PUTTING SITES TO WORK

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

REGION 6 ECONOMIC PROFILE

Cover page photos:
Bayou Bonfouca (Louisiana), RSR Corporation (Texas), Highway 71/72 Refinery (Louisiana), Fruit Avenue Plume (New Mexico), Chevron Questa Mine (New Mexico), Vertac, Inc. (Arkansas)

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. Solar facility at the Chevron Questa Mine site (New Mexico).

TABLE OF CONTENTS

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 created the Superfund Task Force whose work included promoting redevelopment and community revitalization. Working closely with communities, developers and property owners, EPA is leading the way to return these once-contaminated sites back to productive use.

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

This page is intentionally blank.

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 redevelopment 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 the 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 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.

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

Businesses:	*305*
Total Annual Sales:	*$793 million*
Number of People Employed:	*4,590*
Total Annual Employee Income:	*$229 million*

Figure 2. The Jim Collins Family Center at the RSR Corporation site (Texas).

Superfund sites across Region 6 are home to manufacturers, financial service providers, computer system specialists, freight transportation logistics companies, restaurants, hotels and a range of other uses. Public services at Superfund sites in Region 6 offer housing assistance, recycling facilities, public health assistance, sanitation support and safety training. One site supports a plant that converts landfill gas into clean-burning diesel fuel and other products. Another site hosts a state-of-the-art municipal marina. Sites also host ecological preserves and wildlife habitat. On-site businesses and organizations at current and former Region 6 Superfund sites provide an estimated 4,590 jobs and contribute an estimated $229 million in annual employment income. Sites in reuse and continued use in Region 6 generate $5.3 million in annual property tax revenues for local governments.[1]

1 Business and property value tax figures represent only a subset of the beneficial effects of sites in reuse or continued use in Region 6. There are 28 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 (e.g., parks, wetlands, ecological habitat and open space). In addition, there are 30 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.

This profile looks at how redevelopment activities at Superfund sites make a difference in communities across Region 6. In particular, it describes some of the beneficial effects of redevelopment and continued use of current and former Superfund sites. The profile also describes the land values and property taxes associated with Superfund sites returned to use and sites that have remained in use throughout the cleanup process. EPA updates these profiles periodically. The beneficial effects may increase or decrease over time due to changes in:

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

Figures presented represent only a subset of all Superfund sites in reuse or continued use in Region 6.

Figure 3. Left: The Dallas Housing Authority Central Office at the RSR Corporation site (Texas). Right: The four-story burn tower at the Vertac, Inc. site provides firefighter and police response training (Arkansas).

SUPPORT FOR SUPERFUND REDEVELOPMENT

EPA Region 6 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 6 partners with stakeholders to encourage redevelopment opportunities at Superfund sites. Region 6 helps communities and cleanup managers consider redevelopment during cleanup planning and evaluate remedies already in place to ensure appropriate redevelopment. In addition, EPA participates in partnerships with communities and encourages opportunities to support Superfund Redevelopment projects that emphasize environmental and economic sustainability.

Specific redevelopment support efforts in EPA Region 6 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 6 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 putting Superfund sites back into use, such as the U.S. Fish and Wildlife Service.


EPA

DEQ

On this day, May 05, 2015,
the U.S. Environmental Protection Agency Determines that

26 Acres of the Central Plateau Area of the Eagle-Picher Henryetta Superfund Site
Are Ready for Commercial and Industrial Use

Carl Edlund
Director, Superfund Division
U.S. Environmental Protection Agency Region 6

Kelly Dixon
Director, Land Protection Division
Oklahoma Department of Environmental Quality

This Ready for Reuse (RfR) Determination is for the approximately 26-acre Central Plateau area of the Eagle-Picher Henryetta Superfund site located in Henryetta, Okmulgee County, Oklahoma. This RfR Determination provides that U.S. Environmental Protection Agency (U.S. EPA) has made a technical determination that the subject area is ready for commercial and industrial use and the remedy will remain protective of human health and the environment based on U.S. EPA documents for the Eagle-Picher Henryetta Superfund site, which include the 2000 Administrative Order on Consent (AOC), the 2000 Operations & Maintenance Plan included as an Appendix to the AOC, the 2001 Notice of Deed Restriction, the 1996 Eagle-Picher Site Streamlined Risk Evaluation and the 1999 Removal Reports for Eagle Picher-Henryetta, Henryetta, Okmulgee County, Oklahoma. This RfR Determination remains valid only as long as the requirements and use limitations specified in the aforementioned documents are met and no new information becomes available to suggest that conditions at the Site are no longer protective of human health and the environment. Limitations at the subject area include the following: The Property may only be used for commercial or industrial use and shall not be used for residential, child care or nursing care, due to continuing presence of certain authorized concentrations of hazardous substances in the soils and groundwater of the Property, the groundwater underlying the Property shall not be used for drinking or industrial uses. Installation of water wells on the Property is inappropriate, except for the purpose of conducting investigation, remediation, or other work authorized by the City, after notifying the Oklahoma Department of Environmental Quality; and preservation and protection of capped areas on the Property, under which hazardous substances will remain, is necessary. There shall be no disturbance, digging, excavation of the soils nor any drilling or invasive construction on the Property, without the prior approval of the City, after notifying the Oklahoma Department of Environmental Quality. The Administrative Order on Consent preserves U.S. EPA and the Oklahoma Department of Environmental Quality's right of access to the subject area and other areas impacted by the former smelter facility. The types of uses identified as protective in this RfR Determination remain subject to (i) applicable federal, state, and local regulations, including, but not limited to, zoning ordinances and building codes; and (ii) title documents, including, but not limited to, easements, restrictions, and institutional controls. This RfR Determination is an environmental status report and does not have any legally binding effect, nor does it expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits of any party. U.S. EPA assumes no responsibility for reuse activities and/or any potential harm that might result from reuse activities. U.S. EPA retains any and all rights and authorities it has, including, but not limited to, legal, equitable, or administrative rights. U.S. EPA specifically retains any and all rights and authorities it has to conduct, direct, oversee, and/or require environmental response actions in connection with the Site, including, but not limited to, instances when new or additional information has been discovered regarding the contamination or conditions at the Site that indicate that the response and/or the conditions at the Site are no longer protective of human health or the environment for the uses identified in the RfR Determination.

Figure 4. EPA Ready for Reuse certificate indicating that part of the Eagle-Picher Henryetta site (Oklahoma) is ready for reuse.

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

SUPERFUND REDEVELOPMENT: THE BIG PICTURE

EPA can take and oversee immediate action at contaminated sites through short-term cleanup actions, also called removal actions.[2] EPA refers sites warranting long-term cleanup to its remedial program or to state programs. EPA's National Priorities List (NPL) is a list of sites the Agency is targeting for further investigation and possible remediation through the Superfund program. Once EPA places a site on the NPL, the Agency studies the contamination, identifies technologies that could address the material and evaluates alternative cleanup approaches. EPA then proposes a cleanup plan and, after collecting public input, issues a final cleanup plan. The Agency then cleans up the site or oversees cleanup activities. EPA has placed 145 sites in Region 6 on the NPL.

Whenever possible, EPA seeks to integrate redevelopment priorities into site cleanup plans. In Region 6, 56 NPL sites and seven 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 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 6.

Figure 5. The exterior of Goodwill Dallas' central-processing facility at the RSR Corporation site (Texas).

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

Figure 6. Left: Recycling center at the Vertac, Inc. site (Arkansas). Right: Goodwill Industries of Dallas, Inc. at the RSR Corporation site (Texas).

Sites in Reuse and Continued Use: A Closer Look

Reuse Type	Description	Region 6 Example
In Reuse	*There is a new land use or uses on all or part of a site. This is because either the land use has changed (e.g., from industrial use to commercial use) or the site is now in use after being vacant.*	*Vertac, Inc. (Arkansas) – once the location of chemical manufacturing facilities, the site now supports a range of public service uses such as a recycling center, a public safety building and storage for the city's Street Department.*
In Continued Use	*Historical uses at a site remain active; these uses were in place when the Superfund process started at the site.*	*United Creosoting Co. (Texas) – long-time industrial and residential areas remain in continued use on site.*
In Reuse and Continued Use	*Part of a site is in continued use and part of the site is in reuse.*	*RSR Corporation (Texas) – Goodwill Industries of Dallas, Inc.'s central processing facility for donated goods located on site following cleanup; long-time residential, commercial, industrial and public service areas remain in continued use on site.*

BENEFICIAL EFFECTS OF SUPERFUND SITE REDEVELOPMENT IN REGION 6

Businesses and Jobs

EPA has collected economic data for 305 businesses, government agencies and civic organizations operating on 31 NPL sites and four non-NPL sites in reuse and continued use in Region 6.[3] (See the State Redevelopment Profiles for each state's reuse details.) Businesses and organizations at these sites are part of several different sectors, including hotels, professional trade, industrial trade and health care services.

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

The businesses and organizations at these sites earn about $793 million in estimated annual sales and employ about 4,590 people, earning an estimated $229 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]

Table 1. Site and Business Information for Region 6 Sites in Reuse and Continued Use (2019)

	Sites[a]	Sites with Businesses[b]	Businesses[c]	Total Annual Sales[d]	Total Employees	Total Annual Employee Income
In Reuse	*32*	*16*	*28*	*$115 million*	*440*	*$27 million*
In Continued Use	*20*	*9*	*43*	*$197 million*	*981*	*$72 million*
In Reuse and in Continued Use	*11*	*10*	*234*	*$481 million*	*3,169*	*$129 million*
Total	***63***	***35[e]***	***305***	***$793 million[f]***	***4,590***	***$229 million[f]***

[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 Sources.
[e] See footnote 1, page 1.
[f] Throughout this report, sales and annual employee income may not sum exactly to the totals presented due to rounding.

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

Property Values and Property Tax Revenues

Properties cleaned up under the Superfund program and returned to use have the potential to increase in value significantly. This increased value can boost property tax revenues, which help pay for local government operations, schools, transit systems and other public services. Site properties at the Highway 71/72 Refinery site in Louisiana are now valued at nearly $77 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 6 Sites in Reuse and Continued Use: Property Value and Tax Highlights

Total Property Value: *$494 million*

Total Annual Property Taxes: *$5.3 million*

Figure 7. Hotel complex at the Highway 71/72 Refinery site (Louisiana).

EPA has collected property value and tax data for 33 Superfund sites in reuse and continued use in Region 6.[5] These sites span 2,786 property parcels and 4,308 acres. They have a total property value of $494 million. The average total property value per acre is $113,000.

Land and improvement property value information is available for 33 sites. These properties have a total land value of $119 million and a total improvement value of $375 million.[6]

Property tax information is available for 32 sites. The properties generate a combined $5.3 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 (33 sites)[b]	*Total Improvement Value[c] (33 sites)*	*Total Property Value (32 sites)*	*Total Property Value per Acre (33 sites)[d]*	*Total Annual Property Taxes (32 sites)*
$119 million	***$375 million***	***$485 million***	***$113,000***	***$5.3 million***

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

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

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

[d] Based on total property value amount of $485 million divided by total acreage of 4,308.

5 There are 30 additional 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. See footnote 1, page 1.

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

Beneficial Effects from Enhanced Recreational and Ecological Amenities

In addition to hosting commercial developments, retail centers and industrial facilities, many Region 6 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 2017, outdoor recreation contributed $887 billion to the U.S. economy, supporting 7.6 million jobs and generating $65.3 billion in national tax revenue and $59.2 billion in state and local tax revenue.[7] Protected green space can also increase the property values of nearby homes by providing amenities that draw people to live and work in the community.

Many sites in Region 6 provide recreational and ecological benefits. Cleanup of the AT & SF (Clovis) site in Clovis, New Mexico, included restoration of native grasses, providing habitat for migratory birds. The site, which includes Santa Fe Lake, a playa lake, falls within the Curry County Playa Restoration Project Area. Playa lakes are shallow, ephemeral wetlands found in the Southern High Plains that play critical roles in annual bird migration. Healthy playas are keystone ecosystems that serve as critical sites of biodiversity in areas otherwise characterized by semi-arid rangeland and intensive agriculture. The Vertac, Inc. site in Jacksonville, Arkansas, is now home to the Recycling Education Park, an interactive recycling exhibit. A path leads visitors through the green space and past information displays that illustrate different methods of recycling and recyclable materials. In the late 1990s, following cleanup, a YMCA was built on the RSR Corporation site in Dallas, Texas; it provides recreation opportunities in addition to other community services.

Figure 8. The recycling education park at the Vertac, Inc. site (Arkansas).

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

Why Are Wetlands Economically Important?

Superfund site reuse can support wetland habitat, as seen at several sites in Region 6. At the Longhorn Army Ammunition Plant site in Karnack, Texas, the Caddo Lake National Wildlife Refuge includes internationally recognized wetlands with pristine mature flooded bald cypress forest, one of the best-preserved such ecosystems in the United States. Bayou dredging and ecological rehabilitation at the Bayou Verdine site in Lake Charles, Louisiana, has enabled continued use of the bayou as a habitat and wetland area. A containment cell area designed to contain contaminated sediments also allowed an innovative ecological revitalization that benefits an array of species.

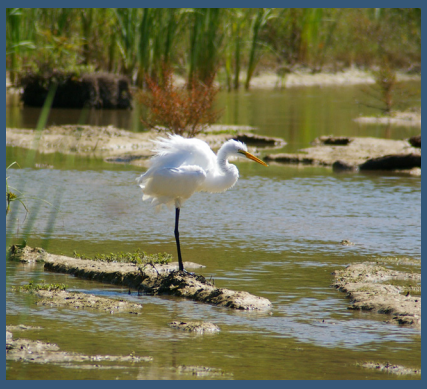


Figure 9. Great Egret at the Bayou Verdine site wetlands (Louisiana).

Wetlands provide a variety of benefits. The combination of shallow water, high levels of nutrients and primary productivity is ideal for 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 acting 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*: www.epa.gov/sites/production/files/2016-02/documents/economicbenefits.pdf.
- EPA's *Why Are Wetlands Important?*: www.epa.gov/wetlands/why-are-wetlands-important.

Beneficial Effects from Alternative Energy Projects

Alternative energy projects can also produce a range of beneficial effects. They can support 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 and public relations opportunities for site owners and local communities, and contribute to broader economic development planning.

Figure 10. Wind farm at the Pantex Plant (USDOE) site (Texas).

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 21-acre portion of the **Chevron Questa Mine** site. The facility began operating in April 2011. It uses a concentrated photovoltaic (CPV) system. At the time of its installation, the facility was one of the largest CPV installations in the world.
- Waste Management of Oklahoma developed a commercial facility for a renewable biogas and natural gas joint venture project at the **Mosley Road Sanitary Landfill** site in Oklahoma City, Oklahoma, which converts methane gas from the site into clean-burning diesel fuel and wax. Waste Management of Oklahoma pioneered the use of this kind of technology by first building and operating a demonstration unit at the neighboring East Oak Landfill.
- The **Pantex Plant (USDOE)** site in Pantex Village, Texas, became the nation's largest federally owned wind farm when it was completed in 2013. The 11.5-megawatt wind farm, called the Pantex Renewable Energy Project, consists of five 2.3-megawatt turbines. It is capable of supplying more than 60 percent of the energy needed by Pantex Plant. In June 2014, EPA presented the DOE Pantex Plant with the Region 6 Greenovations Award for its innovative reuse of the site.

REDEVELOPMENT IN ACTION

EAGLE-PICHER HENRYETTA

New Health Care Facility

The 70-acre Eagle-Picher Henryetta site is located in Henryetta, Oklahoma. From 1916 to 1968, the Eagle-Picher Mining and Smelting company operated a smelter that produced zinc, cadmium and germanium on site. Company operations left behind large piles of waste contaminated with heavy metals. The company donated the smelter property to the city of Henryetta in 1974. Unaware of the contamination in the waste piles, the city used soil from the site as fill material at locations throughout the community, including neighborhoods, schools and parks. Downwind residential properties were also impacted by air dispersion of heavy metals from stack emissions and windblown dust from the smelter facility. Site investigations in the mid-1990s found significant lead and arsenic contamination at the site and across Henryetta. Working in partnership with Oklahoma Department of Environmental Quality (ODEQ), EPA's cleanup focused on removing contaminated soil and waste and addressing affected residential areas. Cleanup included on-site consolidation and capping of wastes on site.

During cleanup, EPA and ODEQ made sure the remedy would be compatible with community reuse goals, grading the central 26-acre Central Plateau portion of the site so that it could be developed for commercial and industrial uses. For its part, the community worked hard to make Shurden-Leist Industrial Park a reality. The city also worked with ODEQ on clean utility corridors, facilitating installation of roads and utilities at the site. The first industrial tenant, a motorcycle manufacturing company, opened for business on site in 2006. In 2007, in recognition of the project's excellence and success, the Shurden-Leist Industrial Park Project received the Phoenix Award for EPA's South-Central Region.

In 2015, the community sought to locate new health care facilities at the site. To support community efforts to leverage resources for the facilities, EPA issued a Ready for Reuse (RfR) Determination stating that the Central Plateau part of the site was safe for industrial and commercial uses, including for use as a health care center. In May 2016, fundraising efforts by East Central Oklahoma Family Health Center, Inc. (ECOFHC) paid off. The U.S. Department of Health and Human Resources awarded the organization a $1 million grant for the project[8]. The organization worked closely with ODEQ and EPA on the construction of the new health care center to ensure the protectiveness of EPA's remedy.

In October 2018, ECOFHC opened on the site. The community health care center provides primary health, dental health and behavioral health care services. During the opening ceremony, EPA Region 6 presented its Excellence in Site Reuse Award to ECOFHC and the city of Henryetta.

Figure 11. The East Central Oklahoma Family Health Center at the Eagle-Picher Henryetta site (Oklahoma).

8 This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under C8DCS29734, Health Infrastructure Investment Program in the amount of $1 million; 24.46% of this project is funded through non-federal and local resources. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by, HRSA, HHS or the U.S. government. The total approximate cost for this project is $1.7 million.

REDEVELOPMENT IN ACTION

TAR CREEK (OTTAWA COUNTY)

Restoration and New Recreational Development

The Tar Creek (Ottawa County) site has no clearly defined boundaries. It consists of areas in Ottawa County impacted by historical mining wastes. The site is also a part of the Tri-State Mining District, which spans parts of Oklahoma, Kansas and Missouri. The mining era left a legacy of open mine shafts, acid mine water, and large volumes of mining and milling wastes contaminated with lead, zinc and cadmium. EPA added the site to the National Priorities List (NPL) in 1983. EPA then led a series of targeted removal actions to ensure that people could continue to live, work and farm safely in the area. To date, cleanup has included the relocation of four impacted communities, the excavation of lead-contaminated soil from nearly 3,000 residential yards and high-access areas, and the remediation of over 4 million tons of mining waste and contaminated soil. Other efforts have included surface water management and the plugging of abandoned wells.

One of EPA's partners, the Quapaw Nation, successfully cleaned up the Catholic 40 part of the site, a 40-acre area with significant cultural and historic meaning for the Quapaw Nation. In late December 2013 and early January 2014, workers excavated about 108,000 tons of contaminated mining waste for off-site disposal. Workers preserved historic structures, artifacts and landscape features during the cleanup. Recovered artifacts are now protected at the tribal museum in Oklahoma. Today, the Quapaw Nation continues to plan for the future at the Catholic 40 site, including archeological research, education, historic preservation, grazing and active use of the area as an important part of the Quapaw Nation's cultural and religious practices.

The Quapaw Nation, in cooperation with EPA and the state of Oklahoma, continue planning, designing and leading cleanup activities at other contaminated areas of the site. These efforts have set the stage for several redevelopment projects that reflect the tribe's reuse priorities, including cultural preservation, agricultural use and the expansion of the tribe's traditional economic focus on ranching. EPA supported the development of a solar reuse assessment covering a part of the site that is contaminated with mining waste and located on Quapaw Nation tribal lands.

Redevelopment is also underway at non-tribal areas. Recently, the city of Miami partnered with the ODEQ and EPA on the cleanup of the Eagle Picher office complex, located in the heart of Miami. It originally served as the local headquarters for the Eagle Picher Mining Company. For many years, the office complex sat abandoned with several environmental challenges, including the presence of mining waste on the property. The city acquired the property, coordinated cleanup efforts with ODEQ and EPA, and is converting the site into a splash pad and city park. The grand opening is anticipated in 2020.

Cleanup across this large site has enabled widespread continued agricultural, commercial, public service and residential use and facilitated new development. Today, site businesses employ nearly 1,300 people and contribute nearly $50 million in estimated annual employment income. In 2018, site businesses generated an estimated $152 million in combined sales revenue.

"We were anxious to demonstrate that the Quapaw Tribe is the appropriate stakeholder to perform remediation activities on tribal properties and...help restore the land to uses that will benefit...the Tribe and the local community." **John Berrey, Quapaw Nation Chairman**.

Figure 12. Revegetation of the Catholic 40 area (left) and development of a new splash pad in the city of Miami (right) (Tar Creek (Ottawa County) site (Oklahoma)).

REDEVELOPMENT IN ACTION

BAYOU BONFOUCA

New Waterfront Recreation Opportunities

The 54-acre Bayou Bonfouca site is located in the city of Slidell in St. Tammany Parish, Louisiana. Beginning in 1882, 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 (LDEQ) worked together on a cleanup and restoration plan. The cleanup decontaminated 170,000 cubic yards of sediments, and to date has treated 236 million gallons of contaminated groundwater and recovered 9.8 million gallons of creosote oil. Groundwater treatment is ongoing. EPA constructed buildings on site to house cleanup equipment and installed a boat ramp to access the bayou.

In 1997, following cleanup, the site owners donated the prime waterfront property to the city for redevelopment, including the area with EPA's buildings and boat ramp. Today, the city uses those buildings as offices and support structures for its public works department. About 130 people are employed on site. The boat launch is available for public use, providing boat access to Bayou Bonfouca. The city also coordinated with EPA and LDEQ on plans for community green space and a city park. The city hosts numerous concerts, festivals and events at Heritage Park throughout the year, including annual Fourth of July festivities, with firework spectators viewing the show from the park and the bayou. Site cleanup resulted in the restoration of over a mile of Bayou Bonfouca's waterway. The site also served as the only helicopter landing pad available in St. Tammany Parish following Hurricane Katrina in 2005. The capped landfill is the highest point in the parish and was one of only a few locations not impacted by flooding.

In 2012, the city received a $1.5-million boat infrastructure grant to promote boating access along Bayou Bonfouca at the site. Coordination among the city, LDEQ and EPA paved the way for the Slidell Municipal Marina. In April 2017, the city held a groundbreaking ceremony for the start of construction on the new marina. The marina opened in the summer of 2018. The project includes floating docks, piers, pedestrian pathways and other amenities to encourage recreational boating on Bayou Bonfouca. The marina provides boaters with access to Heritage Park and downtown Slidell from Lake Pontchartrain. In May 2018, EPA Region 6 recognized the city's efforts with its Excellence in Site Reuse Award. Region 6 established the award to celebrate people and organizations that have supported the reuse of Superfund sites through outstanding efforts that go above and beyond required cleanup.

"Heritage Park is a great asset for the city of Slidell and...I know that the new Slidell Municipal Marina will be welcomed by our citizens. It [will] entice the national and international travelers to visit Slidell, [and] also be a great way for our local boating community to enjoy all the wonderful cultural events in Heritage Park."
Freddy Drennan, former Mayor of Slidell, Louisiana.

Figure 13. Slidell Municipal Marina on the Bayou Bonfouca site (Louisiana) and nearby Heritage Park.

REDEVELOPMENT IN ACTION

CHEVRON QUESTA MINE

Renewable Energy, Recreation and Ecological Restoration

The 4.5-square-mile Chevron Questa Mine site is located near Questa in Taos County, New Mexico. From 1920 to 2014, Molycorp, and later Chevron Mining Inc. (Chevron), operated a molybdenum mine and milling facility along the Red River. The site includes a closed underground mine, nine large waste rock piles, mine tailing disposal impoundments and Eagle Rock Lake. Mining operations and waste disposal practices contaminated soil, sediment, surface water and groundwater as well as sediment in Eagle Rock Lake. EPA added the site to the NPL in 2011. Cleanup activities include excavating and disposing of contaminated soil, regrading, covering and revegetating waste rock piles, covering and revegetating tailing impoundments, installing groundwater recovery systems, treating groundwater, installing stormwater controls, dredging, providing a temporary alternate water supply, placing drilling restrictions, and dewatering the underground mine. Cleanup continues today.

In 2008, Chevron began focusing on development of new commercial opportunities, including solar technologies. With over 300 sunny days a year in Questa, Chevron recognized that a solar demonstration project could work well at the site. In coordination with EPA and New Mexico state agencies, Chevron began construction of a 21-acre CPV system in 2010. A CPV system, which includes about 175 solar panels, follows the sun, concentrates its light and converts it into electrical energy. In April 2011, Chevron began operating the CPV system. At the time of its installation, the solar facility was one of the largest CPV installations in the United States. The system continues to operate today and generates 1 megawatt of power annually, enough to power 150 homes. The Kit Carson Electric Cooperative purchases the electricity under a 20-year agreement.

The site has also provided opportunities for ecological restoration and recreation. Three-acre Eagle Rock Lake, which is located in Carson National Forest, had been a community resource for decades. After contamination from the site impacted the lake, community members prioritized its restoration as part of plans focused on outdoor recreation and tourism. Cleanup of the lake began in 2015. The effort included excavating contaminated lake sediments, installing a clay liner to seal the lake bottom and installing an automatic gate at the Red River inlet to keep storm runoff from the lake. Chevron replaced lakeside recreation facilities and put in new walkways and bridges. In October 2015, community members and local organizations, Chevron, and EPA and state agencies came together to officially reopen Eagle Rock Lake. Today, residents enjoy fishing and explore lakeside trails, which are designed to be accessible for people with disabilities. In September 2017, EPA recognized project partners with its Greenovations Award for excellence and innovation in site restoration.

“The lake will be a great selling point for Questa, a focal point for where Questa is going in reinventing ourselves for the tourism and outdoor recreation markets.” **Mark Gallegos, Mayor of Questa, New Mexico.**

Figure 14. Remediated Eagle Rock Lake at the Chevron Questa Mine site (New Mexico).

REDEVELOPMENT IN ACTION

STATE MARINE OF PORT ARTHUR AND PALMER BARGE LINE

Business Expansion

From the 1970s to the 1990s, marine industrial activities took place at both the State Marine of Port Arthur (State Marine) and Palmer Barge Line (Palmer Barge) Superfund sites in Port Arthur, Texas. Improper waste disposal practices contaminated soil and sediment with metals and hazardous chemicals at both sites. EPA added the State Marine site to the NPL in 1998 and the Palmer Barge site to the NPL in 2000. From 1956 to 1987, the city of Port Arthur operated a municipal landfill at the sites. Between 1982 and 1997, a barge-cleaning company also operated on both sites.

Cleanup of the State Marine site included removal and off-site disposal of waste materials, water treatment, oil/water separation, and stabilization and off-site disposal of sludge. In addition to those activities, cleanup of the Palmer Barge site also included excavation and off-site disposal of contaminated soil, backfilling of excavated areas, and removal and decontamination of wastewater sludge. Land use restrictions are in place for both sites.

The sites are ideally located – they have direct access to the Port of Port Arthur, are spacious and could accommodate varied industrial operations. Tubal-Cain, a marine steel fabrication and vessel-cleaning company, approached the site owners about leasing both sites. From 2009 to 2015, Tubal-Cain leased the site. In mid-2015, Tubal-Cain purchased the site properties and began construction of its Marine Services facility and headquarters on the Palmer Barge property. However, prior landfill operations and closure complicated construction efforts. Texas Municipal Solid Waste Regulations prohibit activities that could affect the integrity of the landfill cover. Working with the Texas Commission on Environmental Quality, Tubal-Cain built its headquarters building so that it was raised one story above ground level. In addition to preventing disturbance of the cover and possible landfill gas contamination, the building's elevation also prevents damage during hurricanes and flooding events.

In early 2017, Tubal-Cain completed construction of the Marine Services facility and accompanying headquarters. Today, the sites are home to three Tubal-Cain subsidiaries – Tubal-Cain Marine Services, Tubal-Cain Gas Free Services and Tubal-Cain Industrial Services. Together, these businesses employ 150 people and provide over $10 million in estimated annual employment income. In 2018, site businesses generated an estimated $31 million in combined sales revenue. In 2018, site property parcels had a total value of $548,000, generating nearly $16,000 in annual property taxes.

Figure 15. Tubal-Cain headquarters at the Palmer Barge line site (Texas).

REDEVELOPMENT 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 through 1991. A waste oil recovery facility also operated on the northwest corner of the property in the early 1980s. Historical operations and waste disposal practices contaminated soil, sediment and groundwater. EPA added the site to the NPL in 1998.

EPA and the community's interest in redevelopment helped guide the cleanup, resulting in an expedited and efficient process that considered future industrial use and maximized the acreage available for reuse. Cleanup, which began in 2000, addressed contaminated groundwater, soil and sediment, waste piles, wastewater treatment ponds, acid ponds and slag piles, and included land and groundwater use restrictions. Cleanup actions also focused on the nearby Swan Lake Salt Marsh Area and affected residential properties. The Swan Lake Salt Marsh Area continues to provide wildlife habitat and serve as a migratory bird flyway. The cleanup of arsenic-contaminated soil in residential areas enabled continued residential use of the site.

After cleanup, to encourage community efforts to plan for the site's future use, EPA awarded Texas City a Superfund Redevelopment grant in 2001. After the community identified reuse priorities for the site, EPA issued the nation's first RfR Determination in 2003. The RfR Determination stated that as long as certain site conditions were met, the remedy would be protective for industrial uses.

In 2005, the cleaned-up former smelter property was transferred under an EPA prospective purchaser agreement (PPA) from a bankruptcy trust to Phoenix International Terminals (Phoenix). The PPA included covenants not to sue and provisions for subsequent transfer of the covenants to future property owners and site users. EPA's RfR Determination and the PPA were both vital to the site's beneficial reuse. In 2010, the Texas City Terminal Railway Company purchased the property from Phoenix, received a transfer of the PPA covenants and pursued redevelopment opportunities at the site.

"At EPA's behest, future development was included as a key consideration for the remedy at the Tex Tin site. Future development served as a guiding principle throughout the design and successful implementation of the Tex Tin site remediation, which culminated with construction of Genesis' terminal; a great example of EPA's goal of helping the community reclaim a former Superfund site." **Edgard Bertaut, Chair of the Tex Tin Steering Committee.**

Figure 16. Texas City Terminal at the Tex Tin Corp. site (Texas).

In November 2015, Genesis Energy, L.P. (Genesis), an integrated midstream energy company, signed a long-term lease with Texas City Terminal Railway Company for part of the site property. The company chose the site for several reasons. It was well located, providing direct connectivity with existing pipeline infrastructure in the area as well as access to other key infrastructure and utilities. The site was also near many of Genesis' production and refining customers.

In May 2016, Genesis began building its Texas City Terminal on site. EPA, the Tex Tin Steering Committee and Genesis coordinated closely during facility planning and construction to ensure the protectiveness of the remedy and the full functionality of the oil terminal and transfer facility. Genesis and its construction contractor used several modified construction techniques to protect the remedy.

The Texas City Terminal opened in May 2017. The facility receives and stores several grades of crude oil produced in the Gulf of Mexico and distributes the oil via pipeline to Houston-area refineries, Texas City refineries and waterborne markets. This significant investment in the site serves a vital role, supporting offshore crude oil producers and oil refineries in the area. The Texas City Terminal and related infrastructure employ nine workers from Texas City and surrounding areas. Genesis also pays property taxes on this previously vacant property, providing revenues that benefit Texas City. Since 2017, Marathon Oil has also been using part of the site property as a storage and laydown facility.

In November 2017, EPA Region 6 presented Excellence in Site Reuse awards to Genesis, the Tex Tin Steering Committee and its remedial contractors, the Texas City Terminal Railway Company, and local officials in recognition of their extensive collaboration, cooperation, and leadership throughout the cleanup and redevelopment of the Tex Tin Corp. Superfund site. In 2018, site property parcels had a total value of $15 million.

REDEVELOPMENT IN ACTION

FRUIT AVENUE PLUME

Green, Affordable Housing and Area Revitalization

The Fruit Avenue Plume Superfund site is located in downtown Albuquerque, New Mexico. Two laundry and dry-cleaning facilities operated above the contaminated area from 1924 to 1972, when a realty company and a development company purchased the properties. The companies demolished the former site buildings to construct a bank parking lot. Dry-cleaning operations and waste disposal practices contaminated groundwater. EPA added the site to the NPL in 1999. Cleanup included treatment of contaminated groundwater, long-term monitoring and groundwater use restrictions.

Collaboration between the New Mexico Environment Department, EPA and a local developer helped return the site property to use as a green housing development. The development, known as Downtown @700-2nd, opened in March 2010. 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 a water recycling system, rooftop rainwater collection systems and rooftop solar panels that generate power to heat water and for supplemental space heating. 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.

In 2017, the Superfund Redevelopment Initiative provided support to facilitate discussions between EPA and the city to remove or relocate groundwater remedy components to accommodate additional development. Development in the area of the former groundwater treatment plant is underway. A new coffee shop and coffee roasting business is currently operating in a nearby building undergoing revitalization. A large-scale mixed-use development called Glorieta Station, that will include a diner, a brewery, a distillery, housing and parking, is planned. Discussions are underway with the New Mexico Department of Transportation and BNSF Railway to develop a rails-trails pedestrian pathway near Glorieta Station. EPA continues to work with the state and community members supporting reuse opportunities in the area.

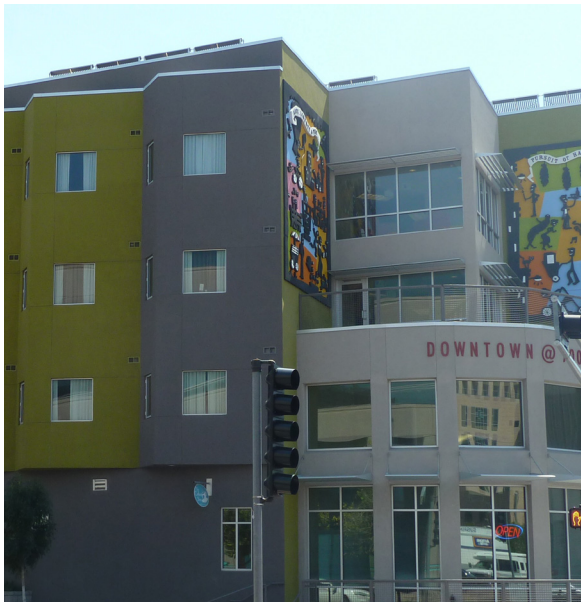


Figure 17. Affordable housing development Downtown @700-2nd at the Fruit Avenue Plume site (New Mexico). (left); new coffee shop operating near the former groundwater treatment plant (right) (photo courtesy of the New Mexico Environment Department).

REDEVELOPMENT ON THE HORIZON IN REGION 6

TRANSFORMING A FORMER SMELTER INTO A RESTORED ECOLOGICAL HABITAT FOR HONEYBEES

The 61-acre Tulsa Fuel and Manufacturing site is located in Collinsville, Oklahoma, just north of Tulsa. A zinc smelter operated at the site from 1914 to 1925 and helped meet the demand for zinc during World War I. The smelting operation used nine furnaces, which were believed to be fueled by nearby natural gas wells. While active, large amounts of ore were stored on site. Historical smelting operations contaminated soil, sediment and surface water with arsenic, cadmium and lead. EPA listed the site on the NPL in 1999.

Cleanup, which took place between 2015 and 2016, included demolition of site structures, institutional controls, and on-site consolidation and capping of 186,000 cubic yards of smelter waste and contaminated soil and sediment. The wastes were consolidated into a 10-acre containment cell on site. Groundwater monitoring wells, fencing and signage were installed around the perimeter of the cell. ODEQ continues to monitor vegetation and groundwater at the site.

The cap of the containment cell has been vegetated and the remainder of the site is covered with a mix of smooth brome grass, annual ryegrass, tall fescue, and red and white clover. The restored area has attracted the attention of a local beekeeper. After learning about the importance of bees and other pollinators to the environment and food supply, James Deming and Courtney Deming became interested in honeybee rescue. In 2013, they purchased two bee hives and started the Shadow Mountain Honey Company. In 2014, they rescued their first bee swarm and began a campaign to educate the public about how to identify and protect a bee swarm. In 2016, the company partnered with a fellow beekeeper, Jay Ide, of Ide's Gary Avenue Gold Honey, to form the Tulsa Swarm Hotline, which has enabled the rescue of nearly 100 honeybee swarms a year since. The duo provides free honeybee swarm rescue and removal, and then relocates the bees to one of its apiaries. The rescued bees produce honey, which the companies sell in small batches. Most of the proceeds go toward the preservation of the honeybee population and to the rescue and relocation of Tulsa bee swarms.

Today, Shadow Mountain Honey Company and Ide's Gary Avenue Gold Honey have expanded operations to part of the Tulsa Fuel and Manufacturing site. The site is now home to six honeybee hives, with plans to increase that number to 16 hives in the near future. Clover planted during site restoration makes an ideal habitat for bees. Cleanup resulted in the transformation of this once-contaminated smelter property into restored ecological habitat, one well-suited to supporting the protection of bees and production of high-quality honey.

Figure 18. Beekeeping facilities at the Tulsa Fuel and Manufacturing site (Oklahoma).

CONCLUSION

EPA works closely with its partners at Superfund sites across Region 6 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 56 NPL sites and seven 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. EPA remains committed to working with all stakeholders to support Superfund redevelopment opportunities in Region 6.

Figure 19. Fire training facility at the American Creosote Works, Inc. (Winnfield Plant) site (Louisiana).

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 6, 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 6 Superfund Redevelopment Initiative Coordinator
Casey Luckett Snyder | 214-665-7393 | luckett.casey@epa.gov

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

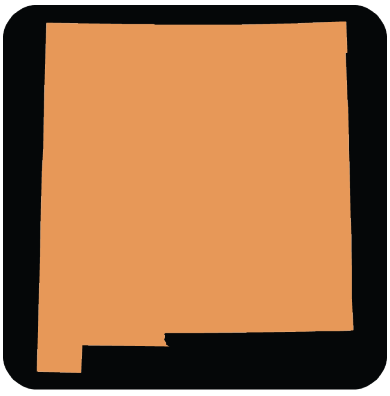
Superfund Redevelopment Initiative Website: tools, resources and more information about Superfund site reuse
www.epa.gov/superfund-redevelopment-initiative

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

This page is intentionally blank.

STATE REDEVELOPMENT PROFILES





ARKANSAS REDEVELOPMENT PROFILE

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. The sections below present economic data, property values and tax data for sites in reuse or continued use in Arkansas.

Businesses and Jobs

EPA has collected economic data for seven businesses and organizations operating on four sites in reuse or continued use in Arkansas.

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

	Sites	Sites with Businesses	Businesses[a]	Total Annual Sales[b]	Total Employees	Total Annual Employee Income
In Reuse	*4*	*3*	*6*	*$576,000*	*101*	*$5 million*
In Continued Use	*1*	*1*	*1*	*$12 million*	*30*	*$2 million*
In Reuse and in Continued Use	*0*	*0*	*0*	*$0*	*0*	*$0*
Total	*5*	*4*	*7*	*$13 million*	*131*	*$7 million*

[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 two Superfund sites in reuse or continued use in Arkansas. These sites span 20 property parcels and 287 acres.

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

Total Land Value (2 sites)	Total Improvement Value (2 sites)	Total Property Value (2 sites)	Total Annual Property Taxes (2 sites)
$1 million	*$2 million*	*$3 million*	*$8,000*

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

Figure 20. A mulch company currently operates at the Mountain Pine Pressure Treating site.[9]

Did You Know?

The Mountain Pine Pressure Treating site in Plainview, Arkansas, includes three wood-treating facilities that operated from 1962 to 1986. A 2001 Superfund Redevelopment grant supported the town of Plainview's efforts to help return the site to productive reuse. In 2004, a steel plant opened on site as a result of these efforts. The steel plant has since closed down. A mulch company is now located on site.

9 2008-08-12 John Deere 280 moving mulch 2 by Ildar Sagdejev available at https://commons.wikimedia.org/wiki/File:2008-08-12_John_Deere_280_moving_mulch_2.jpg/CC BY-SA 4.0 available at https://creativecommons.org/licenses/by-sa/4.0.

LOUISIANA REDEVELOPMENT PROFILE

EPA partners with the Louisiana Department of Environmental Quality to oversee the investigation and cleanup of Superfund sites in Louisiana. Louisiana 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 or continued use in Louisiana.

Businesses and Jobs

EPA has collected economic data for 62 businesses and organizations operating on seven sites in reuse or continued use in Louisiana.

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

	Sites	Sites with Businesses	Businesses[a]	Total Annual Sales[b]	Total Employees	Total Annual Employee Income
In Reuse	*7*	*3*	*3*	*$41,000*	*13*	*$461,000*
In Continued Use	*1*	*1*	*1*	*$1 million*	*150*	*$17 million*
In Reuse and in Continued Use	*3*	*3*	*58*	*$57 million*	*607*	*$19 million*
Total	*11*	*7*	*62*	*$58 million*	*770*	*$36 million*

[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 eight Superfund sites in reuse or continued use in Louisiana. These sites span 599 property parcels and 357 acres.

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

Total Land Value (8 sites)	Total Improvement Value (8 sites)	Total Property Value (8 sites)	Total Annual Property Taxes (8 sites)
$25 million	*$74 million*	*$99 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 2017 to 2019.

Figure 21. Many businesses continue to operate at the Highway 71/72 Refinery site, including this storage facility.

Did You Know?

From 1923 until the mid-1950s, a home heating and fuel oil refinery operated at the Highway 71/72 Refinery site in Bossier City, Louisiana. Following the refinery's dismantling, redevelopment of the area took place in 1968. Today, single-family homes, apartment buildings, commercial buildings, churches and light industrial businesses continue to operate on site. A part of Interstate 20 also runs across the site. Site businesses employ almost 500 people, providing over $12 million in estimated annual employee income and generating nearly $49 million in estimated annual sales.

NEW MEXICO REDEVELOPMENT PROFILE

EPA partners with the New Mexico Environment Department to oversee the investigation and cleanup of Superfund sites in New Mexico. New Mexico has 10 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in New Mexico.

Businesses and Jobs

EPA has collected economic data for 14 businesses and organizations operating on four sites in reuse or continued use in New Mexico.

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

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales[c]	Total Employees	Total Annual Employee Income
In Reuse	*7*	*2*	*2*	*$0*	*0*	*$0*
In Continued Use	*3*	*2*	*12*	*$18 million*	*100*	*$4 million*
In Reuse and in Continued Use	*0*	*0*	*0*	*$0*	*0*	*$0*
Total	*10*	*4*	*14*	*$18 million*	*100*	*$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

EPA has collected property value data for five Superfund sites in reuse or continued use in New Mexico. These sites span 26 property parcels and 280 acres.

Table 8. Property Value and Tax Information for Sites in Reuse and Continued Use in New Mexico

Total Land Value (5 sites)	Total Improvement Value (5 sites)	Total Property Value (5 sites)	Total Annual Property Taxes (5 sites)
$5 million	*$3 million*	*$8 million*	*$124,000*

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

Figure 22. Univar USA continues to operate at the South Valley site.

Did You Know?

Past manufacturing practices at the South Valley site in Albuquerque, New Mexico, resulted in soil and groundwater contamination. The successful cleanup enabled Univar USA to continue to operate on site. When General Electric Aviation closed its plant at the site in 2011, the company recycled or reused all usable building materials, keeping 14,000 tons of materials out of local landfills. Bernalillo County has plans for a connector road between Interstate 25 and the Albuquerque airport that will cross the site.

OKLAHOMA REDEVELOPMENT PROFILE

EPA partners with the Oklahoma Department of Environmental Quality to oversee the investigation and cleanup of Superfund sites in Oklahoma. Oklahoma 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 or continued use in Oklahoma.

Businesses and Jobs

EPA has collected economic data for 101 businesses and organizations operating on six sites in reuse or continued use in Oklahoma.

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

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales[c]	Total Employees	Total Annual Employee Income
In Reuse	*4*	*3*	*6*	*$13 million*	*82*	*$4 million*
In Continued Use	*3*	*1*	*1*	*$228,000*	*3*	*$82,000*
In Reuse and in Continued Use	*2*	*2*	*94*	*$345 million*	*1,586*	*$69 million*
Total	*9*	*6*	*101*	*$358 million*	*1,671*	*$73 million*

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

Property Values and Property Tax Revenues

EPA has collected property value data for three Superfund sites in reuse or continued use in Oklahoma. These sites span 51 property parcels and 358 acres.

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

Total Land Value (3 sites)	Total Improvement Value (3 sites)	Total Property Value (3 sites)	Total Annual Property Taxes (3 sites)
$3 million	*$19 million*	*$22 million*	*$266,000*

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

Figure 23. The award-winning gas-to-liquid fuel technology demonstration project.

Did You Know?

The 72-acre Mosley Road Sanitary Landfill Superfund site is located near Oklahoma City, Oklahoma. Past landfill operations resulted in groundwater contamination. After cleanup, EPA removed the site from the NPL in 2013. Site owner Waste Management of Oklahoma has plans to construct a commercial facility that converts methane gas into diesel fuel. EPA Region 6 awarded the Greenovations Award to Waste Management of Oklahoma in 2014 for constructing and operating a demonstration project of the gas-to-liquid fuel facility at the nearby East Oak Landfill in 2010.

TEXAS REDEVELOPMENT PROFILE

EPA partners with the Texas Commission on Environmental Quality to oversee the investigation and cleanup of Superfund sites in Texas. Texas has 28 Superfund sites with either new uses in place or uses that have remained in place since before cleanup. The sections below present economic data, property values and tax data for sites in reuse or continued use in Texas.

Businesses and Jobs

EPA has collected economic data for 121 businesses and organizations operating on 14 sites in reuse or continued use in Texas.

Table 11. Detailed Site and Business Information for Sites in Reuse and Continued Use in Texas (2019)

	Sites[a]	Sites with Businesses	Businesses[b]	Total Annual Sales	Total Employees	Total Annual Employee Income
In Reuse	*10*	*5*	*11*	*$102 million*	*244*	*$17 million*
In Continued Use	*12*	*4*	*28*	*$165 million*	*698*	*$49 million*
In Reuse and in Continued Use	*6*	*5*	*82*	*$79 million*	*976*	*$42 million*
Total	*28*	*14*	*121*	*$346 million*	*1,918*	*$108 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 15 Superfund sites in reuse or continued use in Texas. These sites span 2,090 property parcels and 3,026 acres.

Table 12. Property Value and Tax Information for Sites in Reuse and Continued Use in Texas[a]

Total Land Value (15 sites)	Total Improvement Value (15 sites)	Total Property Value (15 sites)	Total Annual Property Taxes (14 sites)
$84 million	*$277 million*	*$361 million*	*$3 million*

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

Figure 24. A sign for the Big Texas Auction of Houston business at the South Cavalcade Street site.

Did You Know?

EPA placed the South Cavalcade Street site in Houston, Texas, on the NPL in 1986. Commercial and industrial businesses, including a distribution company, a car auction and a pallet supplier, now operate on site. These businesses employ nearly 90 people. They provide over $6 million in estimated annual income and generate over $70 million in estimated annual sales. A toll road extension near the edge of the site is currently being planned.

SOURCES

BUSINESS, JOBS, SALES AND INCOME INFORMATION

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

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

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

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

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

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

PROPERTY VALUE AND TAX INFORMATION

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

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

Bayou Bonfouca. 2014. Return to Use Initiative Demonstration Project. semspub.epa.gov/src/document/06/300140.

Chevron Questa Mine. 2013. New Energies: Utility-Scale Solar on a Tailing Disposal Facility. Chevron Questa Mine Superfund Site in Questa, New Mexico. semspub.epa.gov/src/document/06/300190.

Mosley Road Sanitary Landfill. 2018. Site Redevelopment Profile. semspub.epa.gov/src/document/HQ/197402.

Pantex Plant. "EPA and Partners Celebrate Nation's Largest Federally Owned Wind Farm; Site Near Amarillo Now Generates Power for Nearby Plant." June 17, 2014. archive.epa.gov/epapages/newsroom_archive/newsreleases/258faab52de4681585257cfa006c300b.html.

State Marine of Port Arthur and Palmer Barge Line. 2017. Reuse and the Benefit to the Community, State Marine of Port Arthur and Palmer Barge Line. semspub.epa.gov/src/document/HQ/100000619.

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

Tex-Tin. Corp. 2018. Collaboration and Innovation Lead to Expedited Cleanup and Industrial Redevelopment, The Tex-Tin Corp. Superfund Site in Texas City, Texas. semspub.epa.gov/src/document/HQ/100001840.

Vertac, Inc. 2012. Reuse and the Benefit to the Community, Vertac, Inc. semspub.epa.gov/src/document/06/300260.

Other Resources

Oklahoma Department of Environmental Quality, Tulsa Fuel and Manufacturing Superfund Site. https://www.deq.ok.gov/land-protection-division/cleanup-redevelopment/superfund/tulsa-fuel-and-manufacturing-superfund-site/.

Quapaw Nation. http://www.quapawtribe.com/.

Remedial Action Completion Report, Tulsa Fuel and Manufacturing Superfund Site. Oklahoma Department of Environmental Quality. July 2017. applications.deq.ok.gov/superfundweb/default.aspx?epaid=OKD987096195.

Site Update, Tulsa Fuel and Manufacturing Superfund Site. Oklahoma Department of Environmental Quality. November 2018. applications.deq.ok.gov/superfundweb/default.aspx?epaid=OKD987096195.

Shadow Mountain Honey. www.shadowmountainhoney.com.

Supportive Housing Coalition of New Mexico. https://www.shcnm.org/communities/.

Back cover photos: ***Chevron Questa Mine (New Mexico), Highway 71/72 Refinery (Louisiana), Vertac, Inc. (Arkansas)***



United States Environmental Protection Agency

Region 6
1201 Elm Street, Suite 500
Dallas, TX 75270

April 2020
www.epa.gov/aboutepa/epa-region-6-south-central