PUTTING SITES TO WORK

How Superfund Redevelopment in the Midwest Region Is Making a Difference in Communities

REGION 7 ECONOMIC PROFILE

Cover page photos:
Strother Field Industrial Park (Kansas), Chemical Commodities, Inc. (Kansas), Big River Mine Tailings/St. Joe Minerals Corp. (Missouri)

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Figure 1. Lindsay Manufacturing's offices at the Lindsay Manufacturing Co. site (Nebraska).

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PREFACE

EPA's Superfund program is a cornerstone of the work that the Agency performs for citizens and communities across the country. The revitalization of places affected by contaminated lands is a key part of Superfund's mission, meeting community needs for thriving economies and improved environmental and public health outcomes. Through EPA's Superfund Redevelopment Initiative, the Agency contributes to these communities' economic vitality by supporting the return of sites to productive use.

EPA has established a renewed focus on accelerating work and progress at all Superfund sites across the country and created the Superfund Task Force whose work included promoting redevelopment and community revitalization. Working closely with communities, developers and property owners, EPA is leading the way to return these once-contaminated sites back to productive use.

These regional profiles highlight community-led efforts as EPA expedites cleanup and remediation and engages with partners and stakeholders to support redevelopment and community revitalization.

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INTRODUCTION

EPA Region 7 (Midwest) includes four states – Iowa, Kansas, Missouri and Nebraska – and nine tribal nations. This area is well known for its wide-open spaces, agricultural strength, diverse ecological and recreational resources, and large military installations. This part of the country includes established urban areas, small towns, farmland, ranches and public lands. Communities across Region 7 are focusing on the cleanup and revitalization of old industrial sites, recognizing that these areas offer substantial opportunities for new development and innovation. Today, states and communities are working diligently to find new uses for these areas, including Superfund sites. The Superfund program in EPA Region 7 is proud to play a role in these efforts.

Region 7 Sites in Reuse and Continued Use: Business and Job Highlights

Businesses:	*1,508*
Total Annual Sales:	*$7.1 billion*
Number of People Employed:	*27,571*
Total Annual Employee Income:	*$1.4 billion*

Figure 2. One of the public service businesses at the Strother Field Industrial Park site (Kansas).

The cleanup and reuse of Superfund sites often restores value to site properties and surrounding communities that have been negatively affected by contamination. Site redevelopment can revitalize a local economy with jobs, new businesses, tax revenues and local spending.

Through programs like the Superfund Redevelopment Initiative, EPA Region 7 helps communities reclaim cleaned-up Superfund sites. Factoring future use of Superfund sites into the cleanup process promotes their safe redevelopment. In addition, EPA Region 7 works closely with state and local officials to remove barriers that have kept many Superfund sites underused. EPA Region 7 works to ensure that businesses on properties being cleaned up under Superfund can continue operating in a way that protects human health and the environment during site investigations and cleanup work. This continuity enables these businesses to remain open and serve as a source of jobs for communities.

Superfund sites across Region 7 support industrial parks, shopping centers and agricultural operations such as manufacturing facilities, grain storage facilities and crop cultivation. Others are now home to natural areas, parks and recreation facilities. One site now hosts an upscale apartment complex. On-site businesses and organizations at current and former Region 7 Superfund sites provide an estimated 27,571 jobs and contribute an estimated $1.4 billion in annual employment income. Sites in reuse and continued use in Region 7 generate $47 million in annual property tax revenues for local governments.[1]

1 Business and property value tax figures represent only a subset of the beneficial effects of sites in reuse or continued use in Region 7. There are 40 Superfund sites in reuse or continued use in Region 7 for which EPA does not have business data, including six federal facilities on the Superfund National Priorities List (NPL). Not all sites in reuse involve an on-site business or other land use that would employ people. Several sites without businesses have beneficial effects that are not easily quantified, such as properties providing ecological or recreational benefits (e.g., parks, wetlands, ecological habitat and open space). In addition, there are 73 sites in reuse or continued use in Region 7 for which EPA does not have property value or tax data, including six NPL federal facilities.

This profile looks at how redevelopment activities at Superfund sites make a difference in communities across Region 7. In particular, it describes some of the beneficial effects of redevelopment and continued use of current and former Superfund sites. The profile also describes the land values and property taxes associated with Superfund sites returned to use and sites that have remained in use throughout the cleanup process. EPA updates these profiles periodically. The beneficial effects may increase or decrease over time due to changes in:

- The number of sites in reuse or continued use.
- The number of on-site businesses.
- Data availability.
- Changes in business and property value data.

Figures presented represent only a subset of all Superfund sites in reuse or continued use in Region 7.

Figure 3. Left: Bonne Terre City Hall at the Big River Mine Tailings/St. Joe Minerals Corp. site (Missouri). Right: Tenant sign at the Strother Field Industrial Park site (Kansas).

SUPPORT FOR SUPERFUND REDEVELOPMENT

EPA Region 7 is committed to improving the health and livelihood of Americans by cleaning up and returning land to productive use. In addition to protecting human health and the environment through the Superfund program, Region 7 partners with stakeholders to encourage redevelopment opportunities at Superfund sites. Region 7 helps communities and cleanup managers consider redevelopment during cleanup planning and evaluate remedies already in place to ensure appropriate redevelopment. In addition, EPA participates in partnerships with communities and encourages opportunities to support Superfund Redevelopment projects that emphasize environmental and economic sustainability.

Specific redevelopment support efforts in EPA Region 7 include:

- Identifying and evaluating local land use priorities to align with site cleanup plans through the redevelopment planning process.
- Facilitating cleanup and redevelopment discussions to help resolve key issues between parties interested in site redevelopment.
- Supporting targeted projects intended to help Region 7 communities and EPA find the right tools to move site redevelopment forward.
- Making efforts to help address communities' and developers' liability, safety and reuse concerns through development of educational materials, comfort letters, developer agreements and environmental status reports – known as Ready for Reuse Determinations – that provide information about the appropriate use of sites.
- Supporting partnerships with groups committed to returning Superfund sites to productive use such as Monarch Watch, the Pollinator Partnership and Monarch Joint Venture.
- Developing reuse fact sheets, websites, webinars and reuse case studies to share opportunities and lessons associated with Superfund Redevelopment.

Figure 4. Ribbon-cutting event for the Jule bus storage and maintenance facility at the Peoples Natural Gas Co. site in April 2018 (Iowa).

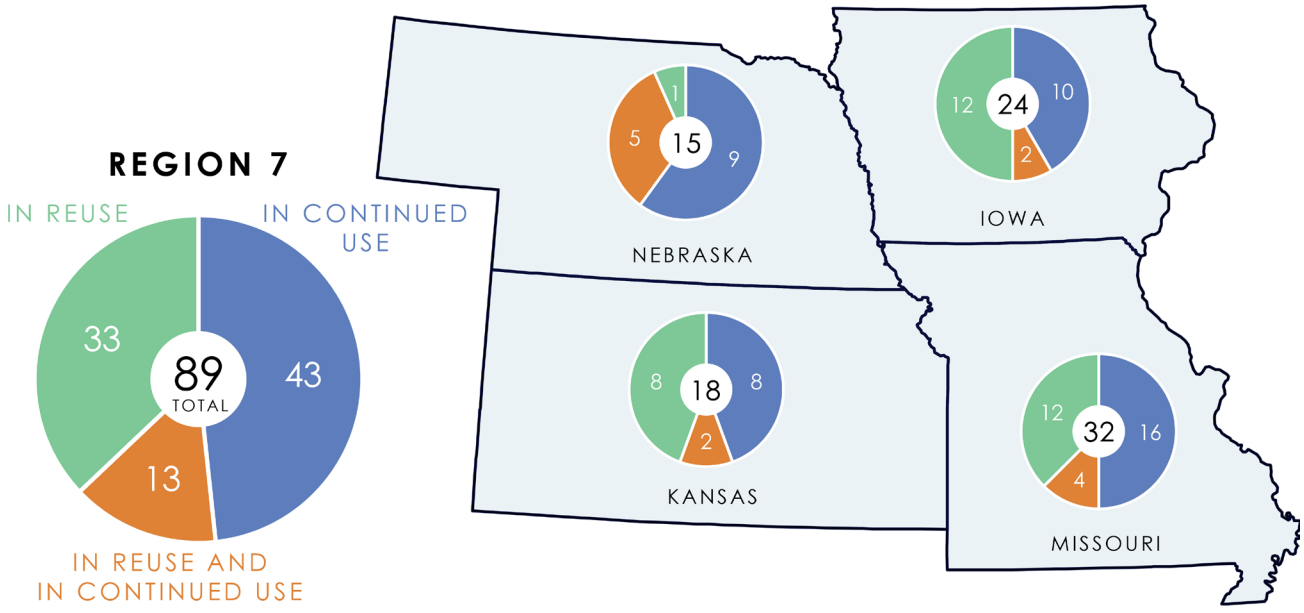
These efforts have helped build expertise across Region 7, making it easier to both consider future use of Superfund sites prior to cleanup and to identify opportunities for removing reuse barriers. These efforts also help tribes, state agencies, local governments, communities, potentially responsible parties, site owners, developers, and other partners and stakeholders to better understand potential future uses for Superfund sites. This helps stakeholders engage early in the cleanup process, ensuring that Superfund sites are restored as productive assets for communities. Most importantly, these efforts lead to significant returns for communities, including jobs, annual income and tax revenues.

SUPERFUND REDEVELOPMENT: THE BIG PICTURE

EPA can take and oversee immediate action at contaminated sites through short-term cleanup actions, also called removal actions.[2] EPA refers sites warranting long-term cleanup to its remedial program or to state programs. EPA's National Priorities List (NPL) is a list of sites the Agency is targeting for further investigation and possible remediation through the Superfund program. Once EPA places a site on the NPL, the Agency studies the contamination, identifies technologies that could address the material and evaluates alternative cleanup approaches. EPA then proposes a cleanup plan and, after collecting public input, issues a final cleanup plan. The Agency then cleans up the site or oversees cleanup activities. EPA has placed 96 sites in Region 7 on the NPL.

Whenever possible, EPA seeks to integrate redevelopment priorities into site cleanup plans. In Region 7, 67 NPL sites and 22 non-NPL Superfund sites are in use. These sites have either new uses in place or uses that remain in place from before cleanup. Some of these sites have been redeveloped for commercial or industrial purposes. Others have been redeveloped for recreational, ecological and agricultural uses. Many redeveloped sites support multiple uses and have the capacity to support additional uses and further redevelopment. The following sections take a closer look at the beneficial effects of businesses operating on current and former Superfund sites in Region 7.

Figure 5. Sites in reuse and continued use in Region 7.



2 Removal actions may be taken at sites on the NPL and not on the NPL.

Figure 6. Left: Walmart Neighborhood Market at the Kansas City Structural Steel site (Kansas). Right: The new police station at the Kansas City Structural Steel site (Kansas).

Sites in Reuse and Continued Use: A Closer Look

Reuse Type	Description	Region 7 Example
In Reuse	*There is a new land use or uses on all or part of a site. This is because either the land use has changed (e.g., from industrial use to commercial use) or the site is now in use after being vacant.*	*Kansas City Structural Steel (Kansas) – former steel fabrication facility is now a Walmart Neighborhood Market and a Kansas City Police substation.*
In Continued Use	*Historical uses at a site remain active; these uses were in place when the Superfund process started at the site.*	*John Deere (Ottumwa Works Landfills) (Iowa) – since 1911, Deere & Company has continued to manufacture agricultural equipment on site.*
In Reuse and Continued Use	*Part of a site is in continued use and part of the site is in reuse.*	*Cleburn Street Well (Nebraska) – commercial dry-cleaning operations, a tire shop and office spaces remain active on site; the Grand Island Public Works Department's Street Division now leases part of the site for a sign shop and for truck and equipment storage and maintenance.*

"The real test for projects like this one is whether residents feel like, when it's done, their neighborhood is a better place to live than it was before. This project meets that test in every way." **Ann Murguia, Executive Director of the Argentine Neighborhood Development Association and the 3rd District County Commissioner to the Unified Government Board of Commissioners, in reference to the Kansas City Structural Steel Superfund site.**

"EPA received us with open arms. They communicated effectively with challenges and potential solutions, including the proper process for proceeding with redevelopment as pertained to any environmental concerns." **Hunter Harris, Lane4, in reference to the Kansas City Structural Steel Superfund site.**

BENEFICIAL EFFECTS OF SUPERFUND SITE REDEVELOPMENT IN REGION 7

Businesses and Jobs

EPA has collected economic data for 1,508 businesses, government agencies and civic organizations operating on 35 NPL sites and 14 non-NPL sites in reuse and continued use in Region 7.[3] See the State Redevelopment Profiles for each state's reuse details. Businesses and organizations at these sites are part of several different sectors, including wholesale trade, construction, roofing, plumbing, heating and cooling contracting, manufacturing, restaurants, automotive repair, warehousing, educational services and national security.

Businesses, facilities and organizations at these sites include farm machinery manufacturer John Deere, aircraft parts manufacturer F.M.I., commercial and industrial equipment manufacturer GE Engine Services, irrigation equipment manufacturer Lindsay Corporation, and medical instrument manufacturer Cardinal Health.

The businesses and organizations at these sites earn about $7.1 billion in estimated annual sales and employ about 27,571 people, earning an estimated $1.4 billion in annual employment income. This income injects money into local economies and generates revenue through personal state income taxes. These businesses also help local economies through direct purchases of local supplies and services. On-site businesses that produce retail sales and services also generate tax revenues through the collection of sales taxes, which support state and local governments. More detailed information is presented in Table 1.[4]

Table 1. Site and Business Information for Region 7 Sites in Reuse and Continued Use (2019)

	Sites[a]	Sites with Businesses[b]	Businesses[c]	Total Annual Sales[d]	Total Employees	Total Annual Employee Income
In Reuse	*33*	*16*	*21*	*$36 million*	*371*	*$16 million*
In Continued Use	*43*	*24*	*171*	*$3.5 billion*	*9,309*	*$601 million*
In Reuse and in Continued Use	*13*	*9*	*1,316*	*$3.6 billion*	*17,891*	*$758 million*
Total	***89***	***49[e]***	***1,508***	***$7.1 billion[f]***	***27,571***	***$1.4 billion[f]***

[a] Six sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Also includes other organizations such as government agencies, nonprofit organizations and civic institutions.
[c] Business information is not available for all businesses on all Superfund sites in reuse or continued use.
[d] For information on the collection of business, jobs and sales data, see Sources.
[e] See footnote 1, page 1.
[f] Throughout this report, sales and annual employee income may not sum exactly to the totals presented due to rounding.

3 See footnote 1, page 1.
4 For additional information on the collection of business, jobs and sales data, see Sources.

Property Values and Property Tax Revenues

Properties cleaned up under the Superfund program and returned to use have the potential to increase in value significantly. This increased value can boost property tax revenues, which help pay for local government operations, schools, transit systems and other public services. Site properties at the Strother Field Industrial Park site in Winfield, Kansas, are now valued at over $18 million.

Identifying increases in property values and property taxes following cleanup and reuse is challenging. This is due to several factors, including limited data on past property values and the frequency and timing of local property value assessments. Likewise, many factors affect property values, including external economic and neighborhood factors not related to a site's contamination or Superfund status. It is also difficult to isolate the effects of Superfund cleanup and redevelopment using current property values. However, these values do provide insight into the current value of Superfund properties and the potential loss in economic value if the properties were not cleaned up and made available for reuse or continued use.

Region 7 Sites in Reuse and Continued Use: Property Value and Tax Highlights

Total Property Value: *$1.9 billion*

Total Annual Property Taxes: *$47 million*

Figure 7. Sign at the Strother Field Industrial Park site (Kansas).

EPA has collected property value and tax data for 16 Superfund sites in reuse and continued use in Region 7.[5] These sites span 19,421 property parcels and 175,460 acres. They have a total property value of $1.9 billion. The average total property value per acre is $11,000.

Land and improvement property value information is available for 15 sites. These properties have a total land value of $355 million and a total improvement value of $1.3 billion.[6]

Property tax information is available for 15 sites. The properties generate a combined $47 million in local property taxes annually.

Table 2. Property Value and Tax Information for Sites in Reuse and Continued Use in Region 7[a]

Total Land Value (15 sites)[b]	*Total Improvement Value (15 sites)*	*Total Property Value (16 sites)*	*Total Property Value per Acre (15 sites)[c]*	*Total Annual Property Taxes (15 sites)*
$355 million	*$1.3 billion*	*$1.9 billion*	*$11,000*	*$47 million*

[a] Results are based on an EPA Superfund Redevelopment Initiative effort to collect on-site property values and property taxes for a subset of Superfund sites. The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2017 to 2019. For additional information, see Sources. Throughout this report, property and tax values may not sum exactly to the totals presented due to rounding.

[b] Detailed (land and improvement) property value data as well as tax data were not available for every site.

[c] Based on total property value amount for 12 sites of $1.9 billion divided by total acreage for 12 sites of 175,460.

5 There are 73 additional sites in reuse or continued use in Region 7 for which EPA does not have property value or tax data, including six NPL federal facilities. See footnote 1, page 1.

6 Property values consist of land value and the value of any improvements (buildings and infrastructure) placed on a property. When sites are redeveloped, some or all of these improvements may be new or already in place. In some cases, the breakdown showing the land value and improvement value is not always available; only the total property value may be available.

Beneficial Effects from Enhanced Recreational and Ecological Amenities

In addition to hosting commercial developments, retail centers and industrial facilities, many Region 7 sites in reuse and continued use provide recreational and ecological benefits. Greenspace and habitat reuses help attract visitors and residents and indirectly contribute to local economies.

Figure 8. Bird garden and pollinator habitat at the Chemical Commodities, Inc. site (Kansas).

Careful planning can enable the integration of green spaces and habitat into site cleanup plans, resulting in the transformation of contaminated properties into valuable community and wildlife assets. Green spaces are integral components of sustainable communities – they can help protect the environment and human health while providing other social and economic benefits. Parks, community gardens and other public green spaces create opportunities for people to gather, exercise and connect with nature. The creation of green spaces and habitat at once-contaminated properties can serve to re-introduce ecosystems and biodiversity into urban and suburban landscapes by providing corridors for migrating species and preserving habitat. They can also mitigate stormwater runoff problems by slowly absorbing and naturally filtering stormwater, resulting in improved water quality due to decreased runoff and erosion.

Parks, natural areas and scenic landscapes also have great economic value – supporting regional economies through tourism, agriculture and other activities. Economic impacts of recreational activities can include outdoor recreation spending and reduced public costs related to healthcare and infrastructure. In 2017, outdoor recreation contributed $887 billion to the U.S. economy, supporting 7.6 million jobs and generating $65.3 billion in national tax revenue and $59.2 billion in state and local tax revenue.[7] Protected green space can also increase the property values of nearby homes by providing amenities that draw people to live and work in the community.

Many sites in Region 7 provide recreational and ecological benefits. At the Annapolis Lead Mine site in Annapolis, Missouri, cleanup included planting native vegetation and over 1,000 trees. The native wild grasses and other plants have attracted birds and wildlife to the Wheeling Disposal Service Co., Inc. Landfill site in Amazonia, Missouri, which is also a local hunting area. The Chemical Commodities, Inc. site in Olathe, Kansas, includes habitat for birds, bees and butterflies, a tagging station for migrating butterflies, and information kiosks along a walking trail. At the Times Beach site in Times Beach, Missouri, Route 66 State Park provides more than 7 miles of trails for hiking, biking and equestrian use, picnic areas, and access to the Meramec River.

“Enough people were involved and saying this is what we need to have happen. There was constant pressure to move it forward and people cared about it. EPA stood behind it all the way, and Boeing stepped up to work with us.” **Glen Andrews, Advisory Group member, in reference to the Chemical Commodities Superfund site.**

7 The Outdoor Recreation Economy. Outdoor Industry Association. Available at https://outdoorindustry.org/wp-content/uploads/2017/04/OIA_RecEconomy_FINAL_Single.pdf.

REDEVELOPMENT IN ACTION

BIG RIVER MINE TAILINGS/ST. JOE MINERALS CORP.

Flat River Industrial Park and St. Joe State Park

The Big River Mine Tailings/St. Joe Minerals Corp. site is located in a former mining region known as the "Old Lead Belt," about 70 miles south of St. Louis, in St. Francois County, Missouri. Mining operations and disposal of mining wastes contaminated soil, sediment, surface water and groundwater with heavy metals. EPA added the site to the NPL in 1992. Cleanup has focused on eight main areas, or subsites, of mine waste; together, those areas make up the site "response area." The site also includes affected areas outside of the response area in St. Francois County.

Cleanup of residential site areas included sampling of residential yards, schools and parks for lead, excavation and placement of contaminated soil in designated repositories, backfilling and revegetation of excavated areas, and institutional controls. Additional cleanup to date includes mine waste removal and stabilization across the site and removal of contaminated sediment from Big River. Cleanup is ongoing.

Following investigations and cleanup in the response area, several redevelopment successes have unfolded in the cities of Park Hills, Bonne Terre and Desloge. For example, following cleanup and stabilization of the National Mine tailings pile subsite in Park Hills, one of the PRPs donated the property to the Park Hills Chamber of Commerce in 1993. To help offset job losses from mine closures in the area, the Chamber of Commerce converted the land into an industrial park. Today, Park Hills Industrial Park (formerly Flat River Industrial Park) supports several businesses, including a glass manufacturer, a construction contracting business and a plastics manufacturer.

Located in the southern part of the response area, St. Joe State Park encompasses over 8,000 acres. For over 100 years, St. Joe Minerals Corp. mined lead within current park boundaries. In 1972, St. Joe Minerals Corp. ceased operations at the site and donated the land to the state in 1976. Recognizing the need for more recreational and ecological resources in the area, the Missouri Department of Natural Resources established St. Joe State Park later that year. The historic milling complex used by St. Joe Minerals Corp. still stands and has been designated as a Missouri Mines State Historic Site. It now houses a Missouri mining history museum and mineral resources museum, including exhibits on Missouri Geology, an extensive mineral collection and a gallery of mining equipment. Today, St. Joe State Park offers area residents and visitors a variety of recreation opportunities as well as signage to learn about the area's history.

The response area, and the other site areas in St. Francois County, are home to a wide range of continued uses and reuses. These land uses include residential, commercial, industrial, recreational, public services, agricultural and ecological areas. On-site businesses bolster the local economy and generate local and state tax revenues. Today, site businesses employ over 11,000 people and contribute about $390 million in estimated annual employment income. In 2019, site businesses generated an estimated $1.4 billion in combined sales revenue. In 2018, site property parcels had a total value of nearly $828 million, which generated nearly $8 million in annual property taxes in 2017.

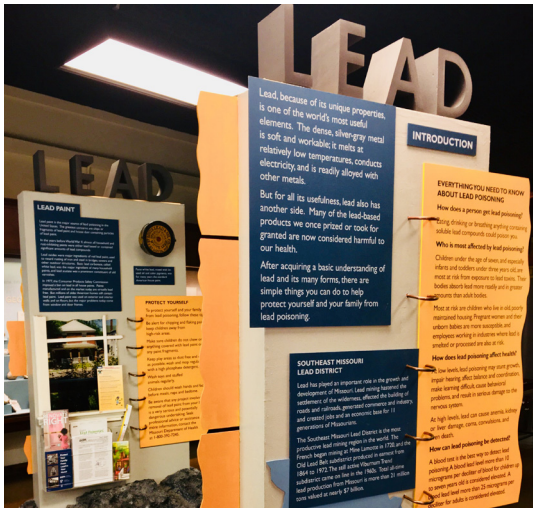


Figure 9. Desloge City Park (left) and Missouri Mines State Historic Site (right) at the Big River Mine Tailings/ St. Joe Minerals Corp. site (Missouri).

REDEVELOPMENT IN ACTION

PEOPLES NATURAL GAS CO.

Jule Operations and Training Center

The Peoples Natural Gas Co. Superfund site covers 5 acres in Dubuque, Iowa. From 1890 through the 1950s, several businesses owned and operated a gas plant on site; the companies produced a natural gas substitute from coal. In 1983, a survey for the proposed extension of U.S. Highway 61 by the Iowa Department of Transportation discovered contaminated residues from the gas manufacturing process, commonly referred to as coal tar. The state found volatile organic compounds and other contaminants in site groundwater and soil. In 1989, a removal action addressed soil contamination in the area designated for highway construction. EPA placed the site on the NPL in 1990.

Cleanup included removal and treatment of contaminated soil as well as groundwater extraction and treatment. EPA updated the site's remedy in 2013, including implementation of additional land use restrictions and installation of an extraction system to capture remaining groundwater contamination. Operation and maintenance of the site's long-term remedy and monitoring are ongoing.

In the 1960s, the Peoples Natural Gas Company sold part of the site to the city of Dubuque. The city operated the Dubuque Public Works Garage on site until 2006. After 2006, the city continued to use the property for storage, and at one point leased a portion of the property to a lumber company for storage. The city and the East Central Intergovernmental Association sought to replace the former public works garage with a bus storage and maintenance facility for The Jule, the city's public transit system. Conversion of the property meant that the city had to demolish the existing building, place fill material on top of the old foundation, and build the new facility on the existing foundation. The city worked with EPA to address vapor intrusion issues at the site that would have impeded the new use.

Work on the facility began in 2016 and finished in 2017. Today, The Jule Operations and Training Center includes storage and light maintenance space, dispatch and management offices, and meeting and training facilities for employees. The facility employs 85 people and contributes nearly $2.6 million in estimated annual employment income. In 2018, site property parcels had a total value of nearly $3 million. In April 2018, EPA Region 7 recognized the city's redevelopment efforts at the site with its Leading Environmentalism and Forwarding Sustainability (L.E.A.F.S.) Award. Looking ahead, the site also offers potential for additional redevelopment, including support and education facilities for a solar array on an adjacent property.

Figure 10. The Jule Operations and Training Center at the Peoples Natural Gas Co. site (Iowa).

REDEVELOPMENT IN ACTION

JOHN DEERE (DUBUQUE WORKS)

Continued Industrial Use and Enhanced Ecological Protection

The John Deere (Dubuque Works) Superfund site occupies nearly 1,500 acres about 2.5 miles north of the city of Dubuque in Dubuque County, Iowa. This manufacturing facility has been in operation since 1946. The facility makes heavy construction equipment, including backhoes, bulldozers and forestry equipment. Former waste disposal activities and a fuel line leak in 1980 contaminated groundwater at the site. As a Resource Conservation and Recovery Act (RCRA) facility, the site's listing was never finalized on the NPL. Deere & Company led cleanup of the site in accordance with a 1989 agreement with EPA. Cleanup included provision of a safe potable water supply for the facility, groundwater extraction and containment, land and groundwater use restrictions, and a contingency plan to prevent contaminant migration in the event of a facility shutdown.

Thanks to the close collaboration between EPA and Deere & Company, the John Deere Dubuque Works facility has remained open during site cleanup. A distribution company, food service business and credit union also operate within the footprint of the facility. Together, site businesses employ about 1,830 people and provide over $135 million in estimated annual employment income. In 2019, site businesses generated just over $1 billion in estimated sales revenue.

The facility previously used two on-site landfills for waste disposal. The company is proactively addressing uncertainties noted in its 2014 ecological risk assessment by placing a vegetative cover over areas of exposed soil on one of the former landfills. The cover includes native grasses and wildflowers. The site's soil improvement plan will make sure there are no unacceptable exposures to ecological receptors while also providing pollinator habitat and a walking area for facility employees. In April 2018, EPA Region 7 awarded Deere & Company its L.E.A.F.S. Award in recognition of the ecological and recreational reuses on site.

Figure 11. Jim Gulliford, EPA Region 7 regional administrator, presents the L.E.A.F.S. Award to Mark Dickson, the manager of John Deere Dubuque Works (Iowa).

REDEVELOPMENT IN ACTION

PCB INC. – MISSOURI

Mixed-Use, Commercial and Residential Development

The PCB Inc. – Missouri site is located in Kansas City, Missouri. PCB Treatment Inc. (PTI) began treating and disposing of materials containing polychlorinated biphenyls (PCBs) at the site in 1982. From 1982 to 1987, PTI removed PCB compounds from electrical transformers, capacitors and waste oil discarded by the federal government, rural electric cooperatives, utility companies, cities, states and businesses. In total, over 25 million pounds of PCB-contaminated materials were sent to PTI for treatment and disposal. The site was not listed on the NPL; it was addressed by EPA's Superfund Emergency Response and Removal program.

In 1995, a group of former PTI customers (the Steering Committee) met with EPA and agreed to assess the site contamination. Under an Administrative Order on Consent, the Steering Committee agreed to clean up the site. Cleanup took place between 2004 and 2005 and included building demolition and off-site disposal of contaminated materials.

Developers quickly noticed the site property's potential; real estate development company Copaken Brooks acquired the property in 2007. However, initial plans for a condominium project did not move forward due to the economic downturn in 2008. Following development of a revised plan, work began in July 2017 on a luxury residential development.

Today, the remediated property is home to the 12-story Arterra apartment complex. Arterra offers 126 state-of-the-art residential units, first-floor retail, an integrated parking garage, a rooftop pool overlooking Liberty Memorial, Penn Valley Park and the Arts District, and a 12th-floor amenity suite that offers views of the Kansas City skyline. It also includes a fitness and yoga studio, private resident storage, a spa, outdoor grills and a coffee bar. Arterra units are currently available for lease.

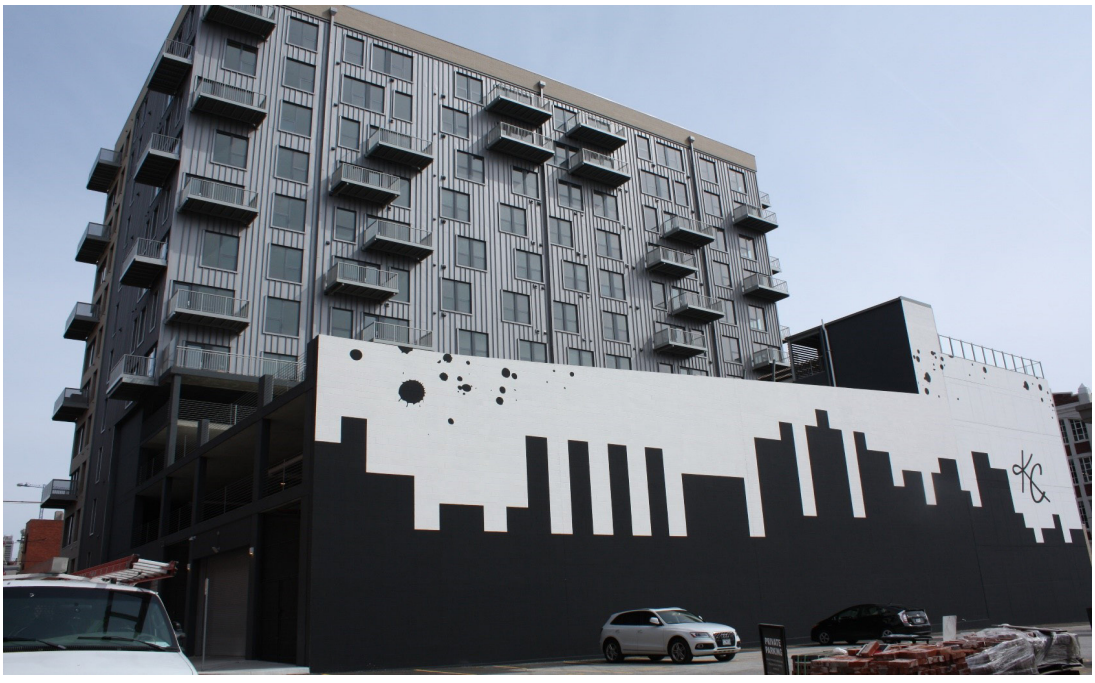


Figure 12. The Arterra apartment complex at the PCB Inc. – Missouri site (Missouri).

REDEVELOPMENT ON THE HORIZON IN REGION 7

TRANSFORMING A FORMER MINING AREA INTO A REVITALIZED ECONOMIC HUB

From the 1850s to the 1970s, mining, milling and smelting of lead and zinc ores occurred at the 20-square-mile Oronogo-Duenweg Mining Belt site in Joplin, Missouri. Smelting operations dispersed airborne contaminants, which contaminated groundwater, surface water and soil with metals, including lead. EPA listed the site on the NPL in 1990.

To date, EPA has completed cleanup of soil at 2,495 residential properties to address threats to human health and the environment, including cleanup of soils at six child-care centers. The city of Joplin cleaned up lead-contaminated soil at 443 more residences as part of the recovery from a tornado in 2011. Additional work included connecting 350 homes to public water supplies, excavating mine waste from 4,500 acres of contaminated land (including backfilling and revegetation), and the construction of wetlands. Additional cleanup is needed to address contaminated sediments in the Spring River.

Figure 13. Area of the Oronogo-Duenweg Mining Belt site ready for development (Missouri).

While community members continue to use parts of the site property for residential and agricultural purposes, collaboration among EPA, the state of Missouri and the community has resulted in innovative approaches to encouraging new productive uses. EPA entered into a Prospective Purchaser Agreement with a scrap metal recycler, which then bought and cleaned up 40 acres of the site prior to building its facility. Using mine wastes as fill material, the Missouri Highway and Transportation Department built the Route 249 highway bypass across part of the site after EPA and the state of Missouri reached an agreement. The bypass opened to the public in 2008. EPA's innovative solutions for the disposal of site wastes has allowed for the development of former narrow containment areas into over 3 miles of roads for Webb City.

Today, additional reuse planning is underway and over 4,000 acres of cleaned-up land are ready for redevelopment. An abandoned water treatment lagoon will soon become a 36-acre sports complex, while another remediated containment area will soon become a 40-acre truck stop. Developers have started turning a 300-acre tract near the roundabout on Highway 171 into a commercial park. During the winter of 2018-19, a new Atwoods Ranch and Home store was constructed on part of the site. The development is called Centennial Park and several additional projects are underway. Moving forward, EPA, the state of Missouri and the community will continue to look for opportunities to turn cleaned-up land into valuable community assets.

"The value of the property...will go up, and we again will be a thriving community. We want our town to grow and prosper. We used to be on top of a lead mine. Now, it's a gold mine." **Dale Davenport, former Mayor of Carterville, Missouri.**

CONCLUSION

EPA works closely with its partners at Superfund sites across Region 7 to make sure sites can safely be reused or remain in continued use during and following cleanup. EPA also works with businesses and organizations at Superfund sites throughout the cleanup process to make sure they can remain open.

The businesses and organizations at these sites provide jobs and income for communities and generate local and state taxes. Cleanup and redevelopment also helps stabilize and boost property values. There are 67 NPL sites and 22 non-NPL Superfund sites in Region 7 that have either new uses in place or uses that have remained in place since before cleanup. Future uses are planned for many more Superfund sites in Region 7. EPA remains committed to working with all stakeholders to support Superfund redevelopment opportunities in Region 7.

Figure 14. Reuse award ceremony attendees tour the manufacturing facility at the John Deere (Dubuque Works) site (Iowa).

The redevelopment of Superfund sites takes time and is often a learning process for project partners. Ongoing coordination among EPA, tribes, state agencies, local governments, communities, potentially responsible parties, site owners, developers, and nearby residents and business owners is essential. EPA tools, including reuse assessments and plans, comfort letters and partial deletions of sites from the NPL, often serve as the foundation for moving forward. At some sites, parties may need to take additional actions to ensure reuses are compatible with site remedies.

Across Region 7, Superfund sites are now home to major commercial and industrial facilities, mid-size developments and small businesses providing services to surrounding communities. EPA is committed to working with all stakeholders to support the restoration and renewal of these sites as long-term assets.

EPA Superfund Site Redevelopment Resources

EPA Region 7 Superfund Redevelopment Initiative Coordinator
Tonya Howell | 913-551-7589 | howell.tonya@epa.gov

Superfund Sites in Reuse: find more information about Superfund sites in reuse
www.epa.gov/superfund-redevelopment-initiative/find-sites-reuse

Superfund Redevelopment Initiative Website: tools, resources and more information about Superfund site reuse
www.epa.gov/superfund-redevelopment-initiative

EPA Office of Site Remediation Enforcement Website: tools that address landowner liability concerns
www.epa.gov/enforcement/landowner-liability-protections

STATE REDEVELOPMENT PROFILES

IOWA REDEVELOPMENT PROFILE

EPA partners with the Iowa Department of Natural Resources to oversee the investigation and cleanup of Superfund sites in Iowa. Iowa has 24 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in Iowa.

Businesses and Jobs

EPA has collected economic data for 22 businesses and organizations operating on 13 sites in reuse or continued use in Iowa.

Table 3. Detailed Site and Business Information for Sites in Reuse and Continued Use in Iowa (2019)

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales[c]	Total Employees	Total Annual Employee Income
In Reuse	*12*	*6*	*8*	*$5 million*	*140*	*$6 million*
In Continued Use	*10*	*6*	*10*	*$263 million*	*363*	*$20 million*
In Reuse and in Continued Use	*2*	*1*	*4*	*$1 billion*	*1,829*	*$136 million*
Total	*24*	*13*	*22*	*$1.3 billion*	*2,332*	*$162 million*

[a] One site is a federal facility. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Business information is not available for all businesses on all Superfund sites in reuse or continued use.
[c] While sales values typically exceed estimated totals of annual income, sales can sometimes be lower than estimated income. This could be attributed to a number of business conditions and/or data reporting. In addition, annual sales figures are not available (or applicable) for every organization that makes jobs data available.

Property Values and Property Tax Revenues

EPA has collected property value data for four Superfund sites in reuse or continued use in Iowa. These sites span 18 property parcels and 27 acres.

Table 4. Property Value and Tax Information for Sites in Reuse and Continued Use in Iowa[a]

Total Land Value (4 sites)	Total Improvement Value (4 sites)	Total Property Value (4 sites)	Total Annual Property Taxes (4 sites)
$1 million	*$6 million*	*$7 million*	*$127,000*

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2017 to 2018.

Figure 15. This metal-plating facility continues to operate at the Electro-Coatings, Inc. site.

Did You Know?

Since 1947, metal-plating operations have occurred at the Electro-Coatings, Inc. site in Cedar Rapids, Iowa. Cleanup involved groundwater pumping and treatment and contaminated soil removal and off-site disposal, which allowed metal-plating operations to continue. The facility generates $3 million in estimated annual sales and provides over $900,000 in estimated annual employee income. Plant operations include chromium, cadmium, nickel and zinc plating.

KANSAS REDEVELOPMENT PROFILE

EPA partners with the Kansas Department of Health and Environment to oversee the investigation and cleanup of Superfund sites in Kansas. Kansas has 18 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in Kansas.

Businesses and Jobs

EPA has collected economic data for 293 businesses and organizations operating on twelve sites in reuse or continued use in Kansas.

Table 5. Detailed Site and Business Information for Sites in Reuse and Continued Use in Kansas (2019)

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	*8*	*4*	*6*	*$30 million*	*213*	*$9 million*
In Continued Use	*8*	*6*	*39*	*$420 million*	*2,890*	*$151 million*
In Reuse and in Continued Use	*2*	*2*	*248*	*$589 million*	*3,100*	*$135 million*
Total	*18*	*12*	*293*	*$1 billion*	*6,203*	*$295 million*

[a] One site is a federal facility. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Business information is not available for all businesses on all Superfund sites in reuse or continued use.

Property Values and Property Tax Revenues

EPA has collected property value data for six Superfund sites in reuse or continued use in Kansas. These sites span 8,201 property parcels and 90,252 acres.

Table 6. Property Value and Tax Information for Sites in Reuse and Continued Use in Kansas[a]

Total Land Value (5 sites)	Total Improvement Value (5 sites)	Total Property Value (6 sites)	Total Annual Property Taxes (5 sites)
$107 million	*$414 million*	*$531 million*	*$847,000*

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which was 2018 for all data collected.

Figure 16. An aviation services company is one of many businesses at the Strother Field Industrial Park site.

Did You Know?

Until 1946, a military facility for aircraft construction and maintenance operated at the Strother Field Industrial Park site in Winfield, Kansas. Following its use as a military facility, the area became a municipal airport and Strother Field Industrial Park. Cleanup enabled the airport and industrial park's continued operations. A community mental health center is also located on site.

MISSOURI REDEVELOPMENT PROFILE

EPA partners with the Missouri Department of Natural Resources to oversee the investigation and cleanup of Superfund sites in Missouri. Missouri has 32 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in Missouri.

Businesses and Jobs

EPA has collected economic data for 1,119 businesses and organizations operating on 14 sites in reuse or continued use in Missouri.

Table 7. Detailed Site and Business Information for Sites in Reuse and Continued Use in Missouri (2019)

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	*12*	*6*	*7*	*$1 million*	*18*	*$1 million*
In Continued Use	*16*	*6*	*111*	*$1.8 billion*	*5,177*	*$382 million*
In Reuse and in Continued Use	*4*	*2*	*1,001*	*$1.5 billion*	*11,073*	*$390 million*
Total	*32*	*14*	*1,119*	*$3.3 billion*	*16,268*	*$773 million*

[a] Three sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Business information is not available for all businesses on all Superfund sites in reuse or continued use.

Property Values and Property Tax Revenues

EPA has collected property value data for three Superfund sites in reuse or continued use in Missouri. These sites span 10,675 property parcels and 35,524 acres.

Table 8. Property Value and Tax Information for Sites in Reuse and Continued Use in Missouri[a]

Total Land Value (3 sites)	Total Improvement Value (3 sites)	Total Property Value (3 sites)	Total Annual Property Taxes (3 sites)
$207 million	*$835 million*	*$1 billion*	*$45 million*

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2017 to 2018.

Figure 17. Trails at Route 66 State Park at the Times Beach site.[8]

Did You Know?

The Times Beach site southwest of St. Louis, Missouri, is now home to the Route 66 State Park. The park provides more than 7 miles of trails for hiking, biking and equestrian use. Visitors can see a wide range of wildlife, including turkeys, geese, deer and more than 40 species of birds. The park also includes picnic areas and a boat ramp that provides access to the Meramec River. A visitor center provides information on the historic highway and the site's cleanup.

8 Gfp-missouri-route-66-state-park-trail by Yinan Chen available at https://commons.wikimedia.org/wiki/File:Gfp-missouri-route-66-state-park-trail.jpg. CC BY-SA 4.0 available at https://creativecommons.org/licenses/by-sa/4.0.

NEBRASKA REDEVELOPMENT PROFILE

EPA partners with the Nebraska Department of Environment and Energy to oversee the investigation and cleanup of Superfund sites in Nebraska. Nebraska has 15 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in Nebraska.

Businesses and Jobs

EPA has collected economic data for 74 businesses and organizations operating on ten sites in reuse or continued use in Nebraska.

Table 9. Detailed Site and Business Information for Sites in Reuse and Continued Use in Nebraska (2019)

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	1	0	0	$0	0	$0
In Continued Use	9	6	11	$944 million	879	$47 million
In Reuse and in Continued Use	5	4	63	$532 million	1,889	$98 million
Total	15	10	74	$1.5 billion	2,768	$145 million

[a] One site is a federal facility. Federal facility sites are excluded from all other detailed site and business data presented above.
[b] Business information is not available for all businesses on all Superfund sites in reuse or continued use.

Property Values and Property Tax Revenues

EPA has collected property value data for three Superfund sites in reuse or continued use in Nebraska. These sites span 527 property parcels and 49,656 acres.

Table 10. Property Value and Tax Information for Sites in Reuse and Continued Use in Nebraska[a]

Total Land Value (3 sites)	Total Improvement Value (3 sites)	Total Property Value (3 sites)	Total Annual Property Taxes (3 sites)
$39 million	$62 million	$101 million	$1 million

[a] The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2018 to 2019 for all data collected.

Figure 18. An aerial view of the Sherwood Medical Co. site area. Imagery © 2019 Google.

Did You Know?

Medical product manufacturing has taken place at the Sherwood Medical Co. site in Norfolk, Nebraska since 1962. Cleanup made continued manufacturing operations possible. The site generates over $877 million in estimated annual sales and over $31 million in estimated annual employee income. A mobile home park is also located on part of the site.

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SOURCES

BUSINESS, JOBS, SALES AND INCOME INFORMATION

Information on the number of employees and sales volume for on-site businesses comes from the Hoovers/Dun & Bradstreet (D&B) (https://www.dnb.com) database. EPA also gathers information on businesses and corporations from D&B. D&B maintains a database of over 330 million active and inactive businesses worldwide.

When Hoovers/D&B research was unable to identify employment and sales volume for on-site businesses, EPA used the ReferenceUSA database (http://resource.referenceusa.com). In cases where ReferenceUSA did not include employment and sales volume for on-site businesses, EPA used the Manta database (https://www.manta.com). The databases include data reported by businesses. Accordingly, some reported values might be underestimates or overestimates. In some instances, business and employment information came from local newspaper articles and discussions with local officials and business representatives. While sales values typically exceed estimated totals of annual income, sales can sometimes be lower than estimated income. This can be attributed to a number of business conditions and/or data reporting.

EPA obtained wage and income information from the U.S. Bureau of Labor Statistics (BLS). Part of the U.S. Department of Labor, the BLS is the principal federal agency responsible for measuring labor market activity, working conditions and price changes in the economy. All BLS data meet high standards of accuracy, statistical quality and impartiality.

EPA used the BLS Quarterly Census of Employment and Wages database to obtain average weekly wage data for site businesses. Average weekly wage data were identified by matching the North American Industry Classification System (NAICS) codes for each type of business with weekly wage data for corresponding businesses in site counties. If weekly wage data were not available at the county level, EPA sought wage data by state or national level, respectively. In cases where wage data were not available for the six-digit NAICS code, EPA used higher-level (less-detailed) NAICS codes to obtain the wage data.

To estimate the annual income earned from jobs at site businesses, EPA multiplied the average weekly wage figure by the number of weeks in a year (52) and by the number of jobs (employees) for each business.

Business and employment data used for this profile were collected in 2019. Estimated annual employment income was calculated using 2019 jobs data and BLS average weekly wage data for those jobs from 2018 (the latest available wage data at the time of this profile). Federal facility sites are included in calculations of total sites in reuse or continued use only. Federal facility sites are excluded from all other calculations (i.e., number of sites with businesses, number of businesses, total jobs, total income and total annual sales). All sales and income figures presented have been rounded for the convenience of the reader. Throughout this report, sales and annual employee income may not sum exactly to the totals presented due to rounding.

PROPERTY VALUE AND TAX INFORMATION

EPA collected on-site property values and property taxes included in this profile for a subset of Superfund sites by comparing available site boundary information with available parcel boundary information and gathering information for selected parcels from county assessor datasets. The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2017 to 2019. Throughout this report, property and tax values may not sum exactly to the totals presented due to rounding. Federal facility sites are excluded from all property value and tax calculations.

REUSE INFORMATION SOURCES

Write-ups of sites in reuse or continued use included in this profile are based on available EPA resources, including Superfund Redevelopment Initiative case studies as well as other resources. Links to EPA's Superfund Redevelopment Initiative case studies and other resources are included below.

EPA Resources

John Deere (Dubuque Works). 2018. Site Redevelopment Profile. semspub.epa.gov/src/document/HQ/197401.

Oronogo-Duenweg Mining Belt. 2018. Site Redevelopment Profile. semspub.epa.gov/src/document/HQ/197403.

Peoples Natural Gas Superfund Site. 2018. Site Redevelopment Profile. semspub.epa.gov/src/document/HQ/197405.

Other Resources

Arterra. www.arterrakc.com.

Back cover photos: Chemical Commodities, Inc. (Kansas), Strother Field Industrial Park (Kansas)

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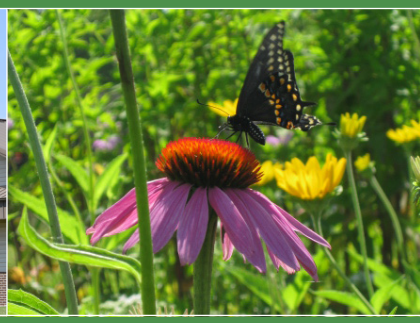

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