
Missouri Market Development Program

Annual Report for Fiscal Year 2020

(July 1, 2019 – June 30, 2020)



EIERA

Environmental Improvement and Energy Resources Authority



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 2020.

Recycling market development is working!

In Fiscal Year 2020, the Missouri Market Development Program's new investment in seven Missouri recycling businesses and continued management of eight active projects benefited our economy and the environment:

- Leveraged more than \$7.7 million in total investment
- Created 129 new Missouri jobs
- Diverted more than 110,000 tons annually from Missouri landfills
- The avoided disposal costs for the materials used in these projects combines to more than \$3.1 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 2020 Update

Market Development Program Supports Missouri Businesses

The Missouri Market Development Program supports both larger and smaller-scale projects. Thanks to the program, Wilson Industries in Gainesville created 11 new jobs in Fiscal Year 2020 and Switchgrass Spirits of Wellston turned a waste disposal expense into an income stream. The program also helped six other Missouri companies create new jobs in other areas of the state.

Fiscal Year 2020 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 <http://eiera.mo.gov/files/2014/12/How-Missouri-Market-Development-Program-applications-are-scored.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 2020 Projects

Arcana, LLC d/b/a Switchgrass Spirits – St. Louis

Arcana LLC DBA Switchgrass Spirits, located in Wellston, was awarded \$13,884 to purchase equipment costing \$18,511.40 that has enabled the company to remove liquid from spent grains so that it can be used as livestock feed.

Switchgrass Spirits is a worker-owned whiskey distillery committed to sustainability and quality spirits. Switchgrass buys grain locally when possible and its barrels are made of Missouri White Oak, built by coopers in the state. The company currently uses 4,800 pounds of grain each week, creating 1,400 gallons of liquid waste. The pancake batter like waste cannot enter a sewer system and must be hauled offsite.

With this project, Switchgrass purchased dewatering equipment that will allow the nutritious waste grain to be re-introduced to the local economy in the form of animal feed. Local farmers are not interested in the wet material because it is difficult to transport and spoils easily, but are very interested in the product if dried, because it is made from grain meant for human consumption unlike that used in ethanol production.

The distillery is located in a 16,000 square foot former American Legion Hall on the north side of St. Louis County. Funded by investments from friends and family, four founding members are responsible for the daily operation of the business. Their first whiskey product, a bottled cocktail, was released in February of 2020.

Switchgrass Spirits anticipates **diverting 280 tons annually** from the waste stream and **creating two part time employee positions** with this project.

Fick Supply Services - Wildwood

Fick Supply Services, Inc., located in Wildwood, was awarded \$200,000 to purchase equipment costing \$416,265 that will enable the company to produce colorized mulch from hard-to-dye wood waste and improve capacity and efficiency for screening materials for its compost operation.

Fick Supply Services began operation in Wildwood in 1994 and has since become a leading supplier of bulk landscape products in the St. Louis region. Besides selling rock, dirt, timbers, pavers, etc., they produce mulch, and in recent years, compost. Having recently been approved as a Yard Waste Byproduct Compost facility, the company has expanded both its footprint and its need to move new materials such as wood fiber from construction debris and additional yard waste tonnage.

With this project, Fick purchased a dual purpose mulch colorizer/trammel screen which has the ability to dye hard-to-color wood fiber while reducing water consumption of their existing machine



Missouri Market Development Program

Business Assistance

FY 2020 Projects

by twenty-percent. The machine can convert to the largest available mobile trammel screen which will increase capacity for both mulch and compost production.

Fick Supply Services, Inc. anticipates **diverting 25,000 tons annually** from the waste stream and **creating three full time and one part time employee positions** with this project.

Foam Products Corporation – Maryland Heights

Foam Products Corporation, located in Maryland Heights, was awarded \$32,500 to purchase equipment costing \$48,000 that will enable the company to process scrap foam.

Foam Products is a family owned and operated company started in 1962 that is a leading fabricator and distributor of industrial foam insulation and packaging products.

Prior assistance from the MMDP enabled the company to purchase a foam densifier to recover their own scrap and to start accepting drop-off foam scrap from businesses and individuals. The drop-offs grew in number and volume and are now coming to the company not only from the St. Louis region, but from sources all around the state.

With this project, Foam Products purchased another densifier to process the increased variety of foam materials they are receiving and generating, including extruded, x-linked, and expanded polyethylene; expanded polystyrene; and expanded polypropylene.

Foam is a problematic waste stream, as it takes up a lot air space in landfills and does not compress well. Once densified, it can be sold and more readily transferred to manufacturers to make new plastic products.

Foam Products Corporation anticipates **diverting 50 tons annually** from the waste stream and **creating two full-time employee positions** with this project.



Missouri Market Development Program

Business Assistance

FY 2020 Projects

Catalytic Innovations, LLC – Rolla

Catalytic Innovations, LLC, located in Rolla, was awarded \$250,000 to purchase equipment costing \$500,000 that will enable the company to produce liquid micronutrient fertilizers made from zinc and manganese recovered from recycled alkaline batteries.

Catalytic Innovations has been manufacturing liquid micronutrient fertilizers made from zinc, manganese and copper for the last eight years. Most of the ingredients are recycled from other industries, while alkaline batteries have just recently been tested at full scale and permanently added to their production processes. The company wishes to increase battery recycling from its current 300 tons per year to 5,000 tons per year, but needs a larger facility and additional equipment to reach this production level. The company believes they could sell three times more liquid micronutrient fertilizer products than it can physically produce, just to its existing customers.

It is estimated that Missouri residents dispose of roughly 2,500 tons per year of spent batteries. Catalytic Innovations currently obtains some of its feedstock from organizations that collect household batteries for recycling, and intends to implement its own nationwide collection program.

A necessary ingredient for the alkaline battery digestion process is organic matter and there are several types of organics currently being landfilled that the company could use. An optimum type is a wet grain mill waste currently landfilled by a company based in Kansas City that has agreed to supply approximately 250 tons per year.

Catalytic Innovations began producing ammoniated zinc in 2012 at its Rolla facility and has since expanded its line of liquid micronutrient fertilizers. There are very few producers of ammoniated zinc in the United States and manganese carbonate is produced overseas, primarily in China. Total US consumption of this product is 60,000 to 100,000 tons per year just for fertilizer and animal feed.

Catalytic Innovations, LLC anticipates **diverting 3,630 tons** annually from the waste stream and **creating twelve full-time and fifteen part-time employee** positions with this project.



Missouri Market Development Program

Business Assistance

FY 2020 Projects

Service Recycling, LLC – Joplin

Service Recycling, LLC, located in Joplin, was awarded \$24,375 to purchase equipment costing \$36,990 that will enable the company to improve delivery of mulch made from scraps generated in their pallet rebuilding operation.

Service Recycling has been providing commercial recycling services in the Joplin area since 1998. The company processes plastics, cardboard, paper, metal, and glass, and also collects pallets for rebuilding. Scrap from the pallet operation is converted into mulch, which the company is able to sell wholesale in any volume they can produce.

With this project, Service Recycling intends to purchase a live floor trailer to be used to deliver mulch to customer locations. The live floor trailer will reduce double-handling of the mulch and increase overall capacity and efficiency of the delivery process.

Service Recycling processed 165,000 pallets in its wood mill in 2019 and also collected additional crates and wood waste. By converting the waste from this aspect of the business into mulch, they maintain a zero-waste wood operation.

Service Recycling anticipates **diverting 585 tons annually** from the waste stream and creating no additional employee positions with this project.

St. Louis Composting – St. Louis

St. Louis Composting, Inc., located in St. Louis, was awarded \$250,000 to purchase equipment costing \$500,000 that will enable the company to increase their capacity for separating food from packaging for composting.

Currently, packaged foods that have exceeded their expiration date, or foods that have been recalled due to manufacturing defects or that have been labeled unfit for consumption are almost always landfilled. The labor needed to remove food from the packaging for recovery is simply not worth the cost. According to the EPA, in 2015 alone, more than 39 million tons of food waste was generated with only 5.3% diverted from landfills for composting.

In 2014, the Authority assisted St. Louis Composting with the purchase of the second-in-the-nation Tiger food depackager, which has been tremendously successful in enabling the company to recover new waste streams. The Tiger, however, is a high-speed machine and does not handle certain items, particularly soft packaged foods such as ice cream, well. With this project, St. Louis Composting will purchase a Bio-Press depackager, which operates at a much slower speed and would enable the company to accept a much wider variety of packaged food. The machine will also enable the recovery of much of the packaging that passes through it.



Missouri Market Development Program

Business Assistance

FY 2020 Projects

Patrick Geraty founded St. Louis Composting in 1992 in response to state legislation restricting yard waste from landfills. During its first year, the company had a single facility and two employees. Today the company employs more than 100 people and operates five composting facilities and one transfer facility.

St. Louis Composting, Inc. anticipates **diverting 12,000 tons annually** from the waste stream and **creating six full-time employee positions** with this project.

Wilson Industries, LLC – Gainesville

Wilson Industries LLC, located in Gainesville, was awarded \$100,000 to purchase a pulverizer costing \$223,277.40 that will enable the company to increase their capacity for processing recovered plastics to be made into custom products.

Wilson Industries LLC purchased the 41 year old company, Bryant Plastics in 2018. Bryant Plastics, a past program participant, was an innovator in the field of PVC manufacturing and Missouri's largest user of post-consumer recovered polyvinyl chloride (PVC). Products made by the company include standard and custom PVC pipe and fittings.

The company's existing pulverizer is 25 years old and has a much lower throughput than the new machine Wilson purchased with this award, which more than triples processing capacity. This has allowed the company to use more recovered plastic to produce new product lines.

Wilson Industries currently operates 24 hours per day, employing 32 people full-time. Pipe products are made by a proprietary extrusion method and the company has recently replaced a large extrusion line, making them ready for increased production. Increased pulverizing capacity is the only thing preventing the company from achieving new production goals.

Wilson Industries anticipates **diverting 6,240 tons annually** from the waste stream and **creating eleven full-time employee positions** with this project.



Missouri Market Development Program

Business Assistance

Summary of FY 2020 Projects

Company	City	Material	Est. Tons Diverted Annually	Est. New Jobs	Award	Investment	Annual Savings
Arcana LLC Switchgrass	Wellston	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
TOTALS			62,785	53	\$870,759	\$1,226,533	\$1,074,379

Recycling market development is working!

The Missouri Market Development Program's fiscal year 2020 new investment in these seven Missouri recycling businesses helped our economy and environment:

- Leverage more than \$1.2 million in total investment
- Create 53 Missouri jobs
- Divert more than 62,000 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 2020 Active Projects (previously awarded – still open)

In addition to the seven new projects awarded in fiscal year 2020, eight 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
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
For Your Convenience	St. James	Plastics	10	0	\$18,000	\$28,278	\$2,000
St. James Winery, Inc.	St. James	organics	1000	12	\$175,500	2,500,000	49,000
Enginuity, Inc.	Mansfield	organics	14,000	12	250,000	\$750,000	\$700,000
EXT, Inc.	Excelsior Springs	Plastics	500	12	\$99,950	\$149,925	\$84,595
Re-Poly, LLC	St. Louis	Plastics	10,800	12	\$250,000	\$1,600,000	\$378,000
TOTALS			47,970	76	\$1,430,950	\$6,486,623	\$2,103,075

Recycling market development is working!

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

- Leveraging over \$6 million in total investment
- Creating 76 Missouri jobs
- Diverting more than 47,000 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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