

Reuse & Redevelopment: Making a Visible Difference in Our Communities



The Region 6 Superfund and Brownfields Programs

Welcome

Every day, EPA's Superfund and Brownfields programs make a visible difference in communities nationwide. The revitalization of communities affected by contaminated lands is a key part of the programs' missions, delivering significant benefits one community at a time, all across the country. Through these programs, the Agency contributes to the economic, environmental and social vitality of these communities by supporting the return of sites to safe, productive use.

This report highlights these community-led efforts in EPA's South-Central Region. Serving Arkansas, Louisiana, New Mexico, Oklahoma, Texas and 66 tribes, the Region 6 Superfund and Brownfields programs play a vital role in protecting human health and the environment.

Superfund Redevelopment and EPA Region 6

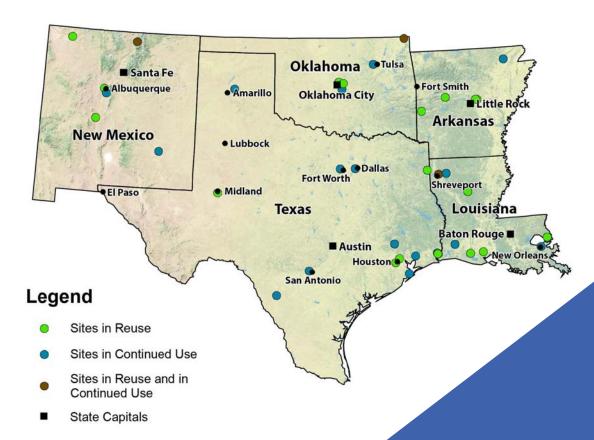
Supporting communities as they plan and revitalize contaminated lands is a key part of the work of the Region 6 Superfund program, making sure that remedies remain protective over the long term. The results are impressive:

- Superfund sites across EPA Region 6 are now home to restaurants, breweries, auto dealerships, a spa, a bank, hotels and doctor's offices.
- Public services offer housing assistance, recycling services, public health assistance, sanitation and safety training.
- A municipal airport is located at one site.
- People live in homes and apartments on several Superfund sites; one mixed-use residential development is green building-certified for its sustainability.
- Some sites are locations for renewable energy projects harnessing wind and solar power; another site is part of an innovative pilot project that converts landfill gas into liquid fuel and other products.
- Other Superfund sites host ecological preserves, wildlife habitats, public parks, a boat launch and a riverfront walkway.

EPA Region 6 works closely with the Superfund Redevelopment Initiative and collaborates with a diverse network of partners – affected communities, tribes, local governments, public nonprofits, private sector organizations and other federal agencies – to make these reuses possible.

This part of the report shares information on how EPA Region 6 helps people turn challenges at Superfund sites into opportunities. It also highlights many of the places in the South-Central Region where Superfund reuse and redevelopment is making a difference, one community at a time.

The South-Central Region



Superfund Sites in Reuse in EPA Region 6, 2015

Industrial facilities	14
Offices and stores	13
Parks and recreation	3
Public services	10
Homes	7
Natural areas	5
Agricultural areas	2
Total:	54



Superfund Redevelopment: The Bottom Line

When a Superfund site is restored for reuse, it can revitalize a local economy with jobs, new businesses, tax revenues and spending. Nationally, 2,240 businesses at 373 sites are providing more than 70,000 jobs and contributing an estimated \$4.9 billion in annual employment income with about \$32.6 billion in annual sales.

Region 6 Sites: Business and Job Highlights

Businesses: 82

Estimated Annual Sales: \$147 million

Employment: 2,004 jobs

Estimated Annual Income: \$76 million

Gulf State Utilities-North Ryan (Lake Charles, Louisiana)

The site is home to an electrical power production and distribution company. The center employs 77 people and generates about \$2.5 million in annual employment income.

Highway 71/72 Refinery (Bossier City, Louisiana)

This new hotel complex near Shreveport is one of several hotels on Superfund sites in EPA Region 6. Homes and businesses are also located across the 215-acre area. Today, 25 on-site businesses employ 635 people and contribute an estimated \$11.9 million in annual employment income. Estimated annual sales for the businesses exceed \$23.8 million.

Big Tex Grain Co. (San Antonio, Texas)

The \$42.7-million Blue Star II development at this former industrial facility includes 334 residential units, 6,000 square feet of retail space and \$2.2 million in public improvements, and is part of a larger mixed-use residential, arts and entertainment district in San Antonio. Its riverfront location also provided an ideal spot for the extension of the popular San Antonio River Walk.



Reuse in Action: Renewable Energy

EPA works nationwide with public and private partners through efforts such as the RE-Powering America's Land Initiative to encourage solar and other renewable energy development opportunities on current and formerly contaminated lands. In Region 6, abundant solar and wind resources are leading to major renewable energy projects that generate clean energy and support jobs.

"For 70 years, Pantex has played a vital security role ... Now, it is poised to help secure the future of America through utilization of renewable energy as well."

Steve Erhart, Manager, National Nuclear Security Administration



The largest federally owned wind farm in the country is located at the Pantex Plant, a U.S. Department of Energy facility near Amarillo in northern Texas. The five-turbine, 11.5-megawatt wind farm produces about 47 million kilowatt-hours of electricity annually, more than 60 percent of the energy needed by the Pantex Plant. The plant is the nation's primary facility for the assembly, disassembly and maintenance of nuclear weapons.

Energy savings from the project are about \$2.9 million annually. The project reduces carbon dioxide emissions by over 35,000 metric tons per year, the equivalent of removing 7,200 cars from the road or planting 850,000 trees. The project is also part of an ongoing collaboration with Texas Tech University to make the facility a leader in innovation in the wind energy sector. The University and the National Nuclear Security Administration recently signed a Memorandum of Understanding to explore the creation of a world-class energy research center on site.



The Pantex Plant officially opened in June 2014.



Reuse in Action: Mixed-Use Revitalization

Superfund sites are often strong candidates for innovative mixed-use projects. They are "well wired" – located near utilities and roads – due to prior land uses. Recycling these lands helps retain development in existing communities, revitalizing downtowns and preserving open space, farmland, natural beauty and important environmental resources.

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

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

RSR Corporation (Dallas, Texas)

Cleanup of a former lead smelter has protected the health of a nearby neighborhood and led to broader land revitalization in the West Dallas area. Site businesses and organizations employ over 900 people and contribute over \$27 million in annual employment income to the local community. Area businesses generate nearly \$18 million in annual sales.

Fruit Avenue Plume (Albuquerque, New Mexico)

Redevelopment of this former dry-cleaning property is contributing to the economic revitalization of a historic area. A new affordable apartment complex earned a high Energy Star rating for energy efficiency. The complex uses 88 solar panels for domestic hot water and heating. It also features a gray water system that recycles water from bathroom showers and sinks to flush toilets. Cisterns collect rooftop rainwater for the facility's community garden.







Reuse in Action: Ecological Revitalization

Ecological revitalization returns land from a contaminated state to one that supports functioning and sustainable habitat for plants and animals.

Restored ecosystems help people live healthier and more enjoyable lives. Ecological revitalization improves soil health and supports diverse vegetation, sequesters carbon, protects air and water quality, and sets the stage for wildlife habitat and environmental education.



Bayou Verdine following cleanup, 2015.

Bayou Verdine (Lake Charles, Louisiana)

Following dredging and storage of contaminated sediments on site, an innovative plan has helped restore the bayou's remarkable natural resources. A former containment pond now provides habitat for fish and other species, while native plantings nearby, including a 500-foot bioswale, provide pollinators

– bees, birds, butterflies

- with vital sources of food, shelter and safe areas for breeding.

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This
former
ammunition
manufacturing
facility is now the
7,200-acre Caddo Lake
National Wildlife Refuge.
Open to the public since 2009,
the refuge supports diverse wildlife
habitat and is a research station for the
U.S. Fish and Wildlife Service.

Visitors can hike trails, observe migratory birds, enjoy guided tours, camp and visit the Ramsar Caddo Lake Wetlands Visitors Center. Other buildings include a fire station and offices for the Fish and Wildlife Service, the Caddo Lake Institute, and the Texas Parks and Wildlife Department.





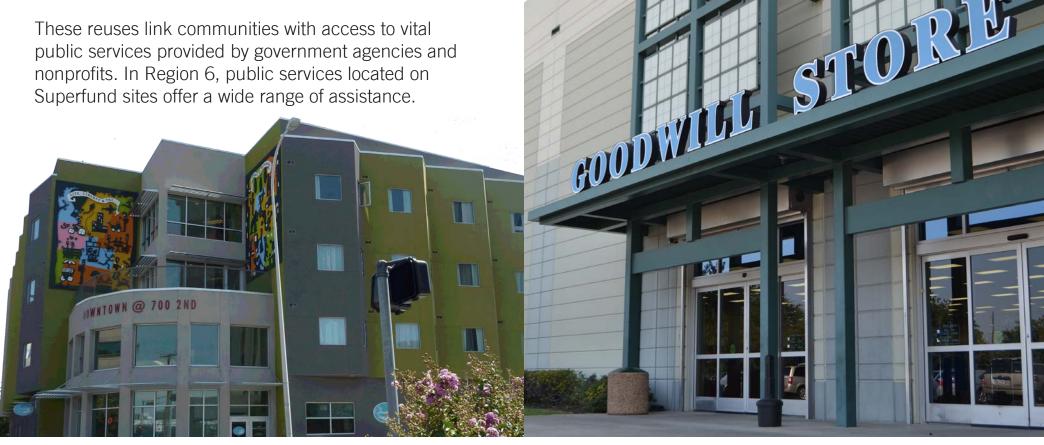


Bayou Bonfouca (Slidell, Louisiana)

Over a mile of this once-contaminated bayou has been restored for aquatic life and recreational and public reuse. The City of Slidell installed a public boat launch on the north shore of Lake Ponchartrain, which improved access to Bayou Bonfouca for boaters and other outdoor enthusiasts. A 54-acre waterfront property, donated to the community by its former owners, now hosts Heritage Park as well as public works facilities. The 2015 Heritage Park Marina Project focuses on encouraging recreational boating in the area, bringing floating docks, piers, new sidewalks and other improvements to this Superfund site.

Reuse in Action: Public Services

These reuses link communities with access to vital public services provided by government agencies and nonprofits. In Region 6, public services located on Superfund sites offer a wide range of assistance.

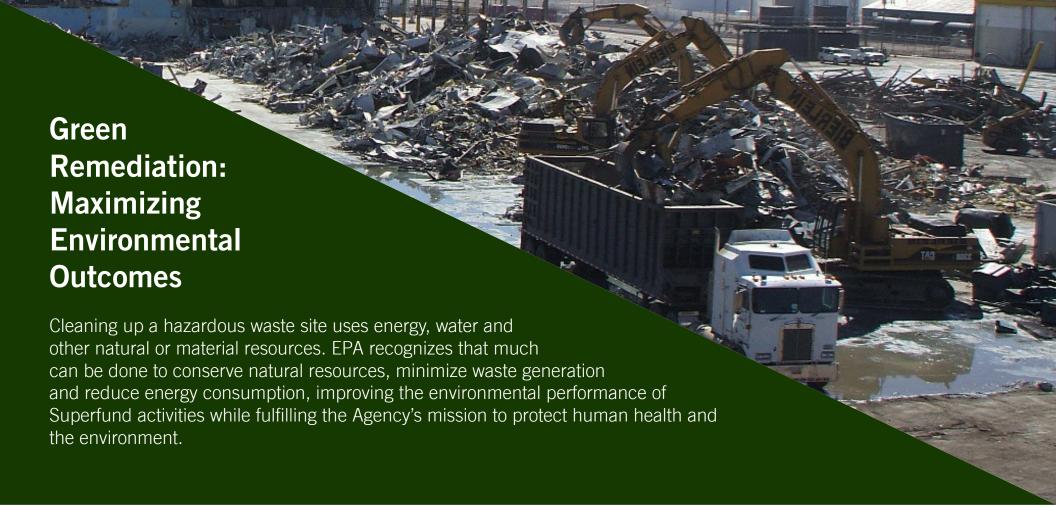


Fruit Avenue Plume (Albuquerque, New Mexico)

This mixed-use development includes training facilities to help oncehomeless community members reenter the job market.

RSR Corporation (Dallas, Texas)

New land uses include office and warehouse space for Goodwill Industries and more than 1,000 units of affordable housing. Goodwill Industries of Dallas operates a 275,000-square-foot facility on site. Focused on providing job training, continuing education and employment to persons with disabilities and disadvantages, the organization has placed over 1,000 people into jobs.



State Road 114 Ground Water Plume (Levelland, Texas)

This innovative remedy – a cryogenic compression and condensation treatment system – contains ground water contamination and restores the Ogallala Aquifer. Each month, on average, the site's ground water pump-and-treat system extracts and treats over 7 million gallons of water. Its soil vapor extraction system recovers over 7,000 gallons of hydrocarbons.

South Valley (Albuquerque, New Mexico)

When General Electric (GE) Aviation demolished this jet engine component manufacturing plant (*see above*), the company committed to recycling or reusing all usable building materials. GE Aviation's "green demolition" saved 14,280 tons of building and related materials from local landfills and reduced demolition costs. The green demolition also supported 75 jobs and made the property available for redevelopment.





Awards and Recognition

Every year, Region 6 seeks opportunities to recognize the remarkable community efforts that return Superfund sites to use. Through success story fact sheets and economic impact case studies, we honor the hard work and partnerships that lead to site reuse. Two awards recognize the outstanding achievements of individuals and organizations whose leadership signifies "above and beyond" performance in Superfund redevelopment.

The Greenovations and Green BEAN Awards

Region 6 has developed the Greenovations Award and the Green BEAN Award to recognize parties for taking "Bold Environmental Action Now" to clean up and facilitate reuse at Superfund sites. The awards recognize innovative efforts and projects that have maximized environmental outcomes and minimized environmental impacts through greener cleanups, sustainability and reuse initiatives, and use of renewable and alternative energy resources.

Mosley Road Sanitary Landfill (Central Oklahoma)

This award-winning gas-to-liquid fuel technology demonstration project (*top left*) at a landfill outside Oklahoma City converts methane gas into clean-burning diesel fuel and wax. A total of 120 wells were drilled into the 105-acre area to access the gas. A vacuum then pulls the gas to the surface. Gas flows may continue for up to 30 years.

Pantex Plant (Pantex Village, Texas)

Superfund Division Director Carl Edlund (*left*) presented the Region's Greenovations Award to the U.S. Department of Energy's Pantex Plant (*see page 6*). The Pantex Renewable Energy Project, or PREP, is the nation's largest federally owned wind farm.

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Information Resources

Website

Our Superfund redevelopment website (<u>www.epa.gov/earth1r6/6sf/reuse</u>) provides access to many tools and resources, including "getting started" materials, FAQs, case studies and fact sheets.

Videos

To see Superfund redevelopment in action, check out the EPA video highlighting the Chevron Questa Mine site in New Mexico. The video – available on the Superfund Redevelopment Initiative website (www2.epa.gov/superfund-redevelopment-initiative/superfund-redevelopment-videos) – shares key steps, lessons learned and project outcomes.

Site Reuse Fact Sheets and Case Studies

Available on our website, these documents can help you explore Superfund site reuse opportunities for specific sites. They provide an overview of key site information and list contact information for EPA site staff.

Trainings

We regularly take part in trainings at national conferences and EPA webinars on Superfund reuse, sharing case studies and lessons learned. Recent webinars are available online at www.cluin.org/sri.



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What is a Brownfield?

Brownfields are real property, the expansion, development or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant.

Brownfields... Making a Visible Difference in Region 6 Communities

EPA's Brownfields program makes a visible difference in communities across the South-Central Region by empowering states, communities and other stakeholders to work together to prevent, assess, cleanup and sustainably reuse brownfields. Revitalizing these sites creates local and community-wide benefits. This part of the report highlights many of the places in the South-Central Region where EPA is helping people restore these lands as vital, functioning parts of their communities.

Leveraging Money and Jobs from Brownfields Assessment, Cleanup and Revitalization

The Brownfields program returns \$18 for every dollar spent. Nationally, brownfields projects have created over 106,000 jobs and generated \$23.3 billion in leveraged funds.

Property Value Benefits

A program study that assessed the impact, or economic benefit, of Brownfields grants on residential property values found that these values increased between 2 and 3 percent following the assessment or cleanup of a nearby brownfield. The study also found that cleaning up a brownfield can increase overall property values within a one-mile radius by \$0.5 to \$1.5 million.

Environmental Benefits

Five program pilot studies found that redeveloped brownfield sites tend to have greater location efficiency than alternative development scenarios at greenfield sites, resulting in a 33 to 58 percent reduction in vehicle miles traveled associated with these sites and a reduction in air pollution emissions, including greenhouse gases. These site comparisons also show an estimated 44 to 88 percent reduction in stormwater runoff.

The Region 6 Brownfields Program in Action

Overview

The EPA Region 6 Brownfields program provides funds and technical assistance to states, tribes, communities and other stakeholders to assess, clean up and redevelop brownfields. Cleaning up and investing in these properties protects the environment, reduces blight and revitalizes neglected areas.

Program Achievements

Completed brownfield assessments: 2,500

• Properties cleaned up and readied for reuse: 634

Acres ready for reuse: 8,000⁺

Jobs created: 16,000⁺

Communities assisted: 500+

Services and Resources

In addition to assessment and cleanup grants, the Brownfields program offers resources for revolving loan funds that can support ongoing community efforts to clean up properties as well as job training grants to help build local capacities. Technical assistance services are provided through several national programs and organizations (*see below*) so that communities can better understand the science, regulations and policies of environmental issues and EPA actions.

Program and Project Examples

- Technical Assistance to Brownfields Communities program (Kansas State University)
- Council of Development Finance Agencies and Groundwork USA projects
- Greening America's Capitals program
- Making a Visible Difference in Communities initiative
- Building Blocks for Sustainable Communities program
- Local Foods/Local Places program
- Strong Cities, Strong Communities initiative
- Promise Zones



Victory Park (Dallas, Texas)

This once-contaminated brownfield bordering downtown Dallas is in the midst of a rebirth as mixed-use hub that will host more than 4,000 residences and four million square feet of office and retail space.

For years, the 75-acre parcel was a blighted eyesore, home to a power plant, garbage crematorium, railroad maintenance yard, packinghouse and landfill for debris from a downtown fire. Today, developers are focused on creating an inviting, vibrant, pedestrian friendly, sustainable and distinctive neighborhood anchored by the American Airlines Center, home to the NBA's Dallas Mavericks and the NHL's Dallas Stars.

Reuse in Action: Urban Infill

These projects help revitalize city neighborhoods and business districts, taking development pressures off green spaces and farmland.



Oklahoma City, Oklahoma

At over 850 feet tall, the LEED-certified Devon Energy Plaza towers over the city's skyline. Contaminated soils and underground storage tanks had limited development. Collaboration among many partners made this remarkable project possible.

Little Rock, Arkansas

Following cleanup, this former rail yard and industrial property is now home to the LEED-certified world headquarters of Heifer International, a nonprofit working to eradicate poverty and hunger.

Shreveport, Louisiana

The Shreveport Convention Center property was a utility and railroad hub for decades. Its cleanup – the result of collaboration among local, state and federal partners – leveraged over 1,100 construction and redevelopment jobs and over \$100 million in public and private funding. Following cleanup, development projects have included a hotel and several other businesses.

Reuse in Action: Historic Preservation and Downtown Revitalization

Communities across the country have been working to protect and restore historic buildings and landscapes, recognizing the importance of preserving these local landmarks. Often, these facilities, once bustling with activity, have been closed down and abandoned. The Brownfields program helps communities restore them, celebrating local history and heritage.



Sulphur Springs, Texas

The city's century-old city library and post office is centrally located downtown and is a lynchpin in the community's plans for the future. Until the city received a brownfields cleanup grant, the community did not have the resources needed to address environmental issues and the building sat idle.

Enid, Oklahoma

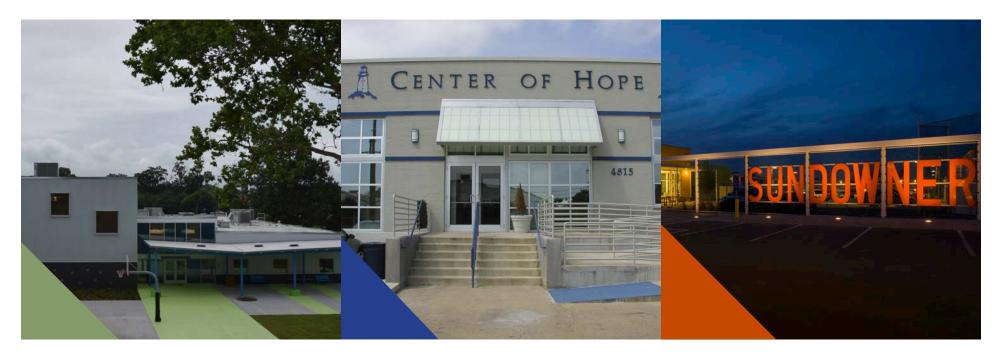
The local government worked with the Community Development Support Association to turn an abandoned downtown department store into a shared workspace for eight nonprofits. Environmental cleanup made the project possible; the Association raised nearly \$2 million to complete building renovations.

Albuquerque, New Mexico

The Albuquerque Hilton was the tallest building in the city in 1939 when it opened and was the only one with air conditioning. It was listed on the National Register for Historic Places in 1984. Now, after cleanup and nearly \$30 million in renovations, Hotel Andaluz has reopened as a LEED Gold-certified, four-star boutique hotel, consuming less energy and water in its daily operation, and minimizing environmental and infrastructure impacts.

Reuse in Action: Access and Services

Other brownfield projects provide safe, welcoming spaces for people in need – places to receive vital services, connect to resources and build skills for the future.



Little Rock, Arkansas

Our House empowers homeless and near-homeless families and individuals to succeed in the workforce, in school and in life through hard work, wise decision-making and community participation. The facility was once an abandoned building with asbestos and lead-based paint. It now serves as a child-care facility for homeless families, the only one of its kind in the state. The project leveraged several million dollars to make cleanup and reuse happen.

Dallas, Texas

The Center of Hope provides transitional housing and serves as a women's shelter. The building was formerly an abandoned federal laboratory.

Albuquerque, New Mexico

New Life Homes has taken abandoned buildings with environmental concerns and brought them back to life. Luna Lodge provides 30 apartments and services for low-income residents. The project leveraged \$5.7 million and created two permanent jobs. Sundowner Lodge provides 71 apartments for veterans, the former homeless, individuals with disabilities and low-middle-income families. The complex also includes a farmers market and retail and community space. The project leveraged \$9 million and created two permanent jobs.

Reuse in Action: Tribal Lands

EPA works closely with a diverse network of partners to safeguard public health and advance environmental protection. Strengthening partnerships with tribes is a top priority for the Agency, and central to the success of the national environmental protection program.



Oklahoma City, Oklahoma

Once one of the state's first oil fields, this 220-acre property in the heart of Indian Country will soon host the American Indian Cultural Center. Tribal, state and federal collaboration made possible the cleanup of oil wells, sludge pits and storage tanks. Opening in 2017, the Center will provide an opportunity for visitors to learn how American Indian values are expressed through language, arts, dance, music, literature, crafts and other traditions thriving in tribal communities today.

Tahlequah, Oklahoma

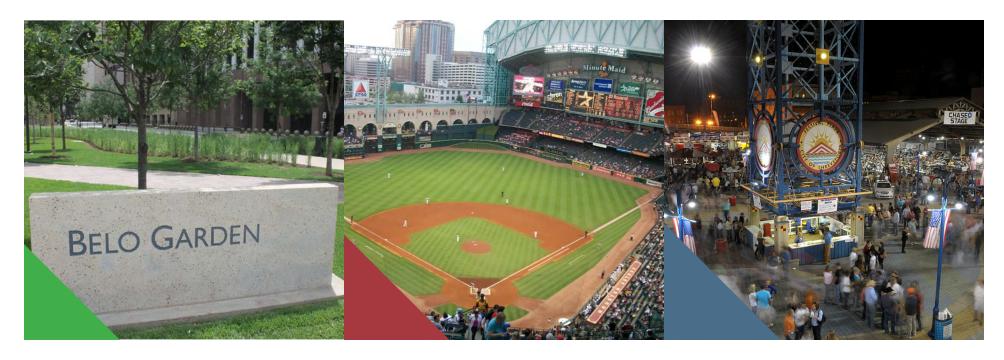
The Jack Brown Adolescent Treatment Center provides services to assist Native youth struggling with substance abuse. The 25,000-square-foot campus features a recreation center and weight room, dorms, a cafeteria, a drum circle, and group therapy rooms. The center opened in November 2014.

Pueblo of Acoma, New Mexico

The old McCarty Day School was an eyesore and a haven for vandals. Before completion of an environmental site assessment, the building burned to the ground. After the assessment, EPA's tribal General Assistance Program funding enabled the tribe to clean up the debris, which included asbestos. Today, it is a safe, clean area where children can play.

Reuse in Action: Green Space and Recreation

EPA is helping communities transform brownfields across the nation into prized green spaces and recreation destinations through technical assistance and Brownfields grants. These areas provide local public health benefits, attract visitors, support tourism opportunities and improve quality of life community wide.



Dallas, Texas

The City of Dallas turned a former parking lot into Belo Garden, 1.2 acres of urban green space. The park features meandering walkways, fountains and native landscaping.

Houston, Texas

The Houston Astros' ballpark, a 42,000-seat stadium, was built on a 38-acre former brownfield. Once the site of a railroad station and industrial facilities, baseball fans now enjoy games in a state-of-the art facility with a retractable roof. The ballpark offers a spectacular view of the Houston skyline.

Shreveport, Louisiana

Festival Plaza, the community's remarkable outdoor public recreation area, began life as a leather tannery, freight and passenger railroad depot, and manufacturing and warehousing hub. The city cleaned up and revitalized the 9.5-acre brownfield; it is now an economic engine providing entertainment to thousands of visitors each year. Over \$8 million in public funding and city incentives made the project possible.



BROWNFIELDS INFORMATION RESOURCES

EPA Office of Brownfields and Land Revitalization: www.epa.gov/brownfields

Region 6 Targeted Brownfields Assessments: www.epa.gov/region6/6sf/bfpages/tba.htm

Technical Assistance to Brownfields (TAB) Program: www.ksutab.org

Council of Development Finance Agencies (CDFA): www.cdfa.net

Groundwork USA: groundworkusa.org

Partnership for Sustainable Communities: www.sustainablecommunities.gov

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Mailing Address: 1445 Ross Avenue Suite 1200, Mail Stop: 6SF-VB Dallas, Texas 75202 The Region 6 Superfund and Brownfields programs protect public health and safeguard the environment by directly supporting EPA's seven priorities:

- Making a visible difference in communities across the country.
- Addressing climate change and improving air quality.
- Taking action on toxics and chemical safety.
- Protecting water: a precious, limited resource.
- Launching a new era of state, tribal and local partnerships.
- Embracing EPA as a high-performing organization.
- Working toward a sustainable future.





