



PRELIMINARY REUSE INVESTIGATION
EUREKA MILLS SUPERFUND SITE

Prepared by
E² Inc.
November 2003

Funded by
US EPA Abandoned Mine Lands Team





PROJECT SCOPE

US EPA's Abandoned Mine Lands Team (AMLT) is committed to developing creative solutions to the problems posed by the large number of abandoned mine lands across the United States. In September 2003, the AMLT asked the consulting firm E² Inc. to perform a preliminary assessment of reuse planning opportunities at the Eureka Mills NPL site in Eureka, Utah. This report summarizes E² Inc.'s preliminary findings, based on the firm's background research and a site visit on October 14th and 15th, 2003.

The City of Eureka faces many of the same challenges encountered by other small, rural mining communities. In addition to the site's contamination and remediation, the community must deal with a near complete erosion of its economic base. The lack of a primary employer, along with an eroded tax base, creates a serious stress on the local government's ability to provide basic services, like zoning code enforcement and infrastructure improvements. In addition, the community lacks an array of basic private-sector services (i.e., a grocery store, pharmacy, doctor's office).

While Eureka faces substantial challenges, there are a number of existing local assets that can serve as the basis for revitalizing the economy and preserving the community's future. Residents in Eureka cherish the high quality of life that they have come to enjoy in the community. This love of community, combined with the area's natural beauty, nearby recreation opportunities, and the region's mining heritage, can provide the framework for the restoration of Eureka's economic vitality.

The contents of this report include:

- Community Revitalization: 5 Steps Toward a New Future
- Immediate Actions: The Future is Now
- Site Background
- Eureka's Economy + Demographics
- Acknowledgements

"Curious children...perch on fence rooftop and window sill to survey the afternoon action." Circa 1898 image of Bullion Beck and Gimini Mines shot from railroad grade. (Tintic Historical Society)



COMMUNITY REVITALIZATION

5 STEPS TOWARD A NEW FUTURE

Remnant Head Frame. Structures such as these are scattered throughout Eureka and serve as proud reminders of Eureka's mining heritage.

CELEBRATE THE MINING HISTORY

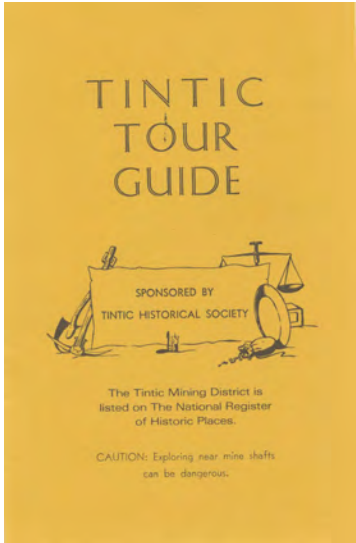
- Restore and preserve Eureka's historic mining structures, including all head frames, mine shafts and building structures. Cover existing mine tailing piles with rock, rather than removing them, to preserve the historic appearance.
- Explore funding resources for restoring and securing Eureka's historic structures and features, including grants that may be available due to Eureka's National Historic Registration status.
- Explore opportunities for obtaining Historic Preservation Tax Credits for restoring historic buildings.
- Partner with nearby mining towns and museums to establish a regional mining tour of the Tintic Mountains.
- Tell the story of former mining operations by displaying interpretive signage at each remnant mining structure or feature.
- Provide the public with access to key historic structures and features rather than fencing them off and keeping people at a distance.
- Create a public relations pamphlet that provides information on Eureka and the Historic Tintic Tour. Distribute the pamphlets to hotels and tourist centers in Provo and Salt Lake City.
- Create a website for the town and the Eureka Mining Museum that describes the cultural and historical amenities to attract non-local tourists.
- Create a mechanism to financially support the upkeep of historic structures and features, as well as the daily operation of the Eureka Mining Museum.
- Identity neighborhoods by their historic structures and features. For example, in future planning efforts name the various neighborhoods in Eureka after the historic features that exist nearby, such as Chief Tailing Neighborhood or Eureka Hill.



REVITALIZE THE MAIN STREET DISTRICT

- Create a Downtown Arts and Historic District. The District could extend from the location of the Eureka Mining Museum west to Billy's Café and Gallery. Other facilities could include a bed and breakfast, a saloon, or bike shop.
- Invest in restoring historic buildings and building facades along the western end of Main Street, including the Gatley Building, the Company Store, and the Oxford.
- During the summer, hold an annual Tintic Arts and Mining Festival to attract visitors to the Main Street District and the Tintic Mining Area.
- Participate in the National Historic Trust's Main Street Program (<http://www.mainstreet.org/About/faq.htm>) which provides resources and guidance to encourage local revitalization efforts.
- Consider creating a special fund for downtown infrastructure improvements out of property tax increases as properties are revitalized.





CREATE AND EXPAND RECREATIONAL OPPORTUNITIES

- Once the site's remediation is completed, turn haul roads constructed for remedial purposes into a looping trail system for hikers, bikers, and ATV users. Provide trail information and maps at the Eureka Mining Museum on Main Street.
- Create a Tintic Trail Tour by connecting trails within the community to trails throughout the region.
- Promote recreational opportunities with a "Trail Guide to the Tintic Mountain Area and Little Sahara" in order to attract recreationists who currently travel through Eureka en route to the area known as Little Sahara. Provide copies of the guide to local recreation shops in Provo and Salt Lake City. Coordinate the recreational trail guide with the historic Tintic Tour guide.
- Identify other nearby amenities for hiking, fishing, sightseeing, hunting and skiing, which may also encourage tourism to the area.





EXPLORE WIND ENERGY POTENTIAL

- Regional wind maps suggest that the Juab County area has limited potential for wind energy generation, but comments made by locals and contractors indicate that the local micro-climate may support power generation from several wind turbines.
- A preliminary wind study could be conducted at a minimal cost with a small grant and the cooperation of the local high school. The high school is already conducting wind monitoring for the US EPA. Several anemometers could be placed at appropriate points along the ridges and students could assist in data collection.
- Eureka's existing infrastructure is a critical component of successful wind power generation and distribution. This existing infrastructure, along with the local winds, are an asset that the community should capitalize on.
- Real property taxes and land rents generated from the placement of wind towers by private developers could produce significant revenues for the local government without the need for capital investment.
- The placement of several wind turbines along the ridges of the valley, combined with an effort to restore the mine head frames would create a striking visual image. This physical juxtaposition of past and future would create a marketable image of the community that would attract tourism.




ENHANCE THE CAPACITY OF LOCAL GOVERNMENT

- Many structures in the community are decaying as the result of long-term neglect. The ability of local government to compel property owners to maintain and secure structures in order to help stabilize property values and discourage blight is critical.
- Identify grants or other sources of funding to assist the local government in obtaining adequate surveying data on properties in the community.
- Assist the local government in acquiring and returning abandoned properties to productive use.
- US EPA's remedy calls for capping significant quantities of contaminated soil in place and relying on institutional controls (ICs) to maintain the remedy's protectiveness. The local community does not currently have the capacity to enforce ICs. US EPA and the State of Utah should develop a long-term funding plan to support the creation of a local planning position that could enforce ICs and help the local community address other planning and enforcement issues. This planner should be a Eureka employee, funded through a contract between the City, US EPA, and the State of Utah.





National Register



Utah Historic Site

BULLION BECK AND CHAMPION MINING COMPANY HEADFRAME

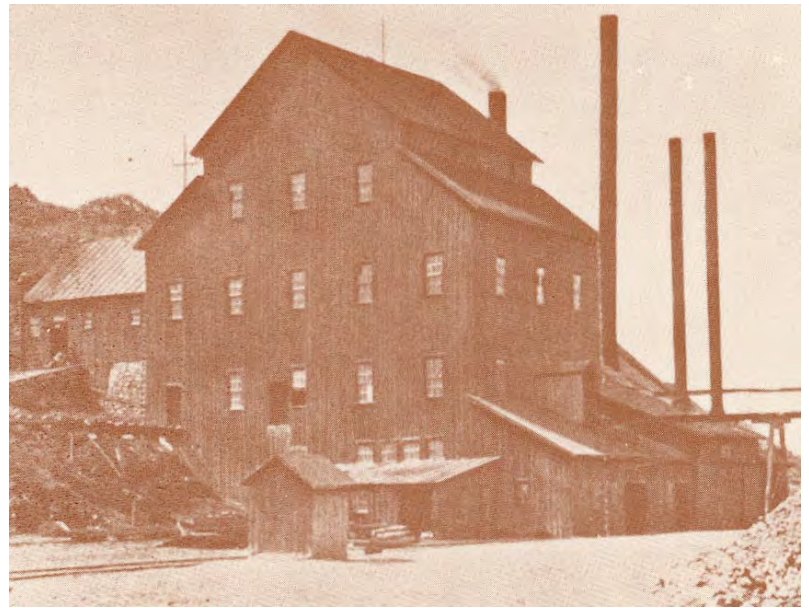
This massive sixty-five foot Montana-type headframe is the only remnant of the Bullion Beck and Champion Mining Company. Discovered in 1871 by John Beck, the Bullion Beck became one of Eureka's Big Four mines. The others, all visible from the Beck, were: the Geminal, the Eureka Hill, and the Centennial Eureka (Blue Rock). Constructed in about 1890, these "gallows" were housed under a frame structure that measured 40 by 119 feet and approximately 70 feet in height. The Bullion Beck and Champion Mining Company headframe forms part of the Eureka Historic District, listed in the National Register of Historic Places on March 14, 1979.

Division of State History N-236-1



IMMEDIATE ACTIONS: THE FUTURE IS NOW...

- The AMLT should seek funding through the US EPA's Community Involvement and Outreach Center to finance a community involvement process focused on future site uses and the community's economic future. This contractor-led effort would help the US EPA and Utah Department of Environmental Quality's community involvement coordinators to improve the state of current community agency relations and could serve as a model for community involvement at other NPL mining sites.
- US EPA should consider hiring local residents to assist with remedial work at the site. The AMLT could seek partners that might provide funding for job training. The site's remediation will be the most significant source of spending in Eureka's near-term future. Seeking opportunities for the local community to capture some of that spending should be a priority.
- Rather than fencing off historical assets, US EPA should use a small portion of the Remedial Action funds to hire a landscape architecture firm to develop a site reuse and historical preservation strategy. A thoughtful design at this stage may create a more desirable reuse outcome for these assets without any additional remedial cost.
- An economic development, historic preservation, and recreational opportunity plan needs to be developed as soon as possible. Site remediation personnel and recreational traffic that pass through Eureka on weekends represent a substantial market that Eureka has no existing capacity to capture.



SITE BACKGROUND

REGIONAL CONTEXT

Near the geographic center of Utah, Eureka is located in the East Tintic Mountains of central Utah's Juab county. In a high mountain valley at an elevation of 6,700 feet, the region is characterized by steep slopes, rolling hills and rock formations, with stands of oak, juniper, quaking aspen and cedar trees. Approximately 800 people live in the small 700-acre city. Eureka's location, 40 miles from Provo and 70 miles southwest of Salt Lake City, allows for a rural lifestyle with commuter proximity to urban areas and jobs in the region. Dugway Proving Grounds, a Department of Defense facility and major area employer, is a 65-mile commute just across the Tooele county line west of Eureka.

The high Mountain setting, combined with the unique mining history and quality of the Tintic School District, has been bringing residents who have moved away back to Eureka to raise their families. Local residents comment that the view over the East Tintic Mountains toward Nephi, the county seat, is unparalleled. Annually, thousands of tourists travel from northern Utah through Eureka to Little Sahara, an area popular for camping, hiking, and photography that is mainly known as a center for off-road vehicle use.

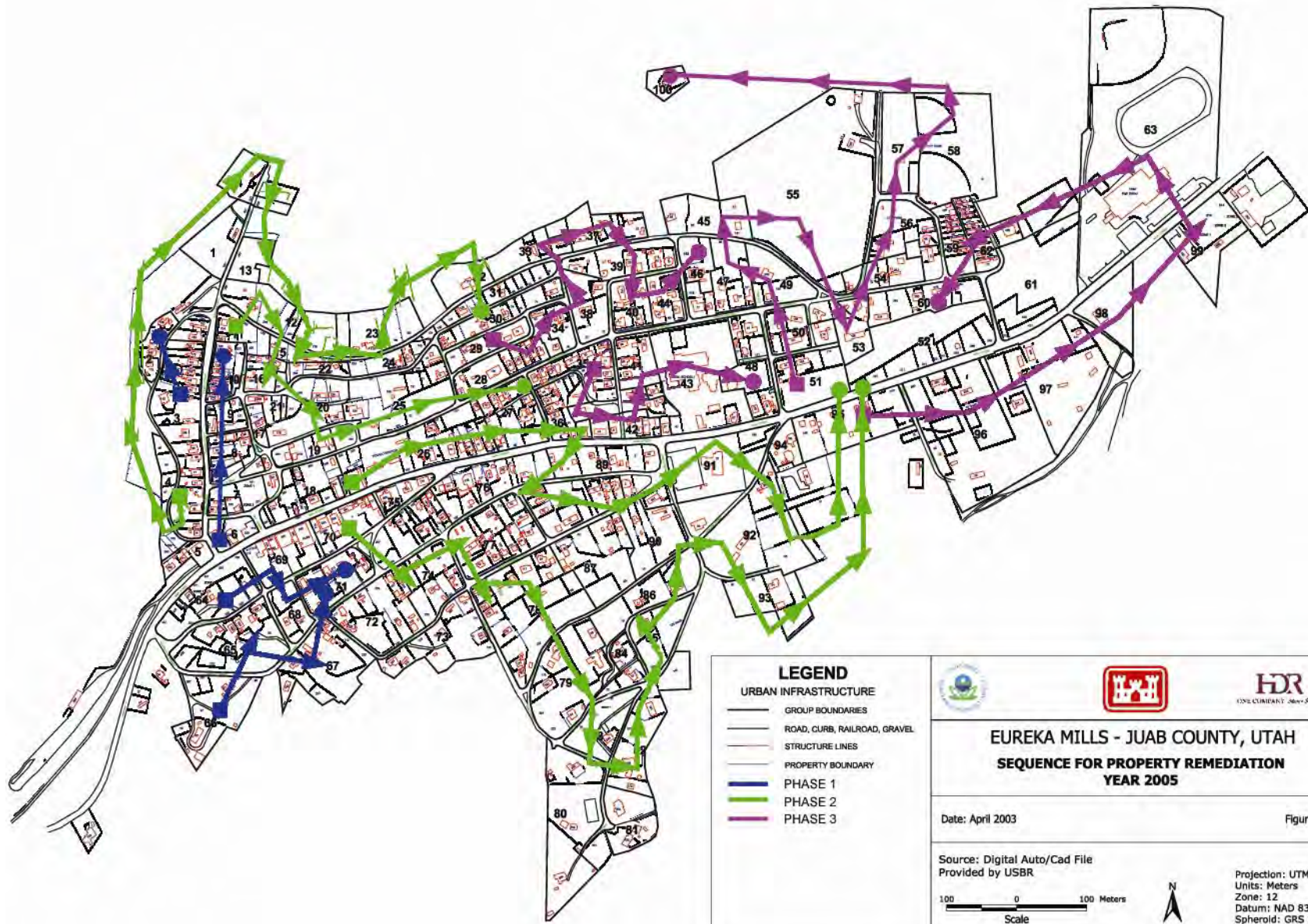
EUREKA'S MINING PAST

Eureka's past is tied to the discovery of precious metals in the East Tintic Mountains. During the latter half of the 19th and early 20th centuries, Eureka was the center of several small mining communities within the Tintic Mining District, an eight square mile area on the eastern and western slopes of the East Tintic Mountains. The early development of Eureka corresponds with major mining events, including the Sunbeam Claim, followed by the Dragon, Mammoth, Eureka Hill, and Bullion Beck claims – the location of these claims are areas where historic mining structures remain.

With the extension of a rail line into the region and new mining technologies, Eureka and the surrounding area began to grow. By 1900, the population of Eureka had more than doubled, from 1,733 in 1890, to approximately 3,325. The Fitch family, owners of the Chief Consolidated Mining Company, moved to the area during this time. By 1925, when milling activity was at its peak, Eureka's population was approximately 4,000, with 112 businesses located in town. The depression of the 1920s resulted in the decline of mining activity which created serious economic downfall in the city of Eureka. Eureka was officially listed on the National Register of Historic Places in 1979 as having "cultural resources worthy of preservation."

LAND USE

According to Eureka's "Official Zoning Map," residential land uses are designated as the predominant land use within Eureka's city limits. The majority of the residential units are single-family dwellings although the zoning map does designate scattered multiple units within the



*diagram created as a composite of remedial sequencing

city's boundaries. Existing residential units are modest in size, ranging from 1000 to 3000 square feet and are located on ½ acre of land or less. In 1999, according to the Eureka General Plan, there were approximately 280 single family residential units in the city, with 75 lots available for new construction. Other land uses include public facilities, such as churches and schools, and "sensitive lands" - areas that are considered either too steep for building or highly environmentally sensitive based on the region's ecology, hydrology, or geology. Both sides of Main Street (Hwy. 6), the primary route through town, are designated as business and commercial zones, according to Eureka's Zoning Map. A significant area of land within the city limits remains under the ownership of the Chief Consolidated Mining Company.

SITE RECLAMATION

- Emergency Removal Actions (2000 - 2003)

In 2000 and 2001, the Utah Department of Health and the Central Utah Public Health Department discovered high blood lead levels in several children living in Eureka. As a result, seventy one houses with high soil lead contamination levels were remediated by US EPA as part of a Emergency Removal action. The top 18" of soil was removed and disposed of in an on-site repository. Clean soil was backfilled and drought-tolerant grasses were seeded at these locations. In areas not revegetated, gravel was added to prevent wind or water erosion.

- Ongoing Remediation (2003 - 2005)

Ongoing remediation is scheduled to take place from 2003 through 2005, depending on weather conditions. The overall strategy includes a Mine Waste Remedial Action Plan and a Residential Remedial Action Plan.

The Mine Waste Remedial Action Plan prioritizes remedial action based on the waste piles with the greatest impact to public health through wind erosion or surface water runoff. The Residential Remedial Action Plan is scheduled in three phases over a period of three years working progressively eastward from the west entrance of town. Because the prevailing wind is from the west, threat of wind borne recontamination of residential lots is reduced by working west to east.

In September 2003, US EPA began the site's ongoing reclamation with the remediation of mine waste piles at the western edge of town. Drainage will also be controlled to prevent remediated areas from being recontaminated.

- The Future

Several ICs are planned to ensure human health and safety. In the south and southwest areas of town, select haul roads used during remediation will be compacted, covered with gravel, and left for limited ATV access. The haul road at the western entrance to town will be left as an ATV access route to Little Sahara. Currently, US EPA is not planning to remove historic head frames or loading chutes. Instead, a fence will encircle the structures and remediation will occur just beyond in an effort to protect the structures and passers-by.



WORLD'S CHAMPION SHAFT-SINKERS

These men, under company work, sink shafts for the Copper (Pit) or the Silver (Lily) Shaft of the Chief Consolidated Mining Company, P. M. Co., Utah. They are the best of their kind, and are considered the best in the world.

EUREKA'S ECONOMY + DEMOGRAPHICS

Since the early 1990s, local population levels have increased significantly, spurred by the proximity of Eureka and surrounding Juab County to Salt Lake City and the Wasatch Front, as well as increased interest in the area's natural beauty and recreational and tourism opportunities. Between 1990 and 2000, Eureka's population increased by 36%, from 562 to 766, while Juab County's population increased by 42%, from 5,817 to 8,238. Between 1990 and 2000, Juab County was the sixth fastest growing county in Utah.

Residents of Eureka and Juab County face significant economic challenges. In 2001, for example, income levels in Juab County were only 74% of the state average, while median family income and per capita personal income levels also ranked below state and national averages. Over time, the local economy has shifted from an emphasis on agricultural and mining operations to the government, trade, and service sectors. The three largest employers in Juab County in 2001 were the local school district, the Central Valley medical center, and a rubber products manufacturing facility.

The arrival of new residents in Eureka and Juab County signals an important opportunity for needed local economic growth and diversification, as well as an opportunity to retain more jobs and financial resources within the community. In Eureka, most working adults commute to jobs either in Juab County or more distant job centers. While Eureka has experienced new residential construction, the community has limited commercial facilities that do not meet local needs. In turn, the community's limited tax base means that adequate funds are not available to support local government and civic services.

ACKNOWLEDGEMENTS

E² Inc. would like to acknowledge the following people for their valuable contributions to the creation of this report:

US EPA

Ted Linnert

Paula Schmittdiel

Utah Department of Environmental Quality

Dave Allison

Dave Bird

US Army Corps of Engineers

Jude Hobza

Citizens of Eureka

Mayor Lloyd Conder

Billy Baum

Gordon Grimstead

Cleo Judge

Nancy Underwood

For more information, contact:

E² Inc.

2417 Northfield Road

Charlottesville, VA 22901

434.975.6700 - fax 434.975.6701

www.e2inc.com

