gift bags and gift boxes to reuse next year. Remember to recycle the wrapping paper you do get and the cardboard and plastic packaging. You can put the plastic wrapping paper in the plastic bin. Call your local UPS/FedEx store to see if they will accept packing peanuts for reuse. Packaging and containers are 27% of the U.S.'s solid waste and that is the average for the year.

If you are shopping, think about reusable or recycled items as gifts. What could you give some one that would cut down on waste? Ask retailers what products they sell with recycled contents. Buy tickets to do something instead of having.

Happy Holidays and good luck!



**Knoxville Recycling Coalition**

KRC is a member of Knoxville's Chamber of Commerce and



### Membership Form

Check membership level:	Price
<input type="checkbox"/> Student/Senior	\$20
<input type="checkbox"/> Individuals/Family	\$35-50
<input type="checkbox"/> Organizations/Groups	\$60-100+
<input type="checkbox"/> Lifetime Membership Individuals/Groups	\$500
<input type="checkbox"/> Sponsorship	Other ____

Please make checks available to:  
Knoxville Recycling Coalition Total: \_\_\_\_\_

\_\_\_\_\_  
Name/Group/Company

\_\_\_\_\_  
Address

\_\_\_\_\_  
Email

\_\_\_\_\_  
Phone Date: \_\_\_\_\_

\_\_\_\_\_  
Signature

*Knoxville Recycling Coalition*

3624 Vandeventer Avenue  
Knoxville, TN 37919  
Website: [www.knoxvillerecycles.org](http://www.knoxvillerecycles.org)

Phone: 865-525-9694  
Fax: 865-525-9694  
Hotline: 865-521-9900  
E-mail: [recycle@discoveret.org](mailto:recycle@discoveret.org)

### Please, Join Us!

Your membership helps us to continue the following programs:

- **A full time CAC AmeriCorps Member Volunteer**
  - **Quarterly Newsletter & E-mail Updates**
    - **The Annual Recycling Guide**
    - **24 Hour Recycling Hotline**
    - **Website Maintenance**
- **Participation in Community Events such as Earth Fest**
  - **Quarterly Homeowner Paper Collections**
- **Presentations to community organizations, schools, and churches**
- **Presentations to community organizations, schools, churches**

# Knoxville Recycling Coalition



3624 Vandeventer Avenue  
Knoxville, TN 37919  
Website: [www.knoxvillerecycles.org](http://www.knoxvillerecycles.org)

Phone: 865-525-9694  
Fax: 865-525-9694  
Hotline: 865-521-9900  
E-mail: [recycle@discoveret.org](mailto:recycle@discoveret.org)

## The Purple Paper Eater People



## Market Square's Impact

Starting last spring, Market Square, Downtown Grill and Brewery, and Bacon & CO. all have been recycling their cardboard through a contract paid for by the City of Knoxville. The Knoxville Recycling Coalition picks-up the cardboard 3-4 times a week, then takes it to a local baling facility to shipped for recycling. Since the program started look what has been saved by recycling 89,755 pounds of cardboard:

**148.10 cubic yards of landfill space**

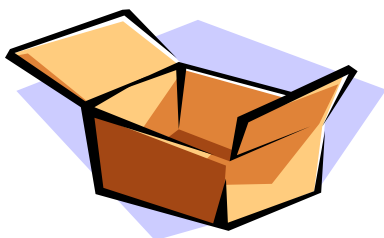
**762.92 trees**

**314,142.5 gallons of water**

**17,053.45 gallons of oil**

**184.00 mwh of energy**

**2,692.65 pounds of air pollutants**



## Boo at the Zoo



If you go to the Knoxville Zoo in October check out our "Recycle Scarecrow", it's behind the meerkats.