

2006 Annual Report



EIERA
Environmental Improvement and Energy Resources Authority

Chairman's Letter



Dear Friends:

In the past 20 years, the Authority has supported several innovative environmental programs that have been very beneficial to the state and its citizens.

During the past year, the Authority has assisted the Kansas City Regional By-Products Synergy Project. This outstanding program was officially launched on July 20, 2004, by Bridging The Gap (BTG), a Kansas City-based community organization.

The By-Product Synergy Project was established through the efforts of BTG's Environmental Excellence Business Network (EEBN) and the staff and resources of the Mid-America Regional Council (MARC), BNIM Architects, Franklin Associates and the U.S. Business Council for Sustainable Development.

The purpose of the project is to form partnerships with Kansas City businesses that have raw materials on-site and other companies that can reuse that same raw material in its manufacturing process. These partnerships have saved Kansas City companies thousands of dollars in disposal fees and tons of raw materials are recovered rather than being trucked to a landfill. More than 20 Kansas City companies are members of the By-Products Synergy Group.

This year, according to BTG officials, the project and its members will divert approximately 100 tons of material for re-processing. Next year, BTG projects that the figure could jump to 10,000 tons. Hopefully, in the near future, this project can be replicated in other communities across the state.

Congratulations and continued success to Bridging The Gap, the By-Product Synergy Group and the Kansas City business community.

Sincerely,

A handwritten signature in black ink, appearing to read "W. H. Worley". The signature is fluid and cursive, with a large loop at the end.

Dr. William H. Worley
Chairman

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Front Cover:

Next year, the city of Columbia will purchase wind energy from three wind turbines at this wind farm near King City, which is about 40 miles northeast of St. Joseph. The three turbines, which are as tall as a 21-story building, will generate an annual output to serve approximately 2,300 Columbia homes. Each blade on the turbine is 140 feet long, which is almost twice as long as a basketball court and nearly half the length of a football field.

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The 2006 Annual Report of the Environmental Improvement and Energy Resources Authority (EIERA), is a public record of the programs administered during fiscal year July 1, 2005 through June 30, 2006.

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Members of the Authority



William H. Worley, Chairman

A Kansas City civic and business leader for more than 30 years, William Worley was appointed to the Authority for a three-year term by Gov. Bob Holden.

Dr. Worley has a vast amount of experience in the environmental arena. In 1986, he founded Kingston Environmental Services, Inc. and currently serves as chairman of the board. Kingston is a full service environmental engineering, consulting and remediation firm based in Kansas City. Kingston offers environmental services throughout the United States.

From 1992 to 1999, Worley was vice chairman of the Missouri Hazardous Waste Management Commission. Additionally, he has served on the boards of numerous civic, economic and cultural groups. In 1995, he received a Presidential Appointment to represent the state of Missouri at the White House Conference on Small Business.

Dr. Worley was educated at the University of Missouri in Columbia receiving both a B.S. degree and a doctorate in Veterinary Medicine.



Jerome (Jerry) Govero, Vice Chairman

Jerry Govero was appointed to a two-year term by Gov. Bob Holden. He is a developer and engineer for Govero Land Services in Festus and has been involved in the planning and development of more than 10 residential communities. Also, he was a management consultant for Bloomsdale Excavating Company, Bloomsdale (Missouri), and worked as an engineer for Armour Agriculture Company in Crystal City. Govero served as a first lieutenant in the U.S. Army Corps of Engineers as a combat engineer.

Govero, who earned a bachelor's degree in mechanical engineering from the University of Missouri, Rolla, is a member of the Missouri Society of Professional Engineers. He is a member of the Greater St. Louis Jaguar Association, the Festus Board of Appeals and Building Officials and Code Administrators (BOCA). He is the former president of the Parish Council of Our Lady Church, Festus, and served as board president of the PONY BIRD Home, Inc. Also, Govero is the former president of the Show Me Antique Car Club.



Deron Cherry, Secretary-Treasurer

Deron Cherry, reappointed to a second term by Gov. Matt Blunt, is a Kansas City businessman and former NFL star. Cherry is managing general partner of United Beverage Company, an Anheuser-Busch distributor in Kansas City. He is a minority owner for the NFL's Jacksonville Jaguars football team.

A six-time All-Pro safety, Cherry was considered one of the best players in Kansas City Chiefs history. He was named to the All NFL Decade Team in the 1980s and is a member of the Kansas City Chiefs Hall of Fame. Known for his bone-jarring tackles, his 50 career interceptions rank third in club history. In 1988, he received the NFL Players Association's highest honor, The Byron White Humanitarian Award for service to his team, community and country.

Cherry, who graduated from Rutgers University with a B.S. degree in Biology, has been a spokesman and fundraiser for several non-profit organizations. He is the founder of Score1 for Health, a program that provides health screenings for more than 12,000 children in the Kansas City metropolitan area. Also, he is co-chairman of the Jazz District Redevelopment Corporation and serves on the Kansas City Sports Commission and the Kansas City Liquor Advisory Committee. Recently, he was selected by Gov. Blunt to serve on the Jackson County Sports Authority.



Darwin Hindman, Member

Gov. Bob Holden appointed Darwin Hindman to a two-year term on the Authority. In 1995, Hindman was elected mayor of Columbia and is serving his fifth term. Also, Hindman practices law at the Columbia firm of Hindman and Goldstein, LLC.

Very active in the community, Hindman is president of the Missouri Rails to Trails Foundation and is a former member of the Missouri Economic Development Finance Board and the Missouri State Parks Advisory Board.

Mayor Hindman earned his bachelor and law degrees from the University of Missouri, Columbia, and served two tours of active duty as an Air Force pilot. He has been honored on numerous occasions including the Dr. Martin Luther King, Jr., Memorial Association Award, Citizen of the Year citation by the Columbia Chamber of Commerce, and Chevron-Times Mirror Publication's Citizen Conservation Award.



Ryan Doyle, P.E., Member

Ryan Doyle was appointed to the Authority for a three-year term by Gov. Matt Blunt. He is currently a safety engineer at ATK at the Lake City Ammunition Plant.

Prior to joining ATK, Doyle was an environmental and safety engineer for three years at Pittsburgh Corning in Sedalia. Also, he served one year as a field engineer at Schlumberger Oil Field Services in Abilene, Texas. In 2000, Doyle was an engineer associate (intern) at Black & Veatch's Water Division in Kansas City.

In 2001, Doyle earned a B.S. degree in Chemical Engineering from the University of Kansas and is a certified Professional Engineer. He is married and lives in Lee's Summit.

The EIERA - Its History and Mission

The Environmental Improvement and Energy Resources Authority (EIERA) is an independent, self-supporting agency, created in 1972 by the state legislature. The EIERA's mandate is to protect Missouri's environment, develop energy alternatives, and promote economic development. The Authority's mandate is broad and includes financing projects and providing technical assistance.

The EIERA is not a regulatory agency. The Authority operates as a quasi-governmental agency and receives no state general revenues or federal funds for its operation. The agency operates on fees received for issuing bonds. However, in 1972, the EIERA did receive a one-time appropriation of **\$225,000** from the General Assembly. Over the years, these monies have been leveraged into **\$4.8 billion** for environmental financing.

The governor appoints the five members of the Authority's board for three-year terms. Board members have experience in law, finance, and environmental affairs. A director and seven staff members conduct the day-to-day activities.

Since 1973, the EIERA has been recognized as an extremely important financing agency. The EIERA issues several types of traditional tax exempt and taxable notes and bonds which are regulated by state and federal laws. The structure of EIERA financings and assistance have varied greatly and are dependent upon the uses and repayment sources of the projects. The nature and size of the projects as well as current federal and state laws are also factors, which must be considered by the EIERA board and staff when requests for financing are reviewed.

In addition to bond issues and other financings, the EIERA can provide small projects with financial assistance, too. The EIERA continues to develop alternative financing methods to assist environmental improvement and energy projects. In terms of energy projects, the Missouri Energy Efficiency Leveraged Loan Program is regarded as the first of its type in the nation. Developed in 2000 by EIERA staff and the Department of Natural Resources' Energy Center, this program



This 3,000-foot runway, taxi area and parking apron at the Rolla Downtown Airport were paved with 4,000 tons of Glasphalt, a mixture that included asphalt and 400 tons of recycled glass. In 1997, the airport, which is the first aviation facility in the United States to use Glasphalt, received \$150,000 in assistance from EIERA's Market Development Program.

provides low-cost financing to increase energy efficiency in Missouri schools and public buildings.

In 1990, the State Revolving Fund (SRF) was developed by EIERA, the Clean Water Commission, Department of Natural Resources and the U.S. Environmental Protection Agency. One of the highest rated SRFs in the nation, this program provides low-cost loans to communities and districts for construction of wastewater and sewage treatment plants. In 1997, a drinking water SRF was developed to assist communities in their efforts to upgrade public drinking water systems and facilities. Also, with this expansion, the Safe Drinking Water Commission is now a partner in the SRF.

In 1992, the Missouri General Assembly established the Missouri Market Development Program to develop and promote markets for recycled content products. The EIERA administers the program and receives assistance through an inter-agency steering committee composed of staff at the Department of Natural Resources and the Department of Economic Development. The steering committee reviews applications and the Authority's board of directors approves all projects.

The Year in Review

Last year, the Authority developed the revolving loan fund for Brownfields projects. This low-cost loan program has generated tremendous interest across the state and empowered community leaders, business owners and company officials to transform blighted and abandoned properties into developments that create jobs and increase property values. This is a major project that will enhance the state on an economic as well as environmental level.

In 2006, the Authority issued more than **\$172 million** in State Revolving Fund bonds for wastewater and drinking water projects. The Market Development Program, which promotes markets for recycled-content products, provided **\$380,000** in project assistance and more than **\$70,000** in technical assistance. The Missouri Energy Efficiency Leveraged Loan Program awarded **\$13 million** in low-cost loans to 25 public school projects and seven local government projects received assistance totaling **\$1.7 million** for energy efficiency improvements.

Staff Activities

The EIERA staff provides support to other organizations that promote environmental protection or environmental financing initiatives.

Council of Infrastructure Financing Authorities

Based in Washington, D.C., the Council of Infrastructure Financing Authorities (CIFA) was established in the mid-1980s. CIFA has members in 44 states and is administered by an executive director and four officers (president, vice president, secretary and treasurer). The EIERA is a charter member of CIFA and **Tom Welch**, director, and **Karen Massey**, deputy director, are the EIERA representatives.

CIFA is a major voice in advancing innovative debt financing techniques to ensure public access to affordable infrastructure improvements. It harnesses the resources of federal, state and local governments to serve the environmental needs of the general public.

Missouri Recycling Association

The Missouri Recycling Association (MORA) is a statewide not-for-profit organization that is administered by a 12-member board. Staff member **Kristin Allan Tipton** is a past president of MORA.

MORA goals support waste reduction and recycling by providing information, educational opportunities and technical assistance. The 200-member organization sponsors an annual conference and supports other environmental conferences and seminars. The group publishes a quarterly newsletter and is an affiliate of the National Recycling Coalition.

Missouri Waste Control Coalition

The Missouri Waste Control Coalition (MWCC) is a 300-member not-for-profit organization. The statewide organization is a coalition of citizens, companies and organizations who are concerned about the environment and the proper management and disposal of generated wastes.

Annually, the MWCC sponsors the Missouri Waste Management Conference, a conference that has run continuously since 1972, making it one of the oldest environmental conferences in the nation. Also, the MWCC publishes three newsletters per year and annually sponsors an awards program, teacher grant program, and an environmental greeting card competition for middle school children. Staff member **Kenneth Seeney** is a former president of the MWCC and currently serves on the advisory board and is public relations chairman. **Kristin Allan Tipton** is president of the coalition.



Since 1972, the Authority has issued bonds totaling more than \$4.8 billion for environmental and infrastructure improvements, which includes the construction of wastewater treatment and public drinking water facilities. The facility pictured here is the Branson wastewater plant, which processes 5.3 million gallons a day.

State Revolving Fund

Water Reclamation in Wentzville

Local farmers are very happy when a truck from the Wentzville Water Reclamation Center pulls up to their gate. Each year, the operations staff from the Wentzville Water Reclamation Center truck 320 tons of wastewater bio-solids – nutrient-rich bio-solids out to their fields.

This past year, city officials received a **\$19.4 million** loan from the State Revolving Fund (SRF) to implement improvements to the Wentzville Water Reclamation Center. The plant, which has five full-time employees, is located on a 54-acre tract along McCoy Creek, which is just off Mette Road.

Goodwin Brothers Construction Company, Crystal City, was the contractor for the project. With 37 workers at the site, the company began construction on March 20, 2006, and expects to finish the project by December 2007. In addition to other construction at the site, the company built four structures – the three-story headworks building, electrical works unit, blower building, and ultra violet (UV) building.

In the state-of-the-art UV building, plant effluent is exposed to ultra violet light to kill microorganisms rather than using the traditional method (chlorine) prior to entering the receiving stream. This fish-friendly method does not remove oxygen from the receiving stream. With all the improvements and a fourth treatment basin, the facility will be able to process more than five million gallons of wastewater per day.

Mayor Paul Lambi emphasized that by utilizing the SRF rather than conventional financing, the city will realize annual savings of **\$471,000**. Also, the plant improvements were necessary to meet the growing demands of residential and industrial development. Wentzville, which is located 40 miles west of St. Louis, has a population of 22,000 people.

“Whether it’s our homeowners or existing businesses or new industry, we want to provide high-quality service, at the lowest cost, without system overloads,” Lambi stated.

Since 1990, Missouri’s State Revolving Fund has awarded more than **\$1.7 billion** in low-cost loans to communities and districts across the state. This past year, 19 communities received assistance totaling **\$140.9 million** for wastewater improvements. Also, seven communities and districts received **\$31.8 million** for the construction of public drinking water facilities.

EIERA Board member Darwin Hindman said the plant is an award-winning facility in a growing community. “A couple of years ago, Wentzville received an award from the Missouri Water Environment Association for wastewater management. Also, General Motors built a plant there (in 1999), so this facility has upgraded its equipment to meet the increasing demands on the system and still protect the environment.”



When completed, the UV (ultra violet-light) Building will be one part of a large improvement project at the Wentzville wastewater treatment plant, supported by a \$19.4 million loan through the State Revolving Fund (SRF). City leaders stated by using the SRF they will realize an annual savings of \$471,000.

Market Development Program

Diaper Dust Gets a Second Life

There is a lot of Luv at this manufacturing plant, five miles north of Cape Girardeau.

There is a lot of Luv...and Pampers and other paper products. Each month, thousands of diapers are produced at Procter & Gamble's 80-acre plant, which is a mile north of Trail of Tears State Park and about 100 miles south of St. Louis. The company employs 1,300 workers and its annual payroll of **\$89 million** makes Procter & Gamble the largest employer in southeast Missouri.

However, the production of disposable diapers was creating 180 tons of diaper dust every month, which was being trucked to a local landfill. Every year, disposal costs were about **\$150,000**.

In 2001, Procter & Gamble received **\$50,000** in assistance from the Missouri Market Development Program in Jefferson City. Company officials used the funds to purchase a baler and other equipment. The company's vacuum system sucks diaper dust and paper fibers from the assembly lines and sends it to a machine that feeds the dust into the baler.

Each hour, the blue baler produces a three-foot, white "square" that weighs 600 pounds. The bales are shipped to companies throughout the Midwest that re-use the paper fibers in their manufacturing operations. One company re-uses the diaper dust in a metal refining process.

This recycling effort has been very beneficial to Procter & Gamble. "Since fiscal year 2004, we diverted 4,500 tons from local landfills," said Richard McLeod, plant manager. "Additionally, we have saved more than **\$300,000** in landfill fees during that period."

Also, Procter & Gamble has recycling programs that include office paper and aluminum cans. "About 89 percent of all waste at this plant is recycled," McLeod said.

"These are the kinds of projects that are good for a community," said William Worley, EIERA chairman.

"The company is helping to protect the environment through waste diversion and also creating a second life for a valuable raw material."

Worley added that the state wants to see companies like Procter & Gamble succeed because they are important to the region's economic fabric. "This company provides jobs for 1,300 people – people who will buy butter and bread and put gasoline in their cars and that supports the local economy."



Company officials at Procter & Gamble purchased this blue baler with financial assistance from the Market Development Program. Every hour, the baler produces one three-foot bale of diaper dust that weighs 600 pounds. Later it is shipped to another company for reuse in a manufacturing process.

Market Development Program

Down on the Farm - Fruit Loops, Chips and Pasta

On U.S. 63, near Houston (Missouri), there is a road sign that says a community called “Success” is 16 miles to the west on Highway 17. But a real success story is located a few miles down the road on a 380-acre farm.

Fruit Loops, red and green ice cream sprinkles, curly pasta and potato chips are welcomed at the front door. “We take all of it,” said Lexie Grisham, president of Grisham Farm Products, Inc., referring to the food wastes he uses in the production of a commercial animal feed. The company, which employs 68 workers at this four-building plant, is two miles west of Mountain Grove. Also, he has 600 beef cattle and 1,500 hogs.

Grisham and his son Rick (vice president) have 32 trucks on the road that collect dry and wet food wastes from stores, restaurants and wholesale outlets in Alabama, Arkansas, Tennessee and other nearby states. “My gasoline (diesel) bill is \$90,000 every two weeks,” Grisham explained.

At the plant, the dry animal feed is produced using a heating process that reaches 500 degrees and the raw materials are funneled through a large rotating cylinder. Then the animal feed is poured into 25-ton trucks and shipped to Tyson Foods, the primary customer. Each month, Grishman Farms produces 11 million pounds of animal feed.

In fiscal year 2005, Grisham Farms received **\$46,275** in financial assistance from the Missouri Market Development Program. Company officials purchased two yellow mixers that receive and stir raw materials before the drying process. The mixers, which are about eight-foot tall, hold 11,000 pounds and process 50,000 pounds of raw materials every hour.

Annually, Grisham’s operation diverts more than 135 million pounds of raw materials from area landfills. “That’s a phenomenal diversion rate,” said Deron Cherry, the Authority’s secretary-treasurer. “And that’s the purpose of the market development program – diverting waste from the state’s landfills and creating products for the marketplace that have recycled content.”

In FY 2006, the Market Development Program provided assistance to 10 Missouri businesses totaling **\$430,200**. Also, 16 companies and organizations received technical assistance totaling **\$70,275**. During the past 15 years, the program has provided **\$7 million** to 250 Missouri businesses across the state to support recycled product development.

In 1991, the Market Development Program was established by the General Assembly in an effort to conserve landfill space and to encourage economic development initiatives that would energize the recycling industry. Missouri was one of the first states in the nation to operate an assistance program to create recycled content products for the marketplace.



These two mixers at the Grisham Farms were purchased with assistance from the Market Development Program. The mixers, which are about eight-feet tall, hold 11,000 pounds and can process 50,000 pounds of raw materials every hour.

Market Development Program

Black Oak Composts Peas, Trees and Leaves

“You don’t see many companies doing that,” said Craig Post, president of Black Oak Organics, LLC, formerly known as CHP Environmental. “We’re one of the few companies in Missouri that composts food wastes.”

Based in Verona, Black Oak Organics is 23 miles west of Springfield. Depending on the market demand, the company contracts with a hauling firm and collects food wastes, commercial wood wastes, yard wastes, tree wastes and storm debris to process into a rich compost material. The food wastes and other raw materials are collected from restaurants, stores, tree-trimming companies, construction companies and utilities in the Springfield area. In the near future, the company will collect from schools and colleges.

Black Oak, which has five employees, is just 18 months old. Annually, Post estimates that the company will divert 10,000 tons of valuable raw materials from area landfills.

In FY 2006, Post received **\$50,000** in financial assistance from the Missouri Market Development Program to purchase a windrow turner. The windrow turner grinds, chops and shapes windrows that are 14 feet wide and about eight feet tall. The windrow turner is operated by one person and travels about a quarter of mile in an hour.

When the raw materials become compost, which is usually a 15-week cycle, the new product is packed and ready for market.

“We ship our compost to lawn and garden companies, nurseries and construction companies throughout southwest Missouri,” Post confirmed. On an annual basis, Black Oak produces 18,000 cubic yards of compost (approximately 6,700 tons).

EIERA vice chairman Jerry Govero said that compost projects are important in the overall scheme of waste management. “In addition to taking up about seven to 10 percent of the capacity,” Govero said, “Food wastes are 90 percent water, which in itself can cause numerous problems in the management of a landfill.”

For more information or to obtain a project application, please call the Market Development Program at EIERA in Jefferson City at (573) 526-5555.



At Black Oak Organics in Verona, this \$95,000 windrow turner grinds, chops and shapes windrows that are 14 feet wide and about eight feet tall. The windrow turner, which weighs 36,000 pounds and is about 12 feet tall, can cover a quarter of mile in an hour.

Missouri Market Development Program

Financial Assistance Projects

Fiscal Year 2006

Company	Materials	Location	Amount
EPC, Inc.	Electronic Scrap	St. Charles	\$34,800.00
Black Oak Organics, LLC.	Food, Yard Waste	Springfield	\$50,000.00
Loganbill Enterprises, Inc.	Food, Yard Waste, Manure	Latham	\$50,000.00
Strategic Materials, Inc.	Glass	St. Louis	\$50,000.00
International Mulch Company, Inc.	Shredded Truck Tires	St. Louis	\$40,000.00
Missouri Botanical Gardens	Plastic	St. Louis	\$5,400.00
DoCo, Inc.	Wood Waste	Ava	\$50,000.00
Recycling Concepts, Inc.	Plastic	St. Louis	\$50,000.00
Nike IHM	Polyether Urethane Plastics	St. Charles	\$50,000.00
			Total \$380,200.00

Technical Assistance Projects

Fiscal Year 2006

Company	Materials	Location	Amount
In-Sight Color Coded Recycling System	Plastic	Fenton	\$5,000.00
Coon Manufacturing	Plastic, Styrene	Spickard	\$4,000.00
Bay Creek	Fabric Waste	Mountain View	\$4,000.00
Terrene	Food Waste Compost	St. Louis	\$5,590.00
Rustique Enterprises, Inc.	PVC, Polystyrene Foam	St. Charles	\$3,500.00
Integrity Recyclers, LLC	Carpet Waste	St. Louis	\$6,000.00
Reglass, LLC	Glass	St. Joseph	\$4,810.00
DoCo, Inc.	Wood Waste	Ava	\$5,550.00
Award Source	Wood Waste	St. James	\$4,000.00
Hammons Products Company	Black Walnut Waste	Stockton	\$4,000.00
Delta Fibers, LLC	Cotton Gin Waste	Caruthersville	\$3,125.00
Research - Used Mattresses Recycling	Mattresses	Statewide	\$5,000.00
Hogenmiller Appliances & Electronics	E-Waste	Barnhart	\$4,200.00
Macon Diversified Industries	Textiles	Macon	\$3,000.00
MarChem Coated Fabrics, Inc.	Textiles	New Haven	\$4,500.00
Premium Standard Farms	Wood Waste chips	Milan	\$5,000.00
			Total \$37,748.00

Energy Loan Program

College Gets Good Grades for Energy Efficiency

At 6'7" and 230 pounds, forward Darryl Butterfield has a chilling effect on opposing basketball teams. What's even more chilling are the new air conditioning units at his former college, Mineral Area College.

Mineral Area College in Park Hills, which is about 80 miles southwest of St. Louis, received financial assistance totaling **\$1.1 million** from the Missouri Energy Efficiency Leveraged Loan Program. The loan program was developed in 2000 by the EIERA in partnership with the Department of Natural Resources (DNR). The loan is financing that provides a low interest rate and replaces a construction loan that originated in 2003 between the college and DNR's Energy Center.

In addition to the nine air conditioning units and a 14-foot cooling tower, the St. Louis-based Trane Company and five technicians installed 2,183 energy-efficient light fixtures in seven campus buildings – the C.H. Cozean Library, Arts and Science Building, bookstore, Fine Arts Building, North College Center, Public Safety, and Robert Sechrest Fieldhouse.

Annually, based on the energy improvements and projections by Trane, the college will save 1 million kilowatts of energy and **\$96,190**. "All Missouri colleges, both private and public institutions, are operating on tight budgets," said Steven Kurtz, president of the college. "Anytime you can save money and resources and improve the classroom environment, that's a positive goal in terms of our expectations."



This 14-foot cooling tower, which weights more than 11,000 pounds and pumps 1,050 gallons of water per minute, was purchased with a \$1.1 million loan from Missouri Energy Efficiency Leveraged Loan Fund. With several other energy improvements, school officials at Mineral Area College will save more than \$96,000 annually.

Kurtz notes that the attractive waterfall in front of the Sechrest Fieldhouse was constructed by three workmen from Brookside Contracting in DeSoto.

Workmen trucked 150 tons of rock from a ravine on the west side of the 300-acre campus.

The state loan program provides low-cost loan assistance to local officials and school districts. The purpose is to encourage the installation of energy-efficient lights, streetlights and other energy conservation equipment for schools and public buildings.

"This program has been very beneficial for local governments," said Ryan Doyle, EIERA board member. "We have been told on a number of occasions that without state

Energy Loan Program



Through participation in a state energy loan program, officials at Mineral Area College were able to install nine air conditioning units and 2,183 energy-efficient lights in seven buildings on the 300-acre campus.

assistance the energy improvements would not have even been considered.”

Nationally, Missouri is the first state to administer this type of loan program. During fiscal year 2006, 32 projects across the state were financed for a total of **\$14.8 million**.

Also, the EIARA bonds, which are issued to provide the loans, have **\$6.8 million** in reserve as security against any potential deficient loan payments. The participants will repay the loans in specified payments not to exceed a 16-year period. Historically, the loan program has held an Aa2 rating, which is one of the highest ratings available. Moody’s Investor Service, a ratings firm based in New York, assigned the rating. The ratings reflect the size, security and quality of the loan program and the high quality of EIARA-issued bonds in the financial market.

To obtain more information about the Missouri Energy Efficiency Leveraged Loan Program contact the Energy Center at (573) 751-7466.

Project Summary - Fiscal Year 2006

Local Government Projects

Participant	Amount
Belton	\$ 86,157.20
Grundy County	\$ 39,090.00
Liberty	\$ 114,657.46
Osage County	\$ 3,696.53
Ozark County	\$ 60,042.84
St. Louis	\$ 781,628.43
St. Louis Community College	\$ 610,318.63
Total	\$1,695,591.09

Public School Projects

Participant	Amount
Ava R-1 School District	\$ 964,315.98
Cape Girardeau 63 School District	\$ 224,087.64
Climax Springs R-IV	\$ 46,250.93
Eminence R-1	\$ 87,134.63
Fair Play R-11	\$ 219,832.69
Golden City R-111	\$ 63,643.14
Hancock Place School District	\$ 197,111.60
Hardin Central C-2 School District	\$ 183,322.61
Hartville R-11	\$ 194,148.60
Holcomb R-111	\$ 140,776.93
Humansville R-IV	\$ 49,284.32
Kirbyville R-VI	\$ 23,842.84
Lee’s Summit R-VII	\$ 2,118,723.12
Liberal R-11	\$ 117,094.14
Logan-Rogersville R-VIII	\$ 185,098.97
Macks Creek R-V	\$ 49,704.39
Mehlville R-IX	\$ 355,363.24
New Franklin R-1	\$ 231,318.77
Newburg R-11	\$ 241,036.94
Norborne R-VIII	\$ 54,671.47
Richmond R-XVI	\$ 286,802.47
Sedalia 200 School District	\$ 2,225,564.58
Twin Rivers R-X	\$ 111,216.87
University City School District	\$ 4,404,643.03
Warsaw R-IX	\$ 312,558.20
Total	\$13,087,547.23

Projects Financed in Fiscal Year 2006

State Revolving Fund

Clean Water Projects

Participant	Amount
Arnold	\$6,125,000
Arnold	\$2,875,000
Battlefield	\$850,000
Eldon	\$4,600,000
Herculaneum	\$6,000,000
Indian Point	\$795,000
Jefferson City	\$10,105,000
Kirksville	\$1,595,000
Liberty	\$6,180,000
Metropolitan Sewer District, St. Louis	\$42,715,000
Moberly	\$5,460,000
Newburg	\$250,000
Osage Beach	\$4,950,000
Ozark	\$7,980,000
Platte County Regional Sewer District	\$11,910,000
Raytown	\$7,590,000
Seneca	\$765,000
Wardsville	\$760,000
Wentzville	\$19,430,000
Total	\$140,935,000

Drinking Water Projects

Participant	Amount
Cape Girardeau County PWS District #1	\$600,000
Clarence Cannon Wholesale Water Commission	\$9,700,000
Clarence Cannon Wholesale Water Commission	\$590,000
Kirksville	\$1,805,000
Russelville	\$650,000
Shelby County PWS District #4	\$810,000
Tri-County Water Authority (Independence)	\$17,625,000
Total	\$31,780,000



A popular haven for trout fishing, Bennett Springs is situated in a 3,100-acre state park about 12 miles west of Lebanon. Daily, more than 100 million gallons of water gush from Missouri's third largest spring.

Projects Financed Through Bond Issuances

1973-2006

	Project	Location	Amount Financed
1973	St. Joe Minerals Corporation	Herculaneum	\$ 7,000,000
			TOTAL: \$ 7,000,000
1974	Union Electric Company	St. Louis	\$ 16,500,000
			TOTAL: \$ 16,500,000
1975	Mobay Chemical Corporation	Kansas City	\$ 7,500,000
	Alpha Portland Industries, Inc.	St. Louis	\$ 1,900,000
	Union Electric Company	St. Louis	\$ 22,000,000
	Mobay Chemical Corporation	Kansas City	\$ 3,500,000
	Amco Corporation	Kansas City	\$ 123,350,000
	TOTAL: \$ 158,250,000		
1976	Noranda Aluminum Company	New Madrid	\$ 10,500,000
	American Cyanamid Company	Hannibal	\$ 9,120,000
	TOTAL: \$ 19,620,000		
1977	Standard Oil (AMOCO) Company	Kansas City	\$ 6,450,000
	Great Lakes Carbon Corporation	St. Louis	\$ 7,000,000
	Kansas City Power & Light Company	Kansas City	\$ 20,000,000
	Union Electric Company	St. Louis	\$ 27,085,000
	TOTAL: \$ 60,535,000		
1978	Mobay Chemical Corporation	Kansas City	\$ 11,000,000
	Mobay Chemical Corporation	Kansas City	\$ 825,000
	Kansas City Power & Light	Kansas City	\$ 31,000,000
	Gulf - Western Industries, Inc.	Cape Girardeau	\$ 11,000,000
	Monsanto Company	St. Louis	\$ 2,370,000
	Empire District Electric Company	Kansas City	\$ 8,000,000
	TOTAL: \$ 64,195,000		
1979	Monsanto Company	St. Louis	\$ 10,250,000
	Mobay Chemical Company	Kansas City	\$ 11,000,000
	American Cyanamid	Hannibal	\$ 3,700,000
	Monsanto Company (Queeny Plant)	St. Louis	\$ 2,900,000
	TOTAL: \$ 27,850,000		
1980	Associated Electric Cooperative, Inc.	Thomas Hill	\$ 95,000,000
	Alpha Portland Industries, Inc.	St. Louis	\$ 1,450,000
	River Cement Company	Festus	\$ 5,700,000
	Standard Oil (AMOCO) Company	Kansas City	\$ 8,300,000
	Great Lakes Container Corporation	St. Louis	\$ 800,000
	Union Electric Company	St. Louis	\$ 60,000,000
	American Cyanamid Company	Hannibal	\$ 3,450,000
	St. Joseph Light & Power Company	St. Joseph	\$ 5,300,000
	TOTAL: \$ 180,000,000		
1981	Associated Electric Cooperative, Inc.	New Madrid	\$ 36,000,000
	City of Wentzville (GM Plant)	Wentzville	\$ 6,350,000
	Union Electric Company	St. Louis	\$ 45,000,000
TOTAL: \$ 87,350,000			

	Project	Location	Amount Financed
1982	Associated Electric Cooperative, Inc.	Thomas Hill	\$ 71,000,000
	Associated Electric Cooperative, Inc.	Thomas Hill	\$ 50,000,000
	Associated Electric Cooperative, Inc.	Thomas Hill	\$ 73,000,000
	Associated Electric Cooperative, Inc.	Thomas Hill	\$ 12,000,000
	Noranda Aluminum, Inc.	New Madrid	\$ 45,000,000
	Union Electric Company	St. Louis	\$ 20,000,000
	Monsanto Company	St. Louis	\$ 9,325,000
	Associated Electric Cooperative, Inc.	Thomas Hill	\$ 55,900,000
	Grant Anticipation Notes, 1982	various locations	\$ 24,500,000
	TOTAL:	\$ 360,725,000	
1983	St. Joseph Light & Power Company	Kansas City	\$ 5,600,000
	Community Development Program, 1983	various municipalities	\$ 18,000,000
	Grant Anticipation Notes, 1983	various municipalities	\$ 44,100,000
	Associated Electric Cooperative, Inc.	New Madrid	\$ 44,100,000
	TOTAL:	\$ 111,800,000	
1984	Union Electric Company	St. Louis	\$ 160,000,000
	Lone Star Industries, Inc.	Cape Girardeau	\$ 9,100,000
	Monsanto Company	St. Louis	\$ 2,890,000
	Union Electric Company	St. Louis	\$ 47,500,000
	Associated Electric Cooperative, Inc.	Thomas Hill	\$ 153,125,000
	TOTAL:	\$ 372,615,000	
1985	Union Electric Company	St. Louis	\$ 126,500,000
	Community Development Program, 1985	various municipalities	\$ 15,000,000
	Grant Anticipation Notes, 1985	various municipalities	\$ 90,000,000
	Chrysler Corporation	St. Louis	\$ 16,000,000
	Mobay Chemical Corporation	Kansas City	\$ 1,600,000
	Reynolds Metal Company	Kansas City	\$ 750,000
	TOTAL:	\$ 249,850,000	
1986	Grant Anticipation Notes, 1986	various municipalities	\$ 65,000,000
	TOTAL:	\$ 65,000,000	
1988	Community Development Note Program, 1988	various municipalities	\$ 15,000,000
	Monsanto Company	St. Louis	\$ 7,850,000
	TOTAL:	\$ 22,850,000	
1989	Grant Anticipation Notes, 1989	various municipalities	\$ 14,850,000
	St. Joseph Light & Power Company	St. Joseph	\$ 5,600,000
	TOTAL:	\$ 20,450,000	
1990	Union Electric Company	St. Louis	\$ 60,000,000
	TOTAL:	\$ 60,000,000	
1991	City of Springfield	Springfield	\$ 32,650,000
	City of Lee's Summit	Lee's Summit	\$ 9,695,000
	Noranda Aluminum, Inc.	New Madrid	\$ 45,000,000
	Metropolitan Sewer District	St. Louis	\$ 68,000,000
	St. Louis County Water Company	St. Louis	\$ 25,000,000
	Missouri Cities Water Company	various locations	\$ 4,500,000
	TOTAL:	\$ 184,845,000	

	Project	Location	Amount Financed	
1992	Union Electric Company	St. Louis	\$	42,685,000
	State Revolving Fund	various locations	\$	13,550,000
	State Revolving Fund, MSD	St. Louis	\$	85,000,000
	St. Louis County Water Company	St. Louis	\$	25,000,000
	Raytown Water Company	Raytown	\$	3,000,000
	Tri-County Water Company	Jackson, Cass & Lafayette Cos.	\$	8,365,000
	Middlefork Water Company	Maryville	\$	2,000,000
	SRF Multiple Participant	various locations	\$	48,295,000
		TOTAL:	\$	227,895,000
1993	Kansas City Power & Light	Kansas City	\$	31,000,000
	Union Electric Company	St. Louis	\$	47,500,000
	Missouri-American Water Company	St. Joseph	\$	5,000,000
	St. Louis County Water Company	St. Louis	\$	15,000,000
	Utilicorp United	Kansas City	\$	5,000,000
	Chrysler Corporation	St. Louis	\$	16,000,000
	Monsanto Company	St. Louis	\$	14,520,000
		TOTAL:	\$	134,020,000
1994	SRF, Multiple Participant	Statewide	\$	22,425,000
	Union Electric Company	St. Louis	\$	44,000,000
	Kansas City Power & Light	Kansas City	\$	12,366,000
	Associated Electric Co-op	Springfield	\$	27,375,000
	Empire District Electric	Springfield	\$	8,000,000
	Metropolitan Sewer District	St. Louis	\$	50,000,000
	American Cyanamid	St. Louis	\$	3,450,000
		TOTAL:	\$	167,616,000
1995	SRF, Multiple Participant	various locations	\$	12,215,000
	SRF, Multiple Participant	various locations	\$	43,230,000
	SRF, Multiple Participant	various locations	\$	30,000,000
	SRF, Multiple Participant	various locations	\$	17,450,000
	SRF, Multiple Participant	various locations	\$	11,463,000
	SRF, Multiple Participant	various locations	\$	18,000,000
	St. Joseph Light & Power	St. Joseph	\$	5,600,000
	St. Louis County Water Company	various locations	\$	12,000,000
	St. Joseph Light & Power (refund)	St. Joseph	\$	5,600,000
		TOTAL:	\$	155,558,000
1996	SRF, Multiple Participant	various locations	\$	26,410,000
	Associated Electric Cooperative	Springfield	\$	127,415,000
	Henry County Water	Henry County	\$	13,000,000
	SRF, Multiple Participant	various locations	\$	4,545,000
	SRF, Multiple Participant	various locations	\$	14,185,000
	SRF, Multiple Participant	various locations	\$	24,000,000
		TOTAL:	\$	209,555,000
1997	Missouri-American Water Company	various locations	\$	6,000,000
	St. Louis County Water Company	various locations	\$	20,000,000
	SRF, Multiple Participant	various locations	\$	23,600,000
	SRF, Multiple Participant	various locations	\$	24,060,000
	SRF, Multiple Participant	various locations	\$	15,785,000
	SRF, Multiple Participant	various locations	\$	2,500,000
	SRF, Multiple Participant	various locations	\$	22,235,000
	SRF, Multiple Participant	various locations	\$	5,730,000
	Bayer Corporation (refund)	Kansas City	\$	1,600,000
		TOTAL:	\$	121,510,000

	Project	Location	Amount Financed
1998	SRF, Multiple Participant	various locations	\$ 14,015,000
	Missouri-American Water Company (A)	various locations	\$ 4,500,000
	SRF, Multiple Participant	various locations	\$ 16,480,000
	St. Louis County Water Company (A)	various locations	\$ 25,000,000
	TOTAL:		\$ 59,995,000
1999	AmerenUE(A)	various locations	\$ 60,000,000
	AmerenUE(B)	various locations	\$ 50,000,000
	AmerenUE(C)	various locations	\$ 50,000,000
	Missouri-American Water Company (B)	various locations	\$ 19,000,000
	SRF, Multiple Participant	various locations	\$ 45,900,000
	SRF, Multiple Participant	various locations	\$ 47,970,000
	Raytown Water Company	Raytown	\$ 2,670,000
	St. Louis County Water Company	various locations	\$ 40,000,000
TOTAL:		\$ 315,540,000	
2000	Tri-County Water Authority	various locations	\$ 14,760,000
	SRF, Multiple Participant	various locations	\$ 13,870,000
	AmerenUE(A)	various locations	\$ 63,500,000
	AmerenUE(B)	various locations	\$ 63,000,000
	AmerenUE (C)	various locations	\$ 60,000,000
	Missouri-American Water Company	various locations	\$ 29,000,000
	SRF, Multiple Participant	various locations	\$ 52,640,000
	SRF, MSD-St. Louis (refund)	various locations	\$ 72,545,000
TOTAL:		\$ 369,315,000	
2001	SRF, Multiple Participant	various locations	\$ 41,485,000
	Middlefork Water Company	various locations	\$ 1,620,000
	SRF, Multiple Participant	various locations	\$ 13,930,000
	SRF, Multiple Participant	various locations	\$ 122,060,000
TOTAL:		\$ 179,095,000	
2002	Missouri Energy Efficiency LL Program	various locations	\$ 4,910,000
	Missouri-American Water Company	various locations	\$ 15,000,000
	SRF, Multiple Participant	various locations	\$ 29,545,000
	SRF, Multiple Participant	various locations	\$ 112,410,000
TOTAL:		\$ 161,865,000	
2003	Little Blue Valley Sewer District	Independence	\$ 88,915,000
	SRF, Multiple Participant	various locations	\$ 103,065,000
	SRF, Multiple Participant	various locations	\$ 39,940,000
TOTAL:		\$ 231,920,000	
2004	SRF, Multiple Participant (A)(refund)	various locations	\$ 77,625,000
	SRF, Multiple Participant (B)	various locations	\$ 179,780,000
	SRF, Multiple Participant (C)	various locations	\$ 27,895,000
TOTAL:		\$ 285,300,000	
2005	Missouri Energy Efficiency LL Program	various locations	\$ 13,760,000
	SRF, Multiple Participant (A)	various locations	\$ 53,060,000
	SRF, Multiple Participant (C)	various locations	\$ 39,895,000
TOTAL:		\$ 106,715,000	
2006	Missouri Energy Efficiency LL Program	various locations	\$ 14,813,137
	SRF, Multiple Participant (A)	various locations	\$ 87,505,000
	SRF, Multiple Participant (C)	various locations	\$ 85,210,000
TOTAL:		\$ 187,490,000	

Economic Development

Liberty Wastewater...Goin' to Kansas City...

It's not raining in Liberty, it's pouring – pouring concrete. That concrete is for the new **\$2 million** pump station on Raines Road in the southeast part of town.

The pump station has the capacity to push 2 million gallons of wastewater a day, through 12" pipe, to connect with the Kansas City system to be treated. The pump station is one phase in the city's efforts to extend its wastewater operation. The city, which is about 10 miles northeast of Kansas City, will close its treatment plant once the pump station and gravity sewer piping are completed.

Robert Steinkamp is mayor of Liberty, which has more than 1,200 businesses and a population of 29,000 people. "For our city's size and needs, economically it's better for us to partner with Kansas City," the mayor explained. Mayor Steinkamp added that an engineering company operates the waste management facility on a contract basis.

In fiscal year 2006, Liberty officials received a **\$6.1 million** loan from the State Revolving Fund (SRF) in Jefferson City. The SRF provides low-cost loans to communities and public water districts for improvements to wastewater treatment systems and public drinking water facilities.

In addition to the pump station, the financial assistance was used to excavate and install pipelines to carry the wastewater. David Ross Construction, Lee's Summit, built the pump station and employed 12 people at the construction site. KAT Excavation, Inc., Bates City, was the sewer contractor for the project improvements. KAT expects all construction to be completed next year.



When completed, this \$2 million pump station in Liberty will push 2 million gallons of wastewater daily to Kansas City to be treated. The pump station was one phase in an improvement project assisted by a \$6.1 million loan from the State Revolving Fund.

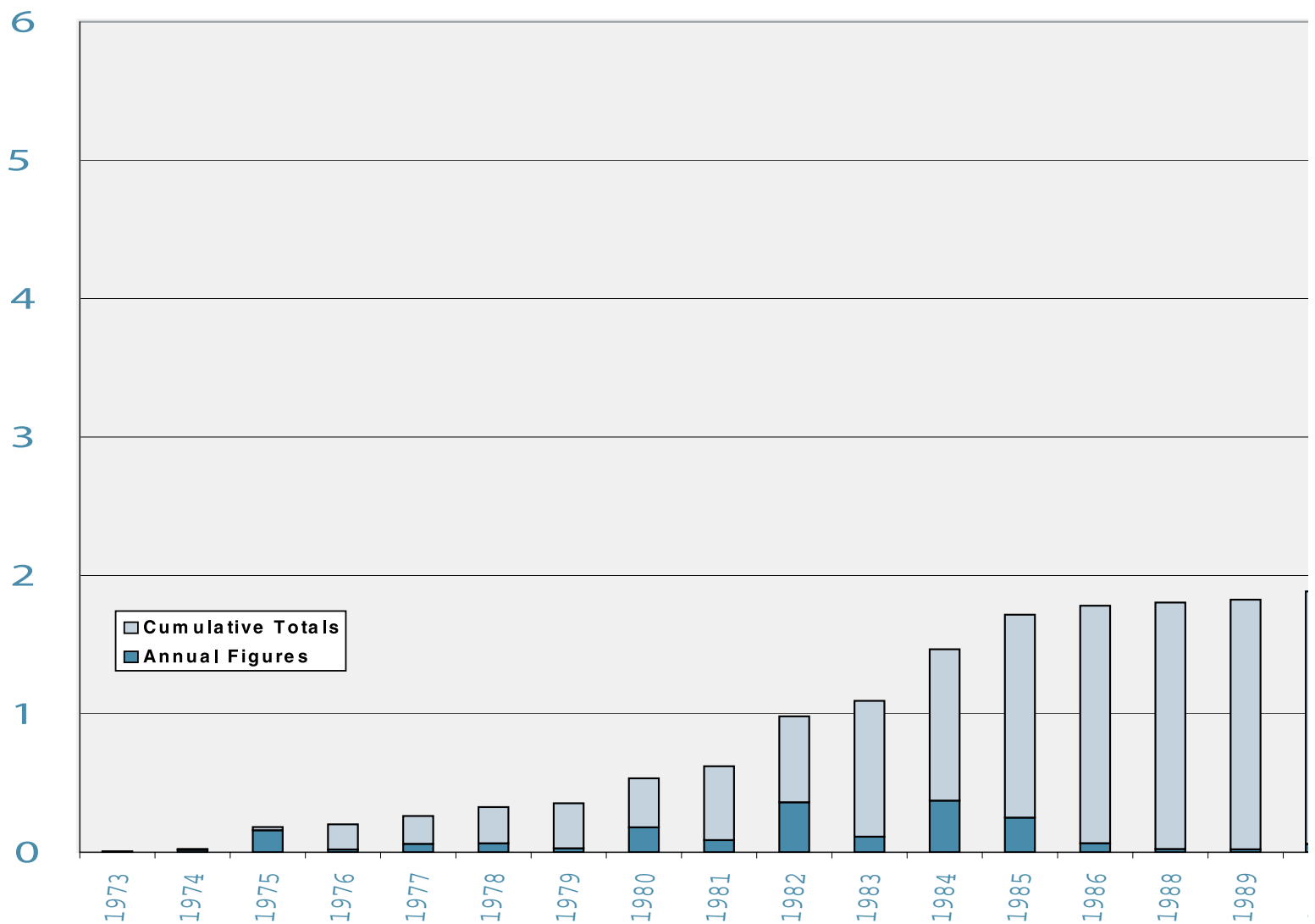
The SRF, one of the top programs in the nation, was established in 1990 by the EIERA, the Department of Natural Resources, the Clean Water Commission and the U.S. Environmental Protection Agency. In 1997, the program was expanded to include drinking water and now EIERA works with the Safe Drinking Water Commission. Since its inception, more than **\$1.7 billion** has been awarded statewide through the SRF for public drinking water and wastewater improvements.

"Hundreds of communities across the state have received financial assistance through this program," said Darwin Hindman, EIERA board member. "By opting for the SRF funding rather than conventional financing, community leaders have saved citizens more than **\$535 million.**"

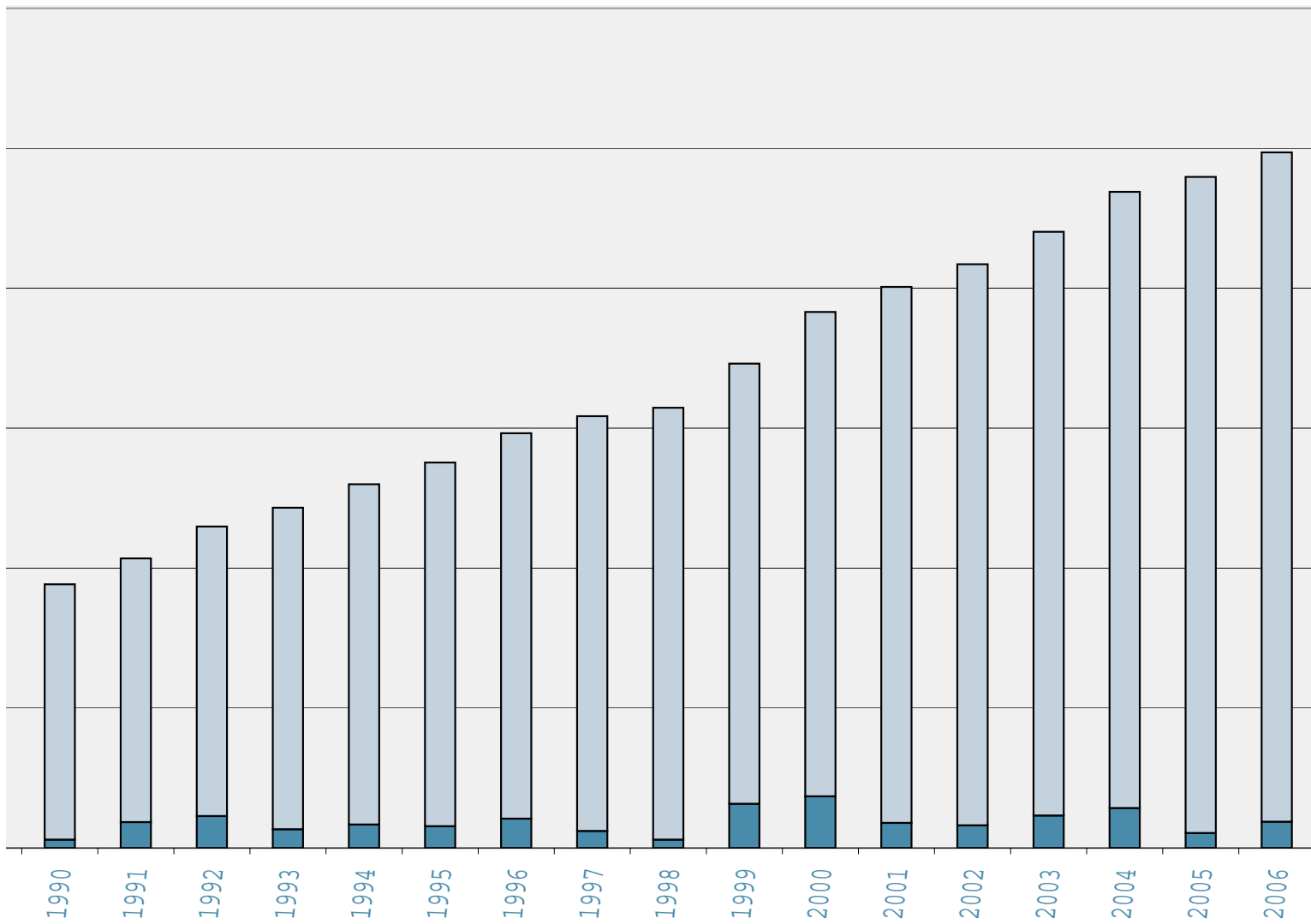
Summary of Bond Issuances

Annual and Cumulative Totals, 1973-2006

(\$ Billions)



Summary of Bond Issuances



Economic Development

Brownfields Program Generates Interest Across the State



Jim Gulliford, Kansas City regional administrator for Region VII of the U.S. Environmental Protection Agency and other officials present a \$1 million "check" to the Missouri Environmental Improvement and Energy Resources Authority for development of the first state-operated revolving loan fund for clean up of Brownfields projects. Tom Welch, director, Karen Massey, deputy director, and Kristin Allan Tipton, development director, accept the check.

"This is one of the most exciting and beneficial projects in the state," said Jerry Govero, vice chairman of the Authority. "We're providing assistance that will help the economic engines create jobs and develop new businesses that will foster pride in the community."

Last year, the Environmental Improvement and Energy Resources Authority received a **\$1 million** grant from the U.S. Environmental Protection Agency to develop a revolving loan program to assist in the clean up and redevelopment of Brownfields sites. In particular, staff will focus on small communities in rural and urban areas that are contaminated with hazardous or petroleum wastes.

Brownfields are underutilized properties that are frequently located on a main road in the center of town. Historically, the business community, commercial lenders and local officials have hesitated to develop these sites because of perceived contamination and other environmental issues that may taint the property's value.

Except for state agencies, any public or private entity may be eligible for loans. Staff emphasize that loan amounts are flexible under the Brownfields program. Staff encourage developers or local officials that are interested in the program to submit a pre-application

form to determine eligibility. Once that form is received, a more detailed application is required with plans for cleanup and redevelopment. The EIERA works closely with the Department of Natural Resources' Brownfields Voluntary Cleanup Program.

Some examples of possible sites are old gasoline stations, manufacturing or industrial plants or abandoned buildings in blighted areas. EIERA and DNR staff confirm that once an area is cleaned up and redeveloped, property values increase significantly.

To obtain an application or project information call EIERA at (573) 751-4919 or fax a letter to (573) 635-3486. The Authority's address is Post Office Box 744, Jefferson City, MO 65102.

"We're providing assistance that will help the economic engines create jobs and develop new businesses that will foster pride in the community."

*-Jerry Govero,
Vice Chairman
of the Authority*

The Redevelopment of Brownfields

This neighborhood in St. Louis, with several vacant lots, abandoned buildings, an old gasoline station and auto repair company, was a depressed area with numerous environmental problems. However, through investments (\$7 million), economic development incentives and assistance from the Missouri Department of Natural Resources' Brownfields Voluntary Cleanup Program, this six-acre site was dramatically transformed. Today, this attractive 50,000-square foot shopping center sits on that same tract of land and annually generates approximately \$400,000 in sales tax revenue for the city and has created more than 70 jobs.



.....will Restore Buildings....



.....as well as Community Pride



State Environmental Improvement and Energy Resources Authority

Missouri Department of Natural Resources