

ANNUAL REPORT



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#### **Governor Parson, Members of the General Assembly, and Fellow Missourians:**

I am pleased to provide this report on the work of the Missouri Technology Corporation (MTC) to grow Missouri's economy through innovation and entrepreneurship. As the private-public partnership created by the General Assembly to promote entrepreneurship and foster the growth of high-tech companies, the Missouri Technology Corporation is proud to support our state's growing entrepreneurial community. We look forward to our report illustrating our strategic investments in startup companies and entrepreneurial support organizations that spur job creation, capital formation, and economic growth.

Over the past year, MTC made significant investments in the infrastructure and support organizations that assist entrepreneurs and enhance Missouri's entrepreneurial ecosystem. MTC also provided critical early-stage co-investment capital directly to entrepreneurs through the Missouri Innovation, Development and Entrepreneurial Advancement ("IDEA") Funds to help grow more Missouri-based companies. Through the IDEA Funds, MTC has co-invested in over 120 companies which have in turn raised over \$600 million in additional private capital to grow their businesses and create jobs. These entrepreneurs and innovators are developing cutting edge technologies to power the agriculture of the future, improve health care outcomes, and transform the way we do business.

Working with partners across the state, MTC continues to position Missouri as the best place for innovation between the coasts. Missouri continues to garner national attention for its extensive startup network and entrepreneur-friendly environment. In fact, Forbes recently named St. Louis the number 2 in its Top 10 Rising Cities for Startups. Kansas City continues to be recognized as a leader for the growth in the number of tech workers and has been recognized as a top city for women in tech for the last 2 years.

We are proud of our accomplishments in serving Missouri's entrepreneurs and we appreciate your support as we continue to serve Missouri's ever-growing startup scene. Together we can ensure that our state is a leader in innovation.

Best Regards,

Cf R2fulf



# Driving Innovation in AGRICULTURE

MTC supports innovation in agriculture from the lab bench to the field and, ultimately, to the consumer. Over the last several years, MTC has provided over \$3 million to support research and commercialization efforts related to agriculture.

# Benson Hill Biosystems

Benson Hill Biosystems is MTC's largest IDEA Fund portfolio investment and is revolutionizing the way crop and food ingredient improvements are brought to market. Through a crop design platform, known as CropOS, BensonHill is improving yield by pairing big data analytics and machine learning with plant biology and genome editing.

In 2013, Benson Hill decided to locate in Missouri because of the growing innovation ecosystem around plant science, the strong research capacity at the Danforth Plant Science Center, and the availability of seed funding from MTC and BioGenerator. Since coming to St. Louis, Benson Hill has grown from its 3 co-founders to more than 50 employees. This summer, the company raised \$60 million in Series C funding in

a round led by GV, formerly Google Ventures. This was GV's first investment in the state of Missouri.

In the last year, Benson Hill inked major partnering agreements with large strategic partners. In partnership with Beck's Hybrids, the CropOS platform will be used to accelerate their corn breeding program to create better-yielding varieties. Benson Hill will also work with Mars, Incorporated to develop cacao tree varieties that have higher yields and are disease and drought resistant. This is being done in an effort to make cacao, the main ingredient in chocolate, more sustainable in the future.

Benson Hill also received a patent for its CRISPR gene editing technology, which will be a critical tool in crop improvement.







The Missouri Soybean Association received grant funding to upgrade facilities at its Bay Farm Research Facility in Columbia. Bay Farm is the home of the University of Missouri's northern soybean breeding program. The upgrades included a new irrigation system, new lab equipment and a combine to more efficiently harvest test plots. With these improvements, MSA has been able to bring 10 new soybean varieties to Missouri farmers to increase yield.



The Danforth Plant Science Center, a

major hub in St. Louis' 39 North innovation district, received funding to build an additional greenhouse and accelerator space. The greenhouse space is critical to support early-stage agtech companies and played an important role in KWS selecting St. Louis for the KWS Gateway Research Center, its U.S. research headquarters. Similarly, the center's accelerator space was a key factor in the decision of the world's largest sugarcane technology company, Brazil's CTC Genomics, to place its U.S. headquarters in St. Louis.





The Missouri Agricultural Foundation received proof-of-concept funding for agricultural practices related to beef cattle such as covered feeding and processing facility upgrades.

The National Center for Beef Excellence, a newly formed nonprofit group, used grant funding to expand their work and build a genetic database for non-Angus cattle breeds.

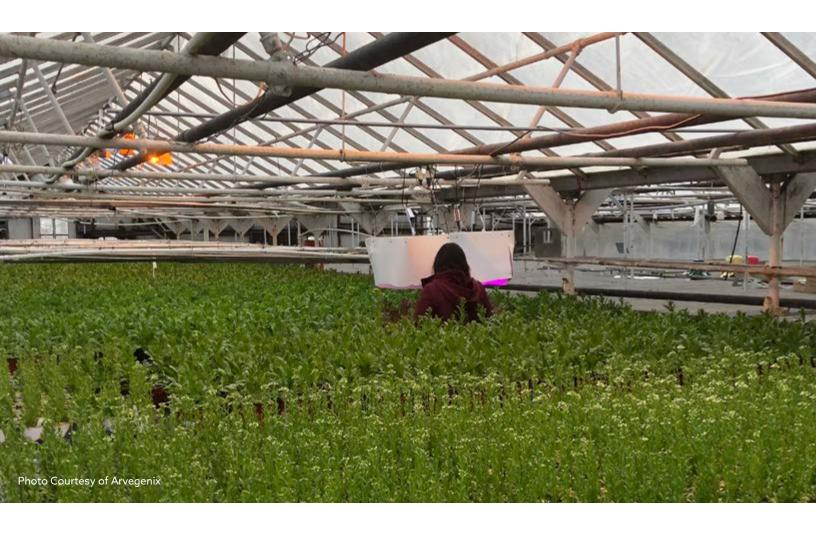
Helix Center, in partnership with BioGenerator, received funding to create a shared lab facility that will increase the lab space available to nascent plant science companies.



Plastomics bioengineers traits like insect and weed resistance, as well as drought and herbicide tolerance, into a plant's chloroplasts. This platform technology provides an additional site for introducing desirable traits into crops like corn, sorghum, and wheat while increasing simplicity, speed, and predictability of trait breeding.

Mazen Animal Health, headquartered in St. Joseph, produces a maize grain containing particular antigens which can be ground into meal and serves as an oral alternative to injected vaccinations. Oral vaccination provides both mucosal and systemic protection while easing timing and dosing for both livestock and companion animals.





Arvegenix aims to develop pennycress as a new, productive cover crop during the winter crop cycle between corn and soybeans. The company is also enhancing the plant's use in oils and animal feed.

Aptimmune Biologics has developed a portfolio of products allowing the mucosal administration of vaccines for viral diseases impacting the swine industry. In 2018, Aptimmune entered into a strategic partnership with Des Moines' Kemin Biologics to advance new research and development programs in the field of swine respiratory disease.



# Improving HEALTH CARE

MTC supports advances in biomedical sciences by investing in a broad range of health care innovations. From cutting edge diagnostics and medical devices to the development of new drugs and therapies to address some of the most concerning disease conditions, these advances generate new growth in Missouri's economy and improve health care in the state and beyond.

Confluence Life Sciences, one of MTC's earliest investments, achieved a very important milestone this fiscal year, both for the company and the broader innovation ecosystem. Confluence, which is developing treatments for inflammatory and immunological disorders and cancer, was acquired by Aclaris Therapeutics in a transaction that could reach a total of \$100 million. Building on the Confluence team, Aclaris will now base its research and development headquarters in St. Louis. The team will continue to grow in St. Louis and will soon be an anchor tenant in a newly developed building in the CORTEX Innovation District.

Kypha is developing tests that help diagnose activation of the body's complement system which occurs after traumatic injuries and in auto immune conditions such as lupus.

**Geneoscopy** is developing a non-invasive diagnostic test that measures RNA in stool to detect colorectal cancer in humans. The company is also using their technology to diagnose inflammatory bowel disease in cats.

Sparo Labs is developing a diagnostic device that pairs with a patient's phone to help patients monitor their lung function and manage respirtory conditions such as asthma and COPD.



# Improving TECHNOLOGY

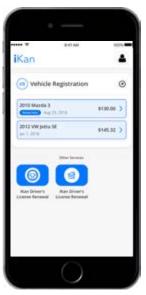
From streamlined corporate and government processes to keeping our cities and families healthy, MTC investments are changing the way we live and work.

Babyation is a company founded by a husband and wife team to engineer better products for parents.

Babyation's first product is a smart breast pump. The innovative design allows for a quieter, more discreet experience that allows a nursing mother to control, track and customize her pumping experience via the connected smart phone app.

Bonfyre allows a company's employees to create communities in which they can feel more connected to their company and each other. The platform also gives employers key insights into employee engagement and job satisfaction.





Paylt, in Kansas City, is changing the way citizens do business with their governments. Instead of waiting in long lines at the DMV, citizens in Florida, North Carolina and Kansas can renew their licenses and registrations from their mobile devices. Paylt's mobile-first platform is also allowing cities and counties across the country to accept payments for property and real estate taxes, court fees, traffic tickets, and utility bills all from their smart phones. Since 2013, Paylt's team has grown from 10 to nearly 50 employees in the KC Crossroads.

Sickweather and Mycroft AI have jointly developed an IoT cough sensor in conjunction with the Kansas City Health Department to be deployed on the KC Streetcar to help the city with disease monitoring. Sickweather's platform technology uses social media to develop sickness forecasts and mapping.

Mycroft AI is developing open source voice assistant software.



# Building Connected ECOSYSTEMS



**Arch Grants** 

JOBS CREATED 99

WAGES

\$5,287,099

**PRIVATE CAPITAL RAISED** 

\$392,450,000

Arch Grants' mission is to build a new economy in the St. Louis region by attracting and retaining innovative entrepreneurs. A staple of St. Louis for the past six years, the Arch Grants Global Startup competition draws the attention of startups from across the state, country, and world, each looking to secure a \$50,000 non-dilutive Arch Grant – and that's just the beginning. Throughout the subsequent year, the competition winners are hosted at T-REX in downtown St. Louis, where they receive educational programming, pro bono services, talent acquisition assistance, professional mentorship, and much more.



## efactory

CLIENTS SERVED

800

ROSIE MEMBERS

1,000

ACCELERATOR COMPANIES

12

INCUBATOR OCCUPANCY

100%

The Springfield-based efactory is part of the Missouri State University's IDEA Commons district. This former poultry processing plant has found new life as a co-working space and business incubator offering entrepreneurial programming, access to business service providers, and a twelve-week accelerator. The efactory's annual Spin66 Innovation Summit, which serves to highlight the work of Springfield's entrepreneurial community, and Rosie, an advocate network for current and prospective female founders, exemplify the initiatives of the efactory aimed at bolstering the entrepreneurial ecosystem of Springfield.

## Digital Sandbox

TOTAL FUNDING PROVIDED

\$1,678,368

TOTAL MISSOURI
STARTUPS FUNDED

87

**JOBS CREATED** 

465

TOTAL FOLLOW-ON CAPITAL

\$34,558,110



Digital Sandbox KC provides proof-of-concept grants of up to \$20,000 to entrepreneurs commercializing innovative and novel technologies. Since launching in 2013, the Sandbox has disbursed over \$1.6MM to over 90 projects and expanded into Independence and St. Joseph. In addition to providing capital, the Sandbox leverages their network of mentors, corporate partners, and capital providers to offer the coaching and connections these projects need to mature into investable early-stage companies.



# Marquette Tech District

STARTUPS LAUNCHED

*42* 

JOBS CREATED
144

**INVESTMENTS MADE** 

\$15,630,000

Housed in Cape Girardeau's historic Marquette Tower and supported by new fiber optic, gigabit internet and free high-speed wi-fi Codefi, the Marquette Technology Institute, and the 1st50K Startup Competition highlight the district's entrepreneurial support offerings. By offering access to early stage grant funding for startups and coding training for students and citizens alike, the Marquette Tech District is transforming the way that citizens in downtown Cape Girardeau live, work, and play.



## LaunchKC

FULL TIME EMPLOYEES 118

**CUMULATIVE INVESTMENT** \$35,400,000

**CUMULATIVE SALES** \$3,700,000

**ANNUAL PAYROLL** *\$7,000,000* 



A collaboration between the Downtown Council and the Economic Development Corporation of Kansas City, the LaunchKC Global Grants Competition awards nine finalists with a total of \$500,000 in non-dilutive grants. Investing across the spectrum of 'tech' companies, LaunchKC delivers its award winners impactful connections to its industry-diverse network of corporate partners and program alumni. While around half of the finalists have been local, nearly the same amount have relocated to downtown Kansas City, MO to take advantage of this enticing opportunity.

# IDEA Funds

The Missouri Innovation, Development, and Entrepreneurship Advancement (IDEA) Funds promote the formation and growth of businesses that engage in the transfer of science and technology into job creation. The funds provide financing to eligible businesses through four components that correspond to the four stages of growth for investment-grade, high-growth enterprises: (1) TechLaunch, pre-seed stage financing; (2) Seed Capital Co-Investment Program, seed stage financing; (3) Venture Capital Co-Investment Program, venture stage financing; and (4) High-tech Industrial Expansion Program, expansion stage debt. Funding decisions are made through a multi-tiered, competitive application process. Companies that receive investments through the IDEA Funds program must raise at least a \$1 of private capital for every dollar invested by MTC.

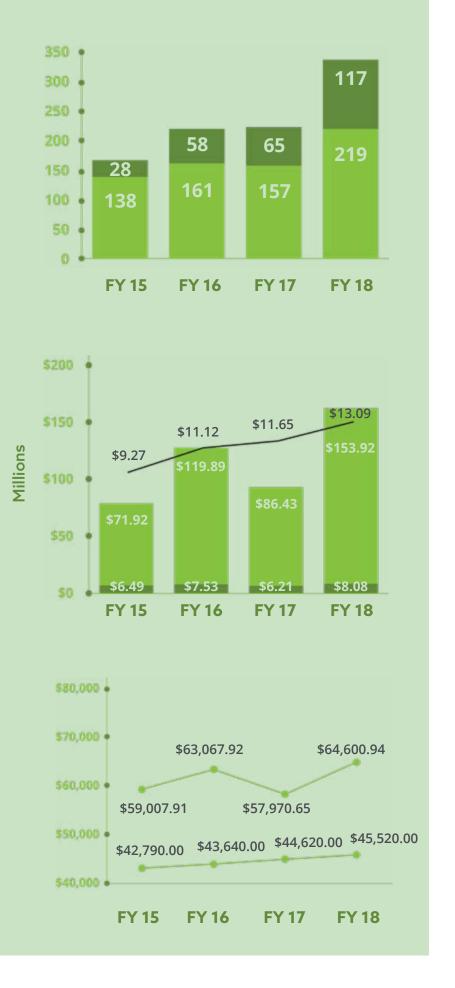
The IDEA Funds program was created to address a critical shortage of early-stage capital source for innovative, high growth startup companies in the state. The program was structured to create a continuum of capital from pre-seed stage through early institutional venture capital financings. In fact, approximately 70% of IDEA Fund investments have gone to pre-seed and seed stage companies filling an important need in the capital markets and positioning early-stage companies for larger subsequent investments from traditional venture capital sources.

Since 2011, MTC has co-invested in over 120 Missouri-based companies. As a result, MTC's portfolio companies have in turn raised over \$600 million in additional private capital to fuel their growth in Missouri.

Net New Jobs

MTC Investment Leverage Ratio

Average Full Time Wage

























































































































































































SYNERZ MEDICAL, INC.



























# Innovation Centers

MTC's Innovation Center Program is a major statewide resource for commercializing Missouri research discoveries and innovations. Innovation centers are the "boots on the ground" that assist Missouri entrepreneurs with creating and growing new high-tech, high-growth businesses. Innovation centers provide the specialized business counseling and hands-on business development and finance assistance needed to take a technology from the lab or garage into a thriving business that creates high-paying jobs. Innovation centers may also operate physical incubators that provide laboratories and office space at affordable rates. The commercialization process may include establishing a proof of concept, securing seed investment, advancing prototype development, and



forming strategic partnerships. The process requires special expertise and can be both lengthy and complex. Innovation Centers are located in Cape Girardeau, Columbia, Joplin, Kansas City, Kirksville, Rolla, Springfield, St. Joseph and St. Louis.

Missouri Enterprise, based in Rolla, serves as the innovation center focused on advanced manufacturing, which includes operating the Manufacturing Extension Partnership (MEP) Program. The MEP Program provides Missouri-based, small- and medium-sized manufacturers with technical engineering assistance to increase productivity, obtain necessary quality certifications for exporting Missouri-made products, and assist with the implementation of growth strategies. Small Missouri manufacturers face increased pressures in a global economy to remain cost competitive with foreign-produced goods made in countries such as China. Accordingly, the MEP Program helps manufacturers of traditional products, like cabinets or pipes, use technology to grow and compete while also assisting high-tech startups create new manufacturing jobs in Missouri.

# Innovation Center ECONOMIC IMPACT DATA

















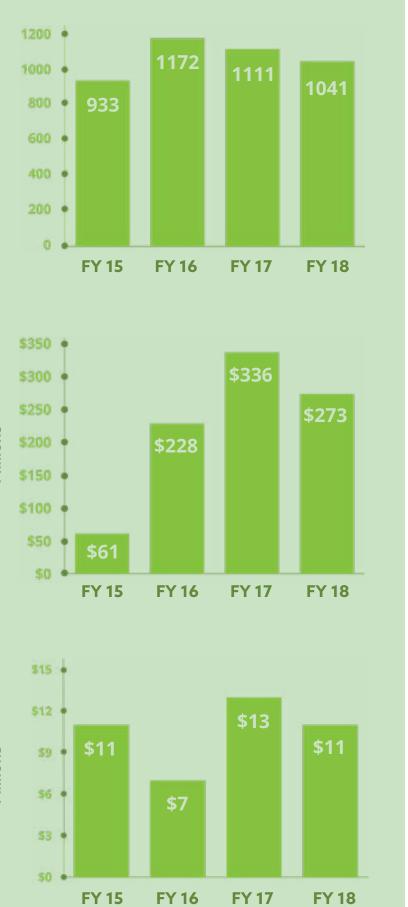




Jobs Created

Private Capital Raised

Government Grant Funding





Our vision is to transform Missouri through the power of entrepreneurship by serving as a catalyst for technology-based innovation to achieve sustainable economic growth.

Our mission is to provide leadership and make strategic investments that help entrepreneurs create and grow technology-based Missouri businesses. MTC focuses on 21st Century bioscience industries that build on Missouri's rich history in agriculture.

### Governance

The Missouri Technology Corporation is a public-private partnership created by the Missouri General Assembly to promote entrepreneurship and foster the growth of new and emerging high-tech companies. It is governed by a 15-member board of directors appointed by Missouri's Governor, Speaker of the House, and President Pro Tem of the Senate. The President of the University of Missouri System and the Director of the Department of Economic Development are ex officio members of the board.

### Values Statement

In carrying out its mission, our board and staff are guided by core values.

- 1. **Integrity** Honesty and candor are the foundation on which MTC builds long-term, trusting relationships with stakeholders.
- 2. **Transparency** MTC is committed to openness in its operations and active communication with stakeholders.
- 3. **Accountability** MTC recognizes that it holds a position of public trust and is the steward of public funds. MTC makes informed decisions, takes responsibility for its actions, and tracks the outcomes of its investments.
- 4. **Independence** The governance, policies, programs, and funding decisions of MTC are nonpartisan and merit-based.
- 5. **Collaboration** Meaningful partnerships can produce game-changing results for Missouri. MTC is committed to actively collaborating with strategic partners.





# MTC AREAS OF FOCUS





#### **ANIMAL HEALTH**

Products and services related to the health and nutrition of companion and livestock animals including but not limited to animal feed, comparative health, diagnostics, human food supply, veterinary drug development and delivery, and veterinary science



#### **APPLIED ENGINEERING**

The use of engineering to develop innovative product and service solutions for technological issues including but not limited to advanced manufacturing, advanced materials, clean energy generation and storage, creative content, digital and convergence media, and information technology



#### **BIOMEDICAL SCIENCE**

Products and services related to human health including but not limited to biomaterials, diagnostics, drug development and delivery, information technology related to human health, medical devices and pharmaceutical manufacturing



#### **DEFENSE AND HOMELAND SECURITY**

Products and services related to national defense and national security including but not limited to development, assembly, maintenance and modification of military equipment, homeland defense-related solutions and related suppliers



#### **PLANT SCIENCE**

Products and services related to plants and plant-derived materials including agricultural yield enhancement, biofuels, food, fiber, plant-derived chemicals, and value-added agriculture technology products

# MTC Board of DIRECTORS



JASON R. HALL Chair



DR. DEDRIC CARTER Vice Chair



DR. JIM BAKER
Secretary/Treasurer



REPRESENTATIVE T.J. BERRY Board Member



**DAN COBB**Board Member



ROB DIXON
Board Member



JIM HEETER
Board Member



SENATOR
DAN HEGEMAN
Board Member



**GARRY KEMP**Board Member



MARK MCINTOSH
Board Member



**LISA NICHOLS** *Board Member* 



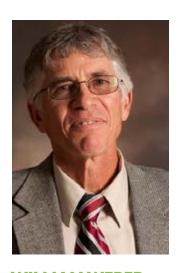
MIKE O'CONNELL Board Member



**DONN RUBIN**Board Member



**ERV SWITZER**Board Member



WILLIAM WEBER Board Member



**BILL ANDERSON Executive Director** 

## **Investment Review Process**

Following a benchmarking analysis of programs and best practices from other states as well as consideration of Missouri's unique strengths, MTC developed clearly defined programs with articulated goals, eligibility standards, and evaluation criteria. These highly competitive application-based programs are subject to a thorough investment review process that reflects MTC's core values of integrity, transparency, accountability, independence, and collaboration.

### **APPLICATION**

Application Submission
Preliminary Staff Review
Due Diligence and Scoring

### INVESTMENT COMMITTEE REVIEW

Highest-ranked Applications Reviewed by Investment Committee Funding Recommendations Issued

### **MTC BOARD REVIEW**

Board Considers Recommendations
Final Due Diligence and Definitive Documents

### TRACKING OUTCOMES

Awardees Report Outcomes for 10 years
Contract Compliance
Outcomes Monitored by Investment Committee



**Total** 

### **BALANCE SHEET**

As of June 30, 2018

### **PROFIT & LOSS**

July 27, 2018 - June 2018 **Total** 

	iotai		iotai
ASSETS		INCOME	
Current Assets	•••••••	Contributions Income	
Bank Accounts		Administrative Income	36,659.16
Central Bank Checking	11,095,583.13	Program Income Total Contributions Income	2,425,000.00 <b>\$2,461,659.16</b>
Total Bank Accounts	\$11,095,583.13	_	
Other Current Assets		Total Income	\$2,461,659.16
Short-Term Investments	\$9,301,957.36	Gross Profit Expenses	\$2,461,659.16
Notes Receivable	\$12,823,042.89	Administrative Services/Cost Allocation	13,159.52
Total Current Assets	\$33,220,583.38	Conference - Expense	1,831.90
Fixed Assets		Dues and Subscriptions	5,000.00
Office Equipment	21,197.74	Fees	30.00
Accumulated Depreciation	-21,046.88	Insurance	10,921.00
Total Office Equipment	\$150.86	Licenses and Permits Meetings	47.88 896.33
		Miscellaneous	99.00
Total Fixed Assets	\$150.86	Office Supplies	106.71
Other Assets		Postage and Delivery	752.05
Total Other Assets-Investments	\$27,397,156.04	Printing and Reproduction	358.20
TOTAL ASSETS	\$60,617,890.28	Professional Development	2,528.00
LIABILITIES AND EQUITY		Professional Services Accounting	25,444.00
	•••••••••••••••••••••••••••••••••••••••	Legal Fees	240,629.56
Liabilities		Total Professional Services	\$266,073.56
Current Liabilities		Program Expense	5,336,684.00
Other Current Liabilities Total Lewis & Clark		Software Program	2,430.00
Discovery Initiative	\$1,432,511.66	Supplies	35.34
Total Ag Research &	\$438,727.37	Telecommunications	4,896.95
Commercialization		Travel & Ent	1.047.00
Total Building	\$1,642,062.88	Meals Travel	1,047.00 15,631.02
Entrepreneurial Capacity Total Early-Stage Business Grants	\$1,314,175.39	Total Travel & Ent	\$16,678.02
Total Current Liabilities	\$4,827,477.30	Wages	326,428.80
Total Liabilities	\$4,827,477.30	Total Expenses	\$5,988,957.26
Equity	¥ 1/02// 177100	Net Operating Income	-\$3,527,298.10
Net Assets - Temporarily Restricted	45,272,608.60	Other Income	
Net Assets - Unrestricted	892,067.34	Interest Income - Administrative	121,497.20
Retained Earnings	11,726,231.46	Interest Income - Program	129,313.29
Net Income	-2,100,494.42	Program Deobligations (LCDI)	243,698.94
Total Equity	\$55,790,412.98	Program Deobligations (MOTIF) Realized Gain (Loss) on Investment	0.02 932,294.23
TOTAL LIABILITIES AND EQUITY	\$60,617,890.28	Total Other Income	\$1,426,803.68
. C. ME EIGHEI HES AID EXOIL	700,017,070.20	Net Other Income	\$1,426,803.68
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**NET INCOME** 

-\$2,100,494.42

