

## **Project Proposal Summary Sheet**

### **Project Summary**

The Kerber Creek Restoration Project is a joint partnership of the Bureau of Land Management, the Natural Resources Conservation Service, Trout Unlimited, Saguache County Sustainable Environment and Economic Development, local landowners, and others. Mine tailings have washed down through Kerber Creek and are contributing metals to the waterway. The project involves tailings removal, in situ treatment, revegetation, installation of fish habitat structures, stream bank stabilization, and fencing to keep cattle from the rehabilitated areas. The partners are taking a holistic view of the watershed; major goals include increased forage area for cattle and wildlife, healthy stream morphology and biota, and removing Kerber Creek from that state's 303(d) list of impaired waterways. This is the final phase of a project which has lasted more than a decade.

The Kerber Creek Restoration Project Partnership proposes hiring a Southwest Conservation Corps crew for two weeks in 2009 for work involving tailings treatment, stream bank stabilization, removal of inappropriate fencing, and installation of prescribed fencing. The addition of a Southwest Conservation Corps crew would greatly increase the amount of restoration work which could be completed on Kerber Creek in 2009.

### **Project Location**

The project is active along the 17 miles of Kerber Creek and over 60 acres of tailings between Bonanza and Villa Grove in Saguache County, CO. The Kerber Creek watershed is designated HUC 1301000302 and is located at 401587.04 N 4233921.32 E.

### **Project Category**

(1) Watershed/Stream Restoration and/or Protection Grants.

### **Grant Amount**

\$12,000

### **Fiscal Sponsor**

Saguache County Sustainable Environment and Economic Development (ScSEED)

### **Fiscal Sponsor Contact**

Kim Smoyer  
ScSEED  
P.O. Box 393  
Moffat, CO 81143  
Voicemail: (719) 655-2775

### **Kerber Creek Restoration Project Contact**

Maggie Barnes  
OSM/VISTA Volunteer  
Kerber Creek Restoration Project  
46525 State Highway 114  
Saguache, CO 81149  
Phone: (719) 655-6133  
Fax: (719) 655-2502  
Margaret\_Barnes@blm.gov

## **1.0 PROJECT PROPOSAL SUMMARY SHEET**

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The project proposal summary sheet is attached.

## **2.0 PROJECT DESCRIPTION**

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### ***2.1 Background Information***

Historic mining activities have severely degraded the Kerber Creek watershed. Heavy metal tailings were discharged into Kerber Creek by pre-1930's mills in the Bonanza Mining District and were transported and re-deposited downstream. The mining impacts resulted in impaired soil and water quality, causing loss and degradation of plant communities, aquatic life, and an impaired stream channel. A multi-million dollar cleanup effort by the US Forest Service (USFS) and the American Smelting and Refining Company occurred on the upper part of Kerber Creek near old mine sites from 1994-2003, plugging a major mine adit and relocating and phytostabilizing tailings.

In 1980, the Colorado Division of Wildlife (CDOW) sampled three sites; the site furthest upstream yielded 117 brook trout. The other sites had no fish. Significant restoration work was completed between 1994 and 2008. In 2008, the US Fish and Wildlife Service (USFW) sampled five sites, from near Villa Grove to the uppermost CDOW site. Each of the five sampling sites contained small fish. Macroinvertebrate sampling was also performed, but the results are not yet available.

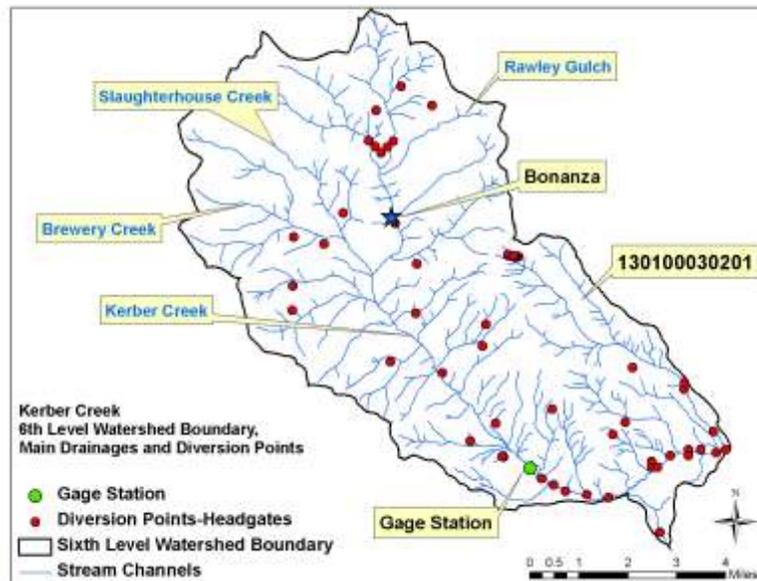
An Environmental Assessment was completed on Kerber Creek restoration work in 2007. No significant impacts of restoration work were found.

Kerber Creek is on the state's 2008 Clean Water Act (CWA) Section 303(d) list of impaired water bodies. As shown in Attachment 7.1, Kerber Creek is divided into two segments: segment 9a is a CWA 303(d) high priority for Cadmium; segment 9b is a high priority for Copper. CWA requires that chemical, physical, and biological integrity of all waters, stream channels, and wetlands be protected. Uses of Kerber Creek include agriculture, aquatic life cold class 1, recreation primary contact, and domestic water source.

The Colorado Department of Public Health and Environment (CDPHE) completed a Total Maximum Daily Load Assessment (TMDL) of Kerber Creek in April 2008. To reach the TMDL requirements for segment 9a, an average annual load reduction of 49% for cadmium is necessary. To reach the TMDL requirements for section 9b, average annual load reductions of 9% for cadmium, 18% for copper, and 8% for zinc are necessary.

### ***2.2 Waterbody Identification***

The Kerber Creek tailings reclamation and stream stabilization project lies within 6<sup>th</sup> level watershed 130100030201 along the main stem of Kerber Creek. Main tributaries to Kerber Creek include Slaughterhouse Creek, Brewery Creek, Skunk Creek, Rawley Gulch, Eagle Gulch, and Sand Gulch and other perennial and ephemeral drainages. One active gage station is located on Kerber Creek within the project area (Fig. 1). The two-year event at this location is approximately 95 cubic-feet-per-second (cfs), and the 100-year event is about 434 cfs. A flow of 211 cfs was recorded in 2001, and highest flow on record is 407 cfs in 1941. Morphologic characteristics of Kerber Creek, including width, depth, sinuosity, and floodprone area, have and continue to adjust to impacts from historic mining. The upper watershed typically has a medium to large cobble substrate with gravels and fines increasing in the lower watershed. Stream bankfull width averages 14-16 feet and varies from approximately 8 to 21 feet. Bankfull depth on wider reaches is 1 foot or less, and increases as width decreases. The stream gradient is approximately 3%, with riffle bedforms the most common.



**Figure 1: Kerber Creek Watershed Map**

### **2.3 Current Projects**

The Kerber Creek Restoration Project Partnership (KCRPP) has four primary goals: riparian restoration, remediation of tailings piles within the floodplain, development of a properly functioning stream channel, and development of improved fisheries habitat.

BLM and the NRCS worked on Kerber Creek in 2008. The BLM received \$132,000 to relocate 2.5 acres of tailings with high metal concentrations to repositories located out of the floodplain. An additional 19 acres of tailings piles were treated in-place (in-situ) with a reclamation method called phytostabilization. Phytostabilization is a method of immobilizing the metals in the soil by incorporating lime, approximately 18" deep, and then adding soils amendments such as clean top soil, fertilizer, and compost; after a few months, the area is seeded and mulched.

Also in 2008, The Natural Resources Conservation Service (NRCS) received \$353,214 through the Wildlife Habitat Incentives Program (WHIP), restoring over 3,000 linear feet of Kerber Creek in 2008 by implementing structural and bio-engineering practices; to correct highly erosive areas, improve in-stream fisheries habitat, and re-establish native riparian areas. These funds will be used to further implement these practices in 2009.

Trout Unlimited recently received a \$413,000 EPA 319 NPS Grant for use on Kerber Creek from 2009-2011. The funds will go towards developing a watershed plan, materials for phytostabilization and stream work, stakeholder meetings, and monitoring morphology, vegetation, and stream biota.

In 2008 KCRPP partnered with the Western Hardrock Watershed Team (WHWT) to obtain a full time volunteer sponsored by the Office of Surface Mining (OSM) and Americorps Volunteer In Service To America (VISTA). The volunteer's duties include identifying data and funding gaps, writing grant proposals, increasing public knowledge and involvement, bringing educational programs into the watershed, and facilitating monitoring activities.

### **2.4 Proposed Project**

With the funding sources secured in 2008, the 2009 field season is anticipated to be the largest implementation year on Kerber Creek. In an effort to help with implementation, KCRPP would like to bring in a Southwest Conservation Corps (SCC) crew for two weeks during the 2009 field season. The

SCC crew would install silt curtains and complete mulching and seeding on tailings piles in which lime and amendments were previously incorporated. The SCC crew would also plant willow plugs, transplant sedge mats, and install willow fascines along stream banks for stabilization. If time allows, the crew may also be used to remove unsuitable fencing and install new fencing where appropriate. Pending funding approval, a map detailing project locations will be provided.

### **2.5 End Results**

On the ground, goals accomplished by bringing the proposed SCC Crew on board include the phytostabilization of an additional 20 acres of tailings and stabilization of approximately two miles of stream bank.

As the majority of SCC crew members are local youth, employing an SCC crew would also help with KCRPP goal of educating the public, particularly the youth, and create jobs in Saguache County, the lowest per capita income area in Colorado in 2008.

### **2.6 Project Details**

<b>Budget Item</b>	<b>Description</b>	<b>Match</b>	<b>Colorado Watershed Restoration Program</b>
SCC Crew	6 crew members and two crew leaders, 2 week period (\$6,000/wk)	-	\$12,000
Match	NCRS is doing similar work through a different contractor, will put up \$12,000 of WHIP funds as a match.	\$12,000	-
Total		\$12,000	\$12,000

## **3.0 APPLICANT QUALIFICATIONS**

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### **3.1 Fiscal Agent**

The non-profit group Saguache County Sustainable Environment and Economic Development (ScSEED) is the fiscal agent. ScSEED is a local organization which currently focuses mainly on the sustainable economic development of Saguache. They are also involved in documenting and celebrating the ranching lifestyle in Saguache County and were a local coordinator of a San Luis Valley Environmental Council initiative to test well water for contaminants in 2008. Partnering with KCRPP is an important step for ScSEED to begin working for the environmental health of Saguache County.

### **3.2 Partnerships**

Active project partners include the BSG, BLM, NRCS, TU, WHWT, ScSEED, USFW, CDOW, USFS, and CDPHE.

### **3.3 Matching Fund Source**

Funds for this project will be matched by NRCS WHIP funds if no other matching fundsource is successfully solicited. KCRPP anticipates providing matching funds through in-kind donations of labor and materials, as well as through future project grants.

## **4.0 ORGANIZATIONAL CAPABILITY**

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### **4.1 Historical Accomplishments**

KCRPP has phytostabilized a total of more than 20 acres of tailings piles, conducted fish and macroinvertebrate surveys, and restored over 3,000 lf of Kerber Creek. KCRPP has also stabilized two large tailings piles to reduce runoff and created partnerships with many regional groups. Additional work

in the watershed restoration efforts included subsoiling and seeding over 15 miles of unauthorized user created routes.

#### ***4.2 Staff and Volunteers***

KCRPP has one full time OSM/VISTA Volunteer: Maggie Barnes with WHWT. There are no full time staff members. However, this is one of several projects three individuals work on professionally: Steve Sanchez with BLM, Chanda Pettie with NRCS, and Elizabeth Russell with TU.

In addition, all landowners involved with KCRPP provide in-kind donations and many are pro-actively involved in the project, attending stakeholder meetings and voicing concerns. The Collegiate Peaks Anglers chapter of TU has also committed to a volunteer weekend in June.

#### ***4.3 Ability to Accomplish Project***

KCRPP has gathered incredible support from the community as well as nonprofit organizations and government agencies. This project will be part of a major restoration effort in the 2009 season. KCRPP has a proven history of success, and there is a large public will for the project to move forward.

SCC is a respected organization with a history of getting things done. They are self supported and motivated, and each team comes with two trained group leaders to ensure that all tasks are completed correctly. KCRPP has talked with multiple agencies and organizations who have utilized SCC in the past, all are extremely satisfied and many are contracting SCC again in 2009.

KCRPP has obtained both a Sec. 404 permit (Action No. SPA-2008-00243-SCO) and a Stormwater Discharge Permit (Permit No. COR-030000). These permits cover the proposed work.

## **5.0 EFFECTIVENESS OF PROPOSAL**

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### ***5.1 Results***

Measurable results directly attributable to the project include the completed phytostabilization of 20 acres of tailings piles and stabilizing vegetation planted on two miles of stream banks. The project will also help with KCRPP goals, Attachment 7.3.

### ***5.2 Demonstration of timeline and budget***

SCC crews should be capable of installing silt curtains, completing mulching and seeding on amended tailings, planting willow plugs, transplanting sedge mats, and installing willow fascines where needed along 2 miles of stream banks in 2 weeks. If time allows, the crew may also be used to tear down unsuitable fencing and install new fencing where appropriate. Other examples of work done in 2 weeks by SCC crews include "59 acres thinned of pinon and juniper. Materials limbed and bucked, slash piled" and "8 miles of trail maintained, 2 rock water bars installed, 176 water bars maintained, 10 rock cairns constructed, 1 rock wall constructed (8ft x 2ft), 3 rock river crossings constructed, 34 downed trees removed from the trail." See Attachment 7.5 for an SCC support letter for this project proposal.

Heather MacSarrow ( SCC) informed KCRPP that an SCC crew costs \$6,000/wk. The NRCS WHIP funds are currently unmatched; Chanda Pettie (NRCS) has agreed to allocate \$12,000 of materials to match this project.

SCC crews are available at any time; if funded the proposed SCC crew will work for two weeks in late summer 2009.

### ***5.3 Project Objectives***

The proposed project objectives are to stabilize two miles of stream banks with sedge mats and willows and to assist with phytostabilization of twenty acres of tailings piles. If time allows, the project would also remove/restore/build fences as prescribed by an NRCS wildlife biologist.

#### ***5.4 Similar Projects***

TU, NRCS, and BLM have similar projects along Kerber Creek. All of the work is primarily phytostabilization, stream bank stabilization through rock structures, and creating fish habitats. This project would include assisting phytostabilization efforts by seeding and mulching, installing sedge mats and planting willows, and possibly managing range animals and wildlife through creating better fencing.

### **6.0 EVALUATION AND MONITORING PLAN**

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#### ***6.1 Data storage, management, and reporting***

Water quality data will be uploaded into the Colorado Data Sharing Network and from there uploaded into the EPA STORET Database. Data will also be made available to the public on the Kerber Creek Restoration Project website (in progress).

#### ***6.2 Scientific Models***

Phytostabilization work for KCRPP is done in consultation with toxicologist Karl Ford, PhD, modeled after his 2005/2006 phytostabilization study at the Keating Site in Montana. Additional study sites were created in 2008 on tailings piles along Kerber Creek, results will determine 2009 phytostabilization prescriptions. Attachment 7.3 mentions other models used by the project.

#### ***6.3 Monitoring Plan***

CDPHE will resume water quality monitoring in 2010. USFW plans to conduct fish shocking and macroinvertebrate surveys on at least three sites along Kerber Creek in 2009 and 2011. In addition, KCRPP will measure three reaches of Kerber Creek for stream sinuosity and percentage of vegetated banks, as well as install three cross section transects and establish three photo points.

For each phytostabilized site, KCRPP will set a photo point to measure vegetation changes, and three long term sites will be established to monitor soil chemistry and site stability.

See Attachment 7.3 for more detail.

#### ***6.4 Long-term funding for Project***

The majority of 2009 cash funding is from the 319 and WHIP funds. 319 will continue to fund KCRPP through 2011. BSG, BLM, TU, NRCS, USFWS, and USFS are committed to providing technical, professional, and hands-on project support to completion. One of the primary goals of the OSM/VISTA Volunteer is to ensure project funding is available; the volunteer is responsible for writing a minimum of four grants per year. The project will have an OSM/VISTA Volunteer through 2011, by which point the volunteer will have organized a mechanism to continue project funding when the volunteer position expires.

### **7.0 ATTACHMENTS**

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#### ***7.1 Maps***

#### ***7.2 Project Photos***

#### ***7.3 Project Goals***

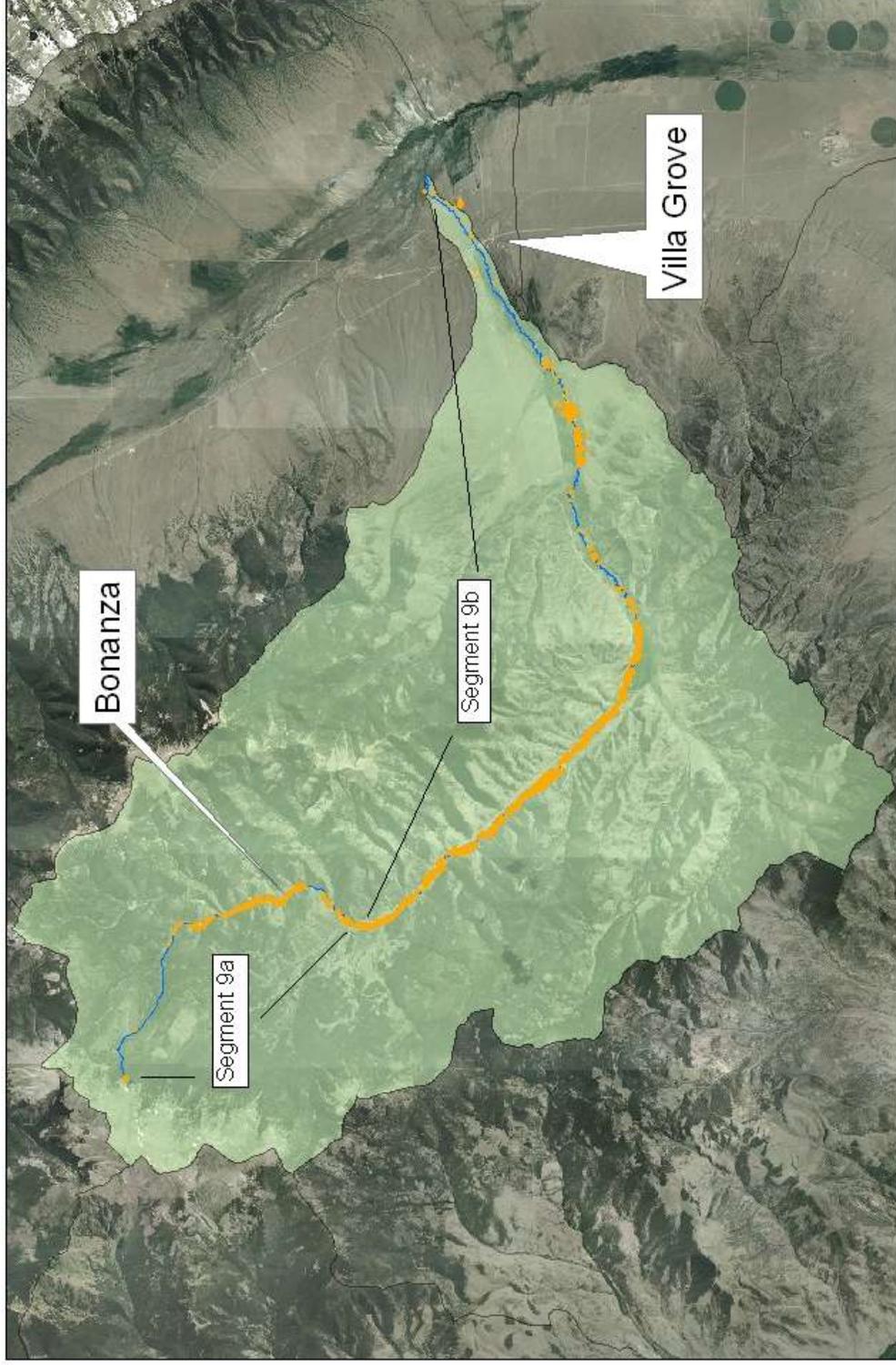
#### ***7.4 Names and Brief Resumes of Project Leaders***

#### ***7.5 Letters of Support and Financial Commitment***

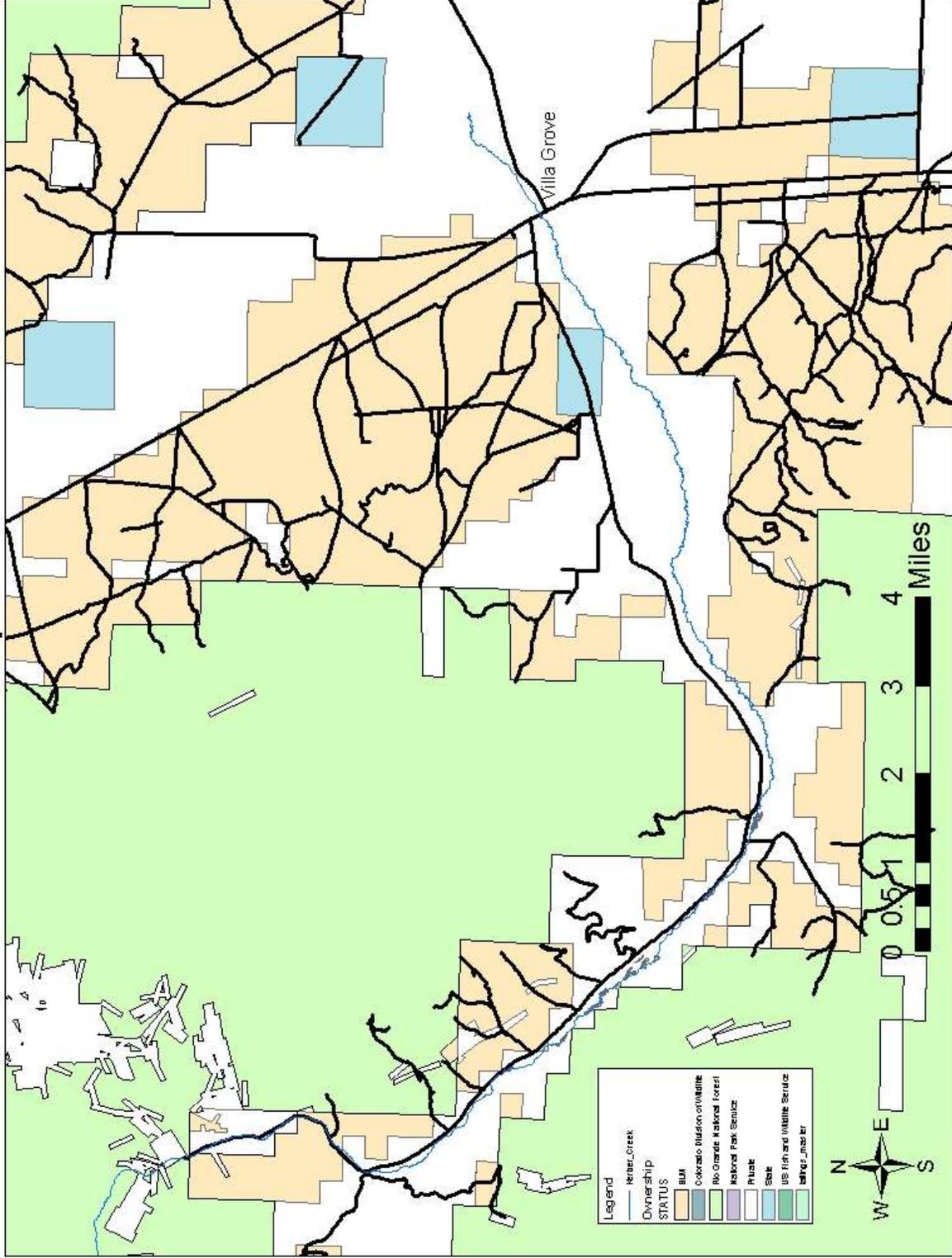
#### ***7.6 Works Cited***

**Attachment 7.1 Project Maps**

# Kerberer Creek Hydrologic Unit Map



# Site Location Map for Kerber Creek

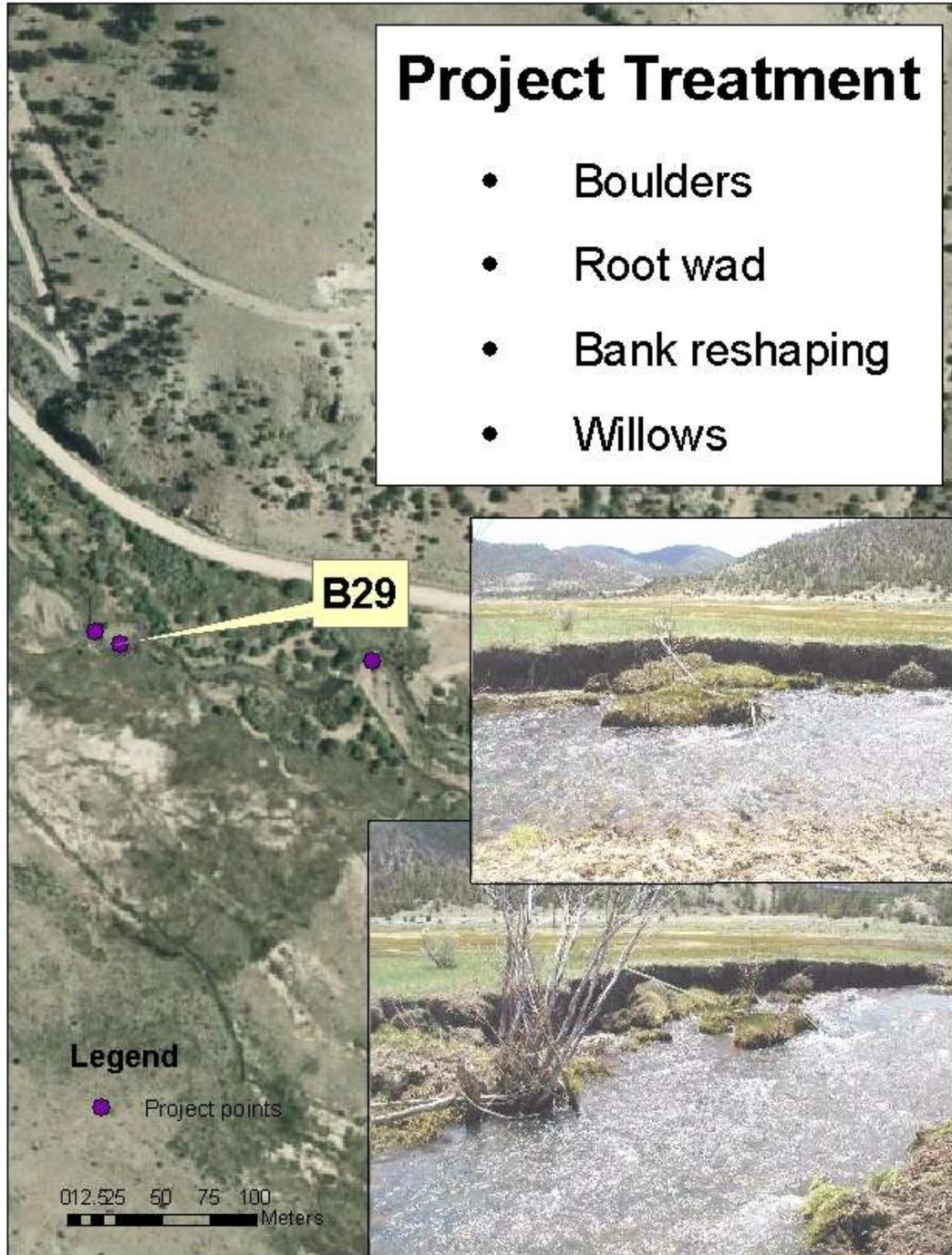


**Attachment 7.2: Project Photos**

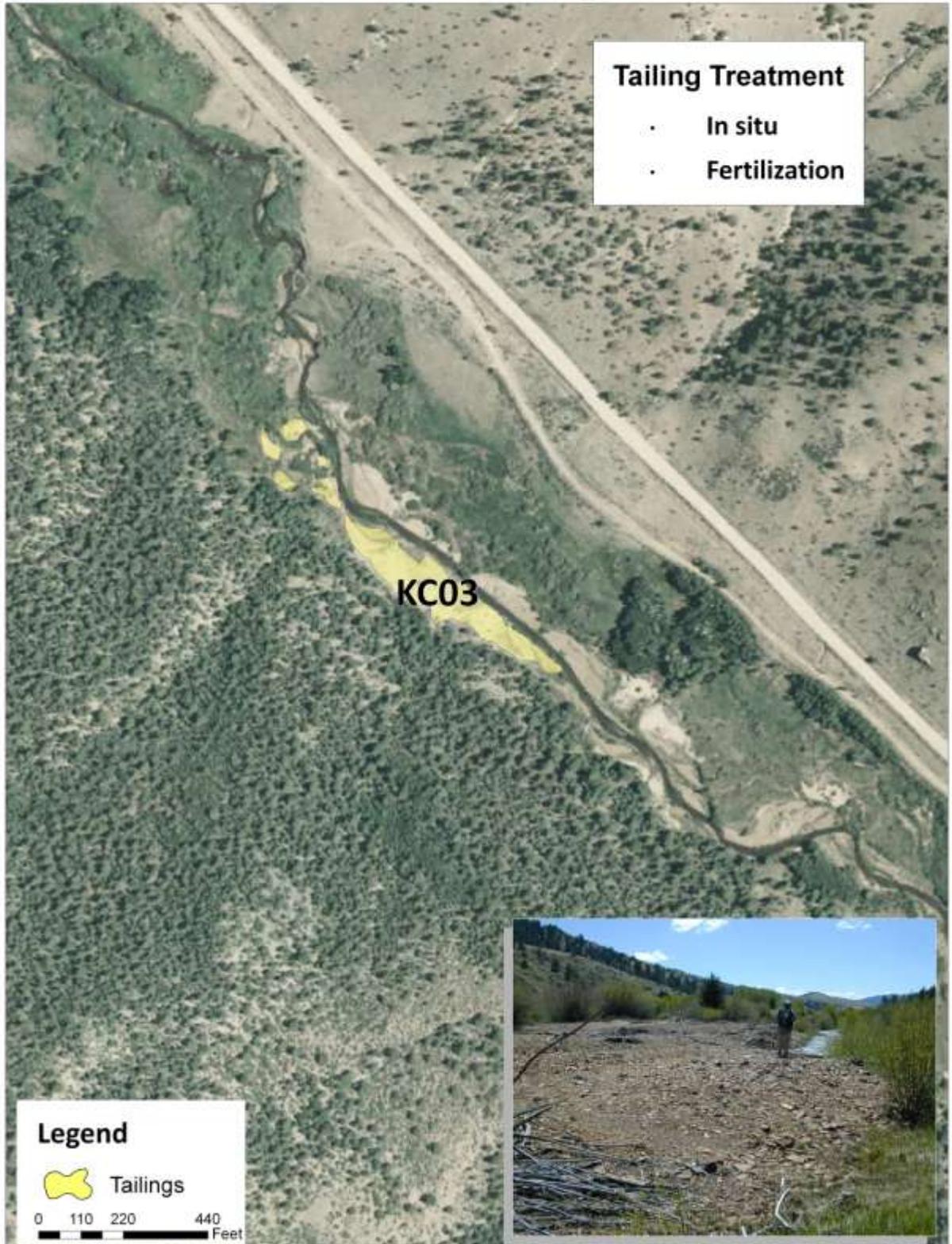
# Example Tailing Removal Site



# Typical Boulder Project



# In Situ Tailing Site



## **Attachment 7.3: Project Goals**

<b>Environmental Goals</b>	<b>Objective</b>	<b>Environmental Data Collection / Tasks</b>	<b>Frequency</b>	<b>Measure Results</b>
Increased Sinuosity	Improve floodplain recharge, and reduce shear stress.	Using past, current, and future satellite imagery, measure stream length and divide by valley length. Measure on the ground, in three 500 feet long reaches (Rosgen 1996).	Prior to project initiation (2008) and then again in 2011, and 2015.	2-5% Increased Sinuosity in a 1 mile reach
Reduced Channel Width	Stabilize banks and facilitate sustainable fate and transport of sediment.	Install three semi-permanent cross sections and measure width depth from floodplain to floodplain (Rosgen 1996)	Prior to project initiation (2008) and then again in 2011 and 2015.	Reduce channel width 10%
Improved Depth	Increase depth of stream for habitat improvement and floodplain recharge.	Install three semi-permanent cross sections and measure width depth from floodplain to floodplain (Rosgen 1996)	Prior to project initiation (2008) and then again in 2011 and 2015.	Increase depth 10%
Increased Macro-Invertebrate density	Improve macro-invertebrate density to assimilate nearest similar potential natural community stream.	Sample and analyze macro-invertebrates at three sites paying particular attention to EPT ratios. Samples will be collected at a minimum of three sites in the Kerber watershed and three sites in Sheep Creek watershed. (Utah State Bug Lab protocols)	Prior to project initiation (2008) and then again in 2009, 2011 and 2015.	Overall increase of 10% macro invertebrate density
Increased Fishery Density	Improve fisheries.	Partner with CDOW and FWS to shock and determine fishery density at three sites (DOW Jake-o-matic)	Prior to project initiation (2008) and then again in 2009, 2011 and 2015.	Overall increase in fish density 10%
Increased Upland Vegetation cover	Decrease overland flow, reduce metals loading, and slow infiltration of rainfall and snowmelt.	Install three semi-permanent Daubenmire transects and record vegetation frequency and cover (Daubenmire 1967).	Prior to project initiation (2008) and then again in 2011 and 2015.	Increase vegetation cover 50%

<b>Environmental Goals</b>	<b>Objective</b>	<b>Environmental Data Collection / Tasks</b>	<b>Frequency</b>	<b>Measure Results</b>
Stabilize stream banks	Improve stream bank stability until it has the ability to withstand event flows without extensive erosion.	In three 500 foot reaches measure unvegetated stream bank reaches on both banks.	Prior to project initiation (2008) and then again in 2011 and 2015.	Increase streambank vegetation cover 50%
Reduce metal mobility in soil	Reduce metal concentrations in Kerber Creek.	Using CDPHE water quality data and monitoring sites already established (TMDL 2008).	Prior to project initiation (2008) and then again in 2011 and 2015.	Within 5 period, meet site-specific chronic water quality standards for zinc, cadmium, and copper
Display change	Demonstrate change overtime with photography.	Establish at least three semi-permanent photo points (BLM TR 4400-4, 1996).	Prior to project initiation (2008) and then again in 2011 and 2015.	Monitor long-term trends in riparian and upland habitats.

**Attachment 7.4: Names and Brief Resumes of Project Leaders**

**Name** Steve Sanchez  
**Resume** Bureau of Land Management Natural Resource Specialist 2008-Present  
Past work experience includes silviculture, recreation, and engineering work for private sector, US Forest Service, and Bureau of Reclamation  
MS Applied Natural Science  
**Role** Manages BLM and co-manages 319 funded work

**Name** Chanda Pettie  
**Resume** Natural Resources Conservation Service (NRCS), Wildlife Biologist, 2002-Present  
US Fish & Wildlife Service, various positions: Range & Biologist Technician, 1998-2002  
Coteau Coal Mine, Mine Reclamation, 1996-1998  
BS Fish & Wildlife Management, Range Management  
**Role** Manages WHIP Funded projects

**Name** Elizabeth Russell  
**Resume** Trout Unlimited Mine Restoration Project Manager  
**Role** Co-manages 319 funded work

**Name** Kim Smoyer  
**Resume** Saguache County Sustainable Environment and Economic Development Program and Development Director  
MPA  
20 years experience managing grant funds for non-profit organizations  
**Role** Fiscal Sponsor for Colorado Restoration Program Funds

**Name** Maggie Barnes  
**Resume** Kerber Creek Restoration Project OSM/VISTA Volunteer  
BS Environmental Science  
**Role** Increases communication among partner organizations and stakeholders; writes grants

**Attachment 7.5: Letters of Support and Financial Commitment**



January 30, 2009

Dear Grant Review Committee Members:

Please accept this letter as strong support for the Hardrock Watershed's request for funding for the **Kerber Creek Restoration Project**.

SCC, founded as a non-profit organization in 1998, empowers individuals to positively impact their lives, their community and the environment. The SCC annually serves 500 young people in a variety of programs. The SCC program model, built upon the legacy of the Civilian Conservation Corps of the 1930s, incorporates guiding principles of experiential learning, respect, openness and willingness, commitment, responsibility, pride, excellence, health and safety, and fun.

The Kerber Creek Restoration Project is a perfect fit for a meaningful project for SCC crews. Crews function as turn-key operations, and arrive on-site with the tools and knowledge they need to finish a task. The Kerber Creek tasks of mulching, seeding, planting and fencing would engage a crew both physically and mentally. In 2008, SCC completed a similar project along Hot Springs Creek for the Orient Land Trust. The creek had been trampled by years of grazing, and was in need of bank stabilization and planting. The crew located and selectively gathered native willows and cottonwoods, stabilized the bank with mats and logs, and planted. Plants were placed to optimize their successional staging and resource needs. Restoration is an important part of conservation, and crews are always eager to participate in such projects.

SCC strongly supports this project and respectfully urges the grant program to fund the **Kerber Creek Restoration Project**.

Sincerely,

Heather MacSllarrow  
Executive Director  
SCC – Los Valles

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Los Valles \* Four Corners \* Sonoran Desert \* Ancestral Lands  
701 Camino Del Rio, Suite 101, Durango, CO 81301  
Phone: 970-259-8607 Fax: 970-259-9424  
[www.sccorps.org](http://www.sccorps.org)

United States Department of Agriculture



Natural Resources Conservation Service  
Alamosa Office  
101 South Craft Drive  
Alamosa, Colorado 81101

719-589-6432 - Office  
719-589-0613 - Fax  
[www.co.nrcs.usda.gov](http://www.co.nrcs.usda.gov)  
[chanda.pettie@co.usda.gov](mailto:chanda.pettie@co.usda.gov)

Maggie Barnes  
Kerber Creek Restoration Project  
46525 State Highway 114  
Saguache, CO 81149

Dear Ms. Barnes:

The Natural Resources Conservation Service is providing this letter of support for the Kerber Creek Restoration Project in Saguache County, CO. The Kerber Creek area has been impacted by historic mining activities; over 60 acres of tailings lie along 17 miles of Kerber Creek from Bonanza to Villa Grove. The project involves tailings removal, in situ treatment, revegetation, installation of fish habitat structures, stream bank stabilization, and fencing to keep cattle from the rehabilitated areas. Primary goals of the project include increasing forage area for cattle and wildlife, obtaining healthy stream morphology and biota, and removing Kerber Creek from that state's 303(d) list of impaired waterways. Provided that these purposes remain the priority for this project, we believe that this project will directly benefit Saguache County.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chanda Pettie".

Chanda Pettie  
NRCS Wildlife Biologist



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Ecological Services  
Colorado Field Office  
46525 Highway 114  
Saguache, Colorado 81149

IN REPLY REFER TO:  
ES/CO: EC/Kerber Creek

MEMORANDUM

30 January 2009

To: Ms. Maggie Barnes, Kerber Creek Restoration Project  
From: Ms. Laura Archuleta, Environmental Contaminants Specialist  
Subject: Kerber Creek Restoration Project Support

LA

The US Fish and Wildlife Service (Service) is providing this letter of support for the Kerber Creek Restoration Project in Saguache County, Colorado. The Kerber Creek watershed has been impacted by historic mining activities including over 60 acres of mining wastes that were deposited along 17 miles of Kerber Creek from Bonanza to Villa Grove. The project involves relocation of mining wastes, in situ treatment of mining wastes, revegetation, in-stream habitat restoration, stream bank stabilization, and riparian fencing/management. Primary goals of the project include: decreasing metals loading to Kerber Creek, increasing forage for cattle and wildlife, improving riparian habitat, improving stream morphology, and restoring habitat for aquatic species. Accomplishment of these goals could lead to the removal of Kerber Creek from that state's 303(d) list of impaired waterways. This project will directly benefit the residents and resources of Saguache County.

The Service looks forward to continuing our involvement with the project including assistance with planning and development. We have a vested interest in the environment and economy of Saguache and this project has many positive benefits. We commend the efforts of the Kerber Creek Restoration Project Partnership for their willingness to take on such a project and for the accomplishments to date.

If you have any questions or I can be of further assistance, please call me at (719) 655-6121.



USDA Forest Service  
Rio Grande National Forest  
Saguache Ranger District

46525 Hwy 114  
Saguache, CO 81149

(719) 655-2547  
TDD Ext. 6135  
Fax (719) 655-2502



USDI Bureau of Land Management  
Saguache Field Office

Date: 30 January 2009

Maggie Barnes  
Kerber Creek Restoration Project  
46525 State Highway 114  
Saguache, CO 81139

Dear Ms. Barnes:

The San Luis Valley Public Lands Center, Saguache Field Office, is providing this letter of support for the Kerber Creek Restoration Project in Saguache County, CO. The Kerber Creek area has been impacted by historic mining activities including over 60 acres of tailings that were deposited along 17 miles of Kerber Creek from Bonanza to Villa Grove. The project involves tailings removal, in situ treatment, revegetation, installation of fish habitat structures, stream bank stabilization, and fencing to keep cattle from the restored areas. Primary goals of the project include: increasing forage for cattle and wildlife, and improving stream morphology and habitat for aquatic species. Accomplishment of these goals could lead to the removal of Kerber Creek from that state's 303(d) list of impaired waterways. This project will directly benefit the residents and resources of Saguache County.

We look forward to continuing our involvement with the project including assistance with the planning and development. We have a vested interest in the environment and economy of Saguache and this project has many positive benefits. We commend the efforts of the Kerber Creek Restoration Project Partnership for their willingness to take on such a project and for the accomplishments to date. If I can be of further assistance, please contact me at 719-655-6115.

Sincerely,

Andrew Archuleta,  
Field Office Manager/District Ranger

**Attachment 7.6: Works Cited**

CDPHE, 2008. Total Maximum Daily Load Assessment, Kerber Creek, Saguache County, Colorado

Daubenmire, F. Rexford, 1967, Plants and the Environment: A Textbook of Plant Autecology, Wiley, New York.

Interagency Technical Reference, 1996, Sampling vegetation Attributes, Cooperative Extension Service, U. S. Department. of Agriculture – Forest Service, Natural Resource Conservation Service – Grazing Land Technology Institute, U.S. Department of the Interior - BLM BLM/RS/ST-96?002+1730.

USDOJ, BLM, Saguache Field Office. 2007. Environmental Assessment Number CO-500-07-014 EA. Kerber Creek Restoration Projects.

USDOJ, BLM. 2006. Technical Note 420. Phytostabilization as a Remediation Alternative at Mining Sites.