

# Leadville, Colorado:

## *Moving Beyond the Scars of Mining, Integrating Remedial Design and Site Reuse*

### Introduction

Over the last two decades, the City of Leadville and Lake County, Colorado have worked through a period of profound economic change, proactively looking for new options and new directions for their future. As part of their efforts to restructure their historically mining-based economies, the communities have developed an innovative recreational reuse for a Superfund site that once threatened to limit local economic growth. Today, the 12.5-mile Mineral Belt Trail provides recreational opportunities for area residents and visitors, offers an important trail connector link, and commemorates the region's mining heritage. Twenty years ago, however, these communities were facing difficult choices and limited options.

Leadville, the seat of Lake County, located 100 miles west of Denver in the Rocky Mountains, was once part of the richest mining district in the world. The area's silver, gold, copper, zinc, manganese, and lead deposits sustained mining and smelting operations for more than 140 years. By 1987, however, when the area's largest remaining mine closed, Lake County had lost more than 85 percent of its tax base. In 1999, the area's last active facility, the Black Cloud mine, closed.

The mining district's soil, surface water, and sediments were heavily contaminated with lead, zinc, and other heavy metals. High lead levels in soils and mining wastes posed risks in residential and commercial areas, while acid mine drainage had taken a heavy toll on the Arkansas River, destroying native vegetation and wildlife habitat, and threatening downstream water supplies for recreation, livestock, irrigation, and public drinking. In September 1983, EPA added the California Gulch site to the National Priorities List (NPL). The 16.5 square-mile site encompasses 12 Operable Units (OUs) across the entire mining district, including the City of Leadville, a portion of Lake County, and two miles of the Arkansas River.

For nearly a decade, the community objected to the NPL designation. Beginning in the early 1990s, however, concern gave way to partnership when Asarco, one of the site's potentially responsible parties (PRPs), began working with the community and EPA to find remedies that would not only protect human health and the environment, but accommodate community goals.



In several consent decrees in the early 1990s, Asarco and other site PRPs formalized an agreement to work with the local community, EPA, and the State of Colorado to remediate the California Gulch NPL site.

Today, in place of an abandoned transportation corridor on the site, the nationally-recognized Mineral Belt Trail loops through the historic Leadville Mining District, coniferous forests, and open meadows, providing striking views of the Sawatch and Mosquito mountain ranges. The trail's design serves as part of the site's remedy – heavy metals were consolidated and capped along the old rail and haul road corridor. In winter, students from nearby Colorado Mountain College groom the trail for cross-country skiing, showcasing the area's alpine beauty. In all seasons, narrow-gauge railroad tracks and haul roads along the trail provide physical reminders of Leadville's mining heritage.

The trail connects Leadville's downtown area with local schools and churches, a hospital, and Colorado Mountain College, providing an important trail connector link for community residents. Since the Mineral Belt Trail's dedication in July 2000, EPA's Superfund Redevelopment Initiative (SRI) has awarded Lake County a \$100,000 pilot grant to support trail alterations and other reuse efforts within the site. The trail has become a key part of Leadville and Lake County's long-term strategies to restructure their historically mining-based economies and capitalize on new economic opportunities provided by recreation and tourism.

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This case study describes how multiple stakeholders worked together to create the Mineral Belt Trail, an effort that took more than seven years. The case study explores the roles of Lake County, the City of Leadville, EPA, Asarco and other PRPs, community residents, Colorado Mountain College, and a variety of federal and state agencies. It also highlights how strong community involvement, active PRP engagement, and effective grant writing can create powerful opportunities to enhance a community's quality of life and protect human health and the environment. The Mineral Belt Trail case study illustrates that strong relationships between stakeholders – through partnership, collaboration, and communication – are critical to successful site redevelopment.

In the following pages, the case study briefly introduces the area's history and then traces the development of the Mineral Belt Trail from its inception in 1993 through today. The case study is intended to provide site stakeholders interested in either the development of recreational trails or the reuse of abandoned mine lands with relevant information and lessons learned from the California Gulch experience.

### ***Comparison Between Demographics of Lake County and the State of Colorado (2000 Census Data)***

	Lake County	State of Colorado
Population	7,812	4,301,261
% Population Change, 1990-2000	0.6%	3.6%
Median Income	\$37,691	\$47,203
Median Age	35 years	33 years

### **Community Profile**

Perched at an elevation of 10,152 feet, Leadville (pop. 2,800) is the highest incorporated city in the country. Since 1859, when gold was first discovered along California Gulch, the community has endured several reversals of fortune tied to the booms and busts of the mining economy. In the 1860s and 1870s, Leadville was *the* place to go in the American West, as the area possessed one of the world's largest concentrations of base and precious metals, helping give rise to mining fortunes like the great Guggenheim fortune. Thousands rushed to the Leadville Mining District, panning the gulch and digging hundreds of underground mines to access the rich deposits of silver, gold, copper, zinc, manganese, and lead. In 1874, two veteran miners discovered lead-silver ore, and with the creation of the first smelter at California Gulch, the silver boom was on. By 1877, Leadville

### ***Partial List of Stakeholders/Involved Parties***

#### *Local Governments, Organizations, and Institutions*

City of Leadville  
Leadville School District  
Leadville Coalition  
Greater Leadville Area Chamber of Commerce  
Lake County  
Lake County Liaison  
Lake County Parks and Recreation  
Colorado Mountain College

#### *Site PRPs*

Asarco  
Union Pacific Railroad  
Resurrection Mining Co.

#### *Local Businesses*

Leadville, Colorado & Southern Railroad Co.  
Conlin Associates

#### *State and Federal Agencies*

Great Outdoors Colorado  
Colorado State Parks  
Colorado Dept. of Minerals and Geology  
Colorado Dept. of Local Affairs  
U.S. EPA  
U.S. Forest Service

#### *Private Landowners*

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was the largest silver-mining district in the country, and the largest city between St. Louis and San Francisco.

However, by the 1890s, mining had become more expensive. Mines were dug deeper and began to flood, forcing the mining companies to dig long tunnels to drain the acidic water into the gulches. In 1893, a silver-market crash ruined the local economy. In the early 20<sup>th</sup> century, Leadville's mining operations shifted to the processing of lead and zinc, and, decades later, molybdenum, a metal used in alloys, electrodes, and catalysts, at the Climax mine north of the city. In 1987, Leadville and Lake County suffered a devastating blow when the mine closed due to falling prices and foreign competition. "We became a blue collar town with no industry," said Leadville Mayor Chet Gaede, "We lost half of our population. Unemployment hit 40 percent. We went from having the second richest school district in the state to being in the bottom third."

Today, most of Leadville's and Lake County's revenues come from small businesses, tourism, and the employment of residents at the Vail and Copper Mountain ski resorts in adjacent Eagle and Summit counties. Leadville and Lake County have both pursued historical and recreational tourism to diversify the local economy and celebrate the region's mining heritage. "As early as 1963, economic studies said that we needed to diversify the economy," recalled Mayor Gaede. "We need to develop to our strengths, which are history and recreation."

The region's new emphasis on its mining heritage, tourism, and recreation has provided employment opportunities for long-time residents, whose families have lived in the area for three or four generations, and attracted newcomers drawn by work at the resorts.

Lake County began to position itself as a tourist destination in the 1970s, when it acquired the Ski Cooper skiing facility. In the late 1980s, the City and County convinced the National Mining Museum to locate in Leadville. In 1988, a local couple started the Leadville, Colorado & Southern Railroad Company, which provides train trips between Leadville and the Continental Divide along a segment of the old High Line route, to attract visitors interested in the area's history and scenery. Finally, in addition to creating recreational and historical attractions, the City and County are working with regional organizations and the

Project Timeline	
1859-1986	Leadville area mined extensively for gold, lead, silver, copper, zinc, and manganese
Dec. 1982	California Gulch proposed for listing on NPL
Sept. 1983	California Gulch site listed on NPL
1984	Remedial Investigation initiated
1986	Climax molybdenum mine closes
Early 1990s	Administrative Orders on Consent for Remedial Investigation/Feasibility Study of slag and waste piles
1993	Asarco funds Lake County Liaison to poll community on reuse ideas for site. Community survey supports development of a recreational trail system
1994	Sitewide Consent Decree / County obtains environmental and regulatory approvals for trail construction
1995	Construction begins on the Mineral Belt Trail
Jan. 1999	Leadville's last mine (Black Cloud mine) shuts down
July 2000	Mineral Belt Trail completed and dedicated
Nov. 2000	State request to EPA for partial deletion of Mineral Belt Trail from site

Colorado Workforce Board to convince nearby ski resorts to move their administrative offices to Leadville.

The City of Leadville and Lake County have pursued their new economic development strategies both before and after the listing of the California Gulch site on the NPL in 1983, which led to

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widespread community concern. Some local residents believed that EPA's boundaries for the site unnecessarily included the entire City of Leadville. Other residents requested that EPA address community concerns and provide additional health and safety information.

It was not until the early 1990s that the reuse of the California Gulch site became a possibility. Spurred by innovative local leadership and the involvement of Asarco, one of the site PRPs, the site could begin to be considered as a potential economic, cultural, and community resource. Community residents and local officials, working with Asarco and other site PRPs, EPA, and other state and federal agencies, developed site reuse options – including the Mineral Belt Trail – that would protect the site remedy and provide community benefits. Over the next seven years, the community worked with these partners to make reuse at the California Gulch site possible and to transform the Mineral Belt Trail from an idea into reality.

### Project History

#### 1993 - 1994

#### *Getting Started: Innovative PRP Leadership, Evolving Partnerships*

Asarco, one of the PRPs at the California Gulch Superfund site, was the catalyst for the creation of the Mineral Belt Trail. In 1994, Asarco and another site PRP, the Resurrection Mining Company, signed a consent decree with EPA to clean up portions of the California Gulch site.

Looking for ways to satisfy Asarco's legal responsibilities and enhance its community image, two mine managers, Mike Lee and Sid Lloyd, along with their public relations liaison, Tom Cherrier, approached County Commissioners to find ways that remediation could provide long-term benefits for the community. In 1993, nearly a year before the consent decree was signed, Asarco funded a group called the

#### *The Mineral Belt Trail Route*

To ensure community access from different areas, the Mineral Belt Trail has six trailheads. From the Dutch Henry Mill trailhead just north of Colorado Mountain College's Timberline Campus (see map below), the Mineral Belt Trail winds southward behind the campus into Leadville's historic mining district. The trail then crosses replicas of early railroad bridges on East 5th and East 7th Streets and proceeds eastward to Iron Hill, northward to Evans Gulch, and on to an area known as "Poverty Flats" before heading westward into downtown Leadville, passing the Lake County Public Library and the Lake County Intermediate School, on the way back to the Dutch Henry Mill trailhead.

Along the trail, there are interpretive areas, including old mine dumps, plugged mine shafts, towering headframes, and the remains of 19th century cabins and other mine-related structures. West of Colorado Mountain College are several fixed, mounted viewing scopes, each labeled with the name of the peak visible through its sights.

#### Mineral Belt Trail Map

*(trail passes through four site OUs – OU 9 is designated as all populated areas)*



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Lake County Liaison to recommend ideas for the site's reuse. The group comprised seven individuals representing business, government, and community interests.

With the help of planning consultant Mike Conlin, a long-time Leadville resident, the group polled the community using surveys published in the two Leadville newspapers and "wishing wells" stationed at local stores. Initial ideas included mining tours, a bobsled run, and riparian restoration, but "the overwhelming response was for a multi-purpose trail that would highlight and showcase Leadville's mining history," said Conlin, who shepherded the project from conception to completion.

Asarco provided the funding for Conlin to develop the Lake County Bicycle Trail Master Plan, which mapped out trails around the community. Five of the trails radiated out from the proposed Mineral Belt Trail, which looped through Leadville, Lake County, and the California Gulch site. The development of the final Mineral Belt Trail route, however, required the creation of new partnerships.

During the creation of the Trail Master Plan, Asarco was looking for additional partners to share responsibility for the trail's development and costs. The Leadville Coalition, a consortium of taxing entities in Lake County, represented an established local partnership opportunity. Conlin, with Asarco's consent, began to work with the Coalition when the Lake County Liaison ceased operating because of changes in personnel.

With the support of Asarco and the Leadville Coalition, Conlin presented the Trail Master Plan to the community in a series of agency and public meetings. Based on these meetings, the community identified the Mineral Belt Trail as the most feasible of the trail options. The community determined that the trail best highlighted downtown Leadville and the area's mining heritage.

Following the public meetings, Lake County agreed to take ownership of the trail and steward the funding and development process. "It was a gutsy move by the County," recalled Conlin.



**Elevated Section of the Mineral Belt Trail**

"The County had become very poor when Climax closed seven years earlier. But they knew they had to make an investment in our future." Beginning in early 1994, Conlin and the County worked with the Colorado Department of Local Affairs on the trail's early design. The department also provided two interns who worked with Conlin to locate the trail alignment, grade, and other specifications along old railroads and haul roads. In addition, the regional office of the U.S. Forest Service provided GPS survey training and equipment. Although the Forest Service did not have an official obligation at the California Gulch site, the agency recognized that the Mineral Belt Trail could eventually link with trails to Turquoise Lake and Twin Lakes in nearby national forests.

Working with the assistance of these agencies and Friends of the Trail, a community group that held monthly meetings and wrote newspaper articles to keep the community informed about the trail's progress, Conlin and Lake County prepared the Mineral Belt Development Plan. The Plan laid out the trail's design and inventoried environmental and cultural resources. By late 1994, Asarco's initial leadership and community outreach and Lake County's sustained support had resulted in finalized plans for the creation of the Mineral Belt Trail.

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**1994 - 1995**

#### ***Addressing Environmental and Cultural Concerns, Meeting Regulatory Requirements***

Lake County's design plans for the Mineral Belt Trail had to meet state and federal environmental and cultural requirements. Before any dirt could be turned, the County and Asarco first had to convince EPA that the trail itself could serve as part of the site remedy – the trail could provide a way to consolidate and cap the contamination along the old transportation corridor. EPA established a threshold for heavy metals and agreed that the trail would break the pathways of exposure. From the outset, EPA

with six inches of gravel, and topped by three inches of asphalt. The trail design was capped to a total width of 18 feet – 12 feet of asphalt plus three feet of gravel shoulders on either side. To protect the safety of trail users and the integrity of the remedy, the Mineral Belt Trail does not permit the use of motorized vehicles.

The County also had to address the environmental and cultural concerns of other agencies. The County had to demonstrate to the U.S. Army Corps of Engineers that the trail would not harm adjacent wetlands and streams. Because Leadville is a National Historic District, the County also had to complete a cultural resource inventory and cultural resource mitigation plan to meet requirements of the National Historic Preservation Act. Finally, the County had to reassure the American Council for Historic Preservation and the Colorado State Historical Preservation Office that the trail would preserve historic assets.

Asarco and the Forest Service funded the cultural and historic resource inventory along the proposed trail corridor. “Part of the history was in the grade that the narrow gauge of the railroads could handle. We had to protect the integrity of the grades and alignments,” explained Conlin, who oversaw the development of the inventory. “We also agreed to use interpretative signs so that people could understand the historical significance of the old railroads.” In addition, a tight construction footprint was required in order to minimize impact to nearby environmental, cultural, and historic resources.



**A Mining Headframe Along the Mineral Belt Trail**

site Remedial Project Managers (RPMs) Rebecca Thomas and Mike Holmes were willing to consider site remedy options that integrated reuse opportunities. The site RPMs also evaluated and enabled the accelerated cleanup of parts of the California Gulch site so that the Mineral Belt Trail could become a reality. “Cleanup at Superfund sites can very often accommodate recreational reuses, whether a trail, soccer field, or baseball field,” said Holmes. “These types of reuses are particularly non-intrusive to remediation at sites.”

The County's resulting trail design left contaminated soil in place and shaped it to form a platform. The platform was covered

**1995 - 2000**

#### ***Moving Forward: Addressing Land Ownership and Financing Concerns, Building the Trail***

Once the regulatory hurdles had been cleared, remediation on portions of the site and construction on the Mineral Belt Trail could begin. Between 1995 and 2000, as the trail's 12.5-mile construction proceeded, Lake County stewarded the process through three major challenges: the resolution of land ownership and liability issues, funding limitations, and the construction process.

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#### *Land Ownership and Liability Issues*

The most time-consuming and complex challenge for the project was the resolution of land ownership issues and old mining claims. The trail's proposed route fell entirely on private land owned by the mining and railroad companies, individual owners, and public entities, such as the local school district, college, and sanitation district. About one-third of the proposed trail, for example, belonged to 120 individuals that owned mining claims or fractions of claims handed down over generations.

To resolve land ownership issues, Conlin and Lake County Assessor Howard Tritz researched and contacted all property owners along the trail's proposed route. Property owners were provided with information about the trail and Lake County requested permission to establish an initial 50-foot-wide construction easement that would be reduced to a 25-foot-wide trail easement on their properties following completion of the trail's construction. At two properties where the trail's proposed route would have limited the land's existing uses, property owners and the County exchanged parcels of land. "There was a lot of positive interest in the trail from property owners, a sense of community pride in the project," recalled Conlin. "There was also a group of property owners that were unaware that they even owned property in the area and they were generally very interested in the trail's development." Ultimately, all property owners agreed to donate the necessary land or contributed property easements to the project.

Other private and public entities also recognized the value of the trail and supported it through land donations, easements, and the sharing of expertise. The Leadville, Colorado & Southern Railroad Company donated 7.3 miles of the old Mineral Belt Railroad mainline and spur lines. Colorado Mountain College, the Leadville School District, and the Leadville Sanitation District each donated land for trail development and construction of trailhead parking. Other local and state organizations donated project oversight and administration services.

Site PRPs also recognized that the Mineral Belt Trail provided an opportunity to address their liability concerns. Resurrection Mining Company, for example, eliminated its liability by signing a Consent Decree with Asarco and EPA that, in addition to assessing cleanup costs, required that the company donate land

to the County, provide construction equipment and labor, fund environmental studies, and stabilize slopes within its property. Another site PRP, the Denver & Rio Grande Railroad, spent several years negotiating with the County over access rights to a 1.8-mile corridor section. The railroad company was reluctant to cede access rights to the corridor because the corridor was its only access point in the region.

When, following a series of mergers, Union Pacific obtained the Denver & Rio Grande Railroad's former corridor section, Union Pacific, which has multiple access corridors in the region, recognized the opportunity to eliminate its liability by donating the land to Lake County without jeopardizing its regional route system. In a 1998 Memorandum of Understanding, Union Pacific, Lake County, and EPA agreed that the fine slag along the track would be capped and incorporated into the Mineral Belt Trail. Lake County assumed responsibility for the track's long-term maintenance. Union Pacific agreed to donate land and paid for gravel, culverts, and paving.

#### *Funding Opportunities*

The development of funding sources and the leveraging of local resources were both critically important components of Lake County's approach to the creation of the Mineral Belt Trail. To fund the trail's construction, Lake County used the Lake County Bicycle Trail Master Plan and the Mineral Belt Development Plan to attract initial grants. Based on the two plans, the State of Colorado and the Intermountain Transportation Planning Commission gave the trail the highest priority for Transportation Enhancement dollars provided by the federal Intermodal Surface Transportation and Efficiency Act (ISTEA) of 1991 – reauthorized in 1998 as the Transportation Equity Act of the 21<sup>st</sup> Century (TEA-21). The county received \$183,000 for initial trail construction from these sources and supplemented this funding with \$350,000 in grants from Great Outdoors Colorado, a state program that dedicates a portion of state lottery proceeds to projects that enhance Colorado's parks, trails, and open spaces.

Lake County provided \$550,000 for road and bridge crews and construction equipment, as well as a \$116,000 cash match for grants and planning. Finally, the \$100,000 that the County received from the Superfund Redevelopment Initiative in July 2000 is being used partly to fund trail alterations and planning

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#### *Economic, Social, and Environmental Site Reuse Benefits*

- Increased local business and tax revenues from tourism
- Downtown trail connector link for Leadville residents
- Quality-of-life benefit for Leadville residents from world-class recreational amenity
- Regional resource that commemorates the area's mining heritage
- Site remedy safeguards human health and the environment, including the protection of local streams from further contamination

for additional reuse opportunities. The end result: for every \$1 the county invested in services and cash, it was able to leverage \$3.50 in grants, donated land, and services.

Lake County's emphasis on the development of funding sources and the leveraging of local resources meant that the County could successfully negotiate land transfers, including property acquisitions, donations, and easements. The availability of funds meant that the County had the resources to provide for the long-term maintenance of properties transferred from site PRPs. In turn, site PRPs were able to reduce or eliminate their site liability concerns by working with Lake County and EPA. In total, Lake County's efforts meant that costs associated with the creation of the Mineral Belt Trail could be minimized. Altogether, the Mineral Belt Trail is valued at approximately \$3 million, which includes the value of donated land and construction costs.

#### *Remediation and Trail Construction*

EPA's remediation work at the site included trail clearing and grading, the provision of fill material, and assistance with environmental planning and permitting. "It was very important to see the trail as part of a larger remediation effort," said site RPM Mike Holmes. "For example, we needed to make sure that water runoff from the bike trail would not affect the surrounding area and vice versa. You need to look beyond the boundaries of the reuse and see the whole picture." EPA also stabilized historic mining structures along the trail corridor as

part of its remediation work.

Construction presented a number of technical challenges. The Colorado Division of Minerals and Geology used the Mineral Belt Trail to prioritize its ongoing efforts to plug abandoned mine shafts. The agency plugged 35 shafts, sweeping out to 200 feet on either side of the trail. The community had also indicated that 100 percent of the trail should be accessible to disabled patrons. This requirement added about two miles to the trail, as grades were not permitted to exceed five percent. The design change also helped to control erosion and enabled the trail to better blend into its surroundings. The County and its partners completed paving the trail days before its grand opening in July 2000.

#### **2000 - Today**

#### *Building on Success: Trail Dedication and New Partnerships*

The Mineral Belt Trail was dedicated on July 29, 2000. In 2002, the Secretary of the Interior and the National Park Service Director designated the Mineral Belt Trail as a National Recreational Trail, providing national recognition. EPA is currently considering a request from the State of Colorado to delist the portions of the California Gulch site that have been remediated as part of the Mineral Belt Trail.

Since the trail's dedication, it has become an integral part of the Leadville community. Community residents walk, bike, and cross-country ski along the trail, using it as a connecting link between the downtown area and the local hospital, schools, and churches. Area schoolchildren learn about the region's mining heritage during class visits. Today, according to *Colorado Central* magazine, "the Mineral Belt Trail is already gaining a reputation as one of Colorado's finest non-motorized trails."

The innovative partnerships and remedial solutions that helped to create the Mineral Belt Trail have also come to serve as a demonstration for other projects in the region, including the Eleven-Mile Reach, where cleanup efforts along the Arkansas River have been enhanced by an innovative voluntary partnership involving EPA, mining companies, and the Public Trustees for Natural Resource Damages Assessment.

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Finally, Leadville and Lake County have also been able to build on the remediation and reuse process at the California Gulch site to expand the local community's economic capacities and technical expertise. Colorado Mountain College, for example, has an ongoing contract with EPA to remediate and monitor portions of the site. Leadville-based Conlin Associates, the primary consultant for the trail and recreation area, has developed an expertise in recreational trail planning. Lake County has contracted with federal and state agencies to provide remediation and reuse services based on its involvement at the California Gulch site.

#### **Challenges and Keys to Success**

Today, the Mineral Belt Trail provides recreational opportunities for the local community and visitors, offers an important trail connector link, and commemorates the region's mining heritage. Over the course of seven years, the local community worked with site PRPs and EPA to develop a trail that meets residents' needs *and* serves as a site remedy.

The development of the Mineral Belt Trail required sustained hard work and dedication from a wide range of local, regional, and national stakeholders. These stakeholders also had to address a range of difficult political, financial, environmental, and legal challenges. At the outset, the listing of the California Gulch site on the NPL had created a distrust of EPA in the local community due to EPA's inclusion of Leadville within site boundaries and limited communication. Early attempts to develop community-based redevelopment organizations were threatened by financial limitations and changing personnel. Finally, throughout the trail's actual development between 1995 and 2000, land ownership disputes and PRP liability concerns slowed Lake County's ability to transform the abandoned rail corridor into a vibrant trail network.

Alongside these challenges, a wide range of factors contributed to the successful creation of the Mineral Belt Trail. Asarco, the site's active and engaged PRP, championed reuse efforts at the site and funded the trail's development from the outset. Asarco focused on the needs of the community and worked with local leaders and consultants to develop trail options. Local consultant Mike Conlin donated time and resources and provided continuity

for the project over seven years, through four county administrations as well as EPA and site PRP staff changes.

Equally important, Lake County's offer to assume ownership of the trail and oversee its funding and development provided a dedicated local project champion that could work with diverse project stakeholders over an extended period of time. In addition, EPA's consideration of innovative remediation options meant that the trail's design could actually serve as part of the site remedy by consolidating and capping contamination along the old transportation corridor.

Perhaps most importantly, effective partnerships and the commitment of individuals were instrumental in the design and execution of the site's remediation and the creation of the Mineral Belt Trail. The partnerships between the City of Leadville, Lake County, EPA, and Asarco, for example, enabled all of the organizations to work together to address the community's preference that the reuse effort at the California Gulch site preserve and protect historical and natural assets. "We were afraid that cleanup, by removing and consolidating piles, would distort what happened here," said Bill Collins, a County land use planner. However, once remediation began, the EPA worked with stakeholders to find remedies that accommodated cultural and historic preservation priorities. As Karmen King, manager of the Natural Resource Management Program at Colorado Mountain College, recalled, "I've worked at 140 mining sites. The one thing that stands out here is the care and attention given to cultural and historic resources, including the tailings piles."

In addition, Lake County would not have been able to pay for the Mineral Belt Trail without outside support – federal and state grants, land donations, and technical assistance. Lake County worked with Conlin to develop strong grant applications and developed relationships with regional representatives of federal and state agencies, who have access to otherwise unavailable information. "If you go to any grant class, they say the same thing," said County Administrator Cathy Patti. "You get money because you've built relationships. The regional offices are key. Rebecca [Thomas] and Mike [Holmes] at EPA's regional office told us about the SRI grant and our local council of government wrote the grant application. You need to solicit EPA's input before you submit the grant. If they have to defend it, they have to understand it and buy into it."

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Finally, EPA site RPMs Rebecca Thomas and Mike Holmes emphasized the importance of site remedy options that integrated reuse opportunities. They also enabled the accelerated cleanup of parts of the California Gulch site so that the Mineral Belt Trail could become a reality. The site managers not only understood the site's technical remediation requirements, but worked extensively with the local community, were open to input, and built trust with the stakeholders at the site. "Mike and Rebecca actually started looking for ways to not just meet the technical requirements for controlling runoff of a particular tailings pile, for example, but how to make the remediation a long-term benefit to the community," said Conlin. The trail allowed EPA to become a community partner and work as part of a greater community effort.

#### Conclusions

The Mineral Belt Trail illustrates that reuse can provide a bridge between cleanup efforts and community capacity-building. The partnerships that developed during more than seven years of planning and trail design worked because a wide range of stakeholders set aside potential differences and focused on common goals. At the end of the process, the site's resulting reuse has improved the quality of life for residents while protecting human health and the environment. The trail also advances economic and community development goals that will forge a new cultural and economic identity for the City of Leadville and Lake County in the years ahead.

Equally important, the dedication of the Mineral Belt Trail in July 2000 did not mark the end of the process. Today, the partnerships formed and the lessons learned during the creation of the trail are helping to build new local capacities, establish new partnerships, and develop new ways to sustain the local economy and commemorate the region's rich mining heritage. In the City of Leadville and Lake County, Colorado, the successful remediation and reuse at the California Gulch NPL site represents new opportunities, new community-wide benefits, and a renewed sense of possibility.

**Case Study Sources:** Photos and maps for this case study were obtained from EPA, the Greater Leadville Department of Commerce, and the National Recreational Trails Program.

#### *Lessons Learned*

- Strong leadership from Asarco and Lake County provided resources for local community involvement and helped focus community discussions on reuse opportunities and the economic, transportation, historical, and recreational benefits that could be provided by a new trail system.
- Lake County successfully leveraged funding resources through adept grant-writing and strong relationships with federal, state, and regional representatives.
- EPA's site RPMs emphasized the importance of integrating community needs and site reuse options with the site's remedy requirements throughout the process. EPA's approach also reduced PRPs' remediation costs and protected human health and the environment.
- The community's focus on the portions of the California Gulch site suited to recreational reuse accelerated remediation and reuse planning efforts and raised community awareness.
- As plans for reuse moved forward, sustained community involvement was critically important. Asarco, Lake County, and EPA each acknowledged the importance of soliciting community ideas for reuse options and involving the community from the beginning.
- The development of successful working relationships at the California Gulch site has in turn spurred the creation of new partnerships at other projects.

#### Resources

Superfund Redevelopment Initiative:

[www.epa.gov/superfund/programs/recycle/index.htm](http://www.epa.gov/superfund/programs/recycle/index.htm)

EPA Region 8:

[www.epa.gov/region8](http://www.epa.gov/region8)

National Recreational Trails Program:

[www.americantrails.org/nationalrecreationtrails/default.htm](http://www.americantrails.org/nationalrecreationtrails/default.htm)

Leadville Mineral Belt Trail site:

[www.leadvilleusa.com/Fun/mbtrail/mbtrail.htm](http://www.leadvilleusa.com/Fun/mbtrail/mbtrail.htm)

U.S. Department of Transportation Recreational Trails Program:

[www.fhwa.dot.gov/environment/rectrail.htm](http://www.fhwa.dot.gov/environment/rectrail.htm)