

# FREEDOM TO FLOW

MONTANA'S PRICKLY PEAR CREEK SEES  
NEW LIFE AFTER INDUSTRIAL PAST ■ BY CAITLIN STYRSKY

Prickly Pear Creek now meanders closer to its natural course through more than 100 acres of restored flood plains.

PHOTOS COURTESY OF MONTANA ENVIRONMENTAL TRUST GROUP



# LAND

**PRICKLY PEAR CREEK** flows out of Montana's Elkhorn Mountains and winds through the scenic countryside of the Helena Valley. Although the creek primarily passes through bucolic pastures and grasslands, a portion of the waterway washes through rehabilitated habitat at the former American Smelting and Refining Company (ASARCO) facility in East Helena.

ASARCO began operating here in 1888 and for more than a century the smelter refined ore to produce lead bullion, an impure blend of lead, gold and silver. The smelting process also yielded valuable byproducts, such as copper, zinc and sulfuric acid, which were shipped to other refining facilities for further processing or sold as commodities to manufacturers.

At the time, lead was used to produce goods such as batteries, ammunition, lead-based paints and leaded gasoline. Although the East Helena facility employed generations of area residents, smelter operations also threatened the safety of the community by leaching arsenic, heavy metals, and other potential drinking water contaminants into the surrounding soil and groundwater. The Environmental Protection Agency added the ASARCO facility to its National Priorities List in 1984, but the site remained operational until 2001.

ASARCO declared bankruptcy in 2005 and the resulting court settlement placed the nonprofit Montana Environmental Trust Group in charge of evaluating the site's environmental impact and cleaning up the property. This multi-year project includes the rehabilitation of a 1.25-mile stretch of Prickly Pear Creek.

"When we started, Prickly Pear Creek was just this long channel that had been moved and relocated by ASARCO going back to the 1800s," said Cindy Brooks, METG director. "The condition that it was in when we started was very unnatural."

The Prickly Pear Creek rehabilitation project began in 2009 as part of the demolition and restoration of the former ASARCO facility. METG created a diversion bypass to redirect the creek away from contaminated areas on the south end of the smelter site, and the remaining slag pile next to the northern stretch of the creek.

Two man-made lakes, which ASARCO created to store water for the smelter's treatment and cooling operations, were drained in order to reduce groundwater levels and prevent the spread of contamination. The smelter dam was also removed, which reopened passage for brown, cutthroat and rainbow trout along Prickly Pear Creek toward Lake Helena.

In August 2016, the creek was finally diverted into a realigned channel, and it now follows a more natural, meandering route through more than 100 acres of newly created floodplain. Fifty acres of wetlands now occupy the drained lakes and a 62-acre evapotranspirative cover, a natural soil barrier, blankets the toxic soil and prevents the remaining contaminants from coming in contact with precipitation, wildlife or people. >>



**NEARLY 35,000 PLANTS WERE HARVESTED**

nearby and replanted at the site, and willows, chokecherries and alders are beginning to take hold—deer, elk, beavers and foxes have returned to the area, according to Brooks. The only indication of the area’s past use is the 16-million ton slag pile, a towering dark mound of glassy smelter byproduct that now looms a safe distance from the banks of the creek.

Project results are already measurable: Groundwater levels have dropped throughout the property, precipitation runs cleanly off of the evapotranspirative cover, and soil contaminant levels have diminished by 75 percent in places. Biologists have also seen an increase in the number of trout that inhabit Prickly Pear Creek.

“In the last couple of years, we’ve actually seen demonstrable improvement in water quality, which is amazing,” Brooks said. “There are very few hazardous waste sites where you can have that outcome so quickly.”

METG will continue to monitor groundwater quality and contaminant plumes on the property over the next several years. The group is also exploring proposals to help mitigate contamination from the slag pile and is investigating options for recycling or reprocessing the material.

With the bulk of the creek restoration complete, METG and the East Helena community can begin looking toward future uses of the restored waterway. METG’s vision for the area surrounding the realigned channel includes dedicated open space with public recreation access to the creek. Brooks hopes to manifest this vision by transferring the land to a long-term steward, such as a government agency or nonprofit, that could establish a community space and preserve the area for future generations.

While a city park along the corridor is one option, East Helena Mayor Jamie Schell cautioned that the small community’s tight municipal budget would make it difficult to acquire the property in the near future.

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“At this stage, we’re very happy with the progress that METG has made,” Schell said. “We’re waiting, as a city, to see where the project goes. Who might be interested in the land? Who might be interested in the long-term care of the area?”

One interested party is the Prickly Pear Land Trust, a Helena-based nonprofit that aims to

preserve public access to open spaces in Lewis and Clark, Jefferson, Broadwater and Powell counties. The group has expressed interest in incorporating approximately 200 acres of the realigned corridor into the Prickly Pear Creek Greenway, a proposed trail through open land that would link the Helena airport, East Helena and Montana City.

“If the Prickly Pear Land Trust could step in and hold these lands now [and] accomplish our vision for the proposed greenway, and the city of East Helena could ultimately be the best holder for the lands down the road, we think that could be a great partnership all around,” said Andrea Silverman, land protection coordinator for the Prickly Pear Land Trust.

Given the project’s successful restoration, Brooks is confident that community stakeholders will arrive at an approach to integrate the creek corridor.

“A big part of the success of East Helena is the alignment of so many different stakeholders with the goal of protecting public health and the environment, and restoring and revitalizing the land,” Brooks said. 🐾

*Caitlin Styrsky lives in West Yellowstone, Montana, where she can usually be found writing, fly fishing, teaching yoga and exploring with her German shepherd Stella.*

**Left:** The American Smelting and Refining Company began operations in East Helena in 1888. Pictured here in 1905, the plant leached dangerous contaminants into the surrounding soil and groundwater for more than a century.

**Right:** The Prickly Pear Creek rehabilitation project began in 2009 with the demolition of the ASARCO facility.