



# PUTTING SITES TO WORK

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



2018

*Cover page photos:  
Omaha Lead (Nebraska), Chemical Commodities, Inc. (Kansas), Strother Field Industrial Park (Kansas),  
Lindsay Manufacturing Co. (Nebraska), Peoples Natural Gas Co. (Iowa)*

*Any mention of trade names, manufacturers or products in this document and its appendices  
does not constitute an endorsement by the United States Government or the U.S. Environmental Protection Agency.  
EPA and its employees do not endorse any commercial products, services, or entities.*





Figure 1. General Electric Aviation Services at the Strother Field Industrial Park site (Kansas).

# TABLE OF CONTENTS

<i>Preface</i> .....	<i>i</i>
<i>Introduction</i> .....	<i>1</i>
<i>Support for Superfund Redevelopment</i> .....	<i>3</i>
<i>Superfund Redevelopment: The Big Picture</i> .....	<i>4</i>
<i>Beneficial Effects of Superfund Site Redevelopment in Region 7</i> .....	<i>5</i>
<i>Redevelopment in Action</i> .....	<i>9</i>
<i>Redevelopment on the Horizon in Region 7</i> .....	<i>13</i>
<i>Conclusion</i> .....	<i>14</i>
 <i>State Redevelopment Profiles</i> .....	 <i>15</i>
<i>Iowa</i> .....	<i>16</i>
<i>Kansas</i> .....	<i>17</i>
<i>Missouri</i> .....	<i>18</i>
<i>Nebraska</i> .....	<i>19</i>
 <i>Sources</i> .....	 <i>21</i>



In May 2017, EPA established a task force to restore the Superfund program to its rightful place at the center of the Agency's core mission to protect health and the environment.

[epa.gov/superfund/superfund-task-force](https://epa.gov/superfund/superfund-task-force)

*This page is intentionally blank.*



# 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 has created the Superfund Task Force whose work includes 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.

*This page is intentionally blank.*

# INTRODUCTION

EPA Region 7 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.

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 in 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. On-site businesses and organizations at current and former Region 7 Superfund sites provide an estimated 12,944 jobs and contribute an estimated \$750 million in annual employment income. Cleaned-up sites in use in Region 7 generate \$1.2 million in annual property tax revenues for local governments.<sup>1</sup>

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

<b>Businesses:</b>	295
<b>Total Annual Sales:</b>	\$3.9 billion
<b>Number of People Employed:</b>	12,944
<b>Total Annual Employee Income:</b>	\$750 million



Figure 2. Budweiser distribution business at the Strother Field Industrial Park (Kansas).

<sup>1</sup> 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 23 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 36 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 2018 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 following cleanup 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: The Walmart Neighborhood Market at the Kansas City Structural Steel site (Kansas). Right: Education signs at the Chemical Commodities site welcome visitors to the site and introduce them to native plants and important pollinators (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 at cleaned-up sites. 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.

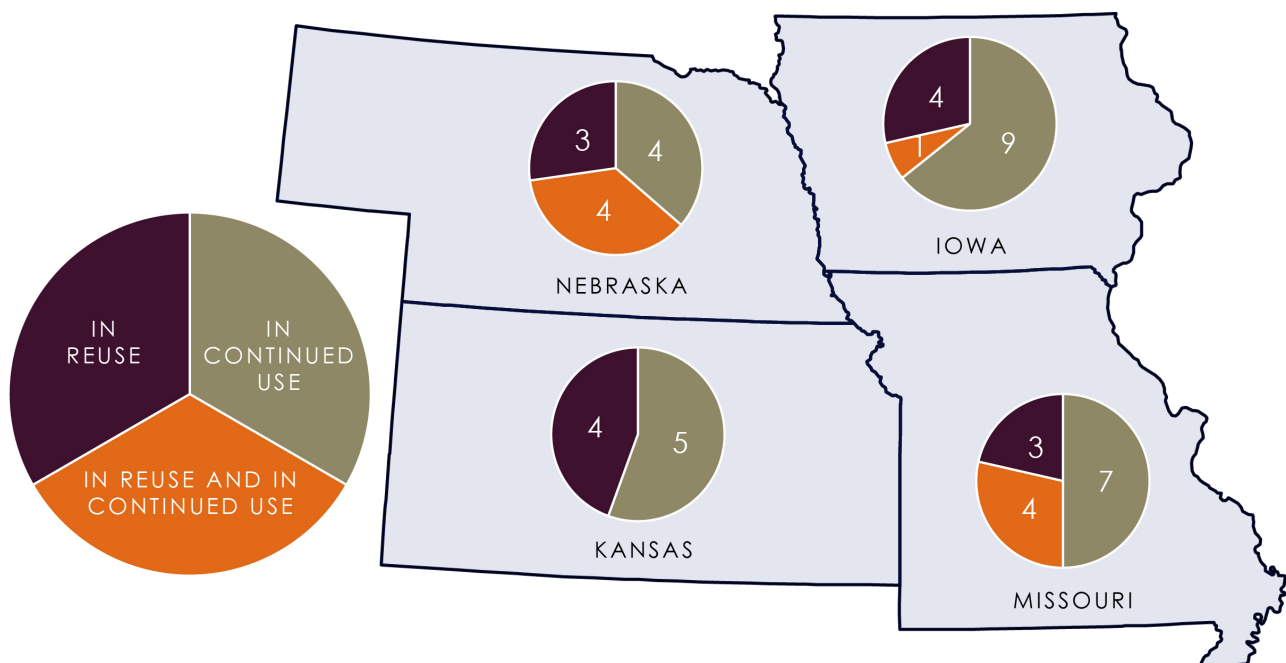
These efforts have helped build expertise across Region 7, making it easier to both consider future use of Superfund sites prior to cleanup and to identify opportunities for removing reuse barriers. These efforts also help tribes, state agencies, local governments, communities, potentially responsible 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.<sup>2</sup> EPA then 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 95 sites in Region 7 on the NPL.

Whenever possible, EPA seeks to integrate redevelopment priorities into site cleanup plans. In Region 7, 44 NPL sites and four 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 4. Sites in Reuse and Continued Use in Region 7*



<sup>2</sup> Removal actions may be taken at sites on the NPL and not on the NPL.

# BENEFICIAL EFFECTS OF SUPERFUND SITE REDEVELOPMENT IN REGION 7

## Businesses and Jobs

EPA has collected economic data for 295 businesses, government agencies and civic organizations operating on 23 NPL sites and two non-NPL sites in reuse and continued use in Region 7.<sup>3</sup> (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 Medtronic.

The businesses and organizations at these sites earn about \$3.9 billion in estimated annual sales and employ about 12,944 people, earning an estimated \$750 million 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.<sup>4</sup>

**Table 1. Site and Business Information for Region 7 Sites in Reuse and Continued Use (2017)**

	Sites <sup>a</sup>	Sites with Businesses <sup>b</sup>	Businesses <sup>c</sup>	Total Annual Sales <sup>d</sup>	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	14	6	42	\$206 million	1,633	\$79 million
<i>In Continued Use</i>	25	14	112	\$2.9 billion	7,968	\$511 million
<i>In Reuse and in Continued Use</i>	9	5	141	\$775 million	3,343	\$160 million
<b>Total</b>	<b>48</b>	<b>25<sup>e</sup></b>	<b>295</b>	<b>\$3.9 billion</b>	<b>12,944</b>	<b>\$750 million</b>

<sup>a</sup> Six sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.

<sup>b</sup> Also includes other organizations such as government agencies, nonprofit organizations and civic institutions.

<sup>c</sup> Business information is not available for all businesses on all Superfund sites in reuse or continued use.

<sup>d</sup> For information on the collection of business, jobs and sales data, see Sources.

<sup>e</sup> See footnote 1, page 1.

<sup>3</sup> See footnote 1, page 1.

<sup>4</sup> For additional information on the collection of business, jobs and sales data, see Appendix B.



Figure 5. Left: The visitor's center for the Route 66 State Park at the Times Beach site (Missouri).<sup>5</sup> Right: Entrance to the Route 66 State Park visitor's center at the Times Beach site (Missouri).<sup>6</sup>

### Sites in Reuse and Continued Use: A Closer Look

Reuse Type	Description	Region 7 Example
<b><i>In Reuse</i></b>	<i>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.</i>	<i>Times Beach (Missouri) – a former residential area is now home to the Route 66 State Park.</i>
<b><i>In Continued Use</i></b>	<i>Historical uses at a site remain active; these uses were in place when the Superfund process started at the site.</i>	<i>Electro-Coatings, Inc. (Iowa) – the Electro-Coatings metal plating plant has been in operation since 1947.</i>
<b><i>In Reuse and Continued Use</i></b>	<i>Part of a site is in continued use and part of the site is in reuse.</i>	<i>Cleburn Street Well (Nebraska) – Commercial dry-cleaning operations remain active on site. The Grand Island Public Works Department's Street Division leases part of the site for a sign shop and for truck and equipment storage and maintenance.</i>

5 Source: Route 66 State Park by Adam Moss available at <https://flic.kr/p/RMigEr>. CC BY-SA 2.0 available at <https://creativecommons.org/licenses/by-sa/2.0/>.  
 6 Source: Route 66 State Park, MO by Haydn Blackey available at <https://flic.kr/p/xwHfB1>. CC BY-SA 2.0 available at <https://creativecommons.org/licenses/by-sa/2.0/>.



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 Aidex Corp. site in Iowa are now valued at over \$1.4 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: \$53 million

Total Annual Property Taxes: \$1.2 million



Figure 6. On-site buildings where businesses operate at the Aidex Corporation site (Iowa).

EPA has collected property value and tax data for 12 Superfund sites in reuse and continued use in Region 7.<sup>7</sup> These sites span 124 property parcels and 1,178 acres. They have a total property value of \$53 million. The average total property value per acre is \$39,000.

Land and improvement property value information is available for 11 sites. These properties have a total land value of \$8 million and a total improvement value of \$37 million.<sup>8</sup>

Property tax information is available for 12 sites. The properties generate a combined \$1.2 million in local property taxes annually.

Table 2. Property Value and Tax Information for Sites in Reuse and Continued Use in Region 7<sup>a</sup>

Total Land Value (11 sites) <sup>b</sup>	Total Improvement Value <sup>c</sup> (11 sites)	Total Property Value (12 sites)	Total Property Value per Acre (10 sites) <sup>d</sup>	Total Annual Property Taxes (12 sites)
\$8 million	\$37 million	\$53 million	\$39,000	\$1.2 million

<sup>a</sup> Results are based on an EPA Superfund Redevelopment Initiative effort in 2018 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 2016 to 2018. For additional information, see Sources.

<sup>b</sup> Detailed (land and improvement) property value data as well as tax data were not available for every site.

<sup>c</sup> Land and improvement value for two of the sites is listed as \$0.

<sup>d</sup> Based on total property value amount of \$46 million divided by total acreage of 1,178.

7 There are 36 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.

8 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.

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 2012, outdoor recreation contributed \$646 billion to the U.S. economy, supporting 6.1 million jobs and generating \$39.9 billion in national tax revenue and \$39.7 billion in state and local tax revenue.<sup>9</sup> 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. Planting native wild grasses and other plants has attracted birds and wildlife to the Wheeling Disposal Service Co., Inc. Landfill site in Amazonia, Missouri, which is also a local hunting and fishing area.



*Figure 7. Habitat at the Wheeling Disposal Service Co., Inc. Landfill site (Missouri).*

<sup>9</sup> The Outdoor Recreation Economy. Outdoor Industry Association. Available at [outdoorindustry.org/pdf/OIA\\_OutdoorRecEconomyReport2012.pdf](https://outdoorindustry.org/pdf/OIA_OutdoorRecEconomyReport2012.pdf).

# REDEVELOPMENT IN ACTION

## PEOPLES NATURAL GAS CO.

### Jule Operations and Training Center

The Peoples Natural Gas Co. Superfund site occupies about 5 acres in Dubuque, Iowa. From the 1930s to the 1950s, a manufactured gas plant operated on site. A survey for the proposed extension of U.S. Highway 61 by the Iowa Department of Transportation in 1983 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 set aside for highway construction. EPA placed the site on the NPL in 1990.

Cleanup included removal and treatment of contaminated soil and groundwater extraction and treatment. EPA updated the site's remedy in 2013, including additional land use restrictions and 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. The city and the East Central Intergovernmental Association replaced the former public works garage with the Jule Operations and Training Center. Conversion of the property meant that the city had to demolish the existing building, place fill material on top of the old foundation and construct 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.

The facility supports the city of Dubuque's Jule public transit system, providing storage and light maintenance space, housing dispatch and management offices, and meeting and training facilities for employees. In April 2018, EPA Region 7 awarded the city of Dubuque the Leading Environmentalism and Forwarding Sustainability Award in recognition of its redevelopment of the site.



*Figure 8. The Jule Operations and Training Center at the Peoples Natural Gas Co. site (Iowa).*



# 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, Missouri. The site includes eight large areas of mine waste and covers about 110 square miles. 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.

In 2006, one of the site's potentially responsible parties (PRPs), The Doe Run Resources Corporation, agreed to conduct a removal action to address lead contamination at the National Mine Tailings subsite. The removal action included regrading and covering the area with 12 inches of clean rock. Cooperation by EPA, the PRP and property owners enabled the continued operation of site businesses at the Flat River Industrial Park throughout the cleanup. 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.

The Federal Tailings Pile subsite is part of St. Joe State Park, Missouri’s third-largest state park. The PRPs at the Site (Missouri Department of Natural Resources – Division of State Parks, and The Doe Run Company) worked to address contaminated soil, regrading and stabilizing steep slopes, establishing vegetation, removing creekside lead tailings deposits, and putting stormwater retention structures in place. The cleanup enabled the continued recreational reuse of the park. The park also includes the Powerhouse Museum, a preserved lead mill that interprets the area’s mining history.

Businesses and agencies operating at the Flat River Industrial Park and St. Joe State Park employ about 1,050 people and provide over \$55 million in estimated annual employment income. In 2017, estimated sales revenue at those businesses exceeded \$208 million.



*Figure 9. ATV riders at St. Joe State Park (Missouri).<sup>10</sup>*

10. Source: St Joe State Park 11 available at [https://commons.wikimedia.org/wiki/File:St\\_Joe\\_State\\_Park\\_11.jpg](https://commons.wikimedia.org/wiki/File:St_Joe_State_Park_11.jpg). CC BY-SA 3.0 available at <http://creativecommons.org/licenses/by-sa/3.0/>.



# 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. The manufacturing facility on site 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 was never finalized on the NPL. Deere & Company led cleanup of the site in accordance with a 1989 consent decree. 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 collaboration between EPA and Deere & Company, the John Deere Dubuque Works facility has remained open during cleanup. A distribution company and a food service business also operate on site, in the John Deere facility. Together, site businesses employ about 1,820 people and provide nearly \$120 million in estimated annual employment income. In 2017, 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 a 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 the Leading Environmentalism and Forwarding Sustainability Award in recognition of the ecological/recreational reuse of a portion of the site.



*Figure 10. Aerial view of the John Deere (Dubuque Works) site (Iowa). Imagery © 2018 Google.*

# REDEVELOPMENT IN ACTION

## CHEROKEE COUNTY

### Ecological Protection and Restoration

Native grasses, streams and wildlife have replaced barren rock and gravel at the 115-square-mile Cherokee County Superfund site in Cherokee County, Kansas. One hundred years of lead and zinc mining in the area contaminated soil, sediment, surface water and groundwater. EPA added the site to the NPL in 1983. Remedial workers covered land with clean soil, diverted streams to avoid the stored wastes and planted portions of the site with native vegetation. Cleanup also included decontamination of former smelter buildings, excavation of contaminated sediment, stream rechannelization and construction of surface water diversions, excavation and disposal of contaminated residential soil, and institutional controls. Over 500 people have also been provided with a permanent source of clean drinking water at the site.

Early in the cleanup process, stakeholders began to explore sustainable reuse options for the site through a reuse assessment and an alternative energy suitability study. The results indicated that activities such as cutting hay, grazing and wildlife habitat were compatible with the site's remedy and could generate financial returns from otherwise unused lands. The alternative energy suitability study found that the site was best suited for utility-scale biomass production. It also noted that restored site lands could play a role in carbon sequestration and conservation programs over the long term.

To date, EPA cleanup has restored a 25-square-mile portion of the 115-square-mile site to its natural state as wildlife habitat. Restoration efforts are ongoing. Bermuda grass was planted in May 2010, enabling harvest of the first grass stand in September 2010. The Baxter Springs sub-site is drained by Willow Creek, Spring Branch and other small unnamed creeks. The state has designated the lower portion of Spring Branch as a critical habitat for nine threatened or endangered species. Cleanup is helping to preserve this delicate natural environment and its wildlife as well as reducing human health risks from contamination.



*Figure 11. The Cherokee County site, before and after cleanup and revegetation (Kansas).*

# REDEVELOPMENT ON THE HORIZON IN REGION 7

## TRANSFORMING A FORMER CHEMICAL FACILITY INTO PART OF A THRIVING COMMERCIAL CORRIDOR

An herbicide blending facility operated at the Armour Road Superfund site in North Kansas City, Missouri, from 1929 to 1986. After adding the site to the NPL in 1999, EPA oversaw the completion of two soil removal actions to demolish contaminated structures and remove contaminated soil from the property. EPA is currently providing oversight for a remedial investigation and feasibility study that will inform the final groundwater remedy.

The site is in part of the city that is experiencing extensive redevelopment. EPA, the PRP and the city coordinated to allow the cleanup of portions of the site that were critical for moving forward with reuse. These efforts have made possible redevelopment at the site itself as well as a large redevelopment project adjacent to the site. The site is zoned for commercial/retail and mixed land uses. All site areas are now available for redevelopment and construction on adjacent parcels is underway. It is also on EPA's national Redevelopment Focus List of sites with major redevelopment potential.



*Figure 12. Removal actions have addressed soil contamination at the Armour Road site (Missouri). All site areas can now support reuse.*



# 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 44 NPL sites and four 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, including at least one site in each of the four Region 7 states. EPA remains committed to working with all stakeholders to support Superfund redevelopment opportunities in Region 7.

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](mailto: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](http://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](http://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](http://www.epa.gov/enforcement/landowner-liability-protections)



*Figure 13. Installation of the wind turbine system at the Former Nebraska Ordnance Plant site (Nebraska).*



# 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 14 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 and continued use in Iowa.

## Businesses and Jobs

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

**Table 3. Detailed Site and Business Information for Sites in Reuse and Continued Use in Iowa (2017)**

	Sites <sup>a</sup>	Sites with Businesses	Businesses <sup>b</sup>	Total Annual Sales	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	4	1	3	\$16 million	47	\$2 million
<i>In Continued Use</i>	9	5	10	\$1.3 billion	2,897	\$189 million
<i>In Reuse and in Continued Use</i>	1	0	0	\$0	0	\$0
<b>Total</b>	14	6	13	\$1.3 billion	2,944	\$191 million

<sup>a</sup> One site is a federal facility. Federal facility sites are excluded from all other detailed site and business data presented above.

<sup>b</sup> 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 five Superfund sites in reuse and continued use in Iowa. These sites span 37 property parcels and 27 acres.

**Table 4. Property Value and Tax Information for Sites in Reuse and Continued Use in Iowa<sup>a</sup>**

Total Land Value (5 sites)	Total Improvement Value (5 sites)	Total Property Value (5 sites)	Total Annual Property Taxes (5 sites)
\$2 million	\$10 million	\$12 million	\$390,000

<sup>a</sup> The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2016 to 2018.

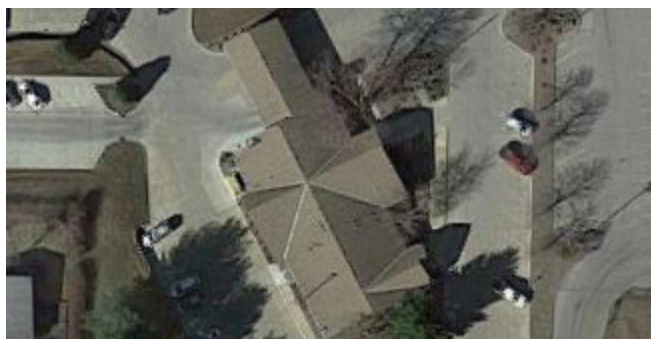


Figure 14. Aerial view of the bank at the PCE Former Dry Cleaner site. Imagery © 2018 Google.

## Did You Know?

A dry cleaners operated at the Tetrachloroethene (PCE) Former Dry Cleaner site in Atlantic, Iowa, in the 1960s. EPA placed the site on the Superfund program's NPL in April 2016. Site cleanup is ongoing. A bank now occupies the former dry-cleaning building. The bank generates \$100 million in estimated annual sales and provides over \$1.1 million in estimated annual income.

# 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 nine 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 and continued use in Kansas.

## Businesses and Jobs

EPA has collected economic data for 38 businesses and organizations operating on five sites in reuse and continued use in Kansas.

**Table 5. Detailed Site and Business Information for Sites in Reuse and Continued Use in Kansas (2017)**

	Sites <sup>a</sup>	Sites with Businesses	Businesses <sup>b</sup>	Total Annual Sales	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	4	2	29	\$140 million	1,421	\$69 million
<i>In Continued Use</i>	5	3	9	\$56 million	267	\$13 million
<i>In Reuse and in Continued Use</i>	0	0	0	\$0	0	\$0
<b>Total</b>	9	5	38	\$196 million	1,688	\$82 million

<sup>a</sup> One site is a federal facility. Federal facility sites are excluded from all other detailed site and business data presented above.

<sup>b</sup> 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 five Superfund sites in reuse and continued use in Kansas. These sites span 82 property parcels and 1,050 acres.

**Table 6. Property Value and Tax Information for Sites in Reuse and Continued Use in Kansas<sup>a</sup>**

Total Land Value (4 sites)	Total Improvement Value (4 sites)	Total Property Value (5 sites)	Total Annual Property Taxes (5 sites)
\$5 million	\$18 million	\$31 million	\$636,000

<sup>a</sup> The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which was 2017 for all data collected.



Figure 15. New police station on the Kansas City Structural Steel site.

## Did You Know?

A long-term protectiveness agreement between EPA and a prospective purchaser led to the redevelopment of the Kansas City Structural Steel site in Kansas City, Kansas. The site is now home to La Plaza Argentine, a small retail development that includes a Walmart Neighborhood Market. The store provides over \$1.6 million in estimated annual income and generates nearly \$13 million in estimated annual sales. In July 2017, the Kansas Department of Corrections opened a new police station 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 14 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 and continued use in Missouri.

## Businesses and Jobs

EPA has collected economic data for 108 businesses and organizations operating on six sites in reuse and continued use in Missouri.

**Table 7. Detailed Site and Business Information for Sites in Reuse and Continued Use in Missouri (2017)**

	Sites <sup>a</sup>	Sites with Businesses	Businesses <sup>b</sup>	Total Annual Sales <sup>c</sup>	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	3	1	1	\$0	4	\$144,000
<i>In Continued Use</i>	7	3	89	\$1.5 billion	4,387	\$286 million
<i>In Reuse and in Continued Use</i>	4	2	18	\$208 million	1,046	\$56 million
<b>Total</b>	14	6	108	\$1.7 billion	5,437	\$342 million

<sup>a</sup> Three sites are federal facilities. Federal facility sites are excluded from all other detailed site and business data presented above.

<sup>b</sup> Business information is not available for all businesses on all Superfund sites in reuse or continued use.

<sup>c</sup> 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

Property value and tax data were not available for sites in reuse or continued use in Missouri.



Figure 16. Route 66 State Park on the Times Beach site.<sup>11</sup>

## 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 seven miles of trails for hiking, biking and equestrian use. Visitors can see a wide range of wildlife, including 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.

11. Scenic View of Rocky Hill by Route 66 State Park, Missouri available at <https://commons.wikimedia.org/wiki/File:Gfp-missouri-route-66-state-park-scenic-view-of-rocky-hill.jpg>. CC0 1.0 available at <https://creativecommons.org/publicdomain/zero/1.0/deed.en>.



# NEBRASKA REDEVELOPMENT PROFILE

EPA partners with the Nebraska Department of Environmental Quality to oversee the investigation and cleanup of Superfund sites in Nebraska. Nebraska has 11 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 and continued use in Nebraska.

## Businesses and Jobs

EPA has collected economic data for 136 businesses and organizations operating on eight sites in reuse and continued use in Nebraska.

**Table 8. Detailed Site and Business Information for Sites in Reuse and Continued Use in Nebraska (2017)**

	Sites <sup>a</sup>	Sites with Businesses	Businesses <sup>b</sup>	Total Annual Sales	Total Employees	Total Annual Employee Income
<i>In Reuse</i>	3	2	9	\$50 million	161	\$8 million
<i>In Continued Use</i>	4	3	4	\$32 million	417	\$22 million
<i>In Reuse and in Continued Use</i>	4	3	123	\$566 million	2,297	\$105 million
<b>Total</b>	<b>11</b>	<b>8</b>	<b>136</b>	<b>\$648 million</b>	<b>2,875</b>	<b>\$135 million</b>

<sup>a</sup> One site is a federal facility. Federal facility sites are excluded from all other detailed site and business data presented above.

<sup>b</sup> 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 two Superfund sites in reuse and continued use in Nebraska. These sites span five property parcels and 101 acres.

**Table 9. Property Value and Tax Information for Sites in Reuse and Continued Use in Nebraska<sup>a</sup>**

Total Land Value (2 sites)	Total Improvement Value (2 sites)	Total Property Value (2 sites)	Total Annual Property Taxes (2 sites)
\$418,000	\$9 million	\$9 million	\$131,000

<sup>a</sup> The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which varied from 2016 to 2017.



Figure 17. Lindsay Manufacturing Co. facility at the Lindsay Manufacturing Co. site.

## Did You Know?

An innovative cleanup approach at the Lindsay Manufacturing Co. site in Lindsay, Nebraska, has enabled a unique partnership at the site. Treated groundwater is used for seasonal irrigation at a neighboring farm, reducing the operating costs for the groundwater cleanup system. Lindsay Manufacturing Co. (now the Lindsay Corporation) continues to operate on site; it makes galvanized irrigation sprinkler equipment.

*This page is intentionally blank.*

# 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) ([www.dnb.com](http://www.dnb.com)) database. EPA also gathers information on businesses and corporations from D&B. D&B maintains a database of more than 225 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 ([resource.referenceusa.com](http://resource.referenceusa.com)). In cases where ReferenceUSA did not include employment and sales volume for on-site businesses, EPA used the Manta database ([www.manta.com](http://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 2017. Estimated annual employment income was calculated using 2017 jobs data and BLS average weekly wage data for those jobs from 2016 (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.

# 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 2016 to 2018. All figures presented have been rounded for the convenience of the reader. 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***

Big River Mine Tailings/St. Joe Minerals Corp. 2011. "Doe Run Resources, Missouri DNR Agree to Address Lead Contamination at St. Joe State Park in St. Francois County, MO".

Big River Mine Tailings/St. Joe Minerals Corp. 2011. Record of Decision. [semspub.epa.gov/src/document/07/30244274](https://semspub.epa.gov/src/document/07/30244274).

Cherokee County. 2010. Exploring New Possibilities: Working and Natural Lands at the Cherokee County Superfund Site. [semspub.epa.gov/src/document/07/30296055](https://semspub.epa.gov/src/document/07/30296055).

## ***Other Resources***

Leah Thorsen. "Cleanup of lead pollution at St. Joe State Park nearing an end." St. Louis Post-Dispatch. Updated July 22, 2014. [www.stltoday.com/news/local/metro/cleanup-of-lead-pollution-at-st-joe-state-park-nearing/article\\_a3a51d6e-0bde-5e8c-9236-9bf5c676bccc.html](http://www.stltoday.com/news/local/metro/cleanup-of-lead-pollution-at-st-joe-state-park-nearing/article_a3a51d6e-0bde-5e8c-9236-9bf5c676bccc.html).

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

*This page is intentionally blank.*

*This page is intentionally blank.*



## United States Environmental Protection Agency

Region 7  
11201 Renner Boulevard  
Lenexa, Kansas 66219

September 2018 | [www.epa.gov/aboutepa/epa-region-7-midwest](http://www.epa.gov/aboutepa/epa-region-7-midwest)



Printed on recycled/recyclable paper with  
minimum 30% post-consumer fiber.