

Daily Camera Opinion

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Back in 1858, a group of white settlers in horse-drawn wagons made their way to Pike's Peak in search of gold. They paused at Fort St. Vrain on the South Platte River for a view of the Flatirons, which inspired their leader, Captain Thomas Aikins, to remark, "The mountains look right for gold and the valleys look good for grazing." The settlers proceeded to Four Mile Canyon and began mining the streams.

From the streams, they harvested gold "float" and traced the gold to quartz veins in the hills above Boulder, near Gold Hill. In Gold Hill, and in Ward, Jamestown, Magnolia, Salina, Sunshine, Sunset, and Sugar Loaf, miners sunk shafts, blasted tunnels, constructed mills, and removed about 660,000 troy ounces of gold over the years. Boulder County mines also produced tungsten, silver, lead, copper, zinc, fluorite, and uranium. The city of Boulder grew rapidly to support mining.

Back in 1992, my wife and I made our way to Boulder in a Budget rent-a-truck. We paused to view the Flatirons from the scenic outlook on the Boulder Turnpike. Despite some knowledge of geology on my part, we weren't lured to Colorado by the prospect for precious metals. Actually, we were completely unaware of Boulder's mining history. Instead, we came to teach and learn at the University, and to do a little skiing, hiking, and biking, too. It took about nine years of residing in Boulder County, most of it in a mountain subdivision about five miles west of Jamestown, along with the concerns of community groups over possible Superfund

designation for the mining districts in the Lefthand Creek watershed, for me to realize the role of mining in Boulder's growth.

In addition to producing some \$230 million worth of gold, Boulder County's mines and mills produced a few million tons of waste rock and tailings. Mine wastes contain pyrite, a mineral that releases sulfuric acid when exposed to air and water. We call this process acid mine drainage. The acid dissolves metals like lead, copper, and zinc into the water. These metals can be harmful to humans if they get into drinking water at fairly high concentrations. Even at very low concentrations, they can poison fish and other aquatic organisms.

Boulder residents have had to reckon with the effects of mining on water quality since the 1870s. Miners washed mill tailings into streams used for water supply, and the heavy loads of suspended sediment made the water undrinkable. In 1874, the *Boulder County Herald* recommended the development of water sources further up Boulder Canyon, above the mining areas. Often hailed for its well-protected water sources near the Continental Divide, the city of Boulder developed these sources out of necessity, not through extraordinary foresight.

Presently, fish in the Lefthand Creek watershed are suffering from the acid and metal contamination. The Colorado Division of Wildlife found only about half as many fish in the James Creek below its confluence with the Little James Creek as above the confluence, and no aquatic life at all in the Little James. Bordering the Little James is a series of abandoned mines – the Wano, the Emmit, the Burlington, and the Argo – that generate acid and metals. Just this spring, Jamestown residents observed a small fish kill in the James Creek during the melting of the record March snowfall. The fish kill coincided with a sudden release of water backed up in subsidence pits at the Burlington Mine.

There is also a minute chance that Boulder County residents are at risk. The Left Hand Water District taps Lefthand Creek to provide drinking water to about 15,000 customers in rural Boulder and Larimer Counties. Water in Lefthand Creek does not contain any metals at levels harmful to humans and neither does the water distributed by the utility, but the U.S. Environmental Protection Agency (EPA) believes that a catastrophic flood could carry metal-contaminated sediments into the treatment plant.

In 1999, the EPA let it be known that they wanted to add the abandoned mines around Ward and Jamestown to the Superfund list. In response, the Boulder County Health Department formed a stakeholder task force, the Left Hand Task Force, with representatives from Jamestown, Rowena, Ward, and the Left Hand Water District, to review three decades of water quality studies, the EPA recommendation, and alternatives for cleanup.

The task force unanimously concluded that the abandoned mines near Ward along a stretch of Lefthand Creek known as California Gulch merited Superfund listing, but they could not agree on a recommendation for the cleanup of the mine wastes along the James and Little James Creeks. A 4-3 majority of the task force declared that “the County should support further assessment and remediation of these areas using alternatives to Superfund.” These alternatives were to include stakeholder-run initiatives and voluntary cleanups.

A Jamestown community group, the Citizens Advisory Group for the Environment (CAGE), led the opposition to the Superfund listing. Superfund listing, CAGE feared, would threaten property values. Superfund coffers are currently nearly empty, they argued, and that Superfund projects often spend more money and time on litigation than on cleanup. The EPA, they contended, sometimes ignores local opinions in its decisions. In addition, the task force

majority pointed out that Honeywell International, Inc., was planning a voluntary cleanup of the Burlington Mine, the major source of acid mine drainage to the Little James Creek.

This year, the EPA followed the task force's recommendation. Only the abandoned mines around Ward were submitted for Superfund listing. The mine wastes around Jamestown must still be cleaned up, but neither the EPA nor Superfund will not be directly involved in this effort.

Avoiding EPA involvement and the Superfund designation in the cleanup of the Jamestown mines may have seemed to some activists like a victory, but now the arduous reality of cleaning up the mine wastes around Jamestown is sinking in. The first step in the cleanup is starting to take shape. A new stakeholder group, the Lefthand Watershed Oversight Group (LWOG), was just awarded two years of funding (\$25,000) through the state's Nonpoint Source Council to develop a watershed plan to direct future efforts at cleaning up mine wastes.

But obtaining sufficient and sustained funding for the cleanup of the abandoned mines will be a daunting challenge. Cleaning up abandoned mines is unquestionably expensive. Honeywell, for instance, will spend about one and a half million dollars to prevent water from contacting the waste rock at the Burlington Mine, and none of this money will address the contaminated water seeping from subsidence pits at the mine because water treatment may not be performed under the terms of voluntary cleanups.

Despite recommending the stakeholder-run initiative, the task force acknowledged that "Superfund is the only source of funding that has the potential to provide all of the required funds for cleanup over the required period of time." In a few years, this acknowledgment may be recalled as a discouraging commentary on the majority's recommendation to forego Superfund listing.

Is it possible that the task force majority overestimated the likelihood of funding for stakeholder-run initiatives? Did they overestimate the potential benefits of the Honeywell voluntary cleanup which, by law, cannot actually stem the flow of contaminated water from the Burlington Mine? Or was the task force majority so preoccupied with the effect of Superfund on property values and the disruption that a major cleanup might mean for life in Jamestown that they underestimated the likelihood that Superfund was the best bet for cleaning up the abandoned mines? Did they, like many Westerners today, avoid hard questions about our responsibility for the legacy of contamination left by the miners?

We need to recognize that we are as responsible for the mine wastes as the miners. We take advantage of the benefits of hard rock mining – just think, for example, of the 440 pounds of copper wire and pipes in an average single family home – so we must accept responsibility for the consequences of hard rock mining. And by participating in the cleanup of these long-neglected abandoned mines, we can enrich our sense of civic cooperation and our foresight for future generations.

Participation in the cleanup can take two forms. We can partake in support the efforts of the stakeholder-run initiative, LWOG, by helping to develop the watershed plan, to seek further funding, and to carry out a cleanup plan. There are excellent models for community-driven cleanup of acid mine drainage in the coal mining regions of the eastern United States. We can follow these models here to encourage communities to convert these cleanups into projects that enhance opportunities for recreation and appreciation of history and art.

And, if necessary, we can accept the burdens of a Superfund cleanup and work with the EPA to end the neglect of the streams that run through our backyards, give life to fish, and

provide us with drinking water. Either way, we will be able to tell our grandchildren that we sacrificed to make Boulder County better for them.

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