



Missouri Recycling Guide 2015

Missouri Recycling Association - www.mora.org - 1-866-667-2777

The Road Map to 75% Waste Diversion

- Sparks innovation in manufacturing
- Creates local jobs
- Strengthens Missouri's economy
- Reduces demand on global resources
- Reduces greenhouse gas emissions



MORA is leading the grassroots effort to set 75% as the next waste diversion goal. The 2015 Recycling Guide is the road map, with **each page a mile marker** to learn how and why the 75% goal will conserve resources and create jobs. Join us for the journey and become part of the Strive for 75% campaign.

MILE MARKERS

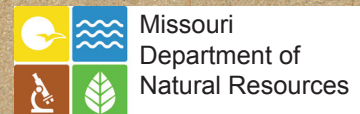
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2. Recycling in Missouri Today
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DRIVE FOR 75 DICTIONARY

- | | |
|---------|---------|
| 10. A-C | 11. C-E |
| 12. E-G | 13. H-L |
| 14. L-O | 15. O-P |
| 16. P-S | 17. S-Y |



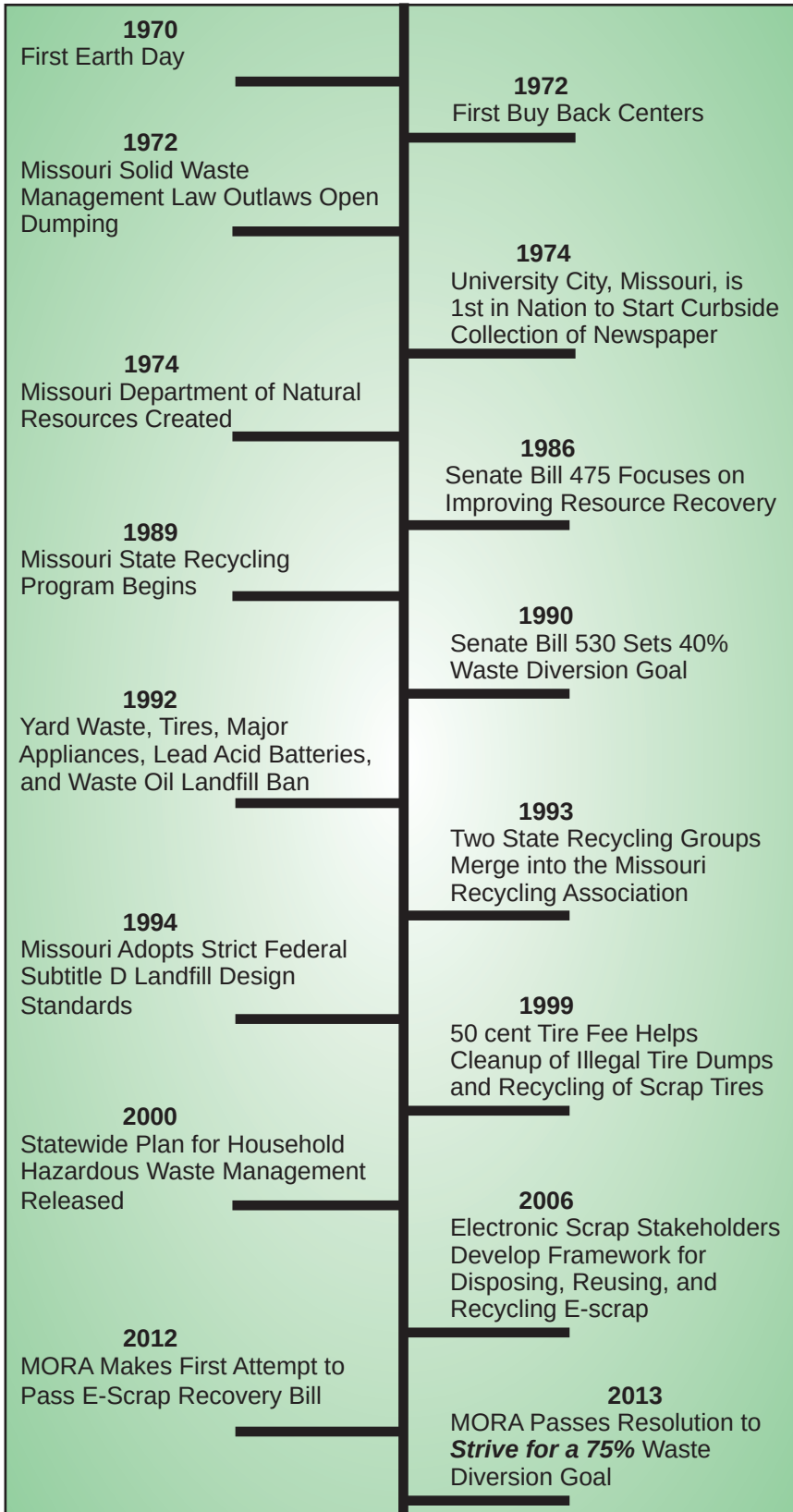
Funding for this guide provided by the St. Louis-Jefferson Solid Waste Management District, Region M Solid Waste Management District and the Missouri Department of Natural Resources.



This publication is printed on recycled content paper.

History of Recycling

In 1970, Missouri completed a two-year survey of statewide waste management practices, which revealed 457 authorized land disposal sites and 2,600 open dumps. 97% of the “authorized” sites were found to be contributing to air, land, or water pollution and all the sites permitted open burning. As the nation celebrated the first Earth Day, Missouri started working toward a solid waste system that strictly regulated solid waste disposal and called for plans to focus on waste reduction, resource recovery and recycling.



1970-1990 The first twenty years...

Increased regulation replaces dumps with 125 engineered landfills. The Environmental Improvement and Energy Resources Authority (EIERA) publishes 18 recommendations to increase resource conservation and recovery. Governor John Ashcroft announces the 1989 “Missouri Policy on Resource Recovery” directing government to apply the Integrated Solid Waste Management Hierarchy to maximize waste prevention. Finally, Senate Bill 530 passes, setting a 40% waste diversion goal establishing 20 Solid Waste Management Districts and a Solid Waste Management Fund to expand waste diversion on the local level.

1992-2013 The second twenty years...

The first grants to build recycling infrastructure were awarded in 1993 to 40 projects. As of 2013, more than \$22 million has been awarded and the EIERA has awarded 11 million dollars for recycling market development and technical assistance.

In 2013 the Missouri Department of Natural Resources reported that the state has 18 open sanitary landfills and that 7,801,244 tons of materials were reduced, reused, recycled and composted, giving the state a 57% waste diversion rate.

Looking forward to 75%...

A 2011 Tellus Institute study estimates that if the national waste diversion rate was increased to 75%, 1.5 million additional jobs would be created by 2030. Missouri has a great opportunity to create jobs and strengthen our economy by recovering the value from the estimated 48% of resources that are still going to landfills (2008 Missouri Waste Composition Study).

*Special thanks to the Missouri Department of Natural Resources 1999 publication “The State of Garbage in Missouri” for the historical information provided here.

Recycling in Missouri Today



Expands the Economy

- 25,000 Jobs in Missouri Recycling Industries ¹
- \$13.3 million total investment leveraged in recycling market development projects ²
- Over \$268,084 in avoided disposal costs in 2014 by recycling at State facilities ³



Strengthens Communities

- 500 Sheltered Workshop employees ⁴
- Builds public/private partnerships
- Fosters civic pride and volunteerism



Protects the Environment

- Recycling 25 plastic bottles saves enough energy to power an air conditioner for 2.1 hours ⁵
- Conserves water and natural resources
- Reduces greenhouse gas emissions

Recycling is a way of life in Missouri. Whether you are watching major league baseball at Busch Stadium, enjoying the State Fair in Sedalia, or tailgating at Mizzou, recycling is part of the experience. Our challenge is to capture the full development potential of the recycling industry. More infrastructure is needed in rural areas to make recycling more convenient. Targeting additional materials for diversion, such as organics, construction and demolition debris, electronics, and textiles across the state, will further increase jobs, payrolls, and tax revenues, to support and grow our economy.



The Missouri Recycling Industry



1. Martinich, University of Missouri-St. Louis, 2011

2. eiera.mo.gov/files/MMDP-FY14-Report.pdf

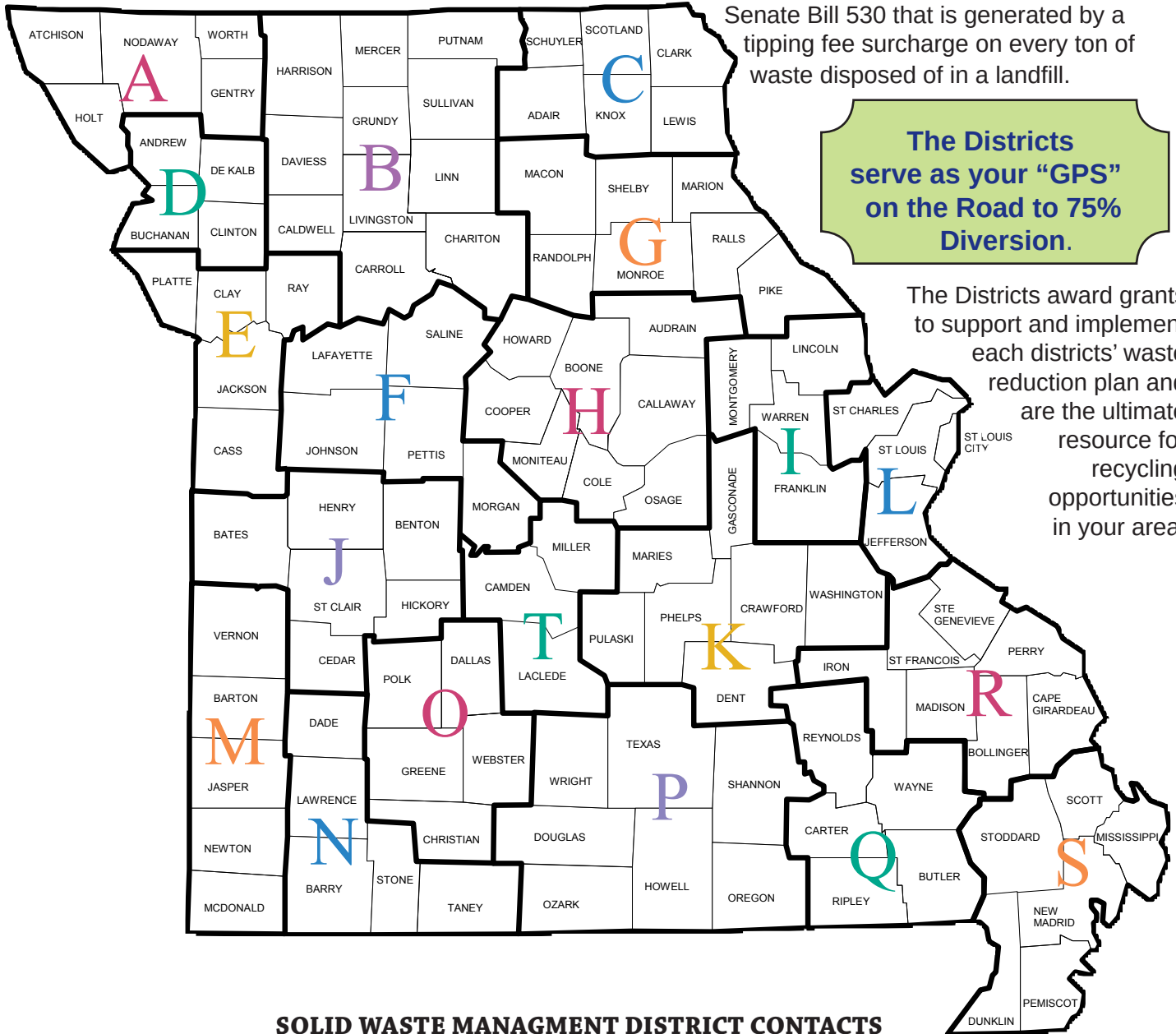
3. oa.mo.gov/sites/default/files/FY14_Annual_Report.pdf

4. www.moworkshop.org/latestfolder/recycling.html

5. www.epa.gov/wastes/conservation/tools/warm

Know Your Solid Waste Management District

Missouri has twenty Solid Waste Management Districts formed in 1990 to take a regional approach to solid waste planning. The Districts encourage entities within their boundaries to work cooperatively toward increased waste reduction. Financial support comes from the Solid Waste Management Fund established by Senate Bill 530 that is generated by a tipping fee surcharge on every ton of waste disposed of in a landfill.



SOLID WASTE MANAGEMENT DISTRICT CONTACTS

- [DISTRICT A](#) Ms. Linda Laderoute, 660-582-5121
- [DISTRICT B](#) Ms. Ann Hamilton, 660-359-5086
- [DISTRICT C](#) Ms. Sue Morton, 660-465-7281
- [DISTRICT D](#) Ms. Brenda Kennedy, 816-393-5250
- [DISTRICT E](#) Ms. Lisa McDaniel, 816-474-4240
- [DISTRICT F](#) Ms. Ruth Anne Parrott, 660-463-7934
- [DISTRICT G](#) Ms. Cindy Hultz, 573-565-2203
- [DISTRICT H](#) Ms. Deanna Trass, 573-874-7574
- [DISTRICT I](#) Mr. Chuck Eichmeyer, 636-456-3473
- [DISTRICT J](#) Ms. Kristi Kelley, 660-885-3393

- [DISTRICT K](#) Ms. Nongluk Tunyavanich, 573-265-2993
- [DISTRICT L](#) Mr. David Berger, 314-645-6753
- [DISTRICT M](#) Ms. Stephanie Campbell, 417-649-6400
- [DISTRICT N](#) Ms. Natalie Moseley, 417-236-9012
- [DISTRICT O](#) Mr. Bob Hamilton, 417-859-5786
- [DISTRICT P](#) Mr. John W. Murrell, Jr., 417-256-4226
- [DISTRICT Q](#) Mr. Matt Winters, 573-785-6402
- [DISTRICT R](#) Mr. David Grimes, 573-547-8357
- [DISTRICT S](#) Mr. Willard Adams, 573-614-5178
- [DISTRICT T](#) Mr. Kevin Rucker, 573-317-6376

Rethink Solid Waste: Sustainable Materials Management

“ReThink” is an Environmental Protection Agency (EPA) program that builds on the familiar model of Reduce, Reuse and Recycle by taking a systems approach over the entire lifecycle of a product (www.epa.gov/smm/). At each stage of a product’s life cycle (see diagram) resources and energy are consumed. Rather than focus only on end-of-life management, sustainable materials management strives to:

- Use materials in the most productive way with an emphasis on using less;
- Reduce toxic chemical and environmental impacts through the material life cycle;
- Assure we have sufficient resources to meet today’s needs and those of the future.

From extraction to end-of-life management, consumers can play an important role in reducing the environmental impact of our “stuff”. Here are some action steps to take at each stage of the life-cycle.



Life-Cycle Stage	Action Step	Why
Materials Extraction	Buy Recycled Content	Using recycled materials conserves resources and the energy it takes to drill, mine, and harvest resources from the earth. By demanding recycled content products, consumers encourage the use of recycled materials in manufacturing.
Manufacturing	Reduce- Buy Less Stuff Ask these questions: Do I need it? Can I borrow it? Can I reuse it? Is it built to last? Can I buy it in bulk?	EPA reports that 42% of U.S. greenhouse gas emissions are associated with the energy it takes to produce, process, transport and dispose of our food and goods. Practice source reduction and choose items that are durable, not over-packaged. Limit single-use items and buy used whenever you can.
Distribution	Shop Local	Supporting businesses that use local suppliers and choosing locally grown produce reduces energy consumption associated with distribution.
Usage	Power Down	Most energy sources come from non-renewable resources and create emissions that impact climate change. Choose energy efficient products and learn more about energy conservation by visiting www.energystar.gov
End-Of-Life Management	Reuse Recycle/Compost	Minimizing what is sent to the landfill reduces demand on global resources, saves energy, and creates local jobs.

EPA Consumer Resources To Reduce Environmental Impacts

Energy Star- www.energystar.gov

Certifies energy saving products.

Safer Choice- www2.epa.gov/saferchoice

Certifies safer chemical ingredients in cleaners and other products.

Water Sense- www.epa.gov/watersense

Certifies products that are at least 20% more water efficient.



Recycling Basics: Drop-off Commodities

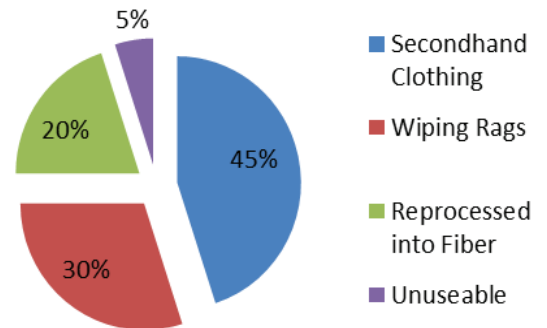
Some of the most common and important recyclables are not collected curbside or with collection programs that accept soda bottles, milk jugs, paper, and cans. A small trip to a local collection bin or scrap yard keeps these resources out of the landfill, creating jobs that support the local economy.

Textiles and Shoes- The Secondary Materials and Recycled Textiles Association reports 85% of clothing, footwear, household textiles, and accessories that are out of style, worn, torn, stained, or just no longer useful end up in a landfill. 95% of those items could have a second life



through donation to charities and/or dropped off at convenient collection boxes. Textiles are sorted, graded and baled for reuse as apparel in the secondhand clothing industry, processed into industrial wiping rags, or reprocessed into basic fiber to create furniture stuffing, home insulation, automobile sound-proofing, carpet padding, etc. To find a textile recycler in your community visit: www.smartasn.org/consumers/recycling.cfm.

Recovered Textile Uses



Scrap Metal – Metal recycling has occurred for centuries and most communities have a metal buyer, scrap yard or the old fashioned junk yard that accepts and often pays for metal items. The payout received depends on weight and the type of metal. Ferrous metal (iron and steel that will stick to a magnet) has a lower value than non-ferrous metal (aluminum, copper, lead, nickel, tin, zinc and others). According to the Institute of Scrap Recycling Industries (ISRI) ferrous metals are the most recycled material in the U.S. and worldwide. Non-ferrous metals can be recycled over and over again and used in electronic devices, automobile batteries, siding, airplane parts and beverage containers. Scrap processors sort, shred, and bale scrap to commodity-grade specifications. Modern shredders allow whole cars, appliances and other items to be quickly shredded into fist-size pieces of metal.



Glass- Glass can be recycled endlessly without loss in quality or purity. Glass jars and bottles are crushed into small pieces called “cullet”. The cullet is mixed or “batched” with sand, soda ash, and limestone and heated to temperatures as high as 2800 degrees F for

forming into the desired shape. The Glass Packaging Institute reports that bottle-to-bottle recycling is the “highest and best use of recycled glass”. This requires a consistent supply of high quality cullet, without contamination from non-container glass, metal, gravel and dirt. In many parts of Missouri, glass is not accepted in mixed recycling programs (curbside and/or comingled drop-off) and is collected in glass-only bins to keep the cullet free from contamination. Glass containers collected in mixed recycling programs are used in secondary applications such tile, filtration media, sandblast media, and in pavements. Pyrex glass, light bulbs, and ceramics have different melting points and should not be recycled through glass container programs.

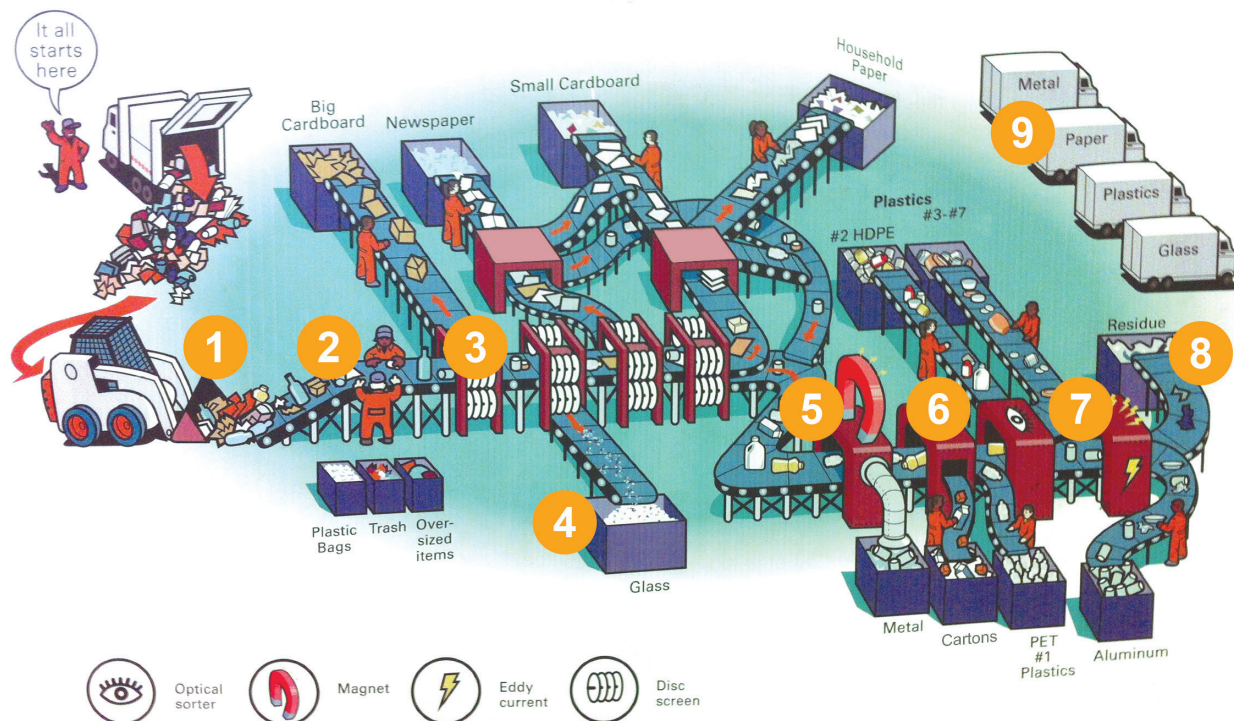


Recycling Basics: Sorting and Processing

Whether recycling is collected curbside or driven to a community collection center, sorting and processing involves a network of people, technology and equipment working together to prepare the recycling for end-use markets. Sheltered workshops, recycling centers and automated material recovery facilities represent the most common methods used in Missouri to turn individual containers, paper and boxes into sorted bales ready for transport to end-markets.



Sheltered Workshops	Rural Recycling Centers	Material Recovery Facilities (MRF)
<p>Recycling and reuse provide dignified and meaningful employment for persons with disabilities in 34 Missouri Sheltered Workshops. The recycling efforts are conducted as stand-alone operations, private/public (municipal) contracts or a combination of both. Workshops collect, sort and bale over 18,000 tons of material per year, including cardboard, textiles, office paper, newsprint, plastics, ferrous metals, wood and aluminum.</p> <p>www.moworkshops.org</p>	<p>Often operating with a shoe-string budget, recycling centers in the rural part of the state may rely on the hard work of volunteers and the determination of people to drive many miles to recycle. Helping the community by either making or saving money, rural recycling centers also bring people together to work for a common cause.</p>	<p>The MRF (pronounced “murf”) can range from a recycling center that sorts everything by hand to a state-of-the art processor where machinery can process 30 tons of recycling in an hour. Follow the steps below to see how a combination of gravity, magnets, and technology sort recycling at automated MRFs.</p>



MRF diagram courtesy of the City of Calgary Waste and Recycling

- Step 1:** Recycling is pushed onto a conveyor belt.
- Step 2:** Material is presorted to remove items that don't belong or could damage the machine.
- Step 3:** Disc screens and gravity are used to separate containers from paper. The screens “float” the paper and cardboard for sorting.
- Step 4:** Glass drops off the conveyor belt into a container.
- Step 5:** Strong magnets are used to remove steel and tin.
- Step 6:** Plastic and cartons are sorted by a series of optical scanners that use near-infrared spectroscopy to identify the

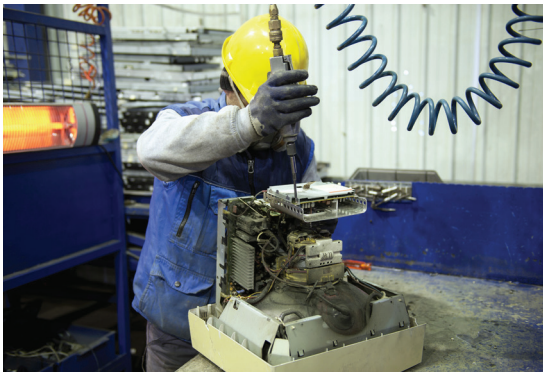
- material in the container.
- Step 7:** Aluminum cans are separated using an eddy current. A magnetic field is created that gives metal particles in the aluminum kinetic energy. The energy causes the cans to literally jump off the conveyor belt.
- Step 8:** Any remaining material is residue that goes to a landfill.
- Step 9:** Materials are then baled and shipped to end markets to be processed into new products.

Looking Forward: E-Scrap

E-Scrap Management

Old consumer electronics (CE) are not garbage and they are not useless. Called e-scrap at the end of their useful life, proper management of CE is important for the following reasons:

- Electronics contain toxic components such as lead, cadmium, mercury and flame retardants.
- Electronics hold personal information that requires secure data destruction to prevent identity theft and cybercrime.
- Production of electronic devices is a very resource



-intensive activity. A UN study found that the manufacturing of a computer and its screen takes 530 pounds of fossil fuels, 48 pounds of chemicals and 1.5 tons of water. Landfilling CE wastes these embodied resources in addition to the plastics and precious metals that can be used to make new products.

- Landfilling squanders opportunity to create jobs. According to the Coalition for American Electronics Recycling, every 172,000 pounds of electronics recycled creates one job directly and indirectly creates two additional jobs.

e-cycle Missouri

e-cycle Missouri is a Missouri Department of Natural Resources program created to establish a set of Best Management Practices for e-scrap. Through the [e-cycle Missouri](#) website, companies that collect and process e-scrap register using Voluntary Tiered Registration Levels. Each level represents an increased commitment to follow MOEST (Missouri E-cycling Standards). Businesses and residents can use the website to find options to properly reuse or recycle electronics.

e-cycle Missouri is an excellent resource, but each business and individual should practice due diligence to assure data security and proper management of e-scrap. Questions that should be asked include:

1. What does the organization do with the equipment? Do they refurbish it? Do they dismantle it? Are components bundled for recycling or are they sent to a landfill?
2. Do they offer secure data destruction?
3. Do they have the necessary state and local permits for handling hazardous materials and end-of-life electronic equipment?



E-scrap Legislation

MORA is working to get legislation passed that will ban the disposal of residential and small business electronics in landfills. A key component of MORA's e-scrap legislation is a fee structure assessed upon the original equipment manufacturers of electronic devices. This fee will help to build infrastructure in the areas of Missouri where there are no electronic recycling processors or collectors and/or to assist with collection. In addition to conserving resources, passage of a residential and small business electronics ban will create jobs.

E-scrap Facts

- Research by the Consumer Electronics Association in 2013 found that the average U.S. household has 28 CE products ranging in size from headphones to televisions. Further sales of smartphones and tablet computers have driven annual consumer electronics sales to over \$206 billion in 2012.
- The 2010 EPA e-waste report revealed 142,000 computers and over 416,000 mobile devices were disposed of every day.
- According to the EPA, recycling 1 million cell phones recovers 50 pounds of gold, 550 pounds of silver and 20 pounds of palladium.

Looking Forward: Organics

Organics (yard wastes, food wastes, manures, soiled papers, wood, etc.) are materials that can be composted into a useful product to enrich soil. When organics are composted, instead of landfilled, it helps reduce methane and leachate formulation in landfills.



According to a 2014 study completed by the Institute for Local Self-Reliance, organics can comprise one-third to one-half of the solid waste stream, providing opportunity to increase waste diversion through comprehensive composting. The study reports a handful of states have started to ban all organics from landfills and that Missouri is one of 20 states that ban yard waste from landfill disposal (unless the landfill is classified as a bioreactor landfill). The yard waste ban has been very successful in generating both beneficial compost and creating over 3,000 jobs for Missourians. Food waste is the next big challenge in organics diversion.

The EPA estimates that 3,000 pounds per second is wasted each year in the U.S. With over 1,000,000

Missourians struggling to provide enough food for their families, we need to rethink food waste. The EPA's Food Recovery Challenge provides practical ideas and resources to assist homes, food processors and restaurants save money and prevent food waste. The first priority is to practice **Source Reduction** (not to create waste in the first place) though smart

purchasing and proper food storage. If food remains, the next priority is to **Feed Hungry People** by donating surplus food to food banks, soup kitchens and shelters and to **Feed Animals** by diverting food scraps to animal feed.



EPA #NoWastedFood
Reduce wasted food
Get Less Food
Buy only what you need
Feed Hungry People
Donate extra food to food banks, soup kitchens, and shelters
Compost
Compost food waste into rich soil
FOOD RECOVERY WEEK OF ACTION: NOV. 17-21
www2.epa.gov/Food-Recovery-Week

Disposal of food that can't feed people or animals should start with **Industrial Uses and Composting**. Industrial uses include providing oils for rendering and fuel conversion and food scraps for digestion to recover energy. The last resort for food disposal is **Landfill and Incineration**.

Composting uses microorganisms to decompose organic material into a dark, earthy material. In addition to large scale commercial facilities other methods include:

Anaerobic Digestion is an emerging technology for onsite composting of food and other organics that uses anaerobic (without oxygen) microorganisms to break down materials in a closed system. The process produces biogas (methane and carbon dioxide) that can be used as an energy source.

Back Yard Composting turns yard waste, fruit and vegetable scraps into compost.

Vermicomposting (also called vermiculture), is where organic plant wastes are broken down by worms creating worm castings that are a nutrient rich and natural fertilizer.

To learn how to backyard compost, visit the Missouri Department of Natural Resources Home Composting page at

www.dnr.mo.gov/env/swmp/composting/compost1.htm



Benefits of Using Compost

Increasing composting provides a resource that can be applied to reverse soil depletion that occurs during erosion and the development of land.

The Composting and Organic Association of Missouri (COAM) describes the benefits of using compost as follows:

- Improves the soil structure, porosity, and density, thus creating a better plant root environment.
- Increases the infiltration and permeability of heavy soils, thus reducing erosion and runoff.
- Improves water holding capacity, thus reducing water loss and leaching in sandy soils.
- Supplies a variety of macro and micronutrients and significant quantities of organic matter.
- Improves Cation Exchange Capacity (CEC) of soils and growing media, improving their ability to hold nutrients for plant use.
- Supplies beneficial microorganisms to soils and growing media.
- Improves and stabilizes soil pH.

www.coam-mo.com

Looking Forward: Waste is Not Inevitable

Setting a new 75% Diversion Goal means committing to the principle that most discards are potentially valuable resources. Trash becomes the small amount of residue left after reducing, reusing, recycling and composting everything else. In addition to increasing e-scrap and organics diversion, here are some other statewide strategies that will help reach a 75% waste diversion rate.

Increase Construction and Demolition (C&D)



Material Recovery

Concrete, shingles, wood, metals, glass and salvaged building components are a few of the resources that can be recovered in construction and demolition activities. As we know too well here in Missouri, natural disasters also can create large amounts of C&D

wastes. The infrastructure in Missouri is growing to give homeowners and contractors more options to follow the principles of LEED (see below). Setting a 75% waste diversion goal will provide resources and education to develop markets and enable best management practices for C&D recovery.

What is LEED?

The U.S. Green Building Council has established national standards for environmentally sound building design and construction. These LEED (Leadership in Energy and Environmental Design) standards are being widely applied across the building industry, in both commercial and residential developments.

LEED is a point-based rating system used by building professionals and owners to guide building, project planning, and implementation. For certification, rigorous documentation is required. But if certifying is not a goal, the LEED standards can be applied as best practice guidelines, to make any building a more energy efficient, healthier and more sustainable working or living environment.

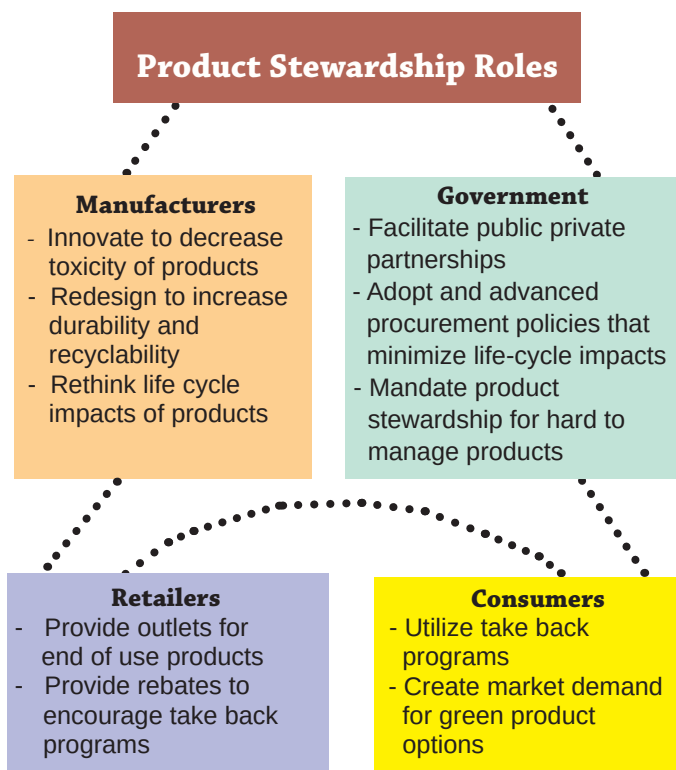
Recycling and waste reduction practices are integral to the LEED criteria. Establishment of a collection system for all commonly recycled commodities is a non-negotiable requirement for earning LEED certification for any commercial building. Optional LEED points may be earned by:

- Documenting diversion of construction and demolition waste.
- Purchasing recycled-content furnishings, office supplies, and building materials.
- Using salvaged or reconditioned building materials.
- Documenting percentages of waste diversion through recycling or composting, relative to daily practices of building occupants.
- Documenting recycling of special wastes such as light bulbs, batteries, shipping pallets, etc.
- Documenting composting of landscaping waste during construction, and routine maintenance.

www.usgbc.org/

Adopt Principles of Product Stewardship

To ensure adequate collection systems to manage toxicity and landfill diversion for consumer products, the principles of product stewardship promote a “cradle-to-grave” approach. This strategy enables all who are involved in a product’s lifecycle to share responsibility for reducing the environmental impacts of products. Though manufacturers have the most control over how consumer goods are produced, marketed and sold, consumers and retailers play a role too.



When product stewardship is mandated by law, it is called Extended Producer Responsibility (EPR). EPR requires manufacturers to implement take-back programs or advance disposal fees on the purchase of hard-to-manage products such as batteries, carpet, electronics, fluorescent lights, gas cylinders, mattresses, mercury containing devices, paint, pesticides, and pharmaceuticals. EPR lessens the end-of-life financial burden on both government and consumers and increases diversion of these products.



Drive for 75 Dictionary



The "Drive for 75" Dictionary is a listing of terms, facts and information about recycling in Missouri. However, **it is important to remember that like real estate, recycling is all about location, location, location.** Every program has guidelines for what is accepted based on local markets and processing capabilities. Always check with your hauler, municipality, or Solid Waste Management District (MM 3) to confirm what is accepted in your program.

A

Aerosol Cans: Empty aerosol cans be recycled in programs that accept steel or aluminum containers. FULL or partially full aerosol cans that contained paint, solvents or other chemicals should be managed as Household Hazardous Waste.

Aluminum: Extracted as bauxite ore and refined alumina that is cast into aluminum ingots. All the bauxite in the United States has been mined, requiring import of the ore to meet the demand for aluminum. Fortunately, aluminum can be recycled endlessly into new cans or other products.

Art: Discards, scraps and recyclables are used as materials for sculpture, crafts and art pieces through upcycling and creative reuse.



B

Bags: If you find yourself with paper or plastic bags that can't be reused, here are some general guidelines for recycling:

- Paper: In general, a paper bag can be recycled with newspaper and programs that accept mixed paper.
- Plastic: Grocery bags, vegetable bags, bread bags are also recyclable by returning them to grocery stores. The bags are baled together and made into new bags or plastic lumber. Do not put plastic bags of any kind in single-stream recycling, as the bags can create havoc on automated sorting equipment.

Banned Items: Major appliances, whole tires, waste oil, lead acid batteries and yard waste were banned from landfill disposal in 1992 as part of the strategy to achieve a 40% waste diversion rate.



Baler: A piece of equipment used to compress material into bales, thus improving storage, handling and transportation efficiencies.

Batteries: 3 billion batteries are thrown away in America every year. Investing in rechargeable batteries reduces waste because most rechargeable batteries can be recharged up to 1,000 times. Recycling options are abundant for rechargeable batteries through Call2Recycle. Visit www.call2recycle.org or call 1-800-8-BATTERY for locations.

There are fees to recycle single-use batteries because the process to recycle them exceeds the market value of the recovered material. Mail back options include:

- www.ThinkGreenFromHome.com
- www.BatteryRecycling.com
- www.BigGreenBox.com

If a battery was manufactured after 1996, and you do not want to pay to recycle them, you can safely dispose of single-use batteries in the trash.

Bicycles: Cycle Recycle! There are many programs to reuse bikes for parts and restoration. Some programs have kids do the restoration while they learn a valuable skill and earn a free bike for their efforts.



Biodegradable: Materials that decompose or break down quickly under natural conditions or processes.

Books: Libraries, schools, thrift stores and book drives appreciate donations of books. Drop off programs like www.betterworldbooks.com collect books to send to those in need. If the book is outdated these programs recycle them.



Buy Recycled: Purchase of recycled content products creates demand for products made from materials collected in recycling programs, and less demand on natural resources. For business, farm and home buy recycled products made in Missouri! Find them at www.eiera.mo.gov/mmdp-recycled-products-directory/

C

Cardboard: Also known as old corrugated cardboard (OCC) cardboard is unbleached paper formed using linerboard and an inner fluted paper. Corrugated cardboard is the most-recycled packaging material on earth, with a recovery rate of about 73 percent.



In the past, cardboard with a moisture barrier (wax coating) could not be recycled because the coating inhibited the pulping process. The industry has developed recyclable alternatives to wax coatings that are now commercially available. Cardboard with wax coating should not be recycled unless it carries the Corrugated Recycles symbol that certifies the coating is re-pulpable and recyclable.

Carpet: When buying new carpet ask your installer if they collect the old carpet and padding for recycling. Large amounts of commercial carpet and padding can be recycled, visit www.carpetrecovery.org for locations. Donate gently used carpet to Habitat for Humanity Reuse Stores.

Cartons: Juice, milk, broth, and wine cartons are made from paperboard as well as thin layers of plastic and/or aluminum. So even though it would appear they would be recycled as paper, they actually are sorted with plastic containers at recycling processors. To find out if carton recycling is available where you live, visit www.recyclecartons.com

Cartridges (ink): Deposit empty ink and toner cartridges in collection bins located at many retail stores that sell new cartridges, or recycle them by using postage-paid envelopes that many manufacturers include with their product. Visit www.inkguides.com for more recycling options.

Chasing Arrows: Three arrows that form a Mobius strip (an unending single-sided looped surface) was created in 1970 through a high school and college design contest sponsored by Smurfit Stone Container. The entry from Gary Anderson, a 23-year-old college student at the University of Southern California, is now known as a universal recycling symbol called the “chasing arrows”.



Christmas Lights: There is valuable copper wire in lights. Be sure to recycle non-working lights. Collection drives are held every holiday season (not accepted curbside).



Close-the-Loop: A term used to represent buying recycled-content. It builds on the three arrows in the chasing arrows that represent the three key components of recycling: collection of materials, manufacturing of materials into new products, and consumer purchasing. You are not truly recycling until you “close-the-loop” and buy recycled content.

Commingled: Mixing plastics, papers, metals and glass together in one container for sorting later.

Compact Fluorescent Lights (CFLs): CFLs use one-fifth to one-third the electric power, and last eight to fifteen times longer than incandescent bulbs. They do contain a small amount of mercury but can be recycled through retail outlets and Hardware Stores.

Composting: Nature’s way of recycling, it is the biological process of breaking down organic waste by microorganisms, fungi and actinomycetes in the presence of oxygen. The final product, called compost, is a humus-like substance that is a nutrient-rich soil amendment.

Construction and Demolition Wastes: 50% of waste generated during construction and demolition activities could be reused, recycled or composted. Examples include shingles, wood, unused drywall, metals, concrete and cardboard.



Curbside Recycling: Community recycling that involves residents placing recyclables at curbside in designated bins or carts for regularly scheduled pick-up.

D

Deconstruction: An alternative to demolition, deconstruction removes a structure into re-useable components, not into dumpsters.

Demanufacturing: Electronics, appliances, ink cartridges and automobiles are just some examples of consumer products that are demanufactured. The goal is to disassemble and recycle every usable component rather than discarding it into a landfill and wasting otherwise reusable materials.

Districts: Not sure how, what or where to recycle? Need grant funding for a waste diversion project? **Call your local Solid Waste Management District (see page 3).** The 20 districts are there to help your region maximize waste diversion and recycling.



Drop-off Recycling: A method to collect non-traditional items for reuse and recycling, such as books, textiles, shoes, in addition to traditional recyclables.

Dual-Stream Recycling: A collection process that separates paper products from other recyclables reducing the contamination of the paper.



E

Earth 911: Guide to local resources including recycling centers, how to recycle, pollution prevention and how help protect the environment. www.earth911.com



End Users: Businesses and manufacturers that buy recyclable materials and convert them into new products.

Environmental Improvement and Energy Resources Authority (EIERA): EIERA is committed to provide solutions that help Missouri and the environment thrive through finance, research and technical assistance. The recycling market development loan program is administered by www.eiera.mo.gov

Environmental Protection Agency (EPA): The EPA is a federal agency whose mission is to protect human health and the environment by developing and enforcing regulations, giving grants, studying environmental issues and sponsoring partnerships. www.epa.gov

E-scrap: An informal name for electronic products nearing the end of their “useful life.” Also called e-waste, examples include computers, televisions, tablets, cell phones, copiers, music players, and fax machines. E-scrap is one of the fastest growing waste streams in the U.S. and the world.



WiFi Zone

Eyeglasses: Donate your eyeglasses to the Lions Club and give the gift of sight to someone in need. Collection boxes are located in many communities or use their mail program. www.lionsclub.org

F

Farm: Missouri recycled plastics can be found on the farm in the form of fence posts, hay bonnets, and cattle feeding stations.



Ferrous Metals: Magnetic metals predominantly composed of iron, like steel.

Feedstock: Raw materials used for manufacturing. For example, mixtures of plastics become petroleum feedstock that can be used for making new products.

Fiber: An industry term to describe paper products (boxes, newspaper, office paper etc.). The term stems from the cellulose fibers in trees, flax, bamboo, hemp, cotton and other plants used to make paper. Virgin cellulose fibers are stuck together with a natural glue “lignin” that has to be separated from the cellulose fibers during the paper pulping process. Recovered fiber from recycled paper has already gone through this process, so creating a pulp for new paper takes significantly less energy, water and chemicals. Paper fibers become shorter and weaker each time they are processed, so the paper you write on often becomes the tissue for wiping a nose when it is recycled.

Fire Extinguishers: Check with your local fire district to see if they will recycle your fire extinguisher. Household Hazardous Waste programs often accept full or partially full units. Empty units can sometimes be refilled for a small fee.



Fluorescent Lights: Reduce the need to replace fluorescent tubes by not using them in buildings that get very cold, such as unheated garages or basements. These bulbs contain mercury and should not be disposed of in the trash. Most Household Hazardous Waste programs accept fluorescent lights for recycling.

Fundraising: Recycling textiles, shoes, cell phones, paper, and ink jet cartridges are common and easy fundraisers throughout the state for schools and organizations who host collection boxes or bins.

FOG: The acronym for fats, oils, and grease, recycled FOG is filtered, de-watered, and processed into “yellow grease” that can be processed into biodiesel fuel.

Furniture: Old office furniture is turned new in multiple refurbishing locations throughout Missouri. Thrift, charity, and surplus stores offer options to give gently used furniture new life with a different family, sometimes with a tax credit for the donor.

G

Gasoline: Avoid having leftover gas by using it all up at the end of the mowing season and storing it safely away from freezing temperatures. Old gasoline can be mixed in a 1:5 ratio (new: old) and used again. Gasoline can be blended into alternative fuels by taking it to a Household Hazardous Waste program.



Gaylord: A large, reusable container for storing and shipping recyclable materials.

Generator: Anyone who produces waste or recyclables is a generator. The EPA estimates every person in the U. S. generates 4.3 pounds of waste per day, 1.6 pounds more than the average in 1960.

Grants: Sheltered Workshop Recycling Center Grants, Scrap Tire Surface Material Grants, Scrap Tire Cleanup Grants and Solid Waste Management District Grants are examples of the financial assistance provided through the Missouri Department of Natural Resources Fund that helped Missouri meet the 40% waste diversion goal in 2001.

Grass cycling: Skip the bag habit and mulch grass clippings, a valuable source of nitrogen-rich organic matter. When mowing, remove no more than one-third of the total plant height so that the clippings are small enough to sift back down into the turf and break down quickly, thus returning valuable nutrients back to the soil. Using a mulching lawn mower or simply converting your existing mower with a mulching attachment is an easy way to practice grass cycling.



Greenhouse gas: Any gas that absorbs infrared radiation in the atmosphere, including carbon dioxide and methane, the major components of landfill gas. Solid waste reduction saves energy by reducing the need to extract raw materials, more efficient processing, and decreased transportation. Saving energy decreases the generation of greenhouse gases which contribute to climate change.

Greenwashing: To sell a product or policy disinformation presented to the public to create a false environmentally responsible public image. Beware of words on consumer products like organic, forest friendly, and green that could be greenwashing if not substantiated elsewhere on the label. www.sinsofgreenwashing.org.

H

Household Hazardous Waste: Many products around the home are hazardous because they contain chemicals that are toxic, corrosive, flammable or reactive. Examples include lawn and garden products, automotive fluids, pool chemicals, paints and thinners, etc. Though safe when used according to label directions, when no longer usable or wanted, they become household hazardous waste (HHW). Avoid creating HHW by:



1. Buy only as much of a product as needed and use products up entirely when possible.
2. Store properly to maintain them in useable condition.
3. Share or swap leftovers with others who can use them.
4. Recycle whenever you can.

Although HHW can legally be disposed in the trash, the best practice is to dispose of your waste at an HHW collection event or permanent collection facilities.

Visit www.dnr.mo.gov/env/swmp/hhw/hhw.htm for collection options in your area.

Hangers: Reuse hangers by returning them to dry cleaners. Thrifts stores may also accept hangers for reuse. Metal hangers can be recycled by metal scrap dealers.

Hauler: Private companies or municipal entities that collect and haul trash, recycling and yard waste from the point of generation to the disposal facility or processor.



Hearing Aids: The Lions Club and Knights of Columbus sometimes collect hearing aids for reuse. Sertoma is a service organization that helps people with hearing loss. You can mail hearing aids to them to be refurbished and distributed to those who need them. Visit www.sertoma.org for details.

High Grade Paper: Office paper and computer printouts are examples of paper that have higher value than other grades of paper. Yes, in recycling the paper is graded too.

Hospitals: Hospitals generate enormous amounts of waste every day. On average, medical waste is five times more expensive to discard than solid waste. Hospitals are among the many institutions in Missouri starting recycling programs to save money and to demonstrate environmental stewardship.



I

I.C.I.: An acronym that stands for Industrial, Commercial and Institutional recycling sector.

Industrial: Industrial wastes can be reclaimed in the manufacturing process or used as “pre-consumer” content when recycled into a different product. Industrial scrap is also reused in Missouri for innovative learning applications and art projects.

Infrastructure: Container and collection systems used to ensure it is as easy to recycle as it is to throw something away.

Ingots: Aluminum and steel cans are made from ores that need to be extracted, refined, smelted and then cast into shapes called ingots. The shape is designed to aid the injection of the ingot in the re-melting process. Recycled cans skip the mining, refining, and smelting steps. They simply are cast into ingots, saving 95% of the energy it takes to process virgin ores.

Institutional: Colleges, universities, schools, medical and government campuses comprise the institutional component of ICI sector. In Missouri, institutions are often the champions of recycling in their community, modeling best practices to divert waste that can be adopted by other businesses.

J

Junk Mail: Opt out of receiving junk mail by enrolling in the National Do Not Mail List at www.directmail.com/mail_preference/

K

Kilns: Gasoline, waste oil and kerosene are examples of products collected at Household Hazardous Waste programs that are blended into alternative fuels for kilns that produce Portland cement. Combustion of hazardous waste in cement kilns is regulated by stringent technology-based standards under the Clean Air Act, which limits emissions of hazardous air pollutants.

Kraft Paper: Heavier paper used for grocery bags, construction paper etc. are made by a chemical pulping process known as “Kraft.” Chemicals are used to separate lignin from the cellulose fibers to make a stronger paper.

L

Landfills: The modern landfill is a highly regulated and engineered facility designed to minimize impact from decomposing trash. Siting a new landfill is difficult and expensive, which is why it is important to preserve landfill space for wastes that cannot be reduced, reused or recycled.



Landfill Gas: As a by-product of decomposition, landfill gas is practically 50% methane and 50% carbon dioxide, with trace amounts of nitrogen, oxygen, and hydrogen sulfide that gives the gas its characteristic odor. Landfill gas must be removed from the landfill using an extraction system of pipes and flares. Often the gas is used for beneficial use as an energy source.



Landfill Mining: Excavating buried wastes to recover recyclables is an industry that is growing in Europe and the U.S. It is much more cost effective not to bury waste in the first place.

Leachate: The liquid generated when precipitation and liquids disposed of in trash seep through the waste. Often acidic, this liquid can “leach” out heavy metals and other pollutants. Liners and leachate collection systems are used to keep leachate from contaminating groundwater, rivers and streams.

Life Cycle Assessment (LCA): LCA is a cradle-to-grave analysis to assess environmental impacts associated with all the stages of a product’s life including raw material extraction, materials processing, manufacture, distribution, use, repair, maintenance, and disposal or recycling.



M

Markets: Recovered materials are commodities that are bought and sold in the global market place. Recycling markets vary by region and what is economically viable in California to recycle, may not be viable in Missouri. Following the 2008 market crash, recycling markets were among the first to recover, a strong indication of how vital recycling commodities are to our economy.



Mattresses: Mattresses take up a large amount of landfill space and can take hundreds of years to properly decompose. When deconstructed into wood, foam, cloth, and wire springs a mattress can be recycled. Opportunities currently are limited, but new programs are starting. Before tossing a mattress in the landfill, a quick internet search may reveal a recycling option.



Medical Equipment: Before discarding or recycling used equipment like wheelchairs, crutches, tub benches, walkers etc. look for donation programs to help those in need.



Medicine/Pharmaceuticals: It is important **not** to flush drugs of any kind down the drain. Studies have shown pharmaceuticals are a growing presence in our lakes, rivers and groundwater. Drug take back programs are sponsored through pharmacies and law enforcement agencies. To find a location near you, visit www.takebackyourmeds.org.

If you must dispose of medicines in the trash, take the drugs out of the original containers and mix drugs with cat litter or coffee grounds. Put the mixture in a disposable container with a lid or a sealed bag.

Missouri Department of Natural Resources (MDNR): Created in 1974, the mission of MDNR is to protect, preserve and enhance Missouri’s natural, cultural and energy resources.

Missouri Recycling Association (MORA): The mission of MORA is to lead Missouri toward environmental sustainability through waste reduction and recycling.

MDNR Solid Waste Management Program (SWMP):



SWMP assures solid waste in Missouri is managed to protect both public health and the environment. SWMP oversees the Solid Waste Management Fund. SWMP also issues permits to solid waste facilities and assures operations comply with state regulations.

Mixed Paper: Paper of various kinds and levels of quality, including stationery, notepads, manila folders, and envelopes collected in commingled recycling.

Municipal Solid Waste (MSW): The EPA defines MSW as “everyday items we use and then throw away, such as product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, appliances, paint, and batteries. This comes from our homes, schools, hospitals, and businesses.”

N

National Events: Celebrate Recycling! Many communities celebrate Earth Day the entire month of April, but the official day is April 22. America Recycles Day is celebrated on November 15. Keep America Beautiful offers a multitude of resources to make the day special. Visit www.americarecyclesday.org

Newspaper: Known as ONP (old newsprint) in the recycling industry, newspaper is made from low-grade paper and most newspaper today contains recycled-content. Recycling one ton of newsprint saves 17 trees.

Non-Ferrous Metals: Metals which contain no iron, such as aluminum, copper, brass, and bronze.



Non-Renewable Resource: Resources that do not regenerate or do not regenerate quickly enough to serve human purposes are non-renewable or finite. Examples include fossil fuels such as coal, oil and natural gas. Although these resources form naturally within the earth, they take billions of years to do so. Other non-renewable resources include metal ores like iron and bauxite. Recycling helps conserve these finite resources.

O

Organics: Carbon-based matter that has come from a once-living organism is capable of decay or being the product of decay. Organics, including food waste, wood, textiles and diapers comprised 32% of waste in Missouri landfills according to a 2008 waste composition study.



Outdoor Equipment: Decks, picnic tables, park benches, fire starters, birdfeeders, playground mats and equipment are just a few of the outdoor items made of recycled-content in Missouri.



P

Packaging: Packaging constitutes as much as one-third of non-industrial solid waste! There is a growing call for manufacturers to eliminate toxic constituents, use less material, make packaging more reusable, use more recycled content, and make packaging more readily recyclable.

Packing Peanuts: Made of expanded polystyrene, the best end use for packing peanuts is reuse. Keep a bag in a dry place and collect the peanuts until you need them or return to mail stores for reuse. For locations visit www.EPSpackaging.org or call 1 (800) 828-2214.

Pallets: Damaged pallets can be reused for any small project requiring wood and repurposed into compost bins, furniture and sheds. There are many businesses that also refurbish pallets that are damaged. Before buying new pallets, check out the Missouri Pallet Recycling Exchange at www.palletbuyersguide.com/cgi-bin/freexchange. Pallets can also be ground for composting and mulch applications.

Paint: Roughly 1.3 million gallons of paint go unused each year in Missouri (Product Stewardship Institute). The burden to properly manage discarded paint typically falls on government Household Hazardous Waste programs. A statewide product stewardship program, where paint was managed by manufacturers would mean Missouri would gain a total benefit of over \$10 million annually.

Paperboard: Heavy weight grades of paper made from wood fiber, recycled paper stock or a combination of both are made into cereal boxes, soda cases etc. Paperboard-construction differs from cardboard in that it is lighter and only has one layer.

Pay-As-You-Throw: Also called variable or unit based pricing; it is a system of trash collection where the resident is charged based on the amount they throw away, creating an economic incentive to recycle.



Pets: Donate old towels, blankets and newspaper to animal shelters. When purchasing dog houses, cat scratchers, and cat litter, look for recycled-content options made in Missouri!

Phone Books: If you do not want to automatically receive printed phone directories, opt out. To stop home delivery and to find the nearest location to recycle directories that are no longer useful. Visit www.yellowpagesoptout.com/

Plastic: The properties that make a plastic ideal for a package (flexible, durable, lightweight etc.) are due to the chemical make-up of the plastic resin used to make the container. For recyclable containers, seven resins are used predominately. To help recycling, the plastic industry developed a Resin Identification Code system in 1988. It is important to realize that the resin code identifies the type of plastic. It does not guarantee that the plastic is recyclable in every community. Most programs in Missouri accept #1 and #2 plastic containers and some areas can recycle all seven resins, except #6.

Polyethylene Terephthalate (PETE): PETE is the most recycled plastic in the world and is used for soda, water, beer and many other products (plastic jars, health and beauty items, etc.) Most of the PETE recycled in Missouri is sent to Georgia to be processed into polyester carpet. One square yard of carpet uses 36 two-liter bottles.



High Density Polyethylene Plastic (HDPE): Used to make milk jugs, detergent bottles, health and beauty containers and dairy containers, recycled HDPE is made into new containers, picnic tables, benches, picture frames, and plastic lumber.



Poly Vinyl Chloride (PVC): PVC is an indestructible plastic that releases toxic hydrochloric acid when burned. An inexpensive plastic it is also versatile and is made into everything from pipe to credit cards. Containers (clear packaging for food, shampoo, lotions, etc.) make up a small percent of plastics that can be recycled.



Low Density Polyethylene (LDPE): Squeezable and flexible, LDPE is used for vegetable bags and containers such as mustard bottles.



Polypropylene: This smooth surfaced plastic is difficult to scratch but cracks easily when bent. It is used for yogurt and dairy tubs, syrup bottles and medicine containers. When recycled it can become a grocery bag or toothbrush.



Polystyrene: Polystyrene can be foamed (expanded polystyrene or EPS) or rigid. Rigid #6 is used for CD cases, plastic cups and in hinged-containers. EPS is only about 5% polystyrene, the rest is air! This makes EPS difficult to recycle economically without first compressing out the air using special densifying equipment. For this reason, most EPS recycling programs in Missouri are for large commercial volumes of EPS.



Other: Containers that are multi-layered using more than one type of plastic, are given the code 'other'. Uses for #7 include ketchup and juice containers and some types of vegetable bags.



Plastic Pots: Don't pitch those plastic pots. The Missouri Botanical Garden has recycled 1 million pounds of plastic garden pots, cell packs and trays. Lowes Home Garden Centers now accept plastic pots for recycling. The pots are ground up and made into plastic lumber-perfect for raised garden beds.

Post Consumer Content: When it comes to recycled content, the higher the percent of post-consumer content, the better it is for the environment. Post consumer means it came from recycling bins. In other words, the feedstock to make the product came from a consumer who recycled the container or box instead of throwing it away. Post-consumer content truly closes-the-loop.

Pre-Consumer Content: Pre-consumer recycled content is made from manufacturing waste that never actually made it to the consumer, i.e. scraps, overruns, and trimmings that are reprocessed. Using scrap materials is good business practice, but some argue it should even be considered recycling as it never was discarded or intended for a landfill.

Pre-Cycling: As consumers we can choose products with minimum packaging, making sure packaging is accepted in your local recycling programs (i.e. #1 plastic cups vs. #6) and/or practice source reduction by buying in bulk. This is called pre-cycling...thinking of minimizing waste at the point of purchase.



Processing: Processing is defined as "preparing or putting through a prescribed procedure..." In recycling, processing means jobs! Recyclables are sorted, baled, shredded, disassembled, melted, and pulped. Whether highly automated or labor intensive, workers are needed.

Putrescible: Waste likely to rot or decompose, such as food waste. Putrescible wastes generate more methane when disposed in landfills and can be turned into a resource if composted.

R

Recycled Paper: A paper can only be called 'recycled' if it contains 100 percent recycled content, according to the U.S. Federal Trade Commission's (FTC) Guides for Environmental Marketing Claims. If the content is less than 100 percent, the paper should then be referred to as "recycled-content" paper.



Recyclable: Products or materials that can be collected, separated, and processed to be used as raw materials in the manufacture of new products.

Recycling: Process by which materials that would otherwise become solid waste are collected, separated, and processed, allowing them to be reused in the form of raw materials or finished goods.



Recycling Rate: The recycling rate can be defined as the total amount recycled (by weight) divided by the total amount discarded as well as recycled (both also by weight).

Reduce: The first and most important of the 3 R's means to use practices that minimize or eliminate the need to dispose or recycle products. Examples include buying in bulk, choosing items with less packaging and switching to reusable instead of single-use items.

Renewable Resource: An organic natural resource that can replenish in due time compared to the usage is considered renewable. Examples include food, trees, and cotton.



Repurpose: Similar to reuse, repurposing is finding new uses for items with minimal modifications and not changing the physical aspects. An example is using an old door as a table or a kitchen table as a desk.

Reuse: Instead of throwing things away, reuse is looking for ways to use them again and again and again.

S

Scrap Metal Processor: Businesses where recovered metal is sorted, cleaned of contaminants, and prepared for final recycling.

Shoes: Shoeman Water Projects collects donated shoes – any kind, new or gently used and exports the shoes to street vendors around the world who sell them at affordable prices to people who cannot afford new shoes. Funds raised are used for clean water programs around the world. To find a collection site near you to host a shoe drive, visit www.shoemanwater.org. Athletic shoes can be recycled through Nike Grind, www.nikegrind.com, or at drop-off locations for clothing and textiles. Midsole foam from 2,500 pairs of recycled athletic shoes is enough material for one outdoor basketball or tennis court.



Shredder: Computer hard drives, paper, containers, textiles, plastics are just some of the recyclables that are put into special equipment that reduces the volume of materials through shredding.

Single-Stream Recycling: When all recyclables are combined in one container and sorted after collection, it is called single-stream recycling. Single-stream recycling makes it easier on the generator and is thought to help increase recycling volumes. Single-stream also results in more contamination, particularly of paper which can lower the value of the end product.



Solid Waste: Wastes that are not liquid and are not hazardous are regulated as solid waste.

Source Reduction: Actions taken at the point of generation to reduce the volume or toxicity of materials entering the waste stream. Source reduction includes pre-cycling and reducing.

Source Separated: When the generators separate recycling from trash, it is considered source separated material and is sent to a recycling center for processing. When recycling is commingled with trash, it is not source separated and can only be accepted by a waste processor.

Smoke Detectors: Because they contain a small amount of radioactive material, smoke detectors cannot be taken to electronic recyclers or Household Hazardous Waste programs. Options include mailing the unit back to the manufacturer or discarding in the trash. Note: Missouri law limits disposal to 10 smoke detector units or less at one time.



Sustainability: EPA defines sustainability as follows: "Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. Sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations."

T

Textiles: When reuse is not an option, textiles can be processed into new fiber that is used as insulation, furniture stuffing, and carpet padding.

Tires: Missouri citizens generate approximately five million scrap tires annually. In 1990, a 50-cent scrap tire fee was established on the purchase of new tires in Missouri to fund scrap tire activities including tire clean-ups, education, and grants for scrap tire surface material (such playgrounds, running tracks, livestock stalls, etc.) Maintenance of this fee is important to continue to reduce the public health threat posed by scrap tires that breed mosquitoes. For information on scrap tire management in Missouri and the Scrap Tire Surface grants, visit the Missouri Department of Natural Resources Scrap Tire Unit page at <http://dnr.mo.gov/env/swmp/tires/tirelist.htm>



Transfer Station: Materials collected in smaller vehicles are consolidated and placed in larger vehicles for transport at transfer stations.

U

Upcycled: Reusing materials in a way to create a product of a higher quality or value than the original. The final product is usually creative and more beautiful than the original product.

Used Oil: Though banned from landfill disposal, local service stations or quick oil change shops accept up to 5 quarts of used oil for recycling. Call ahead of time to verify acceptance. Used oil is also accepted at most Household Hazardous Waste programs.



V

Virgin Materials: In manufacturing, virgin materials are those that have not been previously used or consumed, or subjected to processing. Producing goods using virgin materials is much more energy intensive than manufacturing goods from recycled materials.

Vermicomposting or vermiculture: A compost system broken down by worms. The final product is worm castings that are a nutrient rich and natural fertilizer. Vermicomposting can be done in homes and also on a large industrial scale.



W

Waste Audit: Waste audits of businesses and institutions identify types and quantities of materials in waste streams. They recommend how to improve recycling and reduce waste through source reduction, green procurement and identifying recyclables not being recovered. Entities that receive a waste audit are often surprised at the amount of money that can be saved by reducing and recycling.

Waste Characterization Study: A study that measures wastes deposited in landfills and transfer stations, provides data on categories and composition of what is being thrown away. The last Waste Characterization study done in Missouri (in 2006-2007) revealed that nearly 45% of waste in Missouri had the potential to be recycled.

Waste Diversion Rate: A calculation to determine how much is being diverted from landfill disposal through sourced reduction, recycling, and composting. Missouri estimates their waste diversion rate to be 57% as of 2013.

Waste Stream: The total flow of waste material from generation to disposal including materials that can be reused, recycled and composted in addition to those that are landfilled or incinerated.

White Goods: Appliances such as water heaters, stoves, refrigerators, air conditioners, and washing machines are called white goods and are banned from landfill disposal, but are easily recycled. To find a list of appliance collection services in Missouri communities visit www.dnr.mo.gov/env/swmp/docs/appliance-collection.pdf

Window Glass: Reuse window glass by building coldframes for plants. Instructions can be found at www.extension.missouri.edu. Window glass can't be recycled with bottles and jars, but some communities have the ability to recycle window glass.

Y

Yard Waste: Banned from landfill disposal (unless the landfill is a bioreactor landfill) yard waste includes grass, leaves, small branches and vegetable waste. Yard waste can be deposited at a commercial facility or in your back yard! Visit the Missouri Department of Natural Resources Home Composting page at www.dnr.mo.gov



Join the Missouri Recycling Association

As the collective voice for reuse, recycling and re-manufacturing, the Missouri Recycling Association (MORA) is leading the charge to set a statewide 75% waste diversion goal. By joining MORA, individuals, businesses and institutions can support and help lead Missouri to the next era in waste diversion.

MORA promotes resource management policies in Jefferson City and informs elected officials about the business benefits of recycling for the State of Missouri.

MORA provides resources and technical assistance to help link entities with expertise, equipment and market data through a diverse membership that includes individuals, communities, not-for-profits, industry, institutions and government.

MORA represents stakeholders that have the vision needed to develop the political will to achieve a 75% waste diversion rate.



Don't be left out of the conversation- join MORA today: www.mora.org/membership-application.html

Take the Pledge to Strive for 75% www.mora.org/75-diversion.html

MEMBERSHIP BENEFITS	PARTNER \$5,000	SUSTAINER \$2500	LEADER \$1,000	ASSOCIATE \$150	FRIEND \$35
Recognition during all MORA functions which require a registration fee	X				
Benefits associated with \$1000 annual conference sponsorship	X				
Company logo on MORA promotional bag for all conference attendees	X	X			
Recognition (MORA e-messages, conference, membership directory)	X	X	X		
E-messages with timely recycling news and legislative watch	X	X	X	X	X
Access to MORA membership directory, and Market Prices Report	X	X	X	X	
National Affiliation					
Keep America Beautiful (KAB)	X	X	X	X	
National Recycling Coalition (NRC)	X	X	X	X	
Job opportunity bulletin board	X	X	X	X	



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This publication is printed on recycled content paper.

MORA is a 501 (C) (3) organization and a proud member of Keep America Beautiful and the National Recycling Coalition, Inc.

As the designated state recycling organization (SRO), MORA represents Missouri's recycling interests to these national organizations.

Missouri Recycling Association
Mission: To lead Missouri toward environmental sustainability through waste reduction and recycling.