MAY 2022, ISSUE 3

THE LIVE STREAM

Official Newsletter of Coal Creek Watershed Coalition

GOSSAN IN COAL CREEK WATERSHED

The gossan is located approximately three miles west of Crested Butte. The gossan is a naturally occurring geologic feature composed of limonite and other iron oxides which create the red and yellow soils.

Executive Director Update

BY ASHLEY BEMBENEK

Since November 2021, when the State of Colorado's Natural Resource Damages (NRD) Program announced that approximately $230,000 was available for watershed restoration activities in Gunnison County, CCWC has been busy coordinating stakeholders and crunching data to identify the best restoration project for the NRD funds. Due to the outsized water quality impacts and stakeholder interest, the Gossan Restoration Project was identified as the top priority.

With the support of the Colorado Division of Reclamation, Mining and Safety, the US Forest Service, Mt. Emmons Mining Company, the Town of Crested Butte, and Gunnison County, CCWC prepared a proposal for the NRD Funds. NRD staff just reported that they strongly support the Gossan Restoration Project and would like to fast-track the funding process.

After a decade of characterization and preliminary discussions, CCWC is thrilled to work alongside our partners to restore the Gossan!

An Overview of The Gossan Restoration Project

BY ALLI DEL GIZZI & ASHLEY BEMBENEK

Multiple studies have identified the gossan as a primary source of metals loading and one of the pollutant sources responsible for cadmium and zinc water quality impairments in Coal Creek. In 1978, welding operations at the Keystone Mine site started a wildfire. Despite fire suppression efforts by the US Forest Service, the wildfire burned much of the gossan. Over 40 years later, vegetation is sparse and run-off and erosion from the gossan remain unchecked. Without human-disturbance, the gossan would likely support a forest ecosystem dominated by lodgepole pine, Engelmann spruce, and aspen.

The goal of the Gossan Restoration Project is to improve forest and wetland habitat, eliminate or substantially reduce erosion, and decrease runoff of acidic metals-laden water from the gossan. A series of best management practices will be used to restore the 19-acre area including:

- soil amendments
- revegetation
- wetland restoration
- appropriately-sized drainage channels

Due to its location, the project has the potential to provide multiple benefits the Coal Creek Watershed including:

Improve surface water quality
Decreasing metals-laden runoff from the gossan may allow Coal Creek to attain water quality standards more frequently. Additionally, lower metal concentrations in the Town's municipal water supply could reduce the treatment load at the water treatment plant.

Improve aquatic habitat
Reducing metal concentrations and sediment loading in Coal Creek may create more suitable habitat for macroinvertebrates and fish.

Improve watershed health
By restoring native vegetation and improving hydrologic function, the project will improve the condition of the forest, the downstream riparian corridor of Coal Creek, and the health of the watershed.

Support the Project Today!

As of April 2022, CCWC and the project partners have committed just under $900,000 or 58 percent of the total project cost of $1,529,560. **Your tax-deductible donations will help CCWC fund the remainder of the Gossan Restoration Project!**

This is our most ambitious project yet, please help if you can! You can mail us a check or donate online at CoalCreek.org

WATER WORDS

In water words we explore the etymology of words we commonly use in the world of water.

Gossan (n.) a red or yellow deposit rich in iron oxides. Gossans frequently occur above metallic ores and were traditionally used by miners to identify potentially valuable mineral deposits

Gossan is derived from the Cornish word *gōs* meaning *blood*, likely from the characteristic red coloration of gossans.