

THE LIVE STREAM

Official Newsletter of Coal Creek Watershed Coalition



Intercepting Human Waste

In recent years visitation and recreation in the Gunnison Valley has increased significantly. The improper disposal of human and pet waste can introduce pathogens that are harmful to human health, water quality, and the environment.

For nearly a decade, CCWC has sponsored porta-potties and pit toilets to reduce the amount of human waste impacting our environment. This summer 15 backcountry porta-potty units were installed at popular trailheads. They intercepted approximately 11,000 gallons of human waste from entering our environment. This work was coordinated by the Crested Butte Mt Crested Butte Chamber of Commerce, with the support of several local businesses and organizations.

Executive Director Update

Like our streams, field work has slowed to a trickle. Without the bustle of preparing for our next sampling event, it's tempting to think our work can wait. But attentive ears in the valley know there are a number of big things under way including the Mt. Emmons land exchange, administrative withdrawal, and progress toward a settlement in water court. As each project unfolds, we are excited to serve the community and provide technical expertise to assure that our local watersheds are protected.

Currently, CCWC is working with the Town of Crested Butte, Mt. Emmons Mining Company, the Colorado Division of Reclamation, Mining and Safety, and the US Forest Service to restore the gossan. The gossan is a naturally occurring geologic feature composed of iron oxides located three miles west of Crested Butte on Mt. Emmons. In 1978, a fire was started by welding operations at the Keystone Mine site that destroyed much of the overlying forest; vegetation has not fully recovered. Multiple studies have identified the gossan as a primary source of metals loading in the Coal Creek Watershed. The goal of the Gossan Restoration Project is to restore 19 acres of upland forest and wetland habitat, eliminate or substantially reduce erosion, and decrease runoff of acidic metals-laden water. Due to its location, the Project has the potential to improve water quality, aquatic habitat, and riparian conditions in up to four miles of downstream waters in Coal Creek. The Project will also reduce metal concentrations in the Town's municipal water supply.

With such promising opportunities on the horizon, CCWC is more inspired than ever. Please join us in protecting our local watersheds!

Ashley Bembenek, Executive Director

Colorado's Dusty Little Secret

As high-country dwellers seek warmer playgrounds during the shoulder season, the rugged allure of the Southern Colorado Plateau beckons. This region of southwest Colorado, northwest New Mexico, northern Arizona, and southeast Utah, offers outdoor activities that cater to every interest and boasts some of the most popular outdoor recreation areas in the US. The Southern Colorado Plateau has seen a dramatic increase in recreationists over the past decade.

Increased recreation, especially motorized forms, add to on-going land uses that degrade the quality of sensitive desert soils. Since the late nineteenth century, the expansion of grazing, agriculture, oil and gas development, and recreation have disturbed soil and contributed to an increase of windblown dust. In the last two decades, the movement of dust around the West has increased 300% with no sign of abating (Derry, 2019). Increased traffic on dirt roads, off-road driving, and the trampling of undisturbed soil surfaces and vegetation by recreationists decrease soil stability and increase dust production.

Wind carries fine sediment and dust from the Southern Colorado Plateau to mountains in Colorado. When dust is deposited onto the snowpack, it drastically reduces the reflectivity of the snow. As the snowpack melts, dust from multiple wind events accumulates on the snow surface, further reducing the reflectivity. Dusty snow absorbs more incoming solar radiation, which accelerates snowmelt and leads to an earlier and quicker spring runoff.



Layers of dust stripe a snow pit.
Photo: Center for Snow and Avalanche Studies

Dust-on-snow events have broad environmental, social, and economic consequences. Shorter periods of snow cover can increase stress in trees, making them more susceptible to wildfire and insect infestation (Clow, 2009). Earlier stream runoff results in reduced summer streamflow which leads to higher water temperatures that stress aquatic life (Derry, 2019). Water managers also grapple with uncertainties when the snowpack, which serves as a water source for 40 million people, melts 24 to 50 days ahead of schedule, leaving less water for peak summer demand (Derry, 2019; Deems et al., 2013). Ranchers and farmers who rely on consistent water flow for irrigation and livestock during the summer, face difficulties due to the unpredictable timing and quantity of water (Riccardi, 2009). The presence of dust shortens the ski season. The effects of dust-on-snow events have several economic consequences to recreation and tourism-based economies and to agriculture.

As the allure of a shoulder season escape to the desert draws us in, it is crucial that we recognize the interconnectedness of our actions in the desert and their impacts on the alpine landscapes we cherish and the water sources we rely on. Let's commit to staying on designated trails and in designated campsites, respecting road and trail closures, conserving water, and packing out trash. By fostering a sense of stewardship and taking steps to minimize our footprint, we can work towards reducing the impacts we have on the fragile desert ecosystem and Colorado's snowpack.

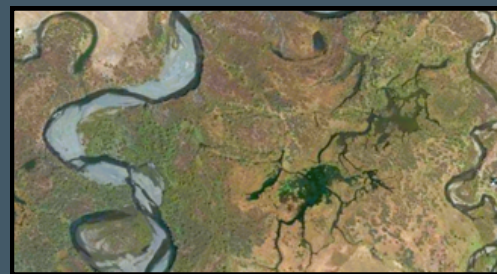
WATER WORDS

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

Meander (n.) A winding curve or bend of a river or road.

Meanders are produced when water in a stream channel erodes the sediment of an outer bend of the streambank and deposits it on subsequent inner bends downstream.

Maeandrus was a river-God in Greek mythology, patron deity of the Maiandros river in Caria, Anatolia (modern Turkey). Maiandros river was noted for its winding course.



The Slate River (left) and Coal Creek (right) meander through the wetlands just North of Crested Butte.

Support CCWC on Colorado Gives Day!

From now through December 5th up to \$1,000 in donations to CCWC will be matched by the Colorado Gives Foundation!



Please consider making a tax-deductible year-end donation to support our mission.