Peru Creek Basin Brownfield Assessment
Summit County, Colorado
Brownfields Assessment Demonstration Pilot

Final Report
Executive Summary

June 26, 2004

Peru Creek Basin bottomlands, with Decatur Mountain in background, as seen from Shoe Basin Mine #1

The complete text of the Peru Creek Basin Brownfields Assessment can be viewed at http://www.restorationtrust.org/legalguides.htm

including
1) Final Report
2) Environmental Liability Management Analysis
3) Stakeholder representatives

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June 25, 2004

In April 2001 Summit County was awarded a $250,000 USEPA Brownfields Assessment Demonstration Pilot grant to identify, assess, and plan response activities to address mining-related contamination and revitalization in the Peru Creek Basin.

The hardrock mining industry played a major role in the economic development of the West, leaving a legacy of contaminated inactive and abandoned mine sites that lay idle and continue to degrade our environment. These contaminated mine sites are the Brownfields of the rural West, whose clean up, reuse and revitalization of rural lands contaminated by mining is often hampered by the same liability concerns that encumber urban lands. The federal government recognized the need to encourage the use of Brownfields techniques in rural and natural settings impacted by past mining by including “mine-scarred lands” in the Small Business Liability Relief and Brownfields Revitalization Act (H.R. 2869), signed into law by the President on January 11, 2002.

The Peru Creek Pilot project area is an approximately 15 square mile, high altitude, sub-alpine and alpine basin in Summit County, Colorado. Past mining activities have left waste rock dumps, tailings piles, partially collapsed buildings, scarred hillsides, and open adits scattered throughout the area. Acid mine drainage from some of these abandoned mine sites significantly degrades the water in Peru Creek itself. Peru Creek is a tributary to the Snake River. The Snake River terminates in Dillon Reservoir, a principle domestic water storage impoundment owned by the City of Denver. About 3,000 people live year-round in the Snake River Watershed, though resort use swells that number to over 20,000. The small town of Montezuma sits on the Snake River two miles upstream from its confluence with Peru Creek. Keystone Resort is three miles downstream on the Snake. Peru Creek is not a source of domestic water for either, though Keystone Resort does use Snake River water for snowmaking.

Federal lands administered by the US Forest Service comprise over 80% of the land in the Peru Creek Basin. The principal targets for the Brownfields Assessment was the approximately 1200 acres in the basin that are privately owned. Most of the private lands are inactive, patented mining claims with parcels ranging in size from 1.8 acres to 296 acres.
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I. Peru Creek Basin Brownfields Assessment Goal

The goal of the Peru Creek Basin Brownfield Assessment was to utilize a suite of Brownfields liability management tools to allow Summit County, via the county’s Open Space Program, to acquire, and where necessary clean and reclaim, prioritized properties in the Peru Creek Basin, so that at some yet-to-be-determined time, those properties can be transferred to the United States Forest Service.

As a result of this assessment, Summit County was able to use County Open Space funds to acquire those claims in the basin that met the criteria established by the Brownfields Assessment. Summit County’s Open Space funds are generated from a real estate property tax approved by Summit County voters in November 1993, providing approximately $700,000 annually through 2004 to fund protection and acquisition of open space resources in Summit County. In 1999, County voters overwhelmingly approved an additional tax mill levy that will generate approximately an additional $2.5 million per year for a ten-year period.

Acquisition of prioritized properties in Peru Creek helped Summit County meet open space objectives by reducing habitat fragmentation caused by dispersed second-home and cabin development, and also helped reduce demand and cost of providing county services such as police, fire and road maintenance, and providing for passive recreation opportunities.

On June 15, 2004, the USEPA announced that Summit County was approved for an USEPA Brownfields Cleanup Grant of $195,000 toward reclamation of the Shoe Basin #1 Mine
II. Brownfields Assessment Accomplishments

The Summit County Open Space and Trails Department conducted the Brownfields assessment on behalf of the Summit County Board of County Commissioners. Grant contracting between Summit County and the USEPA was finalized in September 2001. Shortly thereafter, the Trust for Land Restoration and American Geological Services were contracted by Summit County to assist with the project. Fieldwork for the project was conducted September-October, 2001, June-October, 2002, and June-October 2003.

As a result of the Peru Creek Basin Brownfields Assessment:

1) An Environmental Liability Management Analysis was prepared to guide decision making throughout the Brownfields Assessment;

2) One hundred landowners were contacted via mail, telephone or personal visit;

3) Fifty-four privately owned blocks of patented mining claims were assessed for environmental impacts using a modified Phase I Environmental Assessment;

4) Fourteen patented claim blocks were prioritized for potential acquisition;

5) Nine patented claim blocks (34 individual claims) totaling approximately 167 acres were acquired by Summit County and conserved as open space. Summit County has another 4 claims totaling approximately 21 acres under contract;

6) One site, Shoe Basin #1, was prioritized for reclamation to reduce metals loading into Peru Creek, and for re-use as a developed backcountry trailhead/parking area recreation site. A Phase II Environmental Assessment was completed; a Colorado Voluntary Clean-up (VCUP) application and a USEPA Brownfields Clean-up grant proposal were submitted. Total budget for cleanup of the site is $235,000. On June 15, 2004, the USEPA announced that Summit County was approved for a Brownfields Cleanup Grant of $195,000 for the Shoe Basin #1 reclamation.

7) Colorado Division of Minerals and Geology will perform physical closure of approximately 20 dangerous mine openings during the summer of this year (2004);

8) One landowner has agreed to place a conservation easement on his property, allowing for no development of a claim block totaling approximately 150 acres; and

9) The United States Department of Agriculture, and the United States Environmental Protection Agency selected the Pennsylvania Mine as one of six national demonstration sites for the “Brownfields Federal Partnership Mine–Scared Lands Initiative” to cooperate with the Snake River Task Force to help resolve issues at the Pennsylvania Mine, as part of a nation-wide demonstration project of inter-governmental cooperation related to Brownfields mine-scarred lands.
III. Brownfields Assessment Objectives and Tasks

The specific objectives and tasks to reach the goal of the Peru Creek Brownfields Assessment Pilot included:

A. Prioritization Activities, conducted September 2001-September 2002:

1) Gather existing data and conduct an Initial Private Property Screening of the private property within the basin;
2) Conduct an Initial Environmental Liability Management Analysis;
3) Prioritize sites on the basis of the preliminary assessment and conduct a Phase II environmental assessment for highest priority sites;

B. Phase II Assessment and Remediation, conducted October 2002-June 2004:

4) Conduct a Phase II Environmental Assessment and a more complete Environmental Liability Management Analysis of the Upper Transpacific Tourism block of claims, including Shoe Basin #1;
5) Develop remediation plans for the Shoe Basin #1;
6) Acquire the Upper Transpacific Tourism block of claims in a manner that best manages environmental liability and meets the open space goals of the assessment;
7) Develop the results of the assessment as a demonstration model and conduct a program of education and outreach.

C. Stakeholder Outreach and Involvement

Identifying and involving key stakeholders was a key element for achieving success in the Peru Creek Brownfields Assessment. During the early stages of the Prioritization process, key individuals representing diverse interests were identified and later assembled as the Peru Creek Brownfields Assessment Advisory Team. Site visits to Peru Creek were conducted by Summit County with representatives of the US Forest Service, Department of Agriculture Office of General Counsel, CDPHE, EPA, Snake River Task Force and Arapahoe Basin Ski Area participating.

Also, Summit County staff and representatives of the Trust for Land Restoration participated in a site visit to the Pennsylvania Mine on June 8, 2004 that was coordinated by the Dillon Ranger District of the US Forest Service, and included staff from the US Department of Agriculture and the EPA seeking to develop the Pennsylvania Mine as part of a nation-wide demonstration project of inter-governmental cooperation related to Brownfields mine-scarred lands.

IV. Role of the Trust for Land Restoration

The Trust for Land Restoration, Inc. (TLR) was hired as a sole source contractor to coordinate all activities of the assessment generally, and specifically to conduct the environmental liability management, prioritization, and outreach tasks of the assessment. TLR is a non-profit land trust whose mission is to promote the restoration of environmentally significant lands degraded by mining. TLR has expertise in environmental law; land conservation, ecological assessment, mining, geology, and government relations. TLR's attorneys have specific legal expertise related to mined-land liability. It is the only land trust in the country dedicated to evaluating and managing the legal complexities surrounding mined-land liability issues.
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The tasks completed by TLR for the Peru Creek Basin Brownfields Assessment include providing a legal analysis of liability issues; coordinating stakeholder involvement; facilitating prioritization of parcels for acquisition; performing due diligence tasks; conducting landowner interviews; engaging regulators; developing clean-up funding strategies; and coordinating all project related activities of project cooperators and contractors.

V. American Geological Services as Environmental Consultant/Contractor

American Geological Services, Inc. (AGS) was selected as the environmental consultant/contractor to provide qualified environmental site assessment (including Initial Private Property Screening, and Phase II Environmental Assessment); to develop a project specific database and GIS platform; and to develop an USEPA approved Quality Assurance Project Plan (QAPP) and a Sampling and Analysis Plan (SAP). AGS was selected via a competitive process from among five firms that responded to a Request for Proposals distributed via US Mail by Summit County on July 23, 2001.

VI. Summary of Environmental Liability Management Analysis

Well-intended environmental laws have unintended consequences for would-be Good Samaritans

Early in the Peru Creek Assessment, it was recognized that mining-related contamination usually could be classified as:

1) Solid, hazardous mine waste, such as waste rock and/or mill tailings, and/or
2) Water contamination, caused by mine adit drainage, and/or surface and/or ground water movement.

Water contaminated by mining is referred to as acid mine drainage, or to use slightly more in-vogue terminology, acid rock drainage, or ARD. While the problems associated with acid rock drainage are well known, reducing and/or eliminating ARD from any given site have proven problematic, both from a technical perspective and from a liability-exposure perspective. And while liability issues are difficult enough for a clearly responsible party to wrestle with, they are so complex and potentially onerous that community, local government and non-profit “Good Samaritans” are almost always deterred from even trying to help. The most fundamental deterrence to well-intentioned Good Samaritan action is found in the particulars of the Clean Water Act (CWA). Specifically, CWA permitting requirements place a potentially perpetual obligation on a landowner to monitor and comply with rigid stream standards; and are complicated by a third-party lawsuit provision lurking over any landowner that doesn’t have a permit.

On the other hand, the other major environmental law related to the regulation of hazardous waste, CERCLA (the Comprehensive Environmental Response, Compensation and Liability Act, a.k.a. Superfund) does contain several provisions which can potentially be taken advantage of to manage liability associated with acquiring and cleaning up of solid hazardous waste at mine sites, such as waste rock and mill tailings. Particularly worth noting is the passage of the 2002 Small Business Liability Relief and Brownfields Revitalization Act (H.R. 2869), with provisions that specifically recognize “mine-scarred lands” as a legitimate target of Brownfields liability relief techniques. Unfortunately, these Brownfields protections do not extend to provisions of the Clean Water Act.
For the better part of the last ten years, Congress has been contemplating amendments to the CWA that would provide some liability relief to Good Samaritans working at sites regulated by the CWA. Thus far, none of those proposals have made it out of committee and onto the floor of either branch of Congress for a vote. The Peru Creek Brownfields Assessment Environmental Liability Management Analysis only considered liability management strategies that deal with the CWA as it is currently configured.

Acid rock drainage from collapsed Pennsylvania Mine adit flows over waste rock and mill tailings of Giant Millsite