

# Introduction

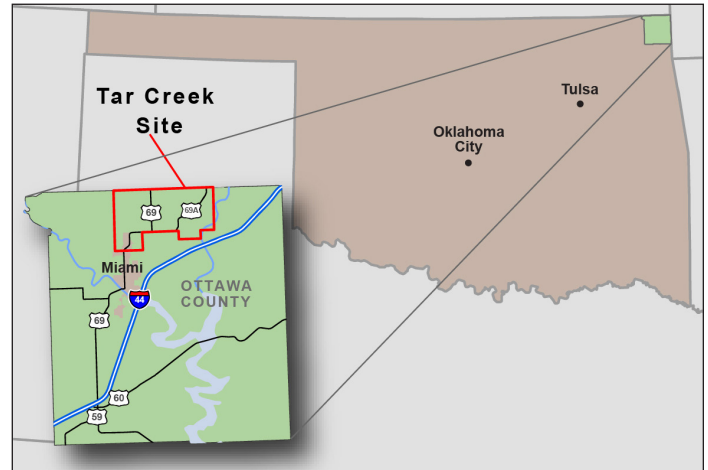
For the first time in the history of EPA’s Superfund program, a tribe has led cleanup efforts at a contaminated property. Seeking to protect and preserve the rich history of the Catholic 40 site, where many tribal members attended boarding school and church from the 1890s to the 1920s, the Quapaw Tribe of Oklahoma signed a cooperative agreement with EPA in 2012.

The Quapaw Tribe Environmental Office led the cleanup effort, which included the excavation and off-site disposal of 108,000 tons of contaminated mining waste in late 2013 and early 2014. Historic structures and landscape features were protected during the cleanup. The Tribe plans to access these areas in the future for archeological research and education opportunities, and to celebrate the Tribe’s rich culture and heritage.

The Catholic 40 site and the larger Tar Creek Superfund site are part of the Tri-State Mining District, which spans parts of Oklahoma, Kansas and Missouri. Beginning in the mid-1800s, the district produced large amounts of lead and zinc. During peak years of operation in the 1920s, the district was the world’s largest source of lead and zinc. After decades of production, mining and milling activities resulted in large areas of contaminated land and water.

Groundwork for the cleanup was put in place over time. Established in 1997 with EPA assistance, the Quapaw Tribe Environmental Office built its technical and operational capacities, including establishment of the Quapaw Services Authority, which oversaw cleanup construction activities. Today, the success of the Catholic 40 cleanup has also laid the groundwork for further collaboration. In 2014, the Tribe signed follow-on cooperative agreements with the State of Oklahoma and EPA for the cleanup of other parts of the Tar Creek Superfund site. Meanwhile, green remediation – an innovative ongoing pilot project – at the Catholic 40 site offers the prospect of new cleanup options for former mine lands nationwide.

“Our goal is to make this land useful and productive again,” said Quapaw Tribal Chairman John Berrey. “We live here and we care



The Tar Creek Superfund site is the Oklahoma portion of the former Tri-State Mining District, which extended from northeast Oklahoma through southeast Kansas to southwest Missouri.

about the outcomes, so we are very pleased to have these two new agreements in place.”

“The cleanup of mountains of mine waste on the Catholic 40 property was a remarkable project,” said EPA Region 6 Superfund Division Director Carl Edlund. “The Tribe’s leadership led to the protection of public health and the environment, historic preservation of important cultural resources, and a revegetation program that may provide a model for many other mining sites.”

This case study explores the tools and partnerships that have led to successful cleanup and preservation of historic resources at the Catholic 40 site. The following pages trace the evolution of cleanup and reuse efforts, highlighting the Tribe’s perseverance and dedication, coordination with elected officials and regulatory agencies, and ongoing planning and partnership efforts through 2015. The case study provides information and lessons learned to parties interested in tribal leadership, historic preservation and green remediation at Superfund sites.



Students and teachers at St. Mary’s of the Quapaw School (left); historic structures preserved by the Quapaw Tribe during cleanup (center); and removal of contaminated mining wastes by the Quapaw Services Authority (right).

## Site History, Contamination and Remediation

The Tar Creek Superfund site is a 40-square-mile area of mine tailings, former mines and acid mine drainage areas in Ottawa County, Oklahoma. The site is also part of the Tri-State Mining District, which spans parts of Oklahoma, Kansas and Missouri. Beginning in the mid-1800s, the district produced vast amounts of lead and zinc.

The mining era left a legacy of open mine shafts, acid mine water, areas prone to subsidence, and large volumes of mining and milling wastes contaminated with lead, zinc and cadmium. EPA added the site to the National Priorities List, the Agency's list of top-priority hazardous waste sites, 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. Long-term cleanup is ongoing.

To date, cleanup has included relocation of some residents and the excavation of lead-contaminated soils from over 2,300 residential yards and high-access areas within the five-city mining area, which includes the historic mining towns of Picher, Cardin and Hockerville. Other efforts have included surface water management and the plugging of abandoned wells. These activities have significantly reduced the exposure of the population, especially young children, to the contamination. The Catholic 40 site is part of ongoing long-term cleanup efforts. In December 2013 and January 2014, workers excavated 108,000 tons of mining waste for off-site disposal.

Throughout all Superfund activities, EPA, in coordination with the Oklahoma Department of Environmental Quality (ODEQ) and the Quapaw Tribe, has kept the community, government agencies, citizen advisory groups and interested parties up to date and involved in planning. In between meetings, a toll-free hotline enables people to share their cleanup suggestions and ideas. Residential relocation and the cleanup of mining and milling wastes are ongoing. Longer-term cleanup of the Tar Creek Superfund site will take several decades.



Most mining activities took place within a 50-to-150-foot-thick ore bearing zone, which is also an underground aquifer known as the Boone Formation. Massive subsurface pumps dewatered the aquifer to allow mining of the ore. The maximum depth of mining was about 385 feet below ground surface.

## History of the Catholic 40

The site is a 40-acre area owned by the Quapaw Tribe of Oklahoma. Many tribal members attended boarding school and church at the site from the 1890s to the 1920s, when the Catholic Church closed the facilities.



In 1937, the church leased the property for mining, which resulted in the site being largely covered by mine tailings (known as chat) contaminated with heavy metals.

In 1975, the Catholic Church deeded the property back to the Quapaw Tribe. The ruins of the church and school, as well as contaminated mine tailings and a cemetery, remain on the property today.



Room and pillar techniques made the mining possible. To remove the ore, large rooms – some with ceilings as high as 100 feet – were connected by horizontal tunnels known as drifts. Pillars were left within the rooms to support the ceilings.

# 2012-2014

## Building Relationships, Developing Agreements...

In 2012, EPA planned to task its primary remedial action contractor for the Tar Creek Superfund site, CH2M Hill, to clean up the Catholic 40 site. The Quapaw Tribe approached EPA with an alternate proposal for the tribally owned property. Recognizing the historic and cultural significance of the tribal property, the Tribe would lead the cleanup with EPA oversight.

“We were anxious to demonstrate that the Quapaw Tribe is the appropriate stakeholder to perform remediation activities on tribal properties and, thereby, help restore the land to uses that will benefit the future of the Tribe and the local community,” noted Quapaw Tribal Chairman John Berrey.

“The Tribe has always been a highly engaged partner,” said EPA Project Manager Rafael Casanova. “From the beginning, from initial studies through remedy selection to now. It is their land and their history and heritage at stake.” Indeed, for the Tribe, the opportunity was the result of more than a decade of capacity building and partnership development.

After establishment of the Quapaw Tribe Environmental Office in 1997, the Tribe and EPA signed a series of agreements. A 1998 Tribal Environmental Agreement (TEA) established a formal agreement between the Tribe and EPA to address issues raised regarding the environmental protection of lands within the Quapaw Reservation. The Tribe also entered into a support agency cooperative agreement with EPA in 2001. A management assistance grant under this agreement enabled the Tribe to have “meaningful and substantial involvement” in the decisions related to the development and implementation of the remedy for operable unit 4 (OU4) of the Tar Creek site – mine, mill and smelter wastes located across a 40-square-mile area that included the Catholic 40 site.

As a result, working with EPA, ODEQ and other stakeholders on Tar Creek site-related issues over a 12-year period enabled the Quapaw Tribe Environmental Office to develop the technical capacities required to administer a remedial response cooperative agreement. During this time, the Tribe developed air and water programs, acquired equipment and built a lab, and hired scientists, an environmental director and other staff. In mid-2012, the Office submitted a Superfund cleanup application along with a work plan and budget to EPA Region 6. After a successful negotiation, EPA approved the Tribe’s application in September 2012.

“The cooperative agreement with EPA in 2001 made everything possible,” said Tim Kent, Environmental Director of the Quapaw Tribe Environmental Office. “By the time the cleanup of the Catholic 40 site was on the horizon, the Tribe had the

## EPA and Tribal Partnerships

EPA works closely with a diverse network of partners to safeguard public health and advance environmental protection. Strengthening partnerships with tribes, states, local governments and the global community is a top priority for the Agency, and central to the success of the national environmental protection program. EPA’s 1984 Indian Policy provides the framework for the Agency’s relationship with federally recognized tribes.

In the policy, EPA recognizes that the United States has a unique legal relationship with federally recognized tribal governments based on the U.S. Constitution, treaties, statutes, Executive Orders and court decisions. The Indian Policy expressly recognizes the right of tribes to self-determination and acknowledges the federal government’s trust responsibility to tribes. The Indian Policy also states that EPA will give special consideration to tribal interests in making Agency policy, and ensure the close involvement of tribal governments in making decisions and managing environmental programs affecting tribal lands.

Nationally, EPA’s American Indian Environmental Office, or AIEO, leads the Agency’s efforts to protect human health and the environment of federally recognized tribes by supporting implementation of federal environmental laws consistent with the federal trust responsibility, the government-to-government relationship, and EPA’s 1984 Indian Policy.

In the South-Central Region, EPA serves 66 federally recognized Native Nations. Region 6 staff act as liaisons to tribes and manage General Assistance Program grants. Region 6 partners with tribes on a government-to-government basis, consistent with their inherent sovereignty. Through these activities, Region 6 strives to strengthen the relationship between tribes and EPA.

Please see the **Sources and Resources** section for more information.

people, the skills, the experience and the equipment needed to do the job. And EPA knew first hand that the capacity was there for the Tribe to take the lead.”

The Tribe’s sustained outreach and relationship building at senior levels of government was also a key factor. U.S. Senator James Inhofe was instrumental in resolving cleanup slowdowns and bureaucratic red tape related to the federal government’s status as a potentially responsible party at the site (due to past actions by the Bureau of Indian Affairs).

## Historic Views of the Catholic 40 Site



*Students in a classroom on site, October 1917*



*Views of the St. Mary's of the Quapaw School, post-1915*

## Cultural and Historical Resources on Site, Before Cleanup



*Structures remaining on site included school buildings, a water tower and storage buildings*

“Having very active tribal leadership has been essential to moving the cleanup along and making sure potential bumps in the road do not derail the process,” noted Tim Kent. “The Tribal Chairman and the Director of EPA Region 6’s Superfund program talk regularly, for example. From that all the way through to project managers and other staff on site, open lines of communication mean that potential issues are caught early on.”

In late 2012, the Quapaw Tribe Environmental Office retained the services of a consulting engineering firm to assist in generating plans and specifications, and other pre-construction documents. The Tribe’s construction department, the Quapaw Services Authority, has completed many road and earthmoving projects as well as a \$300-million casino and resort development, and employs a number of tribal members. Consequently, the Authority also has heavy earthmoving equipment and extensive experience working with local trucking firms, including tribal trucking firms.

“I think everyone – the Tribe, EPA, ODEQ – saw this as a moment to go in a new direction,” said EPA Regional Reuse Coordinator Casey Luckett Snyder. “The cleanup of the Catholic 40 site provided a chance for stakeholders to create a springboard for the future. The Tar Creek cleanup is a long-term project. Each party has a vested interest in moving the cleanup of properties forward as effectively and efficiently as possible. EPA signing cooperative agreements with the Tribe and the state was how we made it happen. We saw the cleanup of the Catholic 40 site as a first step, considering it might lead to future joint projects.”

ODEQ Project Manager Dennis Datin was struck by the dedication of project partners. “We had regular calls with EPA and the Tribe and the contractors,” he recalled. “And we were sharing draft plans, background information and technical data. There was an intense focus to the work, to getting things done, and getting them done right.”

## Designing the Remedy...

With the Tribe taking the lead, cleanup planning focused on how to remove contaminated mining waste (also known as chat) while protecting the site’s cultural and historic resources. Areas near structures would require careful excavation, with some done by hand, to avoid the potential for damage by excavators and other large pieces of equipment. Ground-penetrating radar would identify structures and artifacts below ground. A historic preservation officer from the Tribe would be on site to monitor all activities, with stop-work orders issued as needed to protect any items found.

Beaver Creek also crosses the site. Tribal members gather food and ceremonial resources along its banks during the annual pow-wow and the creek is a sacred resource vital to the Tribe’s cultural and religious practices. Addressing Beaver Creek also required a carefully tailored approach – more excavation

by hand as well as bank stabilization. “We dug stormwater retention basins, put in extra stormwater barriers – silt fences and hay bales – and did not work during rainy periods,” noted Environmental Director Tim Kent. “Then, after cleanup, we worked to revegetate and stabilize areas along the creek as quickly as possible.”

Early consideration of tribal priorities for the area’s future use was also critically important. The cleanup access road was designed so that it also provided access to a previously remote tribal cemetery on site. Grading and contouring plans for restored areas took into account the possibility of using the areas for pastureland in the future. “The cleanup made it possible for the Quapaw Tribe to address some of its long-term priorities,” said Tim Kent. “The Tribe could then turn its attention to archeological research, education, historic preservation, and further recognition and exploration of this land as part of the Tribe’s history, culture and heritage.”

Planning and coordination for the cleanup took time; it had never been done before. “It was a learning experience for everyone,” recalled EPA’s Casey Luckett Snyder. “Each organization had its own process and timelines for steps such as document submittal and review. We developed a shared schedule that worked for everyone, and a joint process that made sure all work was done in accordance with environmental rules and regulations.”

Once plans were finalized, cleanup moved quickly. 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 – dishes, farm implements, personal items, jewelry – are now archived at a tribal museum in Oklahoma. In a little over a year,

## What Is Chat?

Chat is a gravel-like waste created from lead and zinc mining activities in the Tri-State Mining District between the late 1800s and mid-1900s.



*Historic structure and chat pile at the Tar Creek Superfund site prior to cleanup.*

the first tribally managed Superfund site cleanup in the United States had gone from an idea to on-the-ground reality.

### Adapting to New Information...

The two months of cleanup removed a huge volume of contaminated material. However, sampling identified an additional challenge – the material had contaminated a much wider swath of surrounding transition zone soils on site than originally anticipated. Removing these soils to a one-foot depth would be costly and time consuming. There was also another problem. The area’s topsoil layer was shallow and no suitable replacement soil sources were available nearby. A traditional cleanup approach risked leaving behind a barren rockscape. Preserving the site’s shallow topsoil was a priority for the Tribe. “Remove the soil and you quickly hit rock,” noted ODEQ’s Dennis Datin. “We were doing this on other parts of the [Tar Creek] site and it seemed like it made things worse. You couldn’t grow anything or do much else with the land after cleanup.”

EPA, ODEQ and the Tribe took a step back to consider how to tackle this challenge – meeting the site’s cleanup objectives without destroying local environmental conditions. For an outside perspective and specialized expertise, they brought in an optimization team from EPA’s Office of Superfund Remediation and Technology Innovation. As part of a broader review of remaining chat piles and mine, mill and smelter waste at the Tar Creek site, the team’s optimization review, published in September 2014, suggested an innovative approach. On the western part of the Catholic 40 site, away from the historic resources, soil amendments could bind metals in place, making them immobile, removing the risk of exposure to metals in the soils, and allowing transition zone soils to remain undisturbed.

“Addressing these soils is a major challenge across the Tar Creek site,” said EPA’s Rafael Casanova. “Finding a way to manage them safely and effectively over the long term is a high priority.” Today, the project is well underway – soil amendments were added and the areas were seeded; they are now lush grassland. “The entire reservation was once known as the hay growing capital of the world,” noted the Tribe’s Environmental Director Tim Kent. “Everything sprouted right up. Now we’re in the monitoring phase. Eventually, we hope to bring some cows in to graze.” EPA, ODEQ and the Tribe are hopeful that the project may lead to similar efforts across the Tar Creek site.

The optimization review also provided an additional recommendation for the entire Tar Creek site – prioritizing future cleanup using a watershed protection approach. “With the most time-critical risks at the Tar Creek site largely abated, the primary focus should turn to watershed remediation and protection,” the report stated. “Activities would enable natural processes to play a dominant role in reducing ecological impacts to creeks, rivers lakes as well as [plant and wildlife corridors].”

“The Tribe’s revegetation program for the Catholic 40 site is showing great promise,” noted EPA Region 6 Superfund Division Director Carl Edlund. “As a result of the pilot metals sequestration project and the cleanup’s focus on a site-wide watershed cleanup approach, the Tar Creek Superfund site is home to ground-breaking environmental research that may provide a model for former mine sites throughout the United States.”

### Tribal History

Many years ago, the Quapaw (known as Ogaxpa in their own language) were part of a larger group known as the Dhegiha Sioux. The Dhegiha split into the tribes known today as the Quapaw, Osage, Ponca, Kansa and Omaha when they left the Ohio Valley.

They arrived at their historical territory, the area of the confluence of the Arkansas and Mississippi rivers, by the mid-17th century. When Quapaw moved down the Mississippi River into Arkansas, this is the origin of the word Ogaxpa, which can be translated as “downstream people.”

During the nineteenth century, the Quapaw were repeatedly pushed off their land by white settlers and territorial officials despite signing a series of treaties with the federal government. Under the terms of the final treaty, the Treaty of 1833, the Tribe agreed to move to the northeastern corner of the Indian Territory in Oklahoma.

Today, the Quapaw Tribe is headquartered in Quapaw in Ottawa County, Oklahoma. The Tribe’s jurisdictional area covers 13,000 acres, including the Tar Creek Superfund site. The Tribe has 3,240 enrolled members.



*“The Catholic 40 site is a culturally and historically significant site ... it contains evidence of important events in the history of the Quapaw Tribe of Oklahoma. Due to the sensitive historic and cultural nature of the Catholic 40 site, the Tribe feels it is best suited to protect cultural and historical features at the site during remediation and mitigate the potential for accidental damage or removal of any structures or associated items that may help the Quapaw Tribe come to a better understanding of their history.”*

– Statement issued by the Quapaw Tribe of Oklahoma prior to cleanup of the Catholic 40 site

### Timeline of Events

<i>mid-1800s – 1970s</i>	Mining takes place throughout Tri-State Mining District
<i>1892-1927</i>	Catholic Church builds and operates church and boarding school on Catholic 40 site attended by many Quapaw Tribal members
<i>1937</i>	Catholic 40 site leased to mining companies by Catholic Church
<i>1975</i>	Catholic Church deeds the 40-acre property back to Quapaw Tribe
<i>1980-1981</i>	Initial site investigations by government agencies
<i>Sept. 1983</i>	EPA adds site to Superfund program’s National Priorities List
<i>1984 onward</i>	Cleanup planning and implementation for other parts of Tar Creek site
<i>Oct. 1997</i>	Quapaw Tribe Environmental Office established
<i>Jun. 1998</i>	Tribal Environmental Agreement established formal agreement between Tribe and EPA address issues raised regarding environmental protection of lands within Quapaw Reservation
<i>2001</i>	Tribe entered into support agency Superfund cooperative agreement with EPA, enabling Tribe to have meaningful and substantive involvement in development and implementation of site remedy
<i>May 2003</i>	EPA signs Memorandum of Understanding for Interagency Cooperation with the Department of the Interior, the U.S. Army Corps of Engineers, the U.S. Fish & Wildlife Service, the U.S. Geologic Survey, the U.S. Bureau of Indian Affairs, and several tribes
<i>Feb. 2008</i>	Final remedy selected for the Catholic 40 site, as part of cleanup plan for chat piles, other mine and mill waste, and smelter waste at the Tar Creek site
<i>Jan. 2012</i>	Quapaw Tribe requests that EPA fund tribe-led cleanup of Catholic 40 site
<i>Oct. 2012</i>	EPA and Quapaw Tribe of Oklahoma sign cooperative agreement for cleanup of Catholic 40 site
<i>Dec. 2013 – Jan. 2014</i>	Cleanup of Catholic 40 site; historic structures, artifacts and landscape features preserved during cleanup
<i>Jun. 2014</i>	Quapaw Tribe signs cooperative agreements with State of Oklahoma and EPA for cleanup of additional properties within the Tar Creek Superfund site
<i>Sept. 2014</i>	Publication of EPA’s Remedial Action Optimization Report for the Tar Creek Superfund site
<i>2015+</i>	Ongoing metals sequestration pilot project and tribal reuse of the Catholic 40 site

# Cleanup of the Catholic 40 Site



*Stakeholders gathered to celebrate the start of the site's cleanup in December 2014.*



*Views of Beaver Creek, before cleanup and during restoration.*



*View of the site, before and after cleanup.*





*Historic structures preserved during cleanup.*



*Revegetation of the Catholic 40 site, spring 2015.*

# 2014+

## Looking Forward

The Tribe-led cleanup of the Catholic 40 site has also laid a strong foundation for the future. In June 2014, the Quapaw Tribe entered into a cooperative agreement with the State of Oklahoma and EPA to cleanup additional contamination at the Tar Creek Superfund site. The first project, administered through ODEQ, tackles an area known as “Chat Base 11 North” that is on property next to the Catholic 40 site. This first state-tribal partnership project involves the removal of about 72,000 tons of contaminated material and its off-site disposal at a repository in Ottawa County. The agreement is for a one-year period with annual renewals.

“Nothing substitutes for being out at the site,” noted ODEQ’s Dennis Datin. “We maintain a regular presence there. The Tribe is leading the effort, and we’re there to provide oversight and serve as a resource, talking through challenges and day-to-day issues as they come up.”

The second project focuses on the cleanup of contaminated properties in southeast Kansas. The work is addressing 11 separate properties at the Cherokee County Superfund site. While the Quapaw Tribe worked cooperatively with EPA Region 6 on Catholic 40 site cleanup, this effort represents the first joint project between the Quapaw Tribe and EPA Region 7.

Meantime, the Quapaw Tribe continues to plan for the future at the Catholic 40 site as well – archeological research, education, historic preservation, grazing and active use of the area as an important part of the Tribe’s cultural and religious practices.

“Tribal leadership of cleanups on tribal lands just makes sense,” said Tim Kent, the Tribe’s Environmental Director. “Tribe-led cleanups mean that cleanup resources stay in the community, helping tribes rebuild environmentally and financially. Tribal members also use natural resources more intensely – hunting, fishing and other outdoor activities are core parts of their lives. They need to be involved in cleanup and assured that when it’s done, their way of life is protected. That’s what we are trying to do here. Hopefully, our approach can transfer to other places, and help other tribes.”



Revegetation of the Catholic 40 site, spring 2015.

## EPA and Reuse: Lessons Learned

Since the inception of the Superfund program, the EPA has been building on its expertise in conducting site characterization and remediation to ensure that contamination is not a barrier to the reuse of property. Today, consideration of future use is an integral part of the EPA’s cleanup programs from initial site investigations and remedy selection through to the design, implementation, and operation and maintenance of a site’s remedy.

“For more than two decades, EPA has worked with diverse stakeholders to make sure reuse considerations are taken into account during the cleanup process,” reflected Melissa Friedland, EPA’s Superfund Program Manager for Redevelopment. “Superfund cleanups can be creative and flexible in allowing for future site uses, but that information needs to be plugged in early to be as effective as possible.”

EPA also works with site stakeholders to consider how future land use considerations can inform the implementation and long-term stewardship of site remedies *as well as* cleanup planning. At some sites, for example, reuse considerations can inform the future location of ground water monitoring wells and other operation and maintenance equipment that might inadvertently hinder redevelopment efforts. At other sites, detailed site reuse plans have provided additional benefits that save time and reduce redevelopment costs. For example, future infrastructure corridors or building footers can be installed in coordination with site cleanup activities.

## Lessons Learned

Project partners agree that a combination of significant factors have contributed to the Catholic 40 site’s cleanup and successful redevelopment.

- The Quapaw Tribe of Oklahoma energetically pursued the site’s cleanup early on and over the long term, building expertise, identifying resources and

coordinating with site agencies.

- EPA and ODEQ are engaged partners who sought to build more effective working relationships with the Tribe and other stakeholders across the Tar Creek Superfund site.
- Early consideration of future use as part of cleanup planning efforts informed access road design and led to the protection of historic resources and restoration of Beaver Creek, among other tribal priorities.
- All parties involved continue to be patient and flexible, recognizing that cleanup and historic preservation are complex processes reliant on available resources, multiple partners, cleanup requirements and other factors.

## The Bigger Picture

While these conditions created an ideal climate for the successful reuse of the Catholic 40 Site, there also a range of broader lessons learned that can help guide similar projects at contaminated lands across the country.

### **Recognize the leadership role of tribes and tribal agencies.**

As the organizations responsible for their communities' general welfare, tribal governments are particularly well positioned to lead cleanup projects. They are able to bring together diverse stakeholders to discuss site reuse opportunities and use tribal planning tools and knowledge to foster positive site outcomes. At the Catholic 40 site, the Quapaw Tribe Environmental Office developed the technical capacity required to administer a remedial response cooperative agreement over more than a decade of working with EPA, ODEQ and other stakeholders on Tar Creek site-related issues. "It was a gradual process," recalled Tim Kent. "And when the time came to clean up the Catholic 40 site, the Tribe was ready."

### **Identify partnership roles and responsibilities, engage diverse expertise and establish reasonable future use expectations for the process.**

The Tribe recognized its strengths, retained a consulting engineering firm to assist in generating cleanup plans and specifications, and relied on EPA and ODEQ to provide additional guidance and oversight through cleanup planning and implementation. The Tribe's resulting reuse plans were grounded in cleanup and future use considerations, reflecting tribal priorities and protectiveness considerations.

### **Adapt.**

Site conditions and environmental conditions are often complex,

and can require changes in cleanup approaches and reuse plans over time. At the Catholic 40 site, new information (additional soil contamination) and site conditions (thin topsoil) prompted consideration of an alternate cleanup strategy to preserve existing topsoil, a metals sequestration pilot project, and a site-wide watershed approach to future cleanup. In turn, these efforts and recommendations in the Tar Creek Superfund Site Optimization Report may lead to faster, lower-cost cleanups across the Tar Creek Superfund site, and serve as a model for similar projects at other tribal lands and former mining sites nationwide.

### **Establish and sustain open lines of communication at all levels.**

The Tribe's ongoing coordination with U.S. Senator James Inhofe and EPA Region 6's Superfund program ensured that, at the big-picture level, any intergovernmental challenges or bureaucratic issues could be rapidly resolved. On the ground, regular communication among tribal, EPA and ODEQ project managers and other staff meant that detailed technical issues and cleanup questions could also be addressed quickly and directly.

### **Access site-related information and recognize opportunities provided by the Superfund program.**

Superfund sites are among the most comprehensively documented and evaluated areas of land in the United States. At most sites, a completed remedial investigation/feasibility study, proposed plan, or Ready for Reuse Determination will provide prospective purchasers with extensive site information.

## Conclusion

The redevelopment of the Catholic 40 site illustrates how tribal leadership, collaboration with EPA and state agencies, and detailed, flexible planning can result in several major outcomes: the protection of human health and the environment, the preservation of historic and sacred community resources, innovative cleanups and long-term partnerships.

In northeast Oklahoma, the Quapaw Tribe has led a complex project that brought the Tribe together with local, state and federal partners. For the first time in the history of EPA's Superfund program, a tribe has led and managed the cleanup of a contaminated property. In turn, the Tribe's initiative has led to groundbreaking environmental research, follow-on projects across the Tar Creek Superfund site, and an approach that can guide similar efforts on tribal lands and at former mine sites across the United States.

# Tribal Leadership, Historic Preservation and Green Remediation

THE CATHOLIC 40 CLEANUP PROJECT IN NORTHEAST OKLAHOMA

## Sources and Resources

### Sources

Images and maps for this case study are from EPA Region 6, the Quapaw Tribe of Oklahoma, ODEQ and site visits.

### Resources

The Quapaw Tribe of Oklahoma and the Tribe's Environmental Office:

[www.quapawtribe.com](http://www.quapawtribe.com) and  
[www.quapawtribe.com/index.aspx?nid=122](http://www.quapawtribe.com/index.aspx?nid=122)

EPA Region 6 site profile:

[cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0601269](http://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0601269)

Toll-Free EPA site hotline for the Tar Creek site:  
(800) 533-3508

EPA Superfund Redevelopment Initiative:

<http://www2.epa.gov/superfund-redevelopment-initiative>

EPA American Indian Environmental Office Tribal Portal:

[www2.epa.gov/tribal](http://www2.epa.gov/tribal)

EPA Region 6 Tribal Affairs Office:

[www2.epa.gov/aboutepa/organization-chart-epas-region-6-office#ej](http://www2.epa.gov/aboutepa/organization-chart-epas-region-6-office#ej)

EPA Region 6 Superfund Redevelopment:

[pubweb.epa.gov/region6/6sf/reuse/index.html](http://pubweb.epa.gov/region6/6sf/reuse/index.html)

Oklahoma Department of Environmental Quality site page:

[www.deq.state.ok.us/lpdnew/TarCreekindex.html](http://www.deq.state.ok.us/lpdnew/TarCreekindex.html)

CERCLA liability and local government acquisitions:

[www2.epa.gov/enforcement/state-and-local-government-activities-and-liability-protections](http://www2.epa.gov/enforcement/state-and-local-government-activities-and-liability-protections)

2002 Brownfields Revitalization Act and BFPP information:

[www2.epa.gov/enforcement/brownfields-and-land-revitalization-cleanup-enforcement](http://www2.epa.gov/enforcement/brownfields-and-land-revitalization-cleanup-enforcement)

Environmental insurance information:

[www2.epa.gov/brownfields/brownfields-environmental-insurance-helps-ensure-redevelopment](http://www2.epa.gov/brownfields/brownfields-environmental-insurance-helps-ensure-redevelopment)



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