



Friends of Coal Creek

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Fall 2008 &
Winter 2009

Friends of Coal Creek is a joint effort of the Coal Creek Watershed Coalition and the Standard Mine Technical Advisory group. See page 4 for more details.

Editors

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By the Numbers...

Cubic Yards of Waste Material Relocated to the Repository from the Standard Mine Site
-50,000

% of Cadmium Removed by the Bioreactor at the Standard Mine
98%

Number of Safety Closures Made in the Watershed in 2008
28

Number of Water Samples Collected in 2008 by the CCWC
354

Number of Sampling Sites Where Samples Were Collected
28

State Abandoned Mine Land Program Active in 2008

Over the summer of 2008 the Colorado Division of Reclamation Mining and Safety (DRMS) spent significant time and energy addressing abandoned mine issues in the Crested Butte area. Staff and contractors working for DRMS worked on mining related problems at four different projects.

In Redwell Basin, in the Slate River watershed, DRMS wanted to further quantify contaminant sources entering Redwell Creek and Oh Be Joyful Creek from the Daisy and other abandoned mines and from natural sources in the area. As its name implies, Redwell Basin is home to a large spring (the "Red Well") that discharges metals-laden water into Redwell Creek. However, some apparently mining related contaminant sources, such as flowing artesian well, mine waste rock and a discharging adit, also contribute to water quality degradation in Redwell Creek. Coal Creek Watershed Coalition (CCWC) assisted DRMS with field reconnaissance and sample collection in September. A preliminary report describing the

results of the sampling effort will likely be prepared and released over the winter.

In the Coal Creek Watershed, DRMS and CCWC staff and volunteers organized an effort to characterize abandoned mine sites in the upper reaches of the watershed.

This effort focused on documenting mine waste piles and their potential impacts to water quality. Data from this effort will be consolidated into a report summarizing the findings and which will be used to prioritize cleanup efforts where applicable.

DRMS contractors safeguarded twenty eight hazardous abandoned mines shafts and adits which posed public safety concerns near the Irwin town site and other locations in the vicinity of the Standard Mine Superfund Site. About half of these closures are on National Forest System lands, and half are on private property. The sites all posed safety risks to back-country users.

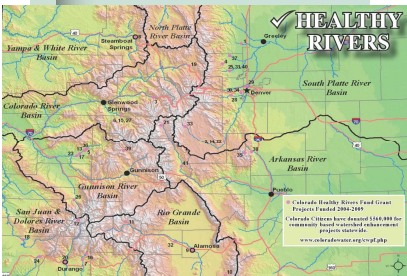
DRMS performed more work at the Standard Mine Superfund Site on behalf of the EPA, in an effort to under-

stand the relationship between groundwater flows and the Micawber Fault, the primary structure associated with mining at the Standard. Because faults can be conduits for water entering mine workings, DRMS and EPA hoped to refine their understanding of groundwater movement along the fault. A DRMS contractor completed a series of water monitoring wells into the rock surrounding the fault. Water levels in the wells will be monitored to track groundwater movement. Core samples of the rock around the fault zone were also obtained. Understanding the groundwater regime could lead to a method of reducing the flow of uncontaminated water into the mine. Reducing the volume of water entering the mine should result in lower volumes of contaminated water requiring treatment as it discharges from Level 1. Waters discharged from the mine at Level 1 are now the primary source of contaminated waters affecting Elk Creek, as the mine waste materials have been consolidated into a repository. ◀



Above: The Forest Service and EPA redesigned the channel for Elk Creek. Sedges, willows, and other vegetation were planted as part of the revegetation of the site.

Over the course of 2008 366 samples were collected from 28 sites in the Coal Creek Watershed by the Coal Creek Watershed Coalition.



Above: The CCWC is part of 41 projects throughout the State funded by the Colorado Healthy Rivers Fund .

Water Sampling Completed for 2008

Sampling by the Coal Creek Watershed Coalition has been completed for 2008. Sampling in 2008 started in February and ended in October. Overall, 366 samples from 28 different sites were collected during the year. Of all of the samples, 354 were water samples and were analyzed for metals, microbes, and nutrients. Twelve of the samples

collected in 2008 were macro-invertebrate samples and will be analyzed through a series of indices used to determine the impacts of pollutants found in the watershed.

Many of the samples were collected with ISCO brand automated samplers located at six sites in the watershed.

These samplers also record flow data, allowing the Coali-

tion to determine metal loads over time.

All of the findings will be available in the winter of 2009 when the Coalition completes its annual Water Quality Monitoring Report. For more information on water quality data from 2006 or 2007 please visit our library of electronic files on our website at www.coalcreek.org. ◀

Standard Mine Update PROVIDED BY THE STANDARD MINE TECHNICAL ADVISORY GROUP

The Environmental Protection Agency had another successful summer of work at the Standard Mine Superfund site. All of the remaining waste materials were relocated to the repository site. The repository was permanently capped with a layer of soil and large rocks to prevent future disturbances. After removing waste materials, the Standard Mine and mill site was re-graded and a new channel for Elk Creek was planted with sedges, grasses, and willows. The EPA will monitor the success of the

plantings over the next couple of years to ensure successful establishment of the vegetation.

The Sulfate Reducing Bioreactor, a created wetland designed to remove metals in water, continued operating throughout the winter and summer. The removal of metals by the Bioreactor has been highly effective but may not remove enough metals to achieve the standards set for Elk and Coal Creeks. The EPA will continue to monitor the effectiveness of the Bioreactor and

report these findings to the community over the winter.

Over the winter the EPA plans to present data collected in 2008. The EPA will also be asking for input from the community on cleanup goals for the Standard Mine. Several other items are tentatively planned for discussion this winter. The community is invited to attend. Please contact Libby Faulk at (303) 312-6083 or faulk.libby@epa.gov for more information. ◀

Colorado Healthy Rivers Grant Awarded

In the fall of 2008, the CCWC was awarded a grant from the Colorado Healthy Rivers Fund for \$8,395. The much needed funds from this grant will be used to analyze microbial water samples, design and create educational signage, process and analyze macroinvertebrate samples, and provide a second year of VISTA services to the organization. The CCWC anticipates

completing these programs before the summer of 2009.

Formerly the Colorado Watershed Protection Fund, the Colorado Healthy Rivers Fund is financed by the Colorado check-off program. This initiative gives taxpayers the opportunity to make a donation or contribute a portion of their tax return to assist locally-based conservation groups in their efforts to protect

land and water resources. For more information please visit: www.coloradowater.org.

To get involved in these programs or any of the organization's other efforts, please contact us. Private donations are always appreciated. Please contact the CWCC at (970) 596-7496 or via email at coordinator@coalcreek.org to receive a sponsorship packet. ◀

Logan Reese: Signing Off! By Logan Reese

I am here to say farewell. As a former Volunteer In Service To America (VISTA) through AmeriCorps & the Office of Surface Mining (OSM) serving as Watershed Development Coordinator for the Coalition, I am now just a resident of the Gunnison valley.

Throughout the past year, I brought stability to the water quality-monitoring program. I played an essential role in the leadership of sampling teams, organization of equipment and data, and volunteer recruitment. I also worked to develop and implement collaborative projects with other local agencies and organizations. I pursued fundraising options, and worked with water quality data

entry and analysis.

I will always be a strong advocate for responsible stewardship, natural resource protection, and community-based organizations and feel everyone in this valley should be in some capacity.

As a biologist, the fieldwork was my favorite part of this job. Whether I was filtering water or measuring abandoned mine waste piles, I became very familiar and fond of this particular watershed. Coal Creek and its surroundings are a beautiful place, in addition to being a drinking water source, and important recreation destination. For these reasons it is a difficult task to manage and balance the

needs of all the watershed's stakeholders.

My full-time work with the Coal Creek Watershed Coalition has come to an end, but I believe I will continue to volunteer...and anyone is welcome to volunteer with this great organization.

To all those folks who've met me, helped me, and to those who are still wondering what I was doing around town; thank you! Your support, donation or a simple smile helped me in my task, whether large or small, of building the capacity of a very important watershed group in YOUR community. To understand the full scope of my work, please contact coordinator@coalcreek.org. ◀



Above: Logan Reese at Lake Irwin in October of 2008.

A New Face in Valuable Role By Amy Weinfurter

To continue the strides former VISTA Logan Reese has made with the Coal Creek Watershed Coalition (CCWC), I began serving as the new VISTA member in mid-October. Since arriving in Gunnison this fall, I have gotten my feet wet – literally and figuratively – by assisting in the season's final water sampling event in October. I am looking forward to seeing the results of this fieldwork, and to continuing to stabilize and expand the Coalition's sampling efforts. So far, I have been deeply excited by the learning opportunities this position offers, the chance to

stomp around in a beautiful watershed, and the generous willingness of Logan, Anthony, and many local residents I've met to share their extensive knowledge of the area and watershed with me.

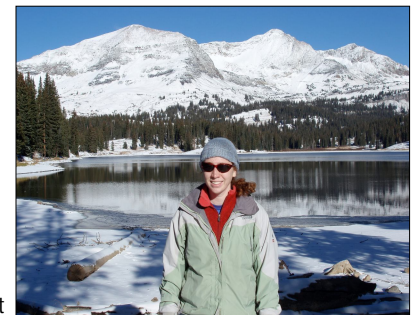
I come to Colorado having graduated from Colby College, in Waterville, Maine, where I studied English and Environmental Studies. Before beginning work with the CCWC, I completed an internship with StoryCorps, one of the largest national oral history projects of its kind, where I focused on grassroots marketing and communication. My work

experience also includes an internship with the New York League of Conservation Voters, a non-profit that evaluates and educates local citizens about local and national environmental policy.

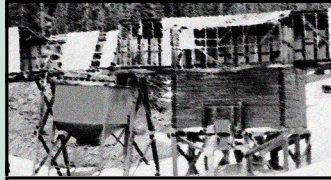
As the second year VISTA volunteer, I will build on Logan's work to develop educational and outreach partnerships, secure funding through grant writing and fundraising, recruit and organize volunteers, and search for ways to increase the Coalition's capacity. You can reach me anytime at amy@coalcreek.org! ◀

"To all those folks who've met me, helped me, and to those who are still wondering who I am and what I was doing around town; thank you!"

- Logan Reese



Above: New OSM*VISTA member Amy Weinfurter will be replacing Logan Reese.



Standard Mine Technical Advisory Group

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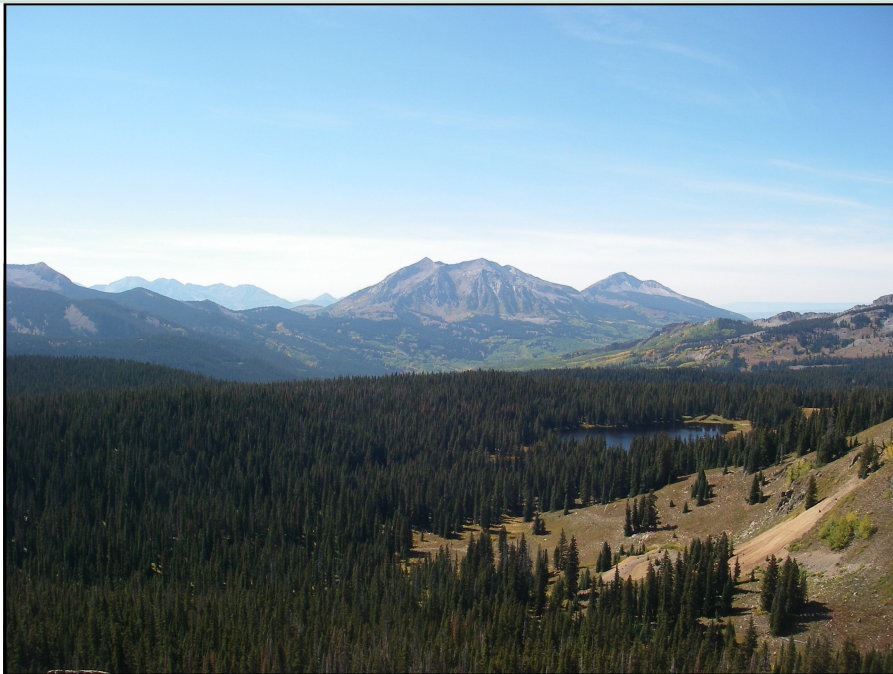
c/o Town of Crested Butte
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Mission Statement: The mission of the SMTAG is to assure that Standard Mine clean-up activities and the final outcome of the clean-up process are beneficial to the environment and to affected persons and communities; to assess and protect the quality of water in Elk Creek and Coal Creek; to serve as a hub of communication about abandoned mine cleanup efforts; to help foster positive relationships between citizens and the state and federal government; and to educate the community about environmental and health issues concerning Elk Creek and Coal Creek and the cleanup of abandoned mine sites.

Mission Statement: The mission of the Coal Creek Watershed Coalition is to maintain, restore and enhance the environmental integrity of the watershed to provide high-quality water for wildlife, aquatic life, and human life.

The CCWC has been supported by the following great businesses and individuals:

- * Scott and Betsy Anderson * Bookie Louise * Flying Petito Sisters * High Country Citizens' Alliance * Town of Crested Butte * Gunnison County * Karyn Adelman Acupuncture
- * McGill's of Crested Butte * Clarke's Market *



The Coal Creek Watershed Coalition is in need of volunteers for a variety of functions including public outreach, water sampling, grant writing, and general administrative functions. Water sampling will begin again in February and volunteers are needed. Volunteers are trained in sampling procedures and will be provided with lunch during sampling events. Come join us for a day of fun in the sun. For more information contact Anthony Poponi at (970) 596-7496 or coordinator@coalcreek.org or visit www.coalcreek.org and click on our "Volunteer" page. ◀

Quotable Quotes:

"If you want one year of prosperity, plant corn. If you want ten years of prosperity, plant trees. If you want one hundred years of prosperity, educate people."

- Chinese proverb



**Colorado Department
of Public Health
and Environment**

The CCWC is supported in part by funding from the Colorado Dept. of Health and Public Environment Non-Point Source Program.