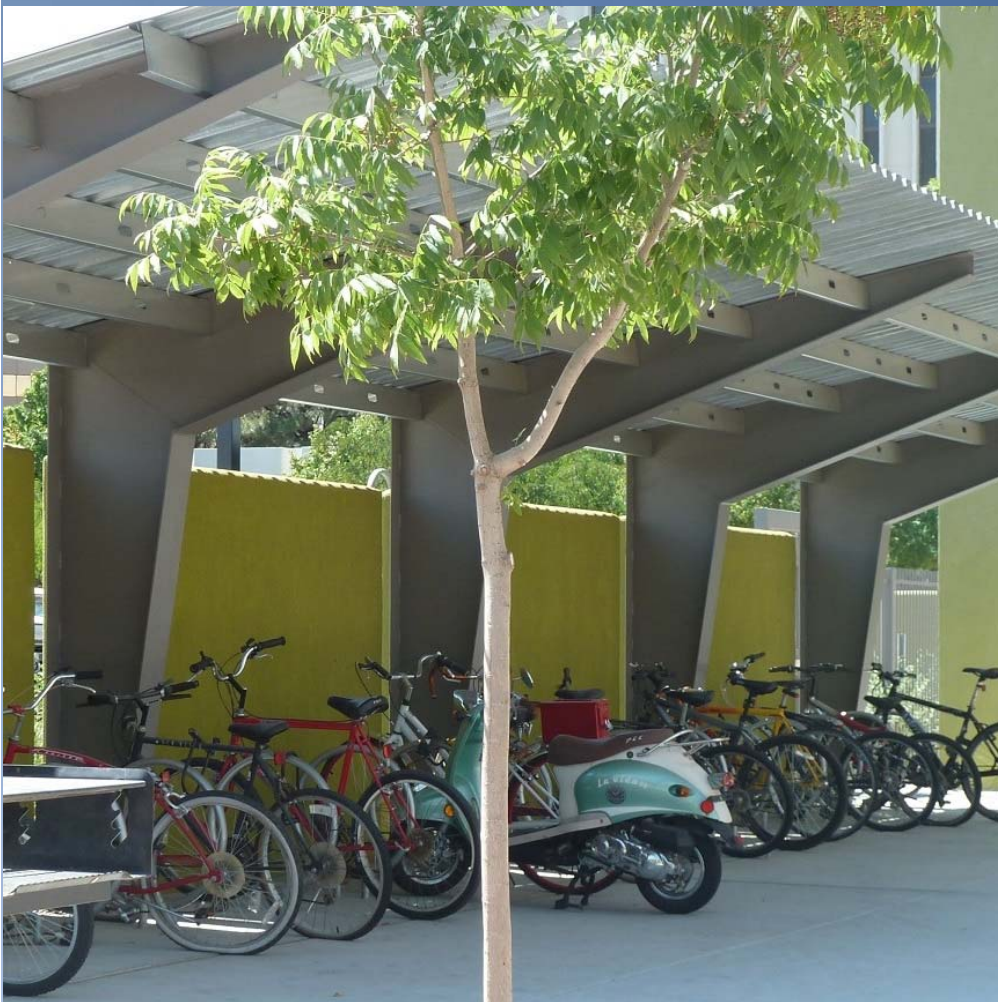




August 2017



PUTTING SITES TO WORK

How Superfund Redevelopment in the South Central Region Is Making a Difference in Communities



WHAT'S INSIDE?

Figure 1. Goodwill Industries of Dallas facility on the RSR Corporation site (Texas)

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Cover page photos, clockwise from top left: Fruit Avenue Plume site (New Mexico), RSR Corporation site (Texas), State Marine of Port Arthur site (Texas), Vertac, Inc. site (Arkansas), Highway 71/72 Refinery site (Louisiana)

Preface

Every day, EPA's Superfund program makes a visible difference in communities nationwide. The revitalization of communities affected by contaminated lands is a key part of Superfund's mission, delivering significant benefits one community at a time across the country. Through EPA's Superfund Redevelopment Initiative, the Agency contributes to these communities' economic vitality by supporting the return of sites to productive use. These regional profiles highlight community-led efforts as EPA launches a new era of partnerships and works toward a sustainable future.

Introduction

EPA's Region 6 (South Central) office serves Arkansas, Louisiana, New Mexico, Oklahoma, Texas and 66 tribes. This part of the country includes some of the nation's fastest-growing cities as well as small towns, farmland, ranches and public lands. Urban and rural communities alike across the region 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 6 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 reuse can revitalize a local economy with jobs, new businesses, tax revenues and local spending.

Through programs like the Superfund Redevelopment Initiative, EPA Region 6 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 6 works closely with state and local officials to remove barriers that have kept many Superfund sites underused. EPA Region 6 works to ensure that businesses on properties being cleaned up under Superfund can continue operating in a manner that protects both human health and the environment while site investigations and cleanup work continue. This continuity enables these businesses to remain as a source of jobs for communities.

Superfund sites across Region 6 are home to manufacturers, financial service providers, computer systems specialists, freight transportation logistics companies, restaurants, hotels and a range of other uses. Public services at current and former Superfund sites in Region 6 offer housing assistance, recycling services, public health services, sanitation and safety training. A municipal airport is located at one site. People live in single-family homes and apartments on several sites; one apartment complex is green building-certified for its sustainability by Enterprise Community Partners, a national non-profit organization focused on affordable housing. One site is part of an innovative pilot project that converts landfill gas into liquid fuel and other products. Other sites host ecological preserves, wildlife habitat and a riverfront walkway. On-site businesses and organizations at current and former Region 6 Superfund sites provide an estimated 2,533 jobs and contribute an estimated \$112 million in annual employment income. Cleaned-up sites in use in Region 6 generate \$3 million in annual property tax revenues for local governments.¹

This 2017 profile looks at how reuse activities at Superfund sites make a difference in communities across Region 6. In particular, it describes some of the beneficial effects of reuse 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 every two years. The beneficial effects may increase or decrease over time due to changes in:

¹ Business and property value tax figures represent only a subset of the beneficial effects of sites in reuse or continued use in Region 6. There are 27 Superfund sites in reuse or continued use in Region 6 for which EPA does not have business data, including eight 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 (such as parks, wetlands, ecological habitat and open space). There are 34 sites in reuse or continued use in Region 6 for which EPA does not have property value or tax data, including eight NPL federal facilities.

Region 6 Sites in Reuse and Continued Use: Business and Job Highlights

Businesses

170

Estimated Annual Sales

\$512 million

Number of People Employed

2,533

Total Annual Employee Income

\$112 million



Figure 2. Trinity Groves in West Dallas near the RSR Corporation site (Texas)

- 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 6.

Support for Superfund Reuse

EPA Region 6 is committed to making a visible difference in communities through the cleanup and reuse of Superfund sites. In addition to protecting human health and the environment through the Superfund program, Region 6 partners with stakeholders to encourage reuse opportunities at Superfund sites. Region 6 helps communities and cleanup managers consider reuse during cleanup planning and evaluate remedies already in place to ensure appropriate reuse 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 reuse support efforts in EPA Region 6 include:

- Identifying and evaluating local land use priorities to align with site cleanup plans through the reuse planning process.
- Facilitating cleanup and reuse discussions to help resolve key issues between parties interested in site redevelopment.
- Supporting targeted projects intended to help Region 6 communities and EPA find the right tools to move site reuse 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 putting Superfund sites back into use, such as the U.S. Fish and Wildlife Service.
- Developing reuse fact sheets, videos, websites, reuse case studies and Return to Use Demonstration Project summaries to share opportunities and lessons associated with Superfund redevelopment.

All of these efforts have helped build expertise across the South Central region, making it easier to both consider future use of Superfund sites prior to cleanup and identify opportunities for removing reuse barriers. These efforts also help other communities, state agencies, potentially responsible parties and developers 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.



Figure 3. EPA RFR Determination for the Chemical Recycling, Inc. site (Texas)



Figure 4. Margaret Hunt Hill Bridge near the RSR Corporation site (Texas)

Superfund Reuse: The Big Picture

EPA can take and oversee immediate action at contaminated sites through short-term cleanup actions, also called removal actions. Then 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, it issues a final cleanup plan and cleans up the site or oversees cleanup activities.² EPA has placed nearly 140 sites in Region 6 on the NPL.

Whenever possible, EPA seeks to integrate reuse priorities into site cleanup plans. In Region 6, 41 NPL sites and five non-NPL Superfund sites are in use. These sites have either new uses in place or uses that remain in place from before cleanup. Many of these sites have been redeveloped for commercial, industrial and residential purposes. Others have been redeveloped for recreational, ecological or agricultural purposes. Businesses and other organizations also use all or parts of other sites for historical memorials and vehicle parking. The following sections take a closer look at the beneficial effects of businesses operating on current and former Superfund sites.

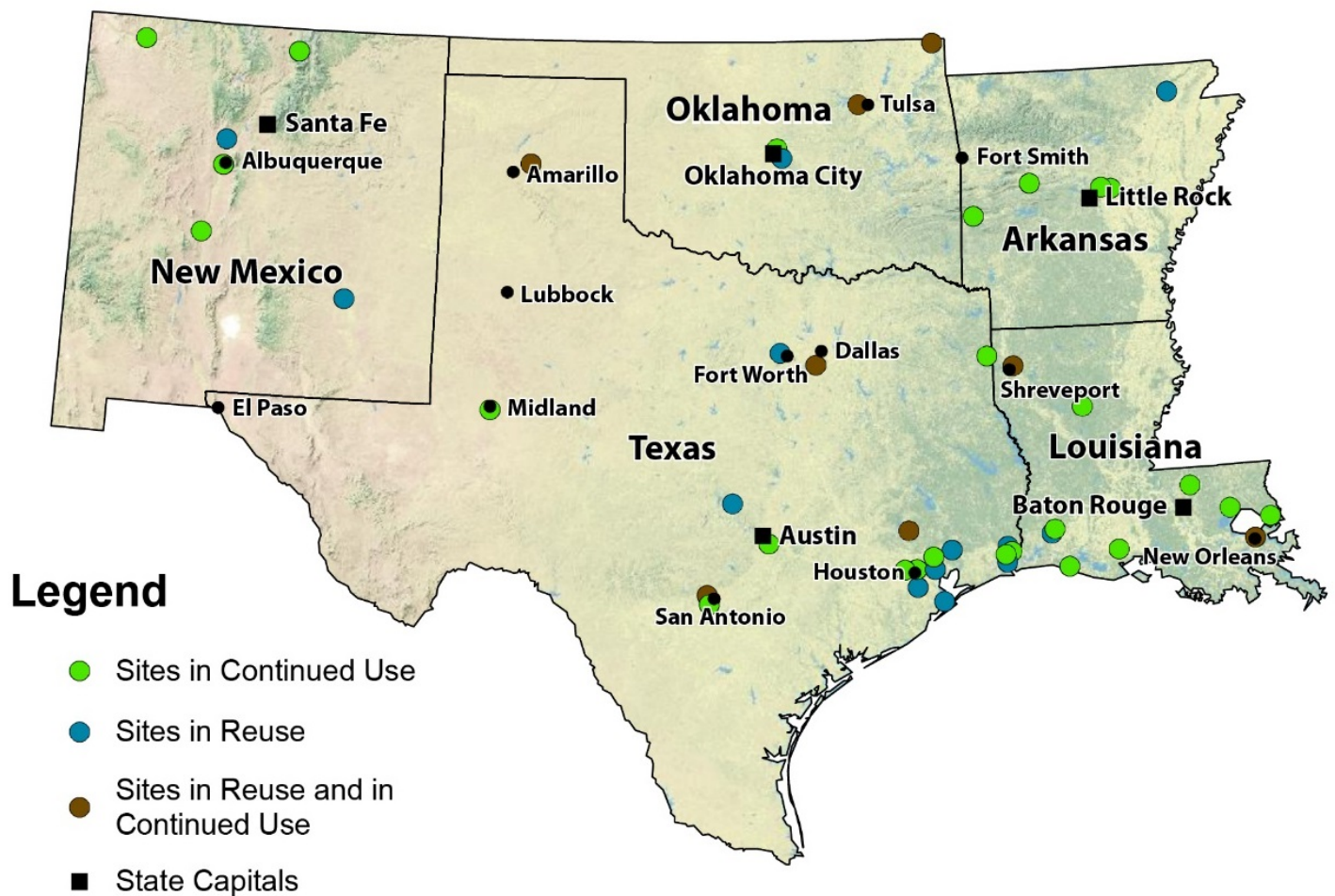


Figure 5. Sites in reuse and continued use in Region 6

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

Beneficial Effects of Superfund Site Reuse in Region 6

Businesses and Jobs

EPA has collected economic data for 170 businesses, government agencies and civic organizations operating on 17 NPL sites and two non-NPL site in reuse and continued use in Region 6.³ (See the State Reuse Profiles on pages 15-19 for each state's reuse details.) Businesses and organizations at these sites are part of several different sectors, including hotels, professional trade, industrial trade and retail trade.

Businesses and organizations at current and former Region 6 Superfund sites include hotels, schools, grocery stores, restaurants, civic and social organizations, freight transportation facilities, and health care centers and manufacturing facilities.

The businesses and organizations at these sites earn about \$512 million in estimated annual sales, and employ about 2,500 people, earning an estimated \$112 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 1.⁴



Figure 6. Palmer Barge Line site (Texas)

Sites in Reuse and Continued Use: A Closer Look

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.

In Continued Use: Historical uses at a site remain active; these uses were in place when the Superfund process started at the site.

In Reuse and Continued Use: Part of a site is in continued use and part of the site is in reuse.

Region 6 Site Examples

- **In Reuse:** Vertac, Inc. (Arkansas) – formerly the location of industrial facilities, the site now supports a range of public service uses.
- **In Continued Use:** Sand Springs Petrochemical Complex (Oklahoma) – industrial operations have continued to operate at the site since before cleanup.
- **In Reuse and Continued Use:** Tar Creek (Ottawa County) (Oklahoma) – long-time residential, commercial and public uses are ongoing across various parts of the site; new land uses include agricultural uses as well as tribal cultural preservation.

³ See footnote 1, page 3.

⁴ For additional information on the collection of business, jobs and sales data, see the “Sources” section of this profile.

Table 1. Site and business information for Region 6 sites in reuse and continued use (2016)

	Sites ^a	Sites with Businesses ^b	Businesses ^c	Total Annual Sales ^d	Total Employees	Total Annual Employee Income
In Reuse	25	9	24	\$233 million	646	\$41 million
In Continued Use	13	4	23	\$27 million	151	\$7 million
In Reuse and in Continued Use	8	6	123	\$252 million	1,736	\$64 million
Total	46	19^e	170	\$512 million	2,533	\$112 million

^a Eight 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 the “Sources” section of this profile.

^e See footnote 1, page 3.



Figure 7. Bayou Verdine site (Louisiana)

Property Values and Property Tax Revenues

Properties cleaned up under the Superfund program and returned to use have the potential for significant increases in value. This increased value can boost property tax revenues, which help pay for local government operations, public schools, transit systems and other public services. Site properties at the RSR Corporation site in Texas are now valued at nearly \$267 million.

Identifying increases in property values and property taxes following cleanup and reuse is challenging. This is due to a few factors, including insufficient data on historical property values and the frequency and timing of property value assessments by local agencies. 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 reuse 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.

EPA has collected property value and tax data for 12 Superfund sites in reuse and continued use in Region 6.⁵ These sites span 1,845 property parcels and 2,113 acres. They have a total property value of \$334 million. The average total property value per acre is \$158,000.

Land value information is available for 11 sites, and improvement property value information is available for 10 sites. These properties have a total land value of \$80 million and a total improvement value of \$253 million.

Property tax information is available for all 12 sites.⁶ The properties generate a combined \$3 million in local property taxes annually.

Table 2. Property value and tax information for sites in reuse and continued use in Region 6^a

Total Land Value (11 sites) ^b	Total Improvement Value ^c (10 sites)	Total Property Value (12 sites)	Total Property Value per Acre (12 sites) ^d	Total Annual Property Taxes (12 sites)
\$80 million	\$253 million	\$334 million	\$158,000	\$3 million

^a Results are based on an EPA Superfund Redevelopment Initiative effort in 2017 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 2017. For additional information, see the "Sources" section of this profile.

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

^c Land and improvement value for one of the sites is listed as \$0.

^d Based on total property value amount of \$334,000,000 divided by total acreage of 2,113.

Region 6 Sites in Reuse and Continued Use: Property Value and Tax Highlights

Total Property Value
\$334 million

Total Annual Property Taxes
\$3 million



Figure 8. Highway 71/72 site (Louisiana)

⁵ There are 34 additional sites in reuse or continued use in Region 6 for which EPA does not have property value or tax data, including 8 NPL federal facilities.

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

Beneficial Effects from Enhanced Ecological and Recreational Amenities

In addition to serving as locations for commercial developments, retail centers and industrial facilities, some Region 6 sites in reuse provide recreational and ecological benefits. Recreational and ecological reuses help attract visitors and residents, and indirectly contribute to local economies. The Longhorn Army Ammunition Plant site in Karnack, Texas, for example, is now part of a national wildlife refuge. Cleanup efforts at the Bayou Verdone site in Lake Charles, Louisiana, included creating a bioswale and other aquatic features designed to reduce erosion and provide additional habitat for wildlife and fish. Efforts are underway to expand waterfront recreational opportunities at the Bayou Bonfouca site in Slidell, Louisiana (see “Reuse on the Horizon”). Other sites, such as the Bailey Waste Disposal site in Bridge City, Texas, and the Tex-Tin Corp. site in Texas City, Texas, also support wetlands.

Benefits from Alternative Energy Projects

Alternative energy projects provide a range of economic benefits. They generate construction and operations jobs, spur local investment for manufacturing and materials, create benefits for landowners in the form of land lease or right-of-way payments, lower energy costs, and reduce greenhouse gas emissions. They can also help hedge against energy price and supply volatility, help support local business competitiveness and technology supply chain development, provide outreach opportunities for site owners and communities, and contribute to broader economic development planning.

Several efforts in Region 6 have encouraged opportunities for alternative energy project development on Superfund and other impaired sites. In 2010, Chevron Technology Ventures built a 1-megawatt solar facility on a 20-acre portion of the Chevron Questa Mine site. The facility began operating in April 2011. In 2014, the U.S. Department of Energy (DOE) began operating a five-turbine, 11.5-megawatt wind energy project on the Pantex Plant (USDOE) site near Amarillo, Texas, providing much of the DOE Pantex Plant’s general power needs. Waste Management is developing a commercial gas-to-liquid facility at the Mosley Road Sanitary Landfill site, in Oklahoma City, Oklahoma, which converts landfill gas, co-fed with natural gas, into renewable fuels and chemicals, like cleaner-burning diesel. Waste Management pioneered the use of this kind of technology by first building and operating a demonstration unit at the neighboring East Oak Landfill.

Why Are Wetlands Economically Important?

Wetlands provide a variety of benefits. The combination of shallow water, high levels of nutrients and primary productivity is ideal for the development of organisms that form the base of the food web and feed many species of fish, amphibians, shellfish and insects. Wetlands are extremely effective in removing pollutants from water and act as filters for future drinking water. Wetlands play a role in reducing the frequency and intensity of floods. They can store large amounts of carbon. They also provide recreational amenities.

These benefits also have economic value. Replacing wetlands’ water treatment services with manmade facilities, for example, would be expensive. Worldwide, wetlands provide an estimated \$14.9 trillion in ecosystem services. To learn more, see EPA’s Economic Benefits of Wetlands fact sheet:

nepis.epa.gov/Exe/ZyPDF.cgi/2000D2PF.PDF?Dockey=2000D2PF.PDF.

See also EPA’s webpage on the importance of wetlands: www.epa.gov/wetlands/why-are-wetlands-important.

See also the National Oceanic and Atmospheric Administration’s website feature on carbon sequestration: www.habitat.noaa.gov/coastalcarbonsequestration.html.



Figure 9. Landfill gas-to-energy plant at the Mosley Road Sanitary Landfill site (Oklahoma)

Reuse in Action

Tex-Tin Corp. – New Bulk Oil Storage Facility

The 170-acre Tex-Tin Corp. Superfund site is located on the banks of Galveston Bay in Texas City, Texas. Copper and tin smelting facilities operated on site from the beginning of World War II until the mid-1980s. EPA added the site to the NPL in 1998. Cleanup actions addressed waste piles, wastewater treatment ponds, acid ponds and slag piles. Cleanup actions also focused on the nearby Swan Lake Salt Marsh Area. The Swan Lake Salt Marsh Area continues to provide wildlife habitat and serve as a migratory bird flyway.

After cleanup, EPA awarded the site a Superfund Redevelopment grant in 2001. EPA issued the nation's first Ready for Reuse (RfR) Determination for the site in 2003. The determination stated that as long as certain conditions are met on site, the remedy is protective for commercial uses. After several initial reuse efforts, Texas City Terminal Railway Co. bought the site property in 2010 to market the site for redevelopment. In 2011, Genesis Energy, a mid-stream oil company, entered into an agreement with Texas City Terminal Railway Co. to reuse the site as a bulk oil storage facility. The terminal went into service on May 1, 2017. Genesis Energy refurbished three above-ground storage tanks on the site and repurposed an existing on-site barge dock. Genesis Energy invested over \$100 million on the site to build the terminal and associated infrastructure. This significant investment also serves a critical role supporting oil refineries in the area. In November 2017, EPA Region 6 will present Excellence in Site Reuse awards to Genesis Energy, the Port of Texas City, the Texas City Mayor's Office, members of the PRP group and their lead remedial contractors in recognition of their substantial collaboration and cooperation during site redevelopment.



Figure 10. Bulk oil storage facility at the Tex-Tin Corp. site (Texas)

Big Tex Grain – Upscale Housing in Downtown San Antonio

Between 1961 and 1989, the 7.5-acre Big Tex Grain Co. Superfund removal site in San Antonio, Texas, was a hive of industrial activity – vermiculite exfoliation, grain production and sawdust warehousing. Plant operations resulted in contamination of dust, air and soil with asbestos. EPA cleaned up the site, removing contaminated soil, disposing of contaminated materials and cleaning on-site structures. Cleanup finished in late 2008.

The site property is located next to the Blue Star Contemporary Art Center, which hosts art exhibitions, events and education programs. Early in the cleanup process, the site owner expressed interest in converting the vacant industrial property into a mixed-use residential, arts and entertainment destination, combining the site with the neighboring Blue Star Arts Complex. The site's riverfront area also provided an ideal location for continued development of the popular San Antonio River Walk. At the request of the site owner, EPA issued an RfR Determination in November 2008. It clearly communicates to current and future users of the site that EPA has not placed any limitations on its use and that it is ready for reuse. In 2012, the city of San Antonio approved \$5 million in tax incentives and an economic development grant to help fund development of the mixed-use complex.



Figure 11. The Flats at Big Tex at the Big Tex Grain Co. site (Texas)

Construction on the multi-million-dollar complex, called The Flats at Big Tex, began in 2014. Construction on the complex is now complete and a grand opening event took place in November 2016. Today, The Flats at Big Tex is a 336-unit multi-family residential development with apartments and townhomes in the heart of San Antonio. Amenities in the complex include dog parks, a pool, a demonstration kitchen, a fitness center and a common area with a view of the San Antonio skyline. The complex is linked to the San Antonio river trail and includes over 6,000 square feet of retail space with two restaurants. Artworks from the nearby Blue Star Contemporary art museum are featured in the complex as well. Grain silos and industrial features at the site have been incorporated into the development.

RSR Corporation – Jobs, Housing and Area Revitalization

The RSR Corporation site is located in a residential and commercial area of West Dallas, Texas. The site spans a former lead smelter, related industrial properties, a long-time neighborhood, a former public housing area and several landfills. RSR Corporation operated a lead smelter on site from the 1920s until 1984. The company disposed of waste materials on site and in area landfills. Contamination of the surrounding community resulted from the fallout of air emissions from the lead smelter. Studies confirmed high blood-lead levels for residents and children living near the smelter. RSR Corporation undertook initial cleanup actions in the early 1980s. EPA, with support from the state, undertook cleanup actions in residential areas northwest of the smelter in the early 1990s. During this time, the Dallas Housing Authority (DHA) removed lead-contaminated soil and buildings from a large DHA public housing area northeast of the smelter. EPA placed the site on the NPL in 1995 for the cleanup of remaining areas.



Figure 12. Goodwill Industries of Dallas facility at the RSR Corporation site (Texas)

Cleanup of these areas resulted in lowered blood-lead levels for children and residents in West Dallas. It also facilitated redevelopment. Portions of the DHA area now include affordable housing, commercial businesses, social service organizations, and agencies and schools. In 2002, Goodwill Industries of Dallas completed its 275,000-square-foot headquarters on site. Today, 300 people are employed at Goodwill Industries of Dallas in jobs that provide \$6.5 million in total annual employment income. Cleanup of other portions of the site, including the former smelter facility and disposal areas, is now complete. EPA issued RfR Determinations for the smelter facility and disposal areas in 2006 to facilitate future redevelopment.

Ongoing uses include churches, primary and secondary schools, commercial businesses, a retirement home and a community YMCA. Together, site businesses and organizations employ over 750 people and contribute over \$26 million in annual employment income to the local community. The extensive investigations and cleanup overseen by EPA, in cooperation with the State of Texas and the city of Dallas, have also played an important part in ongoing efforts by local agencies, community development organizations, business leaders and residents to revitalize greater West Dallas. In November 2015, EPA recognized the efforts of the DHA and Goodwill Industries of Dallas with its Excellence in Site Reuse award.

"The Superfund cleanup has been critical to the revitalization of the area."

– Tim Lott, Vice President of Capital Development, Dallas Housing Authority Coordinator

Vertac, Inc. – New and Expanded Municipal Facilities

The 193-acre Vertac, Inc. site is located 15 miles northeast of Little Rock in Jacksonville, Arkansas. The federal government built the first industrial facilities at the site during the 1930s and 1940s as part of a sprawling munitions complex. Over the next four decades, various chemical manufacturing facilities produced insecticides and herbicides on site. Improper waste disposal and production control by various chemical manufacturers led to soil and groundwater contamination. EPA placed the site on the NPL in 1983.

The city of Jacksonville recognized early on that retaining the site's infrastructure could serve as the foundation for reuse. Following surface cleanup activities, the city acquired the northern part of the site property in 2000. An EPA Superfund Redevelopment Initiative pilot grant enabled the city to evaluate several reuse options.

Today, site reuses include a recycling center, office space and storage for the city's Street Department, a fire department training facility, a driver training pad, a recycling education park, police firing range and a public safety building. The public safety building includes a police and fire training center, city of Jacksonville Police Department facilities, and an emergency operations center and community safe room. The city's new recycling center serves 10,000 residents and recycles 1.5 million pounds of materials each year. By diverting these materials from a landfill, the recycling center saves the city an estimated \$50,000 annually. In total, 134 people are employed on site, providing annual employment income of over \$6.2 million.



Figure 13. Jacksonville Sanitation Department Recycling Center at the Vertac, Inc. site (Arkansas)

Highway 71/72 Refinery – New Hotel Complex

The 215-acre Highway 71/72 Refinery site is located in Bossier City, near Shreveport, Louisiana. Between 1923 and 1948, site uses included an oil refinery and a petroleum storage and distribution facility. Following dismantling and sale of the refinery in the mid-1950s, on-site construction began for an interstate highway corridor. The site owner began voluntary cleanup efforts in 1966. Soon after initial cleanup and construction of the Interstate-20 corridor, redevelopment of the site increased. After the discovery of additional contamination in the mid-1980s, EPA and community leaders implemented a cleanup approach that took the site's residential and business areas into account.

The cleanup plan included removal of contaminated material, groundwater cleanup, monitoring and use restrictions, indoor air pollution mitigation, and any necessary corrective action for all site-related contamination discovered during future earthmoving operations. EPA is addressing the site through the Superfund Alternative approach, which uses the same investigation and cleanup process and standards used for sites listed on the NPL. EPA allows structures protective of human health and the environment to remain on site. EPA requires additional soil cleanup only if parties discover buried waste during construction. For example, the removal of the former hotel on site allowed cleanup crews to access buried refinery waste, clearing the way for construction of the new hotel complex after cleanup. Cooperation between EPA, business owners, developers and the site's responsible party allows the many companies on site to remain open for business, and helps make possible the construction of new uses.



Figure 14. Hotels at the Highway 71/72 Refinery site (Louisiana)

Today, site uses include single-family homes, hotels, restaurants and other commercial establishments. More than 50 on-site businesses employ close to 550 people and contribute an estimated \$14 million in annual employment income. Site uses also help generate property tax revenues. The property previously occupied by a Holiday Inn hotel had an estimated total

property value of about \$2 million and generated just over \$31,000 in annual tax revenue in 2011. After cleanup and redevelopment of the property, there was a significant increase in both property and tax values. Today, the new hotel complex and surrounding property has an estimated value of nearly \$16 million, generating nearly \$300,000 in annual property tax revenue.

Fruit Avenue Plume – New Affordable Housing

The Fruit Avenue Plume Superfund site consists of contaminated groundwater under part of downtown Albuquerque, New Mexico. Between 1924 and 1958, a local business owner operated Sunshine Laundry above the contaminated area. In 1940, the owner expanded laundry services to include dry cleaning services. In April 1989, routine sampling at a nearby supply well by the city of Albuquerque found groundwater contamination. Site investigators determined that dry cleaning processes were the cause of the contamination. EPA added the site to the NPL in October 1999. The cleanup plan included soil and hot spot treatment and groundwater restoration. Cleanup crews completed work in 2006.

Since then, collaboration between the New Mexico Environment Department, EPA and a local developer have helped return the site property to use as a green housing development. These affordable housing units exceed baseline Green Communities Criteria established by Enterprise Community Partners, a national non-profit organization focused on affordable housing issues. Green features include solar power, a water recycling system and rooftop rainwater collection systems. The building has a large outdoor courtyard with a community garden. A hospitality center operates a coffee shop on site and also provides job training to formerly homeless community members. EPA continues to work with the State of New Mexico and community members supporting reuse opportunities in the area.



Figure 15. Sign for The Coffee Shop located within the Downtown @ 700-2nd development at the Fruit Avenue Plume site (New Mexico)

State Reuse Profile: Arkansas

EPA partners with the Arkansas Department of Environmental Quality to oversee the investigation and cleanup of Superfund sites in Arkansas. Arkansas has five Superfund sites with either new uses in place or uses that have remained in place since before cleanup. EPA has collected economic data for six business and organizations operating on three sites in reuse and continued use in Arkansas. The businesses and organizations employ about 165 people and contribute an estimated \$8 million in annual employment income.

Table 3. Detailed site and business information for sites in reuse and continued use in Arkansas (2016)

	Sites	Sites with Businesses	Businesses ^a	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	4	2	5	\$1 million	135	\$6 million ^b
In Continued Use	1	1	1	\$10 million	30	\$2 million
In Reuse and in Continued Use	0	0	0	\$0	0	\$0
Total	5	3	6	\$11 million	165	\$8 million^b

^a Business information is not available for all businesses on all Superfund sites in reuse or continued use.

^b 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 one Superfund site in reuse in Arkansas. The Vertac, Inc. site spans four property parcels and 155 acres. It has a total property value of \$1.3 million. Detailed property value information is available for the site. Together, the site properties have a total land value of \$1 million and a total improvement value of \$285,000. Property tax information is available for the site. Properties at this site generate a combined \$14,000 in property taxes.

Table 4. Property value and tax information for sites in reuse and continued use in Arkansas^a

Total Land Value (1 site)	Total Improvement Value (1 site)	Total Property Value (1 site)	Total Annual Property Taxes (1 site)
\$1 million	\$285,000	\$1.3 million	\$14,000

^a The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which was not specified.

Did You Know?

The 193-acre Vertac, Inc. site is home to several municipal uses for the city of Jacksonville. These include a fire department training facility, a recycling center, office space and storage for the city's Street Department, a driver training pad, a recycling education park, a police firing range and a public safety building. Over 130 people are employed on site.



Figure 16. Fire department training facility (Arkansas)

State Reuse Profile: Louisiana

EPA partners with the Louisiana Department of Environmental Quality to oversee the investigation and cleanup of Superfund sites in Louisiana. Louisiana has nine Superfund sites with either new uses in place or uses that have remained in place since before cleanup. EPA has collected economic data for 62 businesses and organizations operating on four sites in reuse and continued use in Louisiana. The businesses and organizations employ over 700 people and contribute an estimated \$27 million in annual employment income.

Table 5. Detailed site and business information for sites in reuse and continued use in Louisiana (2016)

	Sites	Sites with Businesses	Businesses ^a	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	7	2	6	\$75 million	163	\$13 million
In Continued Use	1	0	0	\$0	0	\$0
In Reuse and in Continued Use	1	2	56	\$55 million	548	\$14 million
Total	9	4	62	\$130 million	711	\$27 million

^a 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 and continued use in Louisiana. These sites span 247 property parcels and 112 acres. They have a total property value of \$32 million. Detailed property value information is available for all three sites. Together, the site properties have a total land value of \$10 million and a total improvement value of \$22 million. Property tax information is available for all three sites. Properties at these sites generate a combined \$309,000 in property taxes.

Table 6. Property value and tax information for sites in reuse and continued use in Louisiana^a

Total Land Value (3 sites)	Total Improvement Value (3 sites)	Total Property Value (3 sites)	Total Annual Property Taxes (3 sites)
\$10 million	\$22 million	\$32 million	\$309,000

^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 2016 to 2017.

Did You Know?

The Gulf State Utilities-North Ryan site is home to the Lake Charles Division Service Center of Entergy Gulf States Louisiana, an electrical power production and retail distribution company. The center employs 80 people and generates nearly \$9 million in annual employment income.



Figure 17. Lake Charles Division Service Center of Entergy Gulf States Louisiana administrative building (Louisiana)

State Reuse Profile: New Mexico

EPA partners with the New Mexico Environment Department to oversee the investigation and cleanup of Superfund sites in New Mexico. New Mexico has six Superfund sites with either new uses in place or uses that have remained in place since before cleanup. EPA has collected economic data for 13 businesses and organizations operating on two sites in continued use in New Mexico. The businesses and organizations employ over 100 people and contribute an estimated \$4 million in annual employment income.

Table 7. Detailed site and business information for sites in reuse and continued use in New Mexico (2016)

	Sites ^a	Sites with Businesses	Businesses ^b	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	4	0	0	\$0	0	\$0
In Continued Use	2	2	13	\$16 million	106	\$4 million
In Reuse and in Continued Use	0	0	0	\$0	0	\$0
Total	6	2	13	\$16 million	106	\$4 million

^a Two 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

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

Did You Know?

The Regional Housing Authority of Region 6, New Mexico is located on the McGaffey and Main Groundwater Plume site in Roswell, New Mexico. The Housing Authority helps build partnerships with a range of stakeholders to develop more affordable housing. The Housing Authority provides nearly \$560,000 in estimated annual employment income.



Figure 18. Region 6 Housing Authority office (New Mexico)

State Reuse Profile: Oklahoma

EPA partners with the Oklahoma Department of Environmental Quality to oversee the investigation and cleanup of Superfund sites in Oklahoma. Oklahoma has four Superfund sites with either new uses in place or uses that have remained in place since before cleanup. EPA has collected economic data for 15 businesses and organizations operating on two sites in reuse and continued use in Oklahoma. The businesses and organizations employ 326 people and contribute an estimated \$19 million in annual employment income.

Table 8. Detailed site and business information for sites in reuse and continued use in Oklahoma (2016)

	Sites ^a	Sites with Businesses	Businesses ^b	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	1	1	1	\$1 million	5	\$313,000
In Continued Use	1	0	0	\$0	0	\$0
In Reuse and in Continued Use	2	1	14	\$151 million	321	\$19 million
Total	4	2	15	\$152 million	326	\$19 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 and continued use in Oklahoma. These sites span 40 property parcels and 306 acres. They have a total property value of \$20 million. Detailed land value information is available for two sites. Together, the site properties have a total land value of \$3 million. Detailed improvement value is available for one site. Together, the site properties have a total improvement value of \$16 million. Property tax information is available for all three sites. Properties at these sites generate a combined \$244,000 in property taxes.

Table 9. Property value and tax information for sites in reuse and continued use in Oklahoma^a

Total Land Value (2 sites)	Total Improvement Value (1 site)	Total Property Value (3 sites)	Total Annual Property Taxes (3 sites)
\$3 million	\$16 million	\$20 million	\$244,000

^a The property value and tax amounts reflect the latest property value year and tax data year available in county assessor datasets, which is 2016.

Did You Know?

The Tar Creek (Ottawa County) Superfund site spans about 12,600 acres in northeast Oklahoma, southeast Kansas and southwest Missouri. In 2013, the Quapaw Tribe became the first tribe to lead cleanup of contaminated property at a Superfund site. The tribe's initiative has led to groundbreaking environmental research, the preservation of historic community resources, and an approach that can guide similar efforts on other tribal lands and at former mine sites across the United States.



Figure 19. A portion of the Tar Creek site (Oklahoma)

State Reuse Profile: Texas

EPA partners with the Texas Commission on Environmental Quality to oversee the investigation and cleanup of Superfund sites in Texas. Texas has 20 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. EPA has collected economic data for 74 businesses and organizations operating on eight sites in reuse and continued use in Texas. The businesses and organizations employ 1,225 people and contribute an estimated \$52 million in annual employment income.

Table 10. Detailed site and business information for sites in reuse and continued use in Texas (2016)

	Sites ^a	Sites with Businesses	Businesses ^b	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	9	4	12	\$156 million	343	\$22 million
In Continued Use	7	1	9	\$1 million	15	\$470,000
In Reuse and in Continued Use	4	3	53	\$45 million	867	\$30 million
Total	20	8	74	\$202 million	1,225	\$52.5 million

^a Five 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 five Superfund sites in reuse and continued use in Texas. These sites span 1,554 property parcels and 1,540 acres. They have a total property value of \$280 million. Detailed property value information is available for all five sites. Together, the site properties have a total land value of \$65 million and a total improvement value of \$215 million. Property tax information is available for all five sites. Properties at these sites generate a combined \$2 million in property taxes.

Table 11. Property value and tax information for sites in reuse and continued use in Texas^a

Total Land Value (5 sites)	Total Improvement Value (5 sites)	Total Property Value (5 sites)	Total Annual Property Taxes (5 sites)
\$65 million	\$215 million	\$280 million	\$2 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 2016 to 2017.

Did You Know?

The South Cavalcade Street site in Houston, Texas, was once a wood-preserving facility and coal tar plant. Today, the site is home to Palletized Trucking and Big Texas Auctions of Texas. Palletized Trucking contributes an estimated \$3.7 million in annual employee income to the community.



Figure 20. Palletized Trucking, Inc. (Texas)

Reuse on the Horizon in Region 6

Transforming a Creosote Plant into New Waterfront Recreation Opportunities

The 54-acre Bayou Bonfouca Superfund site is located in the city of Slidell in St. Tammany Parish, Louisiana. Beginning in 1882, various companies owned and ran a creosote plant on site. Spills and improper disposal practices contaminated the area and the surrounding bayou. EPA added the site to the NPL in 1983. EPA and the Louisiana Department of Environmental Quality worked together on a cleanup and restoration plan. The cleanup decontaminated 170,000 cubic yards of sediments, treated 17.6 million gallons of contaminated groundwater, and recovered 44,500 gallons of creosote oil. Today, project outcomes include 1.5 miles of restored bayou wetlands, waterfront recreation and a public boat launch on Lake Pontchartrain. Buildings on the property now host offices for the Slidell Sewer and Public Works departments.

In 2012, the city received a \$1.5 million Boat Infrastructure Grant to promote boating access along Bayou Bonfouca near the site. Coordination among the city, LDEQ and EPA paved the way for the Heritage Park Marina Project. Once finished, the project will include floating docks, piers, pedestrian pathways and other amenities to encourage recreational boating on Bayou Bonfouca. The marina will be able to accommodate 65 boats total, with slips able to accommodate boats up to 75 feet in length. On April 18, 2017, the city of Slidell held a groundbreaking ceremony for the start of the new Heritage Park Marina on the site. Construction is expected to finish in early 2018.



Figure 21. Pavilion next to the Bayou Bonfouca site (Louisiana)



Figure 22. Groundbreaking ceremony for the Heritage Park Marina Project on April 18, 2017 (Louisiana)
Pictured from left: Blaine Clancy (Director of Engineering, city of Slidell), Brett Audibert (Gill's Crane & Dozer Service), Mayor Freddy Drennen (city of Slidell), Casey Luckett Snyder (Project Manager and Superfund Reuse Coordinator, EPA Region 6) Michael Hattaway (GEC Consulting Engineers), Val Vanney (Slidell City Councilman), Jay Newcomb (Slidell City Councilman) and Keith Horn (Senior Environmental Scientist, LDEQ).

Conclusion

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

The businesses and organizations operating on these sites provide jobs and income for communities. They help generate local and state taxes. Cleanup and redevelopment also helps stabilize and boost property values. There are 41 NPL sites and five non-NPL Superfund sites in Region 6 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 6, including at least one site in each of the five Region 6 states. EPA remains committed to working with all stakeholders to support Superfund redevelopment opportunities in Region 6.

The reuse of Superfund sites takes time and is often a learning process for project partners. Ongoing coordination among EPA, state agencies, tribes, local governments, potentially responsible parties, site owners, developers, and nearby residents and business owners is essential. EPA tools, including reuse assessments or plans, comfort letters or 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 the South Central region, Superfund sites are now home to commercial and industrial developments, mid-sized developments providing services to surrounding communities, and diverse small businesses. EPA is committed to working with all stakeholders to support the restoration and renewal of these sites as long-term assets.



Figure 23. RSR Corporation site (Texas)

EPA Superfund Site Reuse Resources

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

EPA Region 6 Superfund Redevelopment Initiative Coordinator
Casey Lockett Snyder | 214-665-7393 | lockett.casey@epa.gov

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

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) (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. Database data include public records, financials, private company insights, extensive global information, telephone numbers and physical addresses. When D&B database research cannot identify employment and sales volume for on-site businesses, EPA uses the Manta (manta.com) database. The Reference USA (resource.referenceusa.com) database is used only after it is determined that D&B and Manta do not provide economic data for a site business. The databases include data reported by businesses. Accordingly, some reported values might be underestimates or overestimates. In some instances, business and employment information also comes 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. Data included are obtained directly from the aforementioned sources, and reported as presented by those sources.

EPA obtains wage and income information from the U.S. Bureau of Labor Statistics (BLS). EPA uses the BLS Quarterly Census of Employment and Wages database to obtain average weekly wage data for the identified businesses. Average weekly wage data are identified by matching the North American Industry Classification System (NAICS) codes for each type of business with weekly wage data for corresponding businesses. If weekly wage data are not available at the county level, EPA uses wage data by state or national level, respectively. In cases where wage data are not available for the six-digit NAICS code, EPA uses higher-level (less-detailed) NAICS codes to obtain the wage data. To determine the annual wages (mean annual) earned from jobs generated by each of the identified businesses, EPA multiplies 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 2016. Estimated annual employment income was calculated using 2016 jobs data and BLS average weekly wage data for those jobs from 2015 (the latest available wage data at the time of this profile). All income and sales figures presented have been rounded for the convenience of the reader. 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).

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 2015 to 2017. 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 in Action

Write-ups of sites in reuse or continued use included in this study 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.

Superfund Redevelopment Initiative Case Studies

Bayou Verdine. 2016. Ecological Revitalization on the Bayou: Bayou Verdine in Calcasieu Parish, Louisiana. Accessed at: semspub.epa.gov/src/document/06/500024318.pdf

Highway 71/72 Refinery. 2015. Reuse and the Benefit to Community: Highway 71/72 Refinery Superfund Site. Accessed at: semspub.epa.gov/src/document/06/100000020.pdf

RSR Corporation. 2015. Reuse and the Benefit to Community: RSR Corporation Superfund Site. Accessed at: semspub.epa.gov/src/document/06/500018640.pdf

Tar Creek (Ottawa County). 2015. Tribal Leadership, Historic Preservation and Green Remediation: The Catholic 40 Cleanup Project in Northeast Oklahoma. Accessed at: semspub.epa.gov/src/document/06/500017890.pdf

Vertac, Inc. 2012. Reuse and the Benefit to Community: Vertac, Inc. Superfund Site. Accessed at: semspub.epa.gov/src/document/06/300260.pdf

Vertac, Inc. 2013. Public-Sector Land Uses and Superfund Redevelopment: The Vertac, Inc. Site in Jacksonville, Arkansas. Accessed at: semspub.epa.gov/src/document/06/300127.pdf

Other Resources

Camille Garcia. “Big Tex officially opens in Southtown.” *Rivard Report*. November 29, 2016. Accessed at: therivardreport.com/big-tex-officially-opens-in-southtown

Sara Pagones. “Slidell breaks ground on long-awaited marina at Heritage Park.” *The New Orleans Advocate*. April 18, 2017. Accessed at: www.theadvocate.com/new_orleans/news/communities/st_tammany/article_7bb2fee2-2460-11e7-8c0a-ab79bef7d92f.html



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