

# REUSE ASSESSMENT

Lincoln Park Site  
Fremont County, Colorado



## OVERVIEW

The Lincoln Park/Cotter Mill Superfund site includes a former uranium mill property and surrounding areas located in Fremont County, Colorado. On August 20, 2015, EPA Region 8 and the Colorado Department of Public Health and Environment (CDPHE) convened a day-long reuse workshop and an evening community meeting to gather community input regarding potential future uses for the site. The planning workshop brought together approximately 35 participants representing local government, community organizations, the Lincoln Park Community Advisory Group (CAG) and community members. The workshop featured a formal presentation by EPA, CDPHE and consultants Skeo Solutions, followed by a series of focused discussions to gather participants' future use goals and considerations.

This document summarizes the outcomes from the community reuse workshop and includes site background, future land use concepts, specific revitalization priorities and strategies, and recommended action steps. The following concept plans represent ideas from Fremont County, Cañon City, the Lincoln Park Community Advisory Group, Cotter Corporation, community leaders and other interests and can help inform cleanup and future redevelopment processes.

## GOALS

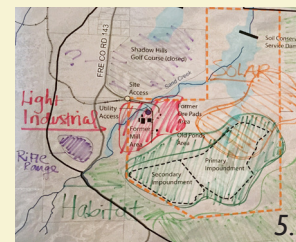
During the planning workshop, participants divided into work groups to develop strategies for the following three focus areas:

- Economic Development & Renewable Energy
- Habitat & Recreation
- Education & Cultural Heritage

## WORKSHOP OUTCOMES

The outcomes of the reuse working session are summarized in the following sections:

- Site Background p. 2
- Future Land Use Concepts p. 3
- Light Industrial p. 4
- Solar Renewable Energy p. 5
- Trails and Habitat p. 6
- Cultural Heritage p. 7
- Looking Ahead p. 8



1. Current Site Conditions (2015)  
2. Former Mill Area Pre-Demolition (2005)  
3-5. Reuse Workshop (August 20, 2015)

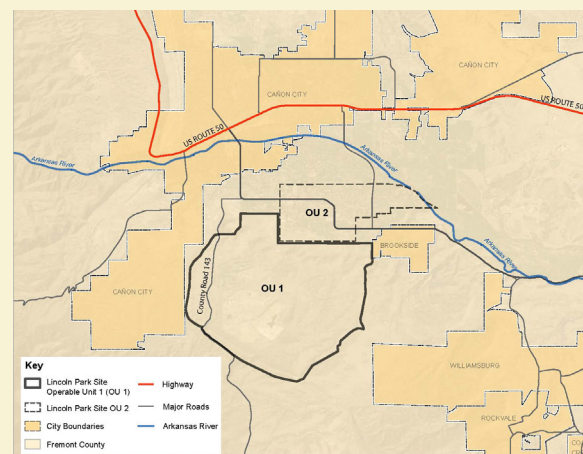


Figure 1. Lincoln Park/Cotter Mill Site Context Map

## Superfund Redevelopment Initiative

EPA's Superfund Redevelopment Initiative (SRI) and EPA Region 8 sponsored a reuse assessment and reuse workshop to develop a vision for future land use that can help inform the remedial process and redevelopment efforts at Lincoln Park/Cotter Mill site.

## SITE HISTORY

The Lincoln Park/Cotter Mill site includes the 2600-acre former Cañon City uranium mill property owned by Cotter Corporation (Cotter), plus areas of mill-associated contamination and the nearby residential area of Lincoln Park.

Cotter produced uranium oxide, molybdenum and vanadium at the former mill site from 1958 until 2006. During operation of the uranium mill, Cotter disposed of tailings and other waste from uranium processing into unlined ponds prior to 1980.

Flooding events in the 1960s caused uranium tailings ponds to overflow into the adjacent Sand Creek and subsequently led to contamination of surrounding areas.

In 1971, flood control dams were constructed on Sand Creek to protect Lincoln Park from flooding and to control contaminated surface water and spring water from flowing downstream and protect the community

from contaminated ground water flowing off the Cotter property. Most operational buildings in the former mill area have been demolished.

The site was listed on the National Priorities List in 1984. CDPHE oversaw a 1988 natural resources damage settlement, interim response actions to address contaminated drinking water in Lincoln Park, and a 2002 Record of Decision for soils in Lincoln Park residential areas. The Cotter Corporation ceased production at the Cañon City Mill in 2006 and permanently closed the facility in 2011.

Today, EPA, CDPHE and the Cotter Corporation are conducting a Remedial Investigation for Operable Unit I (OU I) at the Lincoln Park site. The purpose of the reuse workshop was to identify community goals and potential future uses for consideration by the property owner, EPA and CDPHE during the investigation, cleanup and reuse process.

## SITE FEATURES

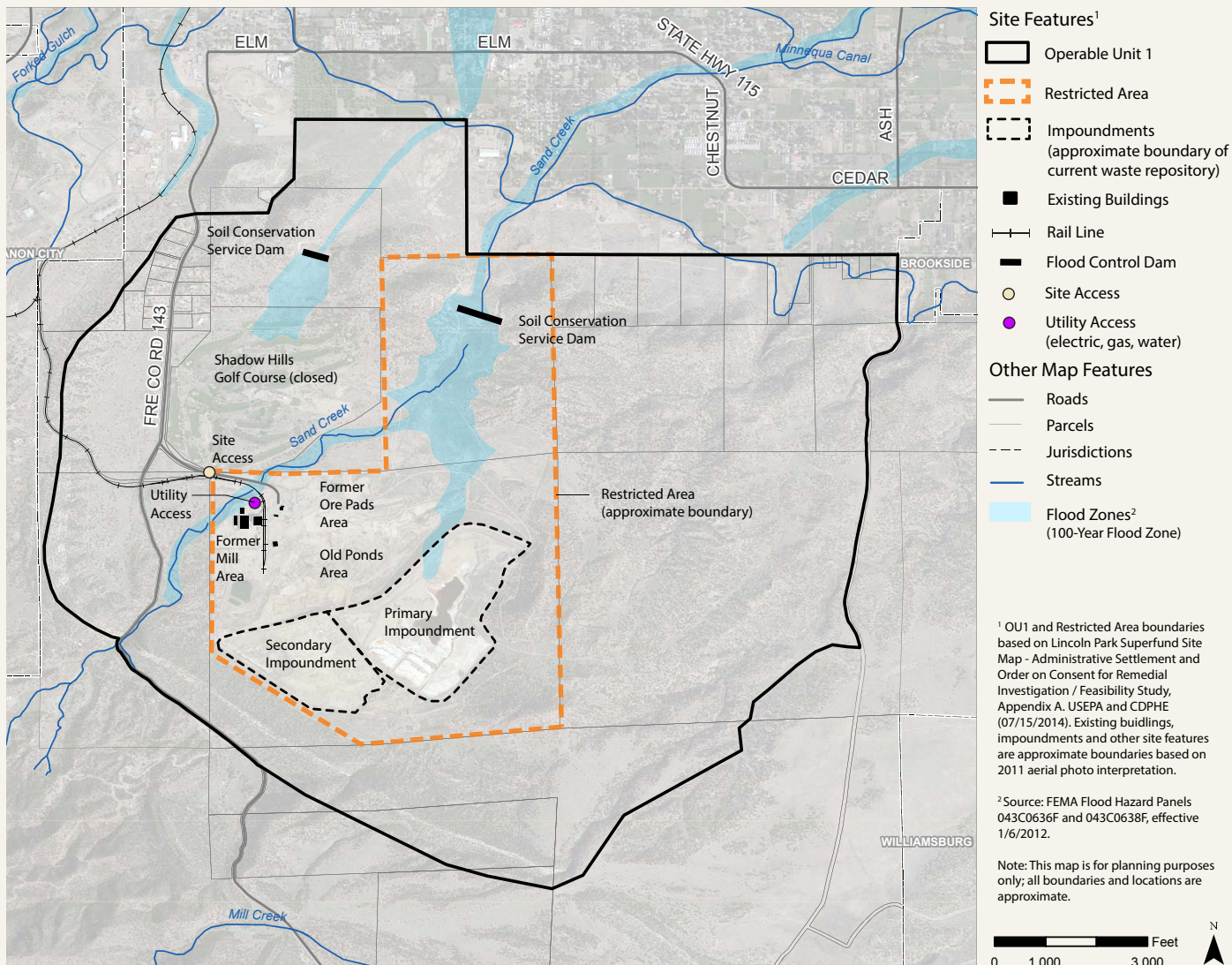


Figure 2. Site Features of Lincoln Park/Cotter Mill Site - Operable Unit I

## REUSE PRIORITIES

Workshop participants engaged in a series of focus group discussions to evaluate future use opportunities around themes of economic development and renewable energy, recreation and habitat, and education and cultural heritage.

Recommendations of the three focus group discussions were then synthesized into a set of potential future land use zones. Overall community reuse goals included:

- Future uses should leverage site and regional assets to enhance local quality of life and prosperity.
- Support a mix of future uses on the site which could include: light industrial, renewable energy, habitat and recreation with opportunities for cultural heritage and education signage.

The Reuse Zones Map below outlines potential land use configurations based on zoning, site features and community input. Specific opportunities for the priority uses are discussed in detail on the following pages.

## REUSE ZONES

### **Residential Area (55 acres)**

Existing residential subdivision.

### **Recreation/Residential Area (203 acres)**

Former golf course and club house facility.

### **Light Industrial (130 acres)**

Former Mill Area, Ore Pads.

Current Restricted Area, zoned for industrial use.

### **Wildlife Habitat/Solar (225 acres)**

Impoundment Areas (current waste repository).

Current Restricted Area, zoned for industrial use.

Potential ownership transfer to U.S. Department of Energy.

### **Riparian and Flood Zone (345 acres)**

Flood control dams, drainage areas.

Current Restricted Area.

### **Open Space (2,100 acres)**

Undeveloped areas outside Restricted Area.

Suitable for recreation, trails and habitat.

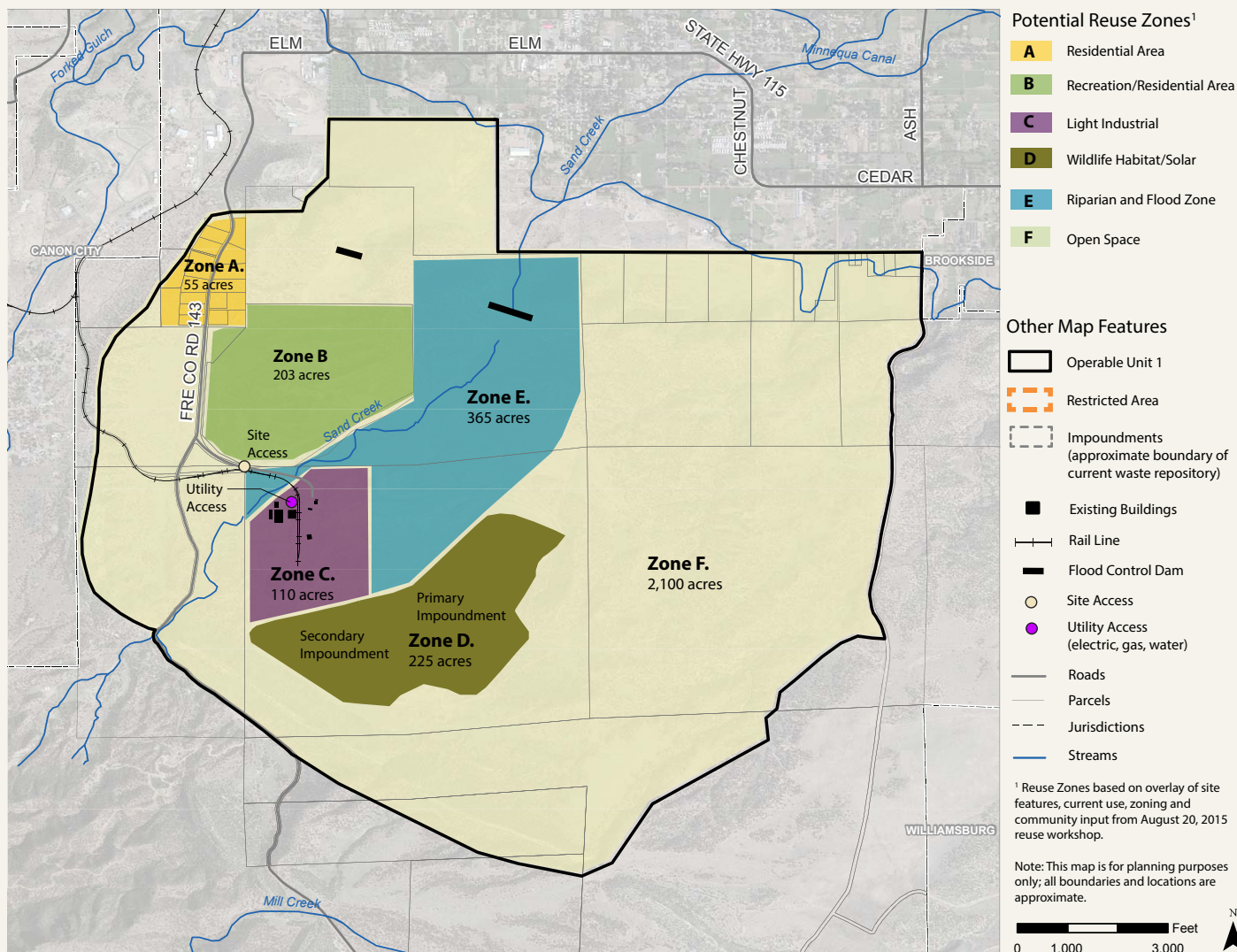


Figure 3. Reuse Zones

# LIGHT INDUSTRIAL USE

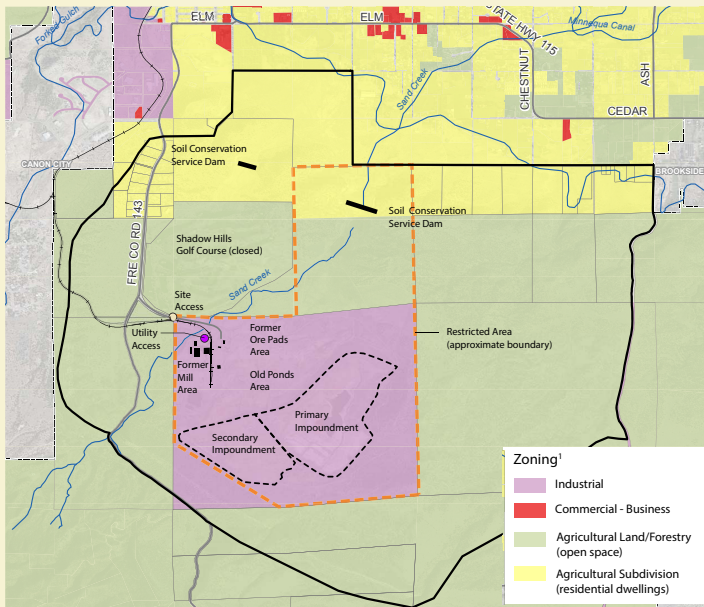
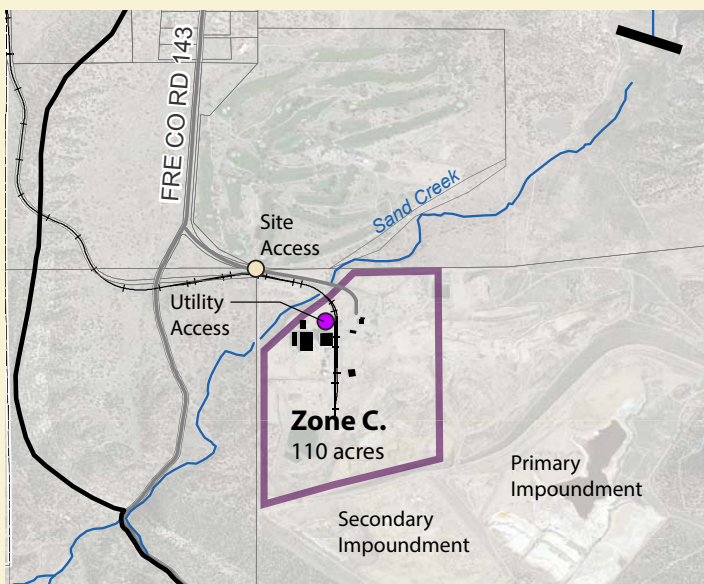


Figure 4. Fremont County Zoning



Former Mill Area (photo credit: Cotter Corporation, May 2012)



Zone C is well-positioned for light industrial use based on the potential for adaptive reuse of existing buildings in the former mill area, road and rail access, and electric and water infrastructure.

## ECONOMIC DEVELOPMENT CONSIDERATIONS

Participants evaluated potential economic development opportunities for OU I based on regional land use and economic development trends.

### Economic and Site Context

- Fremont County has been working to increase opportunities for industrial uses to support jobs and local tax base.
- Participants noted a Fremont County priority to focus investment in a 2,000 acre industrial park proposed for areas east of Cañon City with access to Route 67.
- OU I is in a remote location relative to commercial areas and population centers.
- Approximately 600 acres at the site are currently zoned for industrial use, including the former Mill and Ore Pads areas.
- The former Mill Area and Ore Pads offer access to rail lines and electrical and water utility infrastructure.

## LIGHT INDUSTRIAL OPPORTUNITIES

Participants prioritized light industrial uses for consideration in the former mill area and ore pads areas of OU I, based on existing rail and road access and proximity to electric and water infrastructure.

### Redevelopment of Former Mill Area

- Cotter Corp.'s existing office building, laboratory and maintenance facilities, located in the former mill area offer opportunities for adaptive reuse.
- Parking areas, roads and level areas in southern portions of the former mill area could potentially offer space for light industrial uses.

### Workshop Recommendations

- Focus on attracting sustainable light manufacturing jobs compatible with adjacent residential and habitat uses.
- Evaluate adaptive reuse options for existing office building, laboratory and maintenance facilities in the former mill area.
- Consider establishing a solar energy district that offers low cost power generated from solar panels on the site to businesses located in the park (see page 5).
- Consider pursuing energy crop processing, research and development.

## SOLAR PV OPPORTUNITIES

Participants considered wind and solar resources as potential renewable energy reuse options for OU 1 and prioritized solar photovoltaic (PV) as the most viable technology.

Based on National Renewable Energy Laboratory (NREL) maps and analysis, Fremont County is rated as an excellent solar resource, receiving an average annual solar radiation value of 5.68 kilowatt hours per square meter per day (kWh/m<sup>2</sup>/day).

### Utilities

Electrical connections are available in the former Mill Area at the site, and the nearest substation is located 1.3 miles to the north adjacent to the Forge Road industrial park.

### Technology

Given the available solar resource and utility access, portions of the site could be well-positioned for solar PV renewable energy development. Solar PV options for an area with this solar resource could include:

- Small-scale solar PV (250 – 500 kW)
- Community solar PV (500 kW – 2000 kW)
- Utility-scale solar PV (1,000 kW +)

### Siting Requirements

- Estimate 3.5-5 acres per 1,000 kW
- Flat contiguous land (less than 5% slope) suitable for shallow excavation.
- Transmission line access and capacity for additional power.

### Areas Potentially Suitable for Solar PV

- Portions of Zone C south of the former mill area and Zone D offer flat, contiguous land in close proximity to on-site electrical connections and potential light industrial opportunities.
- Dedicating a 25-30 acre solar energy development zone at the site could support a solar PV system with a 5 megawatt capacity - enough to power over 800 homes if connected to the grid or offset electricity usage for a light industrial park.

### Power For Pennies (Renewable Energy Incentive Concept)

- Local economic development representatives are exploring a renewable energy financing strategy that offers high-energy-use businesses and institutions investment opportunities in renewable energy projects in exchange for renewable energy credits.
- Participants identified the Colorado Department of Corrections, which operates three state correctional facilities in Fremont County, as a potential investor and partner for developing a solar PV system at the site.

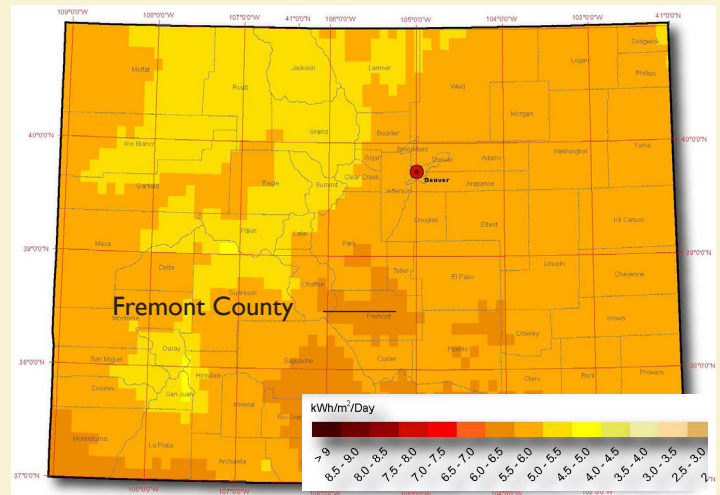


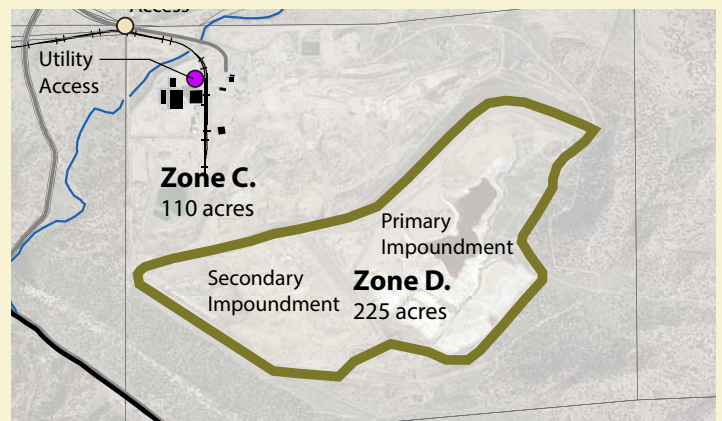
Figure 5. Colorado's Average Annual Solar Radiation



A 500 kW community solar garden at Cowdery Meadows is located on 4 acres at a former landfill (Boulder County, CO).



At the Riley Tar Superfund site, the 43-acre Maywood Solar Farm integrates an 11,000 kW solar PV system with the site's capping remedy (Indianapolis, IN).



Zone D may offer level open space areas suitable for a solar PV system compatible with the site's remedy.

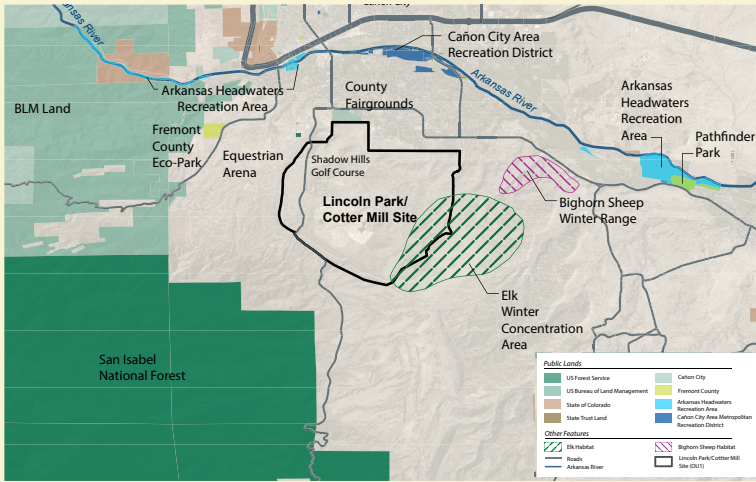
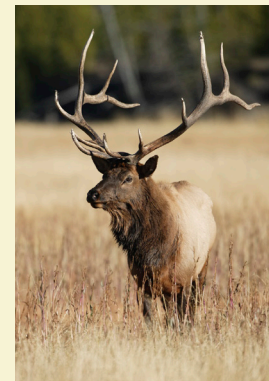


Figure 6. Public Lands and Big Game Habitat



Public lands in Fremont County and the Upper Arkansas River are recreation destinations for hiking and whitewater kayaking.



OU 1 is located within bighorn sheep and elk habitat areas.



Revegetation of impoundment areas could help support big game habitat. (photo credit: Cotter Corporation, July 2010)

## RECREATION AND HABITAT ASSETS

Cañon City and Fremont County are increasingly recognized as a prime recreation tourism destination. Warmer winters, lower annual snow fall, and proximity to the Denver and Colorado Springs metro areas makes the region a popular destination for hiking, whitewater boating, hunting, fishing and wildlife viewing.

- Significant public lands and open space located west of the site are an asset for Fremont County, including land owned by U.S. Forest Service, Bureau of Land Management, Upper Arkansas Recreation Area and Cañon City (Royal Gorge Bridge and Park).
- The Eastern Fremont County Trails and Open Space Plan identifies opportunities to connect regional open space and public land assets through multi-use, back country and drainage corridors. Trail access to the San Isabel National Forest is just to the south of OU 1.
- The Upper Arkansas River and big game habitat are a draw for hunting and fishing. Elk and big horn sheep grazing lands are located in close proximity to the site.

## FUTURE USE OPPORTUNITIES

Participants identified an opportunity to establish a long-term stewardship strategy for the management and conservation of the open space and wildlife habitat resources within OU 1.

### Open Space Goals

- Enhance habitat connections, revegetation, wildlife viewing.
- Establish a name and regional identity for these open space lands and tie to regional events such as the Upper Arkansas White Water Festival.
- Develop a recreation master plan to outline phasing, partners and locations of specific programming elements. (back-country trails, motor-cross park, rifle range).
- Establish a multi-use trail system with multiple loops (15-20 miles) connecting open space areas at the site, San Isabel National Forest land, the Upper Arkansas River corridor and Cañon City.
- Identify a long-term steward such as a trust to support open space goals.

### Remedial Considerations

- Prioritize RI sampling and risk assessment activities in Zone F to allow for near-term open space and trail system reuse.
- Consider habitat restoration and re-vegetation options as final cover for impoundment areas.

## MINING HERITAGE CONSIDERATIONS

Cañon City has a tradition and strong heritage in the mining and smelting industries. Once home to five active smelters and numerous mining sites, the region's heritage has direct ties to the site. Four historic mining areas are located within the vicinity of OU 1 and the historic resources associated with geology, exploration and mining present a range of opportunities to celebrate the cultural and economic importance of the industry to the region.

- Remnants of former mining operations could be of cultural heritage interest and help highlight the local mining and smelting industrial heritage.
- The history of the site provides an educational opportunity to demonstrate the science of geology, mining and cleanup operations.

## FUTURE USE OPPORTUNITIES

Participants identified a set of cultural heritage preservation priorities and educational opportunities that could be integrated with trails, recreational and light industrial reuse opportunities.

- Integrate interpretive signage along multi-use trail system that highlights remnants of former mining operations, mine shafts, miners' housing sites, and geology camps.
- Kiosks located at trail heads or within frequent use areas could serve as a distribution point for educational materials, such as self-guided tour maps.
- Highlight the history of Oak Creek Grade (County Route 143), which was established as a stage coach route in the 1870s and served as an important transportation corridor for commerce, mineral exploration and mine workers.
- Consider interpretive elements to highlight mine shafts at the former Wolf Park Mine that have been identified as some of the deepest shafts in the state of Colorado.
- Establish partnerships with academic institutions to create opportunities for research, internships and camps focused on the geology and history of the area.

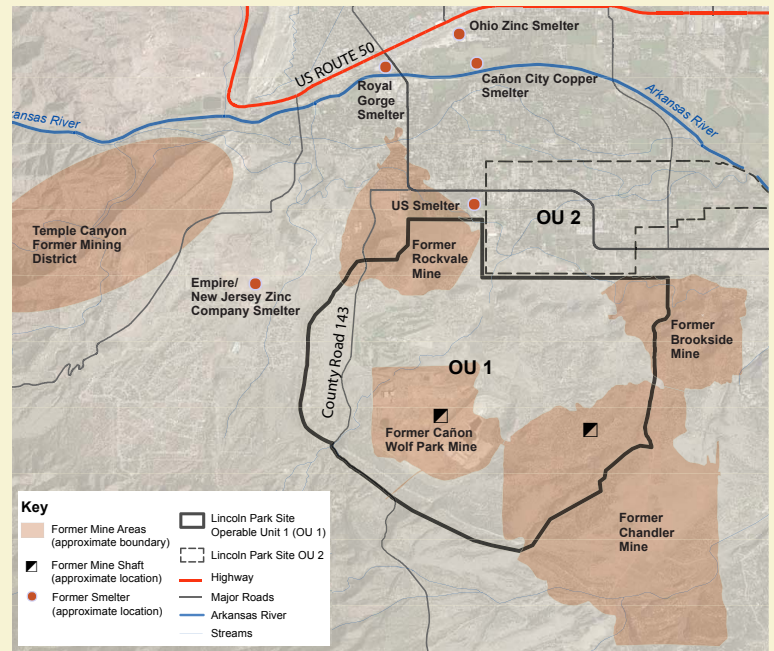


Figure 7. Historic Mining Areas

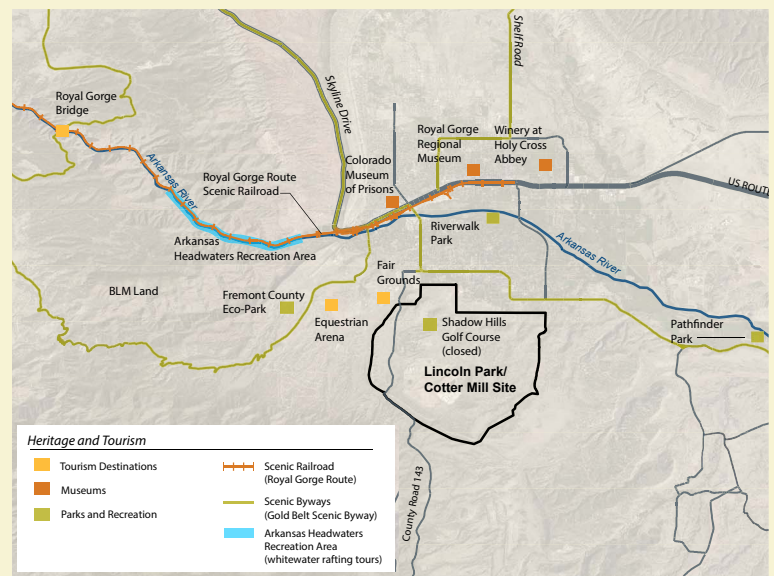


Figure 8. Regional Tourism Destinations



Mining artifacts, miners' housing and former uranium milling areas can offer interpretive opportunities envisioned as part of education and cultural heritage uses at the site.

## FUTURE LAND USE CONSIDERATIONS

The land use concepts generated during the community working session can help inform the Remedial Investigation and the Baseline Human Health and Ecological Risk Assessments. There was general agreement that more than one or even all of these uses might be possible at the site, given the potential land area available.

- Open space and habitat restoration
- Recreation and Trails  
(with integrated historical and cultural signage)
- Solar Renewable Energy Development
- Light Industrial Uses

## PARTNERSHIPS

Workshop participants also identified a range of potential partners that could help refine reuse concepts and outline implementation strategies.

- Property owners - U.S. Forest Service, Bureau of Land Management, US Department of Energy, Cañon City Area Recreation Management District, Cotter Corporation, private land owners.
- Conservation/Recreation Organizations - San Isabel Land Trust, the Trust for Public Land, Rocky Mountain Elk Foundation, Cañon Land Hikers and Walkers, Fremont Adventure Recreation.
- Economic Development - Fremont County Economic Development, Colorado Department of Corrections, Cañon City Planning and Community Development, Black Hills Energy, Rock and Rail Railroad, solar developers.
- Historic preservation - Fremont County Heritage Commission, Southern Rockies Crossroads of Culture, Fremont Historical Society, Florence Historical Society and West Fremont Historical Society.

## NEAR-TERM ACTIONS

The workshop participants identified the following near-term actions to facilitate coordination of future use planning and remedial processes at the site.

- Formalize redevelopment work group to establish partnerships and identify timelines to align land use planning and remedial processes, and help steer reuse process.
- Consider phasing Remedial Investigation to evaluate options to implement trail system in the near-term.
- Develop master plan for recreation, open space, trails, light industrial uses and solar renewable energy development.
- Explore stewardship options as part of implementing an integrated open space plan.

## ACKNOWLEDGEMENTS

The following individuals and organizations participated in the Lincoln Park Site Future Use Planning Workshop and contributed to the outcomes outlined in this report.

### Local Government

- Cañon City Department of Planning
- Fremont County Board of Commissioners
- Fremont County Economic Development

### Community

- Lincoln Park Community Advisory Group
- Residents

### Property Owners

- Cotter Corporation
- Private property owners

### State and Federal Agencies

- U.S. Environmental Protection Agency
- Colorado Department of Public Health and Environment
- U.S. Department of Interior - Bureau of Land Management



*CAG members share focus group recommendations during the community working session (top); working session participants (bottom).*

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