
Missouri Market Development Program

Annual Report for Fiscal Year 2021

(July 1, 2020 – June 30, 2021)





Missouri Market Development Program

Building Missouri Business

Introduction

Administration

In 1990, the Missouri General Assembly directed the Environmental Improvement and Energy Resources Authority to establish the Missouri Market Development Program to promote the development and maintenance of markets for recovered materials. EIERA is a quasi-governmental agency with a Governor appointed bi-partisan board that serves as the financing arm of the Department of Natural Resources. EIERA was selected to house the Missouri Market Development Program to bridge economic development and environmental interests.

Purpose

The Missouri Market Development Program promotes the development and maintenance of markets for recovered materials and recycled content products throughout Missouri by providing financial incentives, technical assistance and informational services to businesses, governments and other organizations.

Recycling market development helps to ensure that recycling will expand its role in a sustainable Missouri economy, create jobs, conserve resources, contribute to a quality environment and reduce reliance on Missouri's landfills for disposal of solid waste.

Funding

To implement this statewide effort, the Missouri Market Development Program was allocated \$800,000 from Missouri's Solid Waste Management Fund in Fiscal Year 2021.

Recycling market development is working!

In Fiscal Year 2021, the Missouri Market Development Program's new investment in six Missouri recycling businesses and continued management of twelve active projects provided the following benefits to our economy and the environment:

- Leveraged more than \$6.7 million in total investment
- Created 105 new Missouri jobs
- Diverted more than 105,000 tons annually from Missouri landfills
- The avoided disposal costs for the materials used in these projects combines to more than \$3.4 million each year.



Missouri Market Development Program

Developing markets through cooperation

Partners

The cooperation and assistance of several agencies and organizations have been instrumental in the success of the Missouri Market Development Program.

Department of Economic Development

During the fiscal year, the Missouri Market Development Program continued its working relationship with the Department of Economic Development in support of program objectives. The Missouri Market Development Program and DED coordinate direct assistance to businesses to improve sales and purchases of Missouri products made from recyclable materials.

Department of Natural Resources

The Missouri Market Development Program works closely with the Department of Natural Resources in its administration of the Solid Waste Management Fund and the Waste Management Program's waste reduction and recycling efforts. The Missouri Market Development Program coordinates priorities and evaluation of activities with the Waste Management Program.

Office of Administration

The Missouri Market Development Program, in cooperation with the Office of Administration, promotes recycling in state agencies. The Missouri Market Development Program works with the Office of Administration on the Missouri Interagency Recycling Council and in developing the annual State of Missouri Recycling and Waste Reduction Report.

Solid Waste Advisory Board

The Missouri Market Development Program provides updates on its activities to the Solid Waste Advisory Board. The Solid Waste Advisory Board is made up of the chairperson of each of the 20 Solid Waste Management Districts, three citizen representatives and two representatives of the solid waste management industry. The Solid Waste Advisory Board chair also serves on the Missouri Market Development Program Steering Committee.

Missouri Market Development Program Steering Committee

Staff from the EIERA, DED and DNR's Waste Management Program comprise the interdepartmental Market Development Program Steering Committee. The Solid Waste Advisory Board chair is a permanent steering committee member. The steering committee evaluates financial assistance applications and technical assistance proposals submitted to the Missouri Market Development Program and makes funding recommendations to the EIERA board.



Missouri Market Development Program

Developing markets through cooperation

Partners (continued)

Mid-America Council of Recycling Officials

The Missouri Market Development Program represents Missouri on the 14-state Mid-America Council of Recycling Officials. As a member of the council, the Missouri Market Development Program encourages multi-state recycling, market development, reuse and source reduction efforts.

Missouri Recycling Association

Missouri Market Development Program staff are actively involved in the activities of the Missouri Recycling Association, Missouri's only collective voice for recycling, waste reduction and sustainability issues.

Missouri Waste Control Coalition

The Missouri Market Development Program supports the efforts of the Missouri Waste Control Coalition.



Missouri Market Development Program

Business Assistance

FY 2021 Update

Market Development Program Supports Missouri Businesses

The Missouri Market Development Program supports both larger and smaller-scale projects. Thanks to the program, Kansas City Composting in Belton diverted more than 15,000 tons of waste in Fiscal Year 2021 and Full Circle Forest Products of Rutledge expanded a limited operation into a full scale business that will employ several people in the area. The program also helped four other Missouri companies create new jobs in other areas of the state.

Fiscal Year 2021 Financial Assistance

The Missouri Market Development Program's financial assistance is targeted toward developing and expanding manufacturing capacity in Missouri by assisting businesses with the purchase of equipment needed to enable manufacturing facilities to use recovered materials. Financial assistance applicants to the Missouri Market Development Program may seek eligibility to request up to \$250,000 toward the purchase of specific equipment needed to manufacture a product from recovered materials or to process materials so that they can be used as manufacturing feedstock.

Applications are assigned points in the categories of job creation, annual diversion and the cash match provided by the applicant. Increasing amounts of assistance are available as points scored by an application increase. If the application addresses a Missouri Market Development Program target, additional points are added to the total. These targets are: construction and demolition waste, food waste and organics, plastics or location in a minimally funded Missouri Solid Waste Management District. (A list of these districts is available at [MMDP Solid Waste Management Districts.pdf](#).)

Any award requires a cash match of at least 25 percent of the cost of the equipment, and a 50 percent cash match is required to receive the maximum award.

Additional Activities

In addition to the financial assistance offered to Missouri business, the Missouri Market Development Program assists businesses with locating and procuring recyclable feedstocks and end markets for their recycled-content products.



Missouri Market Development Program

Business Assistance

FY 2021 Projects

Full Circle Forest Products LLC - Rutledge

Full Circle Forest Products, LLC, located in Rutledge, was awarded \$95,216.73 to purchase equipment costing \$190,443.46 that will enable the company to scale up their operation to produce finished lumber from logs that are currently burned or disposed of in landfills.

Full Circle Forest Products began in 2019 as a part time operation that quickly developed local patronage for custom lumber orders and is now expanding into regional, national and even international markets. The company does portable sawmill jobs, complete custom orders for contractors, makes rustic furniture and sells live edge lumber.

A single owner operator has proven his ability to both produce high quality finished products and provide large orders of custom cut lumber. The business owner has also identified woodworking and mechanical experts to staff his growing venture.

The US Forest Service estimates reclaimed dead and diseased community trees could satisfy around 30% of annual hardwood consumption in this country. However, because these trees grow in unpredictable environments and have sometimes suffered damage, the size and appearance of the board they produce can vary greatly. Full Circle Forest Products' principal suppliers of logs are area tree service companies and municipalities. Typical sawmills will not accept trees that are salvaged from the waste stream because of the possibility of nails or other hidden things that can destroy sawblades. In rural areas, large trees are often left to rot or are burned. In urban areas they are sometimes converted into mulch.

Full Circle Forest Products anticipates **diverting 355 tons annually** from the waste stream and **creating four full time and two part time employee positions** with this project.

Kansas City Composting - Belton

ORMI d/b/a Kansas City Composting, located in Belton, was awarded \$195,570 to purchase a mulch coloring machine costing \$391,141 that will enable the company to accept pallet and other wood waste not suitable for composting and produce colored mulch.

Kansas City Composting purchased a business formerly known as Lawn Corps in 2018 to recycle yard waste and other organics into high quality compost. The business also receives brush and logs that are ground to produce mulch. The purchase of a new colorizer would enable the company to add pallets and clean wood waste to its list of acceptable materials and increase its production of colored mulches.

Pallets and wood waste from construction and demolition sites have limited use, particularly if they are broken or not a desirable wood type. The EPA estimated that only twenty-percent of pallets were recycled in 2017. These materials are difficult to sell as raw mulch because they naturally turn gray very quickly. Coloring the mulch with a safe, water-based dye can make the material



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Business Assistance

FY 2021 Projects

much more valuable. There is an eager market in the Kansas City area for black, brown and red dyed mulch.

ORMI d/b/a Kansas City Composting anticipates **diverting 15,000 tons annually** from the waste stream and **creating three full time employee positions** with this project.

Urban Lumber Company – Kansas City

The Urban Lumber Company, LLC, located in Kansas City, was awarded \$19,987.50 to purchase a sawmill costing \$26,650 that will enable the company to mill larger logs and produce wider logs than their current capacity.

The Urban Lumber Company takes logs from the waste stream, saws them, dries them, and makes them available for sale to the general public. By salvaging city trees, the company is able to produce live edged boards with unique grains and colors. In addition to lumber sales, the company also offers jointing, planing, glue-ups, design, finishing and delivery for a variety of products.

When the company began operating in 2013, the MMDP assisted it with the purchase of a saw mill. While this mill is still in use, it is limited to logs with a diameter of thirty inches. A new, larger mill would enable the company to process logs up to fifty inches in diameter, thus increasing board feet recovered per log and also enabling the production of much wider slabs.

The company gets its logs from area tree service companies, municipalities, and Missouri Organic Recycling, a neighboring mulch and compost producer. Logs frequently just “show up” at the business location as there is no tipping fee like there would be at a landfill.

The sheer variety of lumber harvested from the urban area that the company offers lures crafts people from all over to their show room or web based store. Trees salvaged from development or death of the tree include varieties that aren’t seen in typical lumber stores: honey locust, mulberry, sassafras, catalpa, sycamore, etc. The company notes that a solid wood plank from a local tree also has much appeal to customers tired of imported and shoddy materials. Trees discarded as waste have ended up as beautiful coffee tables, cabinets, or just about anything you can imagine being made with wood.

The Urban Lumber Company, LLC anticipates **diverting 100 tons annually** from the waste stream and **creating one full time employee position** with this project.



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FY 2021 Projects

J. Carter Enterprises – New Bloomfield

J. Carter Enterprises, LLC, located in New Bloomfield, was awarded \$224,000 to purchase a horizontal grinder costing \$448,269.92 that will enable the company to process pallet and other wood waste and produce colored mulch and biofuel.

The owner/operator of J. Carter Enterprises previously owned a pallet, mulch and trucking company called B&G Skid Removal. The successful company was purchased by a competitor in 2015. When his non-compete period expired recently, the owner started a new pallet business, which has already grown to a larger size than his previous business, employing 8 people full time.

The company supplies new and re-built pallets to businesses throughout central Missouri. These same businesses, and others, return used and damaged pallets to J. Carter Enterprises as an alternative to disposal. The demand for both colored mulch and biofuel in the Jefferson City and Columbia area far exceeds that which is produced. In fact, the company supplies an area competitor with materials and product. J. Carter Enterprises is simply unable to process enough materials to meet demand and the new large grinder will allow the company to grind about 75% more material per hour than they currently have capacity to do.

J. Carter Enterprises, LLC **anticipates diverting 7,300 tons** annually from the waste stream and **creating one full time employee position** with this project.

Northwest Missouri State University - Maryville

Northwest Missouri State University, located in Maryville, was awarded \$40,095 to purchase a biomass boiler system that would enable the University to use mixed paper to heat the Northwest Recycling Center.

Northwest has a student population of over 7,300 and not surprisingly produces an enormous amount of waste paper. The Northwest Recycling Center is also open to the public and serves residents in a five county area who have no other option for recycling. On average, Northwest recycles 300,000 pounds of paper and 1.6 million pounds of cardboard, generated both on campus and from community members.

The mixed paper commodity market has all but collapsed in the Midwest. The value of this mixed paper when sold at market no longer covers the labor and fuel costs needed to recover it. As a result, paper that was once being baled and sold is now being landfilled.



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FY 2021 Projects

The addition of a biomass boiler system would allow Northwest to add value to the waste mixed paper, while also reducing tipping fees and continuing to provide a method of paper recycling for northwest Missouri residents.

The proposed project would install the first biomass boiler on campus, which would be analyzed for efficiency, diversion, and cost savings. The University is hopeful the project will demonstrate biomass boilers are feasible for other buildings on campus.

Northwest Missouri State University **anticipates diverting 44.1 tons annually** from the waste stream and creating no full time employee positions with this project.

Starr Burn Enterprises, Inc. d/b/a St. Joseph Plastics - Sedalia

Starr Burn Enterprises, Inc. d/b/a St. Joseph Plastics, located in St. Joseph and Sedalia, was awarded \$100,000 to purchase equipment costing \$200,156 that would enable the company to recover polymers from their Sedalia plastics processing plant that are currently being landfilled.

St. Joseph Plastics began operation in 1990 as a post-industrial scrap plastic grinding operation and has since added pelletizing, a post-consumer wash plant, and a compounding plant. The company currently employs 82 people.

In 2012 the Market Development Program assisted the company in outfitting its post-consumer wash plant in Sedalia. The original system was designed to clean polypropylene and polyethylene which both float in water. When the original system was installed, it was not fully understood how many resins would occur unintentionally in a polypropylene bale. The company has been landfilling “sinkers” that are other resins (mostly PET). This equipment will enable recovery of these sinking polymers by taking them through a density separation system that will allow the company to separate and clean another resin. These PET flakes could then be sold rather than landfilled.

St. Joseph Plastics anticipates **diverting 500 tons annually** from the waste stream and **creating one full time employee** position with this project.



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Business Assistance

Summary of FY 2021 Projects

Company	City	Material	Est.Tons Diverted Annually	Est.New Jobs	Award	Investment	Annual Savings
Full Circle Forest Products LLC	Rutledge	wood	355	6	\$95,217	\$393,634	\$28,400
Kansas City Composting	Belton	organics	15,000	3	\$195,570	\$391,141	\$450,000
Urban Lumber Co.	Kansas City	wood	100	1	\$19,988	\$26,650	\$5,757
J. Carter Enterprises	New Bloomfield	wood	7,300	1	\$224,000	\$448,270	\$876,000
Northwest MO State Univ.	Maryville	paper	44	0	\$40,095	\$53,461	\$2,112
St. Joseph Plastics	Sedalia	plastics	500	1	\$100,000	\$225,000	\$25,000
TOTALS			23,299	12	\$674,869	\$1,538,156	\$1,387,269

Recycling market development is working!

The Missouri Market Development Program's fiscal year 2021 new investment in these six Missouri recycling businesses helped our economy and environment by:

- Leveraging more than \$1.5 million in total investment
- Creating 12 Missouri jobs
- Diverting more than 23,000 tons annually from Missouri landfills
- The avoided disposal costs for the materials used in these projects combines to more than a million dollars.



Missouri Market Development Program

Business Assistance

Summary of FY 2021 Active Projects (previously awarded – still open)

In addition to the six new projects awarded in fiscal year 2021, twelve previously awarded projects were actively managed by the program during the fiscal year.

Company	City	Material	Est.Tons Diverted Annually	Est.New Jobs	Award	Investment	Annual Savings
Arcana LLC Switchgrass	St. Louis	organics	280	2	\$13,884	\$20,511	\$45,500
Catalytic Innovations LLC	Rolla	batteries	3,630	27	\$250,000	\$2,600,00	\$200,000
Fick Supply Services Inc.	Wildwood	organics	25,000	4	\$200,000	\$416,265	\$0
Foam Products Corp	Maryland Heights	foam	50	3	\$32,500	\$50,000	\$18,000
Service Recycling LLC	Joplin	wood	585	0	\$24,375	\$36,990	\$87,750
St. Louis Composting	St. Louis	organics	27,000	6	\$250,000	\$500,000	\$140,875
Wilson Industries LLC	Gainesville	plastics	6,240	11	\$100,000	\$223,278	\$582,254
Ozark Shavings Co. LLC	Licking	wood	11,000	8	\$250,000	\$952,000	\$517,000
Refab	St. Louis	wood	100	8	\$169,500	\$503,220	\$2,880
Evertrak LLC	St. Louis	plastics	10,560	12	\$218,000	\$3,200	\$369,600
St. James Winery, Inc.	St. James	organics	1000	12	\$175,500	\$2,500,000	\$49,000
For Your Convenience	St. James	plastics	10	0	\$18,000	\$28,278	\$2,000
TOTALS			85,455	93	\$1,701,759	\$5,213,231	\$2,014,859

Recycling market development is working!

These twelve previously awarded, active projects benefited the Missouri economy and environment by achieving the following:

- Leveraging over \$5 million in total investment
- Creating 93 Missouri jobs
- Diverting more than 85,000 tons annually from Missouri landfills
- The avoided disposal costs for the materials used in these projects combines to more than \$2 million each year.



Missouri Market Development Program

Informational Services

Working Toward Solutions

During the fiscal year, staff advised businesses on market conditions, locating recovered material feedstocks, determining markets, developing products and creating business presentations. Staff also responded to requests for information on marketing, planning assistance and markets for recyclables from governments and not-for-profit organizations.

The Missouri Market Development Program assisted businesses, governments, organizations and individuals in locating specific recycled-content products.

Information sharing is an important aspect of the Missouri Market Development Program's efforts to help build Missouri's recycling infrastructure. The program provides resources and informational services to businesses, governments and other organizations to increase manufacturing, marketing or purchasing of recycled content products.

Missouri Market Development Program staff also promoted Missouri's recycling industry and the "buy recycled" message in speaking engagements and workshops and participated in state, regional and national recycling issue conferences and meetings.

Staff develop and maintain information for a Missouri Market Development Program web site (www.eiera.mo.gov/mo-market-dev-program) and continue to gather and refine information for future web publication. The web site enables businesses to download the Missouri Market Development Program Application for Financial Assistance and access other program publications and information.

During the fiscal year, Missouri Market Development Program staff supported and participated in state, region and nation-wide organizations and activities to gain and share knowledge and to develop professional relationships in the areas of recycling, economic development, solid waste and related environmental or business areas. Active involvement in these initiatives enables Missouri Market Development staff to approach problem solving from many perspectives and better facilitate growth of Missouri's recycling businesses.



Missouri Market Development Program

Outlook

Focusing on Opportunity

Economy

The economic benefits of recycling versus landfill disposal seem negligible at the front end, but as materials flow further downstream, the value of the commodity increases, as do the wages and skilled labor required to turn the commodity into an end product. Recycling is estimated to create nearly five times as many jobs as landfilling. The recycling industry is an elaborate and diverse network of public sector institutions and private industry. Recycling involves not only collection, but also processing and manufacturing. At each level, jobs are created, and income is generated. Recoverable material destined for a landfill is a leakage from the local economy.

Environment

The greatest environmental benefits of recycling are related not to landfills but to the conservation of energy and natural resources and to the prevention of air and water pollution when a recycled material, rather than a raw material, is used to make a new product. Using recovered materials in preference to virgin also helps stimulate Missouri's development of green technologies. The benefits of developing markets for recovered materials are found at every stage of the life cycle of a consumer product - from the mining of raw materials through its use and final disposal.

Challenges

Missouri has made great strides in recycling since 1990, but much of our recovered material continues to flow out of state, often to other countries where it is used in manufacturing products that are resold to the United States. According to the Department of Natural Resources, 1.9 million tons of recyclables are disposed of in Missouri landfills each year. End markets, particularly local end markets, for many materials simply do not exist.

Opportunities

The Missouri Department of Economic Development reports that Missouri exports of scrap exceed \$5 million annually. Recirculation of even a fraction of this within the state would have significant economic benefits for Missouri. Manufacturers that use recovered materials do so in lieu of feedstocks that are mined, harvested or extracted outside of the region. As a result, these businesses create jobs closer to home and have a smaller environmental footprint than companies that rely on raw material extraction. The Missouri Market Development Program acts to counter-balance foreign demand by developing local markets that will in turn create jobs and broaden the domestic tax base. Recycling market development feeds directly into building Missouri jobs, supports larger, private sector investments, promotes resource efficiency and spurs new technologies.



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