



Superfund
Redevelopment
Initiative

SITE REDEVELOPMENT PROFILE

Bunker Hill Mining & Metallurgical Complex Superfund Site

Northern Idaho



The Silver Mountain Resort and the Kellogg skyline. (Source: EPA)

Site Location: Northern Idaho, east of the city of Coeur d’Alene

Size: Over 1,500 square miles

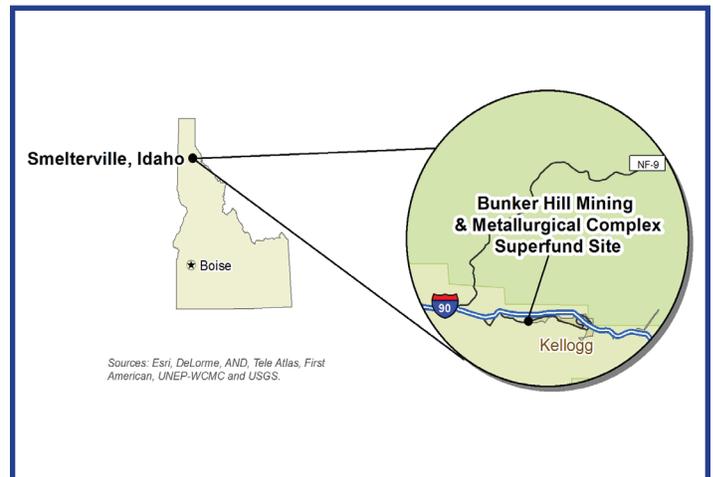
Existing Site Infrastructure: All major types of infrastructure are located on site.

Current Site Uses: The site supports a wide range of commercial, industrial, public service, residential and recreational uses.

Use Restrictions: The Idaho Panhandle Health District (Idaho PHD) manages the site’s unique and comprehensive institutional control program (ICP). The ICP ensures the compatibility of future uses with the remedy and helps maintain protective barriers across the site. It regulates and provides assistance for all construction projects within designated boundaries. No homes or businesses are built on site without ICP involvement.

Surrounding Population: The site includes mining-contaminated areas in the Coeur d’Alene River corridor, adjacent floodplains, downstream water bodies, tributaries and fill areas as well as the 21-square-mile Bunker Hill Box (referred to as “the Box”), which surrounds the area of historic smelting operations. Operable unit 1 (OU1) includes populated areas of the Box. OU2 includes non-populated areas of the Box. OU3 addresses mining-related contamination in the broader Coeur d’Alene Basin. In total, the site spans 1,500 square miles and 166 river miles, across several counties. The Box is located in Shoshone County, Idaho. About 12,500 people live in Shoshone County.

The Coeur d’Alene Basin in northern Idaho is one of the largest historic mining districts in the world. Over 100 years of commercial mining, milling and smelting resulted in the widespread contamination of soil, sediment, groundwater and surface water in the area now known as the Bunker Hill Mining & Metallurgical Complex Superfund site. Extensive cooperation and collaboration among the U.S. Environmental Protection Agency (EPA), the Idaho Department of Environmental Quality (IDEQ), Idaho PHD, and other local and state agencies resulted in the remarkable cleanup and revitalization of this former industrial site. Today, the area provides a wide range of employment and housing options as well as recreational and public service amenities.



Sources: Esti, DeLorme, AND, Tele Atlas, First American, UNEP-WCMC and USGS.

Location of the site in Northern Idaho.

SITE HISTORY AND REDEVELOPMENT TIMELINE

1883	Mining operations began at the site.
September 1973	A fire destroyed the baghouse and the primary emissions control for the lead smelter.
1974	EPA initiated emergency response actions at the site to address elevated blood lead levels in children living on site.
1981	Smelter operations ceased.
September 1983	EPA added the site to the NPL and began early cleanup efforts.
Late 1980s/ Early 1990s	Most large-scale mining on site had stopped.
1987	The city of Kellogg began to pursue redevelopment opportunities for cleaned-up parts of the site.
1991	EPA selected the first of several long-term cleanup plans to address site-related contamination; remedy implementation began.
1995	Idaho PHD partnered with federal and local agencies to create the ICP.
2004	Resort development and refurbishment of existing infrastructure started.
2005	The new Shoshone Medical Center opened on site.
2008 - 2010	Construction completed for Silver Mountain Resort amenities, including the Silver Rapids Waterpark and Galena Ridge Golf Course.
2015	EPA presented wetland habitat project stakeholders with the Howard Orlean Excellence in Site Reuse Award.
2018	Cleanup is ongoing. Children's blood lead levels near national averages.

“Community leaders in the Silver Valley have known from very early on that the long-term success of the cleanup would depend on economic revitalization. The establishment and acceptance of the ICP is a key factor in not only protecting the remedy but ensuring the economic development future of the Silver Valley communities.”

– Andy Helkey, PHD ICP Program Manager

Tailings – generated by the milling of ore, waste rock and air emissions from smelter operations – served as the primary source of contamination at the site. Until as late as 1968, mining operations included the disposal of tailings into the South Fork of the Coeur d’Alene River and its tributaries. These wastes have spread through more than 160 miles of the Coeur d’Alene and Spokane rivers, lakes and floodplains. Over time, groundwater also became contaminated. Ore processing facilities in Kellogg and Smeltonville also impacted air quality and other media through air emissions.

EPA added the site to the Superfund program’s National Priorities List (NPL) in 1983. EPA, IDEQ and Idaho PHD have been working at the site since the mid-1980s to remove lead-contaminated soil and gravel from residential properties, churches, schools, parks, businesses and rights-of-way. Cleanup has also included consolidation and capping of waste rock, mine tailings and contaminated soil and sediment, capture and treatment of mine drainage, creek reconstruction, demolition of abandoned milling and processing facilities, revegetation efforts, ecological restoration, and treatment of contaminated groundwater. Cleanup is ongoing.

In 1987, the city of Kellogg began to pursue redevelopment opportunities for cleaned-up parts of the site. However, getting liability protections for developers was a complex and often lengthy process. To address this, Idaho PHD partnered with federal and local agencies in 1995 to create a comprehensive ICP. It works through existing local administrative procedures and programs and plays a major role in protecting public health. Through the ICP, Idaho PHD educates local communities and visitors about the risks associated with site-related contamination and how to safely enjoy the natural environment. It also helps area communities maintain protective barriers and ensures the compatibility of future uses with the remedy. The ICP also addresses developer and lender concerns and continues to help facilitate site redevelopment. Panhandle Health District offers free blood lead screening for young children each year. Over the years, the concentration of lead in the blood of local children has been reduced by more than



Waterfowl in restored habitat. (Source: EPA)

50%, from historically high levels to below the Centers for Disease Control and Prevention’s current reference level of 5 micrograms/deciliter.

Today, the site supports a wide range of commercial and industrial businesses, public services, and housing. For example, Silver Mountain Resort – a year-round destination offering a wide range of recreation opportunities to locals and visitors of all ages – is located on site. In addition to skiing, snowboarding and snow tubing, the resort includes the Morning Star Lodge, Galena Ridge Golf Course, miles of bike trails and Silver Rapids, Idaho’s largest indoor water park. In 2017, businesses in the Bunker Hill Box employed over 2,800 people.

Redevelopment projects such as Silver Mountain Resort have attracted people to the area. New arrivals invest in homes and start businesses, bolstering the economy. With limited developable land in the area, newcomers often purchase and renovate older homes, improving neighborhoods and raising property values. The extensive cleanup of residential properties across the site has also enabled thousands of people to remain in their homes.

Cleanup has also resulted in significant ecological benefits. For example, in 2011, EPA and other project stakeholders completed the conversion of nearly 400 acres of once-contaminated agricultural land in the lower Coeur d’Alene River Basin into thriving wetland habitat. The area’s cleanup and restoration reduced waterfowl exposure to toxic levels of heavy metals; monitoring data show that the remediated and restored habitat is attracting some of the highest levels of waterfowl usage,

waterfowl feeding and waterfowl diversity in the Coeur d’Alene River Basin. In August 2015, EPA Region 10 presented the Howard Orlean Excellence in Site Reuse Award to project stakeholders in recognition of their care of and commitment to their land.

Site restoration also included the successful revegetation of hillsides across the site. The use of native plants and trees during revegetation efforts created habitat for wildlife and pollinators. A wide range of wildlife has returned to the site following the cleanup. Cleanup of a former rail line in 2004 enabled the creation of the Trail of the Coeur d’Alenes, a 72-mile paved bike trail that passes through the site. In 2012, the Rails-to-Trails Conservancy named it one of the 25 top trails in the nation. In addition to recreation opportunities provided by Silver Mountain Resort and the Trail of the Coeur d’Alenes, the site offers a wide range of other recreation amenities, including playgrounds in restored residential areas and opportunities for fishing, boating and hiking.

Local government officials and residents continue to work together to support site development efforts and attract new investment to the area. Shoshone County Commissioners have developed a multi-pronged approach to meet infrastructure improvement goals, including the installation of broadband Internet service in the area, expansion of Shoshone County Airport and improvement of labor force training opportunities. The successes at the Bunker Hill Mining & Metallurgical Complex Superfund site are an example of what can happen when future site use is considered early in the cleanup process and when stakeholders commit to developing a shared vision for a safe and economically sustainable future.



Restored stream and shore at the site. (Source: EPA)



A moose on the Coeur d'Alene bike trail. (Source: EPA)



A hillside on the site after restoration. (Source: EPA)



Entrance to the Morning Star Lodge. (Source: EPA)

“We have to focus on the positives of being a Superfund site. While it has not been without challenges, we came together as a unique community and seized the opportunity to turn our area around and promote the positives. We have a beautiful area to call home, enjoy the outdoor lifestyle and build the economy around.”

– Colleen Rossen, Director, Historic Silver Valley Chamber of Commerce

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In May 2017, EPA established a task force to restore the Superfund program to its rightful place at the center of the Agency's core mission to protect health and the environment.

epa.gov/superfund/superfund-task-force