

The Leadville Contamination Scare: A Preventable Disaster Averted, Showing the Need for a Good Samaritan Provision to Allow Volunteer Clean-ups

by

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I. INTRODUCTION

Contaminated water is a developing world concern. While many people in the United States do not think twice about drinking tap water or letting kids play in sprinklers, water

contamination is an ongoing issue in our own backyards. In our modern industrialized society, people are not prepared to hear that their source of water is or even might be contaminated with a substance that could endanger their health or the health of their loved ones. The common thought is that water contamination is something that used to happen and that could only happen in the movies or other countries. Water in the United States remains vulnerable and needs greater legal protection.

This article will consider how water security can be achieved in the Leadville community as well as along the Arkansas River. Part I will provide a background on the Leadville Mining District and its impact on water availability. Part II will address government involvement in ensuring public health in the region while Part III will consider the degree of damage that has resulted from mining activities to date. Part IV will analyze the legal capacity of the Bureau of Reclamation and EPA generally and in relation to the California Gulch Superfund Site in particular with the recommendation that a Good Samaritan provision be added to the Clean Water Act. Water is one of the most precious resources on earth, yet it is still one of the most abused resources. This article concludes that public private coordination is called for to protect the Arkansas River Watershed.

II. BACKGROUND

Generally, the mining industry has not dealt effectively with the aftermath of its activities on water resources. Recently one of the country's richest mining towns as well as the Arkansas River were once again faced with the threat of vast water contamination. For over 100 years, The Leadville Mining District, hereinafter LMD, has been mined for various heavy metals

including gold, silver, lead, and zinc.¹ The soil, water, and sediments were heavily contaminated with these heavy metals.² The contamination is a result of the mining practices that left waste rock and tailings behind. Waste rock and tailings are “rich in pyrite and other sulfides, being dispersed over a 30 sq. km area including the city of Leadville.”³ These contaminants are dispersed through the process of oxidation of the sulfides.⁴ Oxidation of sulfides releases lead, arsenic, cadmium, silver, and zinc into the runoffs from snowmelt and rainstorms.⁵ The water loaded with contaminants drains into the Arkansas River.⁶ The levels were high enough to pose a threat to local communities and contaminate the Arkansas River, harming native vegetation which was a natural habitat for wildlife as well as threatening the water supplies downstream.⁷

Attention needs to be paid to the effects of mining to water sources, especially with water becoming such a scarce commodity.

A. Leadville, Colorado

Leadville, Colorado is the highest incorporated city in the country at 10,152 feet above sea level.⁸ It is located approximately 100 miles west of the Colorado’s capital city, Denver.⁹ Nestled in the Rocky Mountains, Leadville was the source of great mining endeavors for over well over 100 years.¹⁰ Mining boomed in Leadville making it “the largest silver-mining district

¹ Gregg A. Swayze, Roger N. Clark, K. Eric Livo, *Mapping Acid-Generating Minerals at the California Gulch Superfund Site in Leadville, Colorado using Imaging Spectroscopy*, (March 13, 1996) available at <http://speclab.cr.usgs.gov/PAPERS.Leadville95/leadville1.html>.

² Environmental Protection Agency, EPA.gov, *Leadville, Colorado: Moving Beyond the Scars of Mining, Integrating Remedial Design and Site Reuse*, http://www.epa.gov/superfund/programs/recycle/pdf/cal_gulch.pdf.

³ Swayze, *supra* note 1.

⁴ *Id.*

⁵ *Id.*

⁶ *Id.*

⁷ Environmental Protection Agency, *supra* note 2.

⁸ *Id.*

⁹ *Id.*

¹⁰ Swayze, *supra* note 1.

in the country, and the largest city between St. Louis and San Francisco.”¹¹ However, with the silver crash and decline in mining, Leadville now has a population of only 2,800.¹²

B. The Arkansas River

The Arkansas River runs for approximately 1,450 miles from its headwaters at Leadville, Colorado until it pours into the Missouri River.¹³ One of the most unique and remarkable facts about the Arkansas River is that it drops 10,000 feet in only 125 miles.¹⁴

The main source taking the brunt of the ill effects of the mining industry has been the Arkansas River. It has perhaps suffered the most from Colorado's historic mining legacy, languishing for years in the contamination from heavy metals from the LMD.¹⁵ Yet, the Arkansas River is the main source of water for the urban centers of the Colorado Front Range and agricultural communities on the plains.¹⁶

C. Leadville Mining District

The events that put Leadville, Colorado on the map occurred in the mid 1800's, starting in 1859 with the discovery of gold in the California Gulch.¹⁷ Finally by 1874, silver was discovered in the LMD and it soon became the largest district for silver mining in the country.¹⁸ The mining in the LMD offered some of the richest sources of metals and gave way to many

¹¹ Environmental Protection Agency, *supra* note 2.

¹² *Id.*

¹³ Tulsaweb.com, *An Outline History of the Arkansas River from Early Europe Explorations to the Development of the McClellan-Kerr Arkansas River Navigation System*, <http://www.tulsaweb.com/port/history.htm> (last visited, April 02, 2010).

¹⁴ tulsaweb.com, *supra* note 13.

¹⁵ Charlie Myers, *River's Recovery Suddenly Threatened*, *Denver Post* (February 20, 2008) available at http://www.denverpost.com/search/ci_8307816.

¹⁶ Swayze, *supra* note 1.

¹⁷ Environmental Protection Agency, *supra* note 2.

¹⁸ *Id.*

fortunes.¹⁹ With the amount of silver, gold, copper, zinc, manganese, and lead that was discovered and mined there, Leadville, Colorado was once one of the richest mining districts in the world.²⁰ The mines in the LMD yielded a higher volume of minerals than any other mining district in the country.²¹ Unfortunately, during the booming mining era and the majority of the time that mining operations were active at the LMD, there were no regulations to govern how tailings and waste should be discarded.²² Because there were not any regulations, the waste was often dumped directly into the Arkansas River or just dumped into piles.²³

Yet, the riches were not to go on forever. Mining became more expensive and the sources less abundant. The mining companies began running into problems with the fact that they were not able to extract as much out of the mines. The mining companies shifted to mining different metals and finally, the mines began to close. In an attempt to salvage the mining at the LMD, they were digging the mines deeper causing them to flood.²⁴ Because the mines were flooding, the companies had to create a system of draining the water out of the mines.²⁵ While a seemingly good solution, it did not take into account the future effects that it could cause and was not a cure to the failing mining industry. The last remaining mine was closed in 1999.²⁶ The mining not only wreaked havoc on the local economy but the land as well. The land had been ravaged by the mining and even though the mining had ceased the danger had not yet passed.

¹⁹ Environmental Protection Agency, *supra* note 2.

²⁰ *Id.*

²¹ National Historic Landmarks Program, *Leadville Historic District*, <http://tps.cr.nps.gov/nhl/detail.cfm?ResourceId=152&ResourceType=District> (last visited, March 31, 2010).

²² Sally Brown, Mark Sprenger, Amanda Maxemchuk, and Harry Compton, *Ecosystem Function in Alluvial Tailings after Biosolids and Lime Addition*, available at <http://faculty.washington.edu/slb/sally/Leadville%20jeq%20copy.pdf>.

²³ *Id.*

²⁴ Environmental Protection Agency, *supra* note 2.

²⁵ *Id.*

²⁶ *Id.*

D. Leadville Mine Drainage Tunnel Treatment Plant

The Leadville Mine Drainage Tunnel is located in Lake County, Colorado just north of Leadville, Colorado.²⁷ This tunnel runs under Leadville and into California Gulch.²⁸ The tunnel was built by its original owner, the Bureau of Mines in 1943.²⁹ The original purpose of the tunnel was not to provide an environmental safety valve, but rather to permit the mining process to continue by removing waste water that filled the mine shafts.

The Leadville Mine Drainage Tunnel was purchased by the Bureau of Reclamation in 1959.³⁰ The goal of the Bureau of Reclamation was to include the water as a source for the Fryingspan-Arkansas Project, but the water quality of the Arkansas River was too poor.³¹ Because of the poor water quality, it needed to be treated before it could be released into the Arkansas River. By this time, treatment of the water was not an option for the Bureau of Reclamation. The treatment had to be done to comply with the Clean Water Act.³² In order to treat the water and disperse it into the Arkansas River, a water treatment facility needed to be constructed. The Bureau of Reclamation designed and built the Leadville Mine Drainage

²⁷ U.S. Department of the Interior Bureau of Reclamation, *Managing Water in the West, A Summary of Existing Reports which have Examined the Leadville Mine Drainage Tunnel (LMDT) Discharge to the East Fork of the Arkansas River, Colorado*, Technical Memorandum 8220-05-11, available at <http://www.cdphe.state.co.us/hm/rpcalgulcheastforkrpt.pdf>.

²⁸ United State Environmental Protection Agency, *Superfund Program: California Gulch*, <http://www.epa.gov/region8/superfund/co/calgulch/index.html> (March 31, 2010).

²⁹ *Managing Water in the West*, Technical Memorandum 8220-05-11, *supra* note 27.

³⁰ *Id.*

³¹ *Superfund Program: California Gulch*, *supra* note 28.

³² *Reclamation Managing Water in the West*, Technical Memorandum 8220-05-11, *supra* note 27. The Clean Water Act is a legislative enactment that is to restore and maintain the “chemical, physical, and biological integrity of the Nation’s waters.” Clean Water Act, 33 U.S.C. §1251 (1987). The Clean Water Act uses both regulatory and nonregulatory means to attempt to minimize the discharge of polluting materials into waterways, financially assist municipal wastewater treatment facilities, and control polluted runoff. The basic goal of the Clean Water Act is quality control of the nation’s waters. U.S. Environmental Protection Agency, *Introduction to the Clean Water Act*, <http://www.epa.gov/watertrain/cwa/> (last visited April 05, 2010).

Tunnel. The Bureau of Reclamation began to treat and disperse the low quality water into the Arkansas River in 1991.³³

III. A DISASTER IN THE MAKING: THE LEADVILLE CONTAMINATION SCARE

A. The Actual Event

“This could be one of the biggest major environmental catastrophes that we’ve ever faced in the western part of the United States,”³⁴ Observed Senator Tom Wiens. The tunnel was dug during WWII and the Korean War.³⁵ However, after releasing contaminated water into the Arkansas River, it became an environmental liability.³⁶ In 1992, a water treatment plant was constructed at the mouth of the tunnel.³⁷ The Reclamation Projects Authorization and Adjustment Act of 1992, granted the Secretary to construct the treatment plant and monitor downstream water contamination.³⁸ Along with water in the mines, water that has leached through rock and disturbed soil in the Evans Gulch is treated.³⁹ After the water passes through the treatment plant, it enters into California Gulch.⁴⁰

A portion of the Leadville Mine Drainage Tunnel collapsed, causing a blockage.⁴¹ The blockage caused a backup of the water in the mining tunnels, which in turn increased the level of the mine pool and the pressure in the Leadville Mine Drainage Tunnel.⁴² It is not known what caused the collapse and resulting blockage, but local experts believe that the interconnectedness

³³ Superfund Program: California Gulch, *supra* note 28.

³⁴ *Lake County fears blowout of the tunnel water*, Denver Post (February 14, 2008) available at http://www.denverpost.com/news/ci_8255093.

³⁵ *Leadville Tunnel risk report due July 1*, Pueblo Chieftan (June 24, 2008) available at http://chieftain.com/news/local/article_20c61936-b2b7-51db-8cad-e087246cfa13.html (March 28, 2010).

³⁶ *Id.*

³⁷ *Id.*

³⁸ Reclamation Projects Authorization and Adjustment Act of 1992, Public Law 102-575, Title VII §701 (October 30, 1992).

³⁹ Myers, *supra* note 15.

⁴⁰ *Id.*

⁴¹ *Lake County fears blowout of the tunnel water*, *supra* note 34.

⁴² H.R. 08-1396(1)(a) (Co. 2008).

of the various mine shafts along with faults and fissures caused a problem in one area to affect another area.⁴³ In its House Bill, the State of Colorado declared that just as this was event was occurring, “[w]ater flowing from the collapsed Canterbury tunnel [was] identified as a source of water that may be contributing to the mine pool that drains into the LMDT and to the build up of pressure within the LMDT.”⁴⁴ The increase of pressure nearly caused a blow out of the tunnel.⁴⁵

While it is not known when the portion of the LMDT collapsed, the EPA began working on a solution to remove the blockage in 2001.⁴⁶ Yet, these efforts were insufficient. The EPA took their time in looking for a solution and were not able to fix the problem soon enough. The blockage was threatening to cause a blow-out in the LMDT that could dump up to one (1) billion gallons of contaminated water into the Arkansas River.⁴⁷ The contaminated water pouring into the Arkansas River would put downstream property and the “aquatic ecosystem of the Arkansas river” at risk.⁴⁸ In a response to the widespread fear of the community that this blowout would actually occur, the Lake County Commissioners declared the incident a state of emergency.⁴⁹

The February 13, 2008 declaration was based on the EPA assessments of the water quality at the Yak Tunnel.⁵⁰ However, the Bureau of Reclamation contended that there was no imminent danger of a blowout.⁵¹ It is important to note that the Bureau of Reclamation said that the danger was not imminent, not that there was no danger. Yet, Governor Bill Ritter told the

⁴³ Chris Woodka, *Work begins to ease Leadville mine pressure*, Pueblo Chieftan (February 23, 2008) available at http://chieftain.com/metro/article_d6d242a0-6a8d-5c87-a29d-49279be7efc0.html.

⁴⁴ *Supra* note 42 at 08-1396(1)(e). The same piece of legislation called for more studies to be conducted to determine if the belief was accurate. *Id.* at 08-1396(2).

⁴⁵ *Id.* at 08-1396(1)(a).

⁴⁶ *Lake County fears blowout of the tunnel water*, *supra* note 34.

⁴⁷ Myers, *supra* note 15.

⁴⁸ *Supra* note 42 at 08-1396(1)(a).

⁴⁹ *Id.* at 08-1396(1)(b).

⁵⁰ Woodka, *supra* note 43.

⁵¹ *Id.*

Denver Post that “[s]uch a release could result in the loss of life, cause untold human misery, threaten drinking-water supplies for half-million people, impact farmers and ranchers and leave the river and the recreation economy it also supports degraded for decades.”⁵² This widespread fear was not unfounded given EPA officials beliefs that a blowout and release of heavy metals was likely⁵³, despite Bureau of Reclamations attempts to downplay the situation.

B. The Government’s Involvement

Realizing that there was a problem with the mine tailings, the EPA added California Gulch to the National Priorities List as a Superfund Site.⁵⁴ The National Priorities List “is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories.”⁵⁵ The goal of the NPL is to help the EPA determine which sites need further attention.⁵⁶ A Superfund Site is an area that is determined to need to be in a program that cleans up “the nation’s uncontrolled hazardous waste sites” and is governed by CERCLA.⁵⁷

The Comprehensive Environmental Response, Compensation, and Liability Act, in hereinafter CERCLA, was enacted December 11, 1980.⁵⁸ CERCLA was enacted in response to the risks associated with industrial pollution.⁵⁹ The purpose of CERCLA was to promote the

⁵² Steve Lipsher, *Feds to pump mine water to avert Leadville flooding*, Denver Post, (February 15, 2008) available at http://www.denverpost.com/breakingnews/ci_8273079.

⁵³ *Id.*

⁵⁴ The EPA placed 16.5 square mile site on the National Priorities List. Within the area put on the National Priorities List was the City of Leadville, a portion of Lake County, and two miles of the Arkansas River. Environmental Protection Agency, *supra* note 2.

⁵⁵ Environmental Protection Agency, *National Priorities List*, <http://www.epa.gov/superfund/sites/npl/> (last visited April 02, 2010).

⁵⁶ *Id.*

⁵⁷ Environmental Protection Agency, *Superfund: Cleaning up the Nation’s Hazardous Waste Sites*, <http://www.epa.gov/superfund/> (last visited April 02, 2010).

⁵⁸ CERCLA, Pub. L. No. 96-510, Title I, §101 (1980).

⁵⁹ *See US v. Bestfoods*, 524 U.S. 51, 55 (1998).

cleanup of hazardous waste sites.⁶⁰ CERCLA also ensures that the cleanup was performed by those responsible for the contamination.⁶¹ The process first identifies what is called the potentially responsible party, which can include the owner of the facility that was responsible for the waste or those that have agreed to disposal or treatment of the hazardous waste. These parties may be compelled by CERCLA to cleanup a contaminated area.⁶² Rather than actually performing the cleanup, a potentially responsible party may be compelled to reimburse the government for the cost incurred during the cleanup.⁶³

CERCLA is an immensely large statute so for the purpose of this paper only a portion of it will be considered. Section 9607 discusses the event where a person would enter into a transaction to discard of the hazardous waste.⁶⁴ The entity that agrees to the disposal of the waste may qualify under this section when it takes intentional steps to dispose of the waste. When this type of agreement occurs, the party agreeing to handle the waste also accepts liability.⁶⁵ This aspect of CERCLA creates an issue for entities that want to voluntarily take on the challenge of cleaning up hazardous waste and the liability that they face to third parties.

While many would view being placed on the National Priorities List as a good thing for the environment and beneficial to those living in the vicinity, this was not the case for those in and around the California Gulch Superfund site. From the point that California Gulch was added to the NPL list in September of 1983 until one of the sites potentially responsible parties, Asarco, began to work with the community, there was opposition.⁶⁶ After the collapse of the mining

⁶⁰ *Consolidated Edison Co. of N.Y. v. UGI Util., Inc.*, 423 F.3d 90, 94 (C.A.2 2005).

⁶¹ 42 U.S.C. §9601 et seq

⁶² CERCLA, 42 U.S.C. §9607(a).

⁶³ *Id.*.

⁶⁴ *Id.* at §9607(a)(3)

⁶⁵ *Id.*

⁶⁶ Environmental Protection Agency, *supra* note 2.

industry in the Leadville area, the economy suffered severely and the community became concerned about being put on the NPL.⁶⁷ The community would not fare well if being put on the NPL would cost it its tourism as well. However, with Asarco stepping up along with other potentially responsible parties fears began to subside allowing the potentially responsible parties to enter into agreements with the EPA, the State, and most importantly the community to clean up the California Gulch Superfund Site.⁶⁸

The relief felt by the local community by the fact that the EPA, Bureau of Reclamation, and potentially responsible parties were going to clean the area up and make it safe again did not last. After the news broke about the possible blowout in the Leadville Mine Drainage Tunnel, the EPA began taking steps to “fix” the situation. Despite working with the LMD mines for 25 years, the EPA had not been able to prevent such a situation nor had the previous leaching been eliminated.⁶⁹ Without being able to prevent a situation⁷⁰ or even knowing when and how it happened, the EPA was unable to pursue a true remedy rather than a band aid for a stab wound. This did not stop the EPA from trying.

The EPA funded and took steps to try to alleviate the pressure on the blockage to prevent an actual blowout.⁷¹ The plan that the EPA established was to plow the snow from an access road and at some point in the following 12 weeks drill into the mine pools.⁷² Once the mine

⁶⁷ With the closing of the largest remaining mine in 1987, the tax base for Lake County dropped over 85 percent. Environmental Protection Agency, *supra* note 2.

⁶⁸ *Id.*

⁶⁹ Lipsher, *supra* note 52.

⁷⁰ Even before the declaration of an emergency, the Bureau of Reclamation performed a Risk Assessment starting in November of 2007 to determine how dangerous the amount of contaminated water that was being trapped inside the abandoned mine shaft *Leadville Tunnel risk report due July 1, supra* note 35.

⁷¹ Woodka, *supra* note 43.

⁷² *Id.*

pools were drilled into, pumps would be set up to remove the water.⁷³ The goal was to pump the water out of the mine pools and run it through the Bureau of Reclamation's Leadville Tunnel treatment plant, which would increase its capacity to take on the extra volume of water.⁷⁴ After being installed, the pump was removing "more than 1,000 gallons per minute from the tunnel," to be treated then released into the Arkansas River.⁷⁵ The capacity for the treatment plant is approximately 2,000 gallons of water per minute.⁷⁶ While it was the EPA that was to initiate and implement pumping to release pressure that seen in the Leadville Mine Drainage Tunnel, according to Greg Policky of the Division of Wildlife, any action taken would have to satisfy the state's Coldwater Class One Stream Standards.⁷⁷ These Standards are the highest standards set by the state of Colorado public health officials.⁷⁸ If the actions taken do not meet the strict standards, other remedies such as treatment plants can be considered.⁷⁹

It would have seemed as though everything was under control and that the EPA and Bureau of Reclamation were doing everything that they could to remedy the situation. However, as the Leadville Chronicle uncovered, neither the EPA nor the Bureau of Reclamation had a secondary plan in case the drilling the water was unsuccessful⁸⁰ Stan Christensen of the EPA told the Leadville Chronicle that, "It will be at least six to 12 months before we can analyze the

⁷³ Kay Doan, *LMDT – no plan B?*, Leadville Chronicle Reporter (August 28, 2008) available at <http://www.leadvillechronicle.com/article/20080828/NEWS/808289965/1052&parentprofile=1001>.

⁷⁴ Woodka, *supra* note 43.

⁷⁵ Doan, *supra* note 73.

⁷⁶ U.S. Department of Interior Bureau of Reclamation, *Reclamation Partners with Lake County, Colorado and other Federal Agencies to Address Public Concerns at Leadville Mine Drainage Tunnel*, <http://www.usbr.gov/newsroom/newsrelease/detail.cfm?RecordID=20641> (last visited March 28, 2010).

⁷⁷ Paul Goetz, *Leadville seepage may be killing fish*, The Mountain Mail (February 26, 2008) available at <http://themountainmail.com/main.asp?SectionID=4&SubSectionID=4&ArticleID=13097>.

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ Doan, *supra* note 73.

work we've put in..."⁸¹ The Bureau of Reclamation's Bill Murphy said, "[w]e won't know for a long time if what we've done is adequate or not."⁸² Not having a Plan B and not knowing whether or not their Plan A was sufficient was a very risky approach the government agencies to pursue. The citizens of Leadville did not let their guard down. Even 6 months after a state of emergency was declared, it was not lifted.

IV. THE DAMAGE

A. Damage that has Occurred

While it may not be one of the best fishing grounds in the world, the Arkansas River attracts its fair share of anglers. The trout in the River have been substantially affected.⁸³ Unfortunately, in 2008 there was yet again concern that mining contaminants were seeping from the mining tunnels into the Arkansas River.⁸⁴ As the back-up of water that has occurred in the Leadville Mine Drainage Tunnel increased, contaminated water began seeping through fissures in the tunnel into the California Gulch without being treated.⁸⁵

The seepage from the LMDT reached the Arkansas River and raised alarm about the trout population.⁸⁶ Greg Policky of the Division of Wildlife, Salida division, discussed in The Mountain Mail Salida newspaper and the Denver Post that tests were being conducted on fish above and below California Gulch.⁸⁷ Policky explained that there was a definite decrease in the fish population below California Gulch and that mine seepage was a contributing, but not known

⁸¹ *Id.*

⁸² *Id.*

⁸³ Goetz, *supra* note 77.

⁸⁴ *Id.*

⁸⁵ Myers, *supra* note 15.

⁸⁶ *Id.*

⁸⁷ Goetz, *supra* note 77.

to be the sole, factor.⁸⁸ According to Policky, the observations and samples “have seen a four-fold decline between 2006 and 2007 below the confluence⁸⁹ of the gulch.”⁹⁰ Before this decline can be determined to be related to the seepage from the mine tunnels, any diseases that might have infected the trout population needed to be ruled out.⁹¹ However, the Division of Wildlife also wanted to run tests on the fish and compare the data to that acquired in 1985 after the previous discharge from the Yak Tunnel polluted the River.⁹² Policky and the Division of Wildlife remain concerned that another contamination event like that seen with the Yak Tunnel would undo years of work to restore the trout population and the Arkansas River.⁹³

B. Damage that was Averted

According to the Bureau of Reclamation, the immediate danger of the possible blowout of the Leadville Mine Drainage Tunnel and devastation to Leadville, Colorado and beyond has passed.⁹⁴ The Bureau of Reclamation performed studies and released a draft report in June, 2008 that said that it would be “unlikely there would be a sudden release of water from the Leadville Mine Drainage Tunnel.”⁹⁵ If such an occurrence had happened, it would threaten the lives of more than 100 Leadville residents⁹⁶ as well as jeopardize the Arkansas River as a significant source of the domestic water supplies for Aurora, Colorado Springs, and Pueblo.⁹⁷ Including those cities, there are approximately 500,000 people downstream that depend on the

⁸⁸ *Id.*

⁸⁹ A confluence is where two different flowing bodies of water, such as a stream or river merge together. See Merriam Webster Online, *Confluence*, <http://www.merriam-webster.com/dictionary/confluence> (last visited April 05, 2010).

⁹⁰ Goetz, *supra* note 77.

⁹¹ *Id.*

⁹² *Id.*

⁹³ Myers, *supra* note 15.

⁹⁴ P. Soloman Banda, *Trapped water in Leadville no threat, feds say*, Denver Post (July 01, 2008) available at http://www.denverpost.com/ci_9749539.

⁹⁵ *Id.*

⁹⁶ *Lake County fears blowout of the tunnel water*, *supra* note 34.

⁹⁷ Myers, *supra* note 15.

Arkansas River for their drinking water.⁹⁸ According to Lake County Commissioners, the Arkansas River could be contaminated clear to the Mississippi River.⁹⁹ This is approximately 1,450 miles along a river where countless communities and rural farms would be left without clean water.¹⁰⁰

V. A LESSON LEARNED?

Even though cooperation occurred it was intermittent and insufficient. According to the Denver Post, County Commissioner Carl Schaefer said that the Bureau of Reclamation's 2008 report was "...a starting point for a discussion and doesn't provide new information on the bureaucratic logjam that led to the water backup over the years."¹⁰¹ Despite a transition to a cooperative effort, damage had already been done.

Mining resulted in acid mine runoff into the Arkansas River, mine tailings leached heavy metals into the water, The town's people of Leadville were seeing unhealthy levels of lead in the blood of children. There have been countless cases from coast to coast of local people being made seriously ill by the lack of environmental concerns that contaminate the most valuable resource, water.

Love Canal marks one of the most devastating tragedies to public health as a result of corporate pollution of public drinking supplies would be that of Love Canal.¹⁰² While the cause

⁹⁸ Myers, *supra* note 15.

⁹⁹ *Lake County fears blowout of the tunnel water*, *supra* note 34.

¹⁰⁰ tulsaweb.com, *supra* note 13.

¹⁰¹ Banda, *supra* note 94.

¹⁰² Love Canal was a New York community that had originally been planned to be the "model community" by its developer William T. Love. Love wanted to build a canal that ran from the upper and lower Niagra Rivers to power a small community. However, the economy and the advancements in technology prevented this from happening. Instead, the canal was used as a municipal and more importantly a chemical dumpsite. In 1953, the then owner of Love Canal, Hooker Chemical Company, covered the dumpsite with dirt and sold it to the city for \$1. The city began to develop over the canal, knowing that the chemicals were underground but not knowing they could cause future harm. Unfortunately, they were wrong. In 1978, higher amounts of rain had disturbed the buried

of the contamination at Love Canal was not from mining, the area was contaminated by a substance that was affecting the health of the community members, something that could happen again. Even after the damage Love Canal caused, it was not the end of contaminated drinking water.

Similarly, the clean-up at the California Gulch Superfund Site has been a seemingly endless struggle. The EPA's work overseeing the clean-up project has been ongoing for over a quarter of a century.¹⁰³ The only notable accomplishment during this time has been the development of a water treatment plant.¹⁰⁴ By no means should the value of this accomplishment be belittled, but as of 2007, the project was still not complete and approximately \$150 million had already been poured into it.¹⁰⁵ The community surrounding the California Gulch project is losing patience. In 2007, after the contamination scare, Lake County Commissioner Ken Olson has become frustrated that “[v]irtually nothing has changed from five years ago.”¹⁰⁶ The community's patience has not only been tried with the length of time that has gone into working on cleaning up the area, but also the little ground that has been gained.

Just before the EPA finished the pump test that it was conducting on the Leadville Mine Drainage Tunnel in June of 2008, which was the one and only plan that had been determined, a local citizen noticed something. Brad Littlepage noticed what he determined

chemicals. This caused them to begin to leach. Before the city knew it, it became a contaminated cesspool. The chemicals that had been dumped there decades before were leaching from the ground and contaminating everything: waste disposal drums were being brought to the surface, plant life was dying, and pools and puddles of the contaminated substances were found everywhere. The children of the community were coming home with burns from the chemicals and the air was full of the sick smell. By the time it was all over, the community had to be evacuated and the government had to buy their land from them, children were born with birth defects, and cancer was a common occurrence. Eckardt C. Beck, *The Love Canal Tragedy*, EPA Journal (1979), available at <http://www.epa.gov/history/topics/lovecanal/01.htm>.

¹⁰³ Steve Lipsher, *Leadville cleanup hits snags*, Denver Post (October 09 2007) available at http://www.denverpost.com/news/ci_7122768.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

to be signs of a failing dam.¹⁰⁷ Mr. Littlepage observed cracks in the dam and water seeping out.¹⁰⁸ He believed that the water was very dirty and going into Little Evans Gulch.¹⁰⁹ At this point in time, Little Evans Gulch has not experienced contamination like so many other areas nearby.¹¹⁰ In a true governmental fashion, the EPA minimized the concerns of Mr. Littlepage by saying that the seeping water was expected from a dam of that sort and it was only a little dirty.¹¹¹ The EPA was not concerned.¹¹²

At what point will the EPA become concerned? Is a little dirty water acceptable? It is this thought process that has caused water pollution issues to get out of hand. Slightly dirty water is still dirty water and a leak is still a leak. Attention should be paid any time a dam is not working properly; especially if on the other side of dam is heavily toxic water that could wreak havoc on communities. As the next section will discuss, when small problems are ignored and handled properly they grow to being on the verge of out of control.

A. Problems with the Bureau of Reclamation and EPA

The Bureau of Reclamation is the actual owner of the LMDT.¹¹³ When it first acquired the LMDT from the Bureau of Mines in 1959, it did not think that the tunnel needed to be maintained because it was no longer being used for mining.¹¹⁴ Nothing was done in the tunnel

¹⁰⁷ Ann E. Wibbenmeyer, *Dam seepage: Cause for alarm or not?*, Herald Democrat (June 05, 2008) available at <http://www.leadvilleherald.com/main.asp?SectionID=1&SubSectionID=1&ArticleID=3721>.

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ *Lake County fears blowout of the tunnel water, supra* note 34.

¹¹⁴ U.S. Department of the Interior Bureau of Reclamation, Managing Water in the West, *The Leadville Mine Drainage Tunnel*, available at http://www.usbr.gov/gp/eca/leadville/lmdt_overview.pdf.

until the 1970's when finally the Bureau of Reclamation began to stabilize it.¹¹⁵ After owning the tunnel for 33 years, the Bureau of Reclamation finally took a step in the right direction to prevent the heavy metals from contaminating the Arkansas River. In 1992, the Bureau of Reclamation built a water treatment facility to treat the water before it was released into the Arkansas River.¹¹⁶ It is unacceptable for 33 years to have passed before the Bureau of Reclamation took action, especially considering that the California Gulch had been placed on the National Priorities List. The Bureau of Reclamation should have been responsible in caring for the tunnel before an incident occurred.

This isn't the first time that something like this has happened under the EPA's watch. The EPA declared California Gulch a Superfund Site in 1983 and work began to clean it up.¹¹⁷ However, two (2) years after being declared a superfund site, a disaster occurred. Despite working with the LMD mines for 25 years, the EPA had not been able to prevent such a situation nor had the previous leaching been eliminated.¹¹⁸

Both the EPA and the Bureau of Reclamation knew about the blockage in the Leadville Mine Drainage Tunnel, and yet it ignored the fact that contaminated water was backing up behind this blockage.¹¹⁹ The Bureau of Reclamation claimed that it did not have the authority to treat this water, because it is only *required* to treat "historic flows through the tunnel."¹²⁰ It took the declaration of a State of Emergency for bills to be introduced to the State Legislature that

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ Environmental Protection Agency, EPA.gov, *NPL Site Narrative for California Gulch*, (September 08, 1983) available at <http://www.epa.gov/superfund/sites/npl/nar853.htm>.

¹¹⁸ Lipsher, *supra* note 52.

¹¹⁹ The Water Information Program, *Legislation would give Reclamation long-term responsibility*, (March 06, 2008) available at <http://waterinfo.org/node/1584>.

¹²⁰ *Id.*

would force the Bureau of Reclamation to treat the water behind the blockage.¹²¹ This is not in accordance to the Clean Water Act, which anticipates that states and the federal government could cooperate and work together as partners.¹²² The Clean Water Act unites these two through a common objective, “to restore and maintain the chemical, physical, and biological, integrity of the Nation’s waters.”¹²³ As a result of the lack of partnership, two bills were introduced to the Colorado Congress known as the Leadville Mine Drainage Tunnel Remediation Act of 2009.¹²⁴ The main purpose is to force the implementation of the remediation actions at California Gulch.¹²⁵ In this implantation, the two differ slightly, both “give” the Bureau of Reclamation the authority to treat the water that is backed up in the Leadville Mine Drainage Tunnel.¹²⁶ The Bills would also create the requirement to maintain the Leadville Mine Drainage Tunnel and make the necessary repairs to keep it from failing.¹²⁷ The Bureau of Reclamation and EPA are continuously trying to force people to take responsibility for their messes and be liable for the clean-up, but the Bureau of Reclamation has had little more effect in the region than the “greedy and environmentally destructive” mining companies.

When the news first broke about the possible problem, The Bureau of Reclamation stated that there was not an immediate threat to those near the LMDT.¹²⁸ However, in a November,

¹²¹ *Id.*

¹²² *Arkansas v. Oklahoma*, 503 U.S. 91, 101 (1992).

¹²³ Clean Water Act, 33 U.S.C. §1251(a).

¹²⁴ *See generally The Leadville Mine Drainage Remediation Act of 2009*, S. 1417 (Co. 2009), H.R. 3123 (Co. 2009); The Water Information Program, *supra* note 119.

¹²⁵ *See generally The Leadville Mine Drainage Remediation Act of 2009*, S. 1417 (Co. 2009), H.R.3123 (Co. 2009)

¹²⁶ The Water Information Program, *supra* note 119.

¹²⁷ *See generally The Leadville Mine Drainage Remediation Act of 2009*, S. 1417 (Co. 2009), H.R.3123 (Co. 2009)

¹²⁸ *Lake County fears blowout of the tunnel water*, *supra* note 34.

2007 letter from the EPA Regional Administrator to the Bureau of Reclamation the Bureau was warned of the heightening concerns of the EPA.¹²⁹ In that letter, the EPA wrote:

We are concerned that an uncontrolled, potentially-catastrophic release of water to the Arkansas River from (the tunnel) is likely at some point. Not only endangering human life (people living at the East Fork Trailer Park and BOR employees), the sudden release of water, rock, sediment, and heavy metals to the Arkansas River would be an environmental disaster.¹³⁰

It is disheartening that the public, the State officials, and the EPA were all concerned about the possible events that were looming overhead, but the Bureau of Reclamation was informing people that there was no imminent danger. It is not known whether the Bureau of Reclamation was trying to keep the public calm or if they did not have as much concern for the possible disaster. It did raise the question, however, as to whether the possibility of disaster and the stalled situation was being taken seriously by the Bureau of Reclamation.¹³¹

Finally, the Bureau of Reclamation has monitors and sirens inside of the tunnels to detect if there are changing conditions and provide an early warning.¹³² Yet, despite the danger presented by the problems within the Leadville Mine Drainage Tunnel, no sirens went off and not alert was heard. The sirens were to be tested by the Lake County Emergency Services over a week after the State of Emergency was declared.¹³³ Warning

¹²⁹ *Lake County fears blowout of the tunnel water, supra* note 34.

¹³⁰ *Id.*

¹³¹ Doan, *supra* note 73.

¹³² Reclamation, *Managing Water in the West, supra* note 114.

¹³³ US Department of the Interior Bureau of Reclamation, *Reclamation Partners with Lake County, Colorado and other Federal Agencies to Address Public Concerns at Leadville Mine Drainage Tunnel*, (February 15, 2008) available at <http://www.usbr.gov/newsroom/newsrelease/detail.cfm?RecordID=20641>.

sirens are meant to be heard to warn of a problem, not to be tested after the emergency has occurred.

B. Possibility of Problems in the Future

The EPA expects the transport system to eventually fail altogether. As an EPA flyer over the subject has pointed out, “[o]vertime, the structural integrity and the general competency of all tunnels and underground mine workings will continue to deteriorate without regular maintenance.”¹³⁴ While it is very possible that this is just something that is determined by time and natural erosion, it is still hard to overlook the fact that the Bureau of Reclamation allowed for the tunnel to go so long without maintenance.

This isn’t the first time that something like this has happened under the EPA’s watch. Since the EPA declared California Gulch a Superfund Site in 1983 and work began to clean it up,¹³⁵ the Yak Tunnel has had a blow-out in 1985, two years after being declared a superfund site.¹³⁶ According to Policky, the Arkansas River turned a dirty orange color.¹³⁷ The discoloring of the water was not just a local occurrence; it spread 148 miles¹³⁸ to the Pueblo Reservoir.¹³⁹ Despite already being a superfund site, it took this “minor mishap” to spark genuine action by the EPA regarding the superfund site. This incident “precipitated the superfund action.”¹⁴⁰

¹³⁴ Katie Redding, *EPA proposes new clean-up plan for Leadville*, The Colorado Independent (August 04, 2009) available at <http://coloradoindependent.com/34677/epa-proposes-new-clean-up-plan-for-leadville>

¹³⁵ Environmental Protection Agency, EPA.gov, *supra* note 117.

¹³⁶ Myers, *supra* note 15.

¹³⁷ *Id.*

¹³⁸ Salida Colorado: Gem of the Rockies, *salida.com*, *Best of Salida – The Arkansas River*, <http://salida.com/salida-best-of/best-of-arkansas-river.html> (last visited April 05, 2010).

¹³⁹ Myers, *supra* note 15.

¹⁴⁰ *Id.*

Now, with the problems with the Leadville Mine Drainage Tunnel, there are signs that contaminated water is seeping up around the Yak Plant. It took a lawsuit¹⁴¹ brought on by the Sierra Club to get EPA action in the first place and it took a declaration of a State of Emergency to get action with this latest incident, who knows what it will take the next time around.

VI. RECOMMENDATIONS

The Bureau of Land Management retains an inventory of all known abandoned mines. According to the Bureau of Land Management, most abandoned mines are hardrock mines.¹⁴² The Bureau of Land Management's inventory, as of December 31, 2009 showed "25,281 sites and 65,976 features."¹⁴³ Of these, only 20% have been remediated, have current or planned reclamation actions, or not in need of further remediation.¹⁴⁴ Yet, the other 80% still need investigated to determine if remediation is necessary.¹⁴⁵ With 80% of all known abandoned mines still possibly needing remediation and those that have received some remediation and still cause contamination issues, like those around Leadville, the odds of having future water contamination issues are not promising.

While governmental agencies such as the EPA and Bureau of Reclamation and regulatory schemes such as the Clean Water Act are meant to be beneficial in ensuring that the nation's waters are clean and safe, however, at times they can hinder improvements. U.S. Sen. Wayne Allard said, "The time for foot-dragging and further government studies has passed. The time

¹⁴¹ See generally *Sierra Club v. Lujan*, 728 F. Supp. 1513, (D.Colo., 1990).

¹⁴² US Department of the Interior Bureau of Land Management, *Abandoned Mines*, http://www.blm.gov/wo/st/en/prog/more/Abandoned_Mine_Lands.html (last visited April 05, 2010).

¹⁴³ *Id.*

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

has come to stop studying and stop bureaucratic squabbles and focus on immediate and long-term solutions.”¹⁴⁶ Such bureaucratic squabbles have hindered the advancement of mine remediation and include such debates as whether or not to include a Good Samaritan provision to the Clean Water Act.

In the early 1990s, the U.S. Supreme Court reinforced the water quality and permitting provisions of the Clean Water Act in a case involving pollution from an abandoned mine in California. While it cannot be certain the intent the case was meant to have on volunteer organizations working to clean-up sites, the actual result was a virtual end of volunteer clean-ups.¹⁴⁷

After the Supreme Court decision, nearly every year proposals to amend the Clean Water Act to provide for a Good Samaritan provision arise in Congress, but every year they are turned down.¹⁴⁸ “A Good Samaritan is an entity willing to perform cleanup work under CERCLA at an orphan mine site, even though it does not own the property, intend to own the property, or have responsibility for the pollution at the property.”¹⁴⁹ Simon believes that the reason that opponents, such as the Sierra Club, are blocking the passage of such a provision.¹⁵⁰ With its great lobbying power, it is very conceivable that the Sierra Club and other national environmental organizations are able to influence Congress to turn down such a provision. The organizations worked hard to get the Clean Water Act enacted and have seen such great benefits from it that they do not want to touch the Act, because, as Bill Simon explains, “[i]t’s a sacred

¹⁴⁶ Lipsher, *supra* note 52.

¹⁴⁷ Bob Berwyn, *Clean Water Act stymies mine cleanups*, Summit Daily News (September 26, 2007) available at <http://www.summitdaily.com/article/20070926/NEWS/70926001>.

¹⁴⁸ *Id.*

¹⁴⁹ Settlements in particular programs, 2 L. of Env'tl. Prot. § 9:113.1(Current through April 2010).

¹⁵⁰ Berwyn, *supra* note 147

cow.”¹⁵¹ An additional problem with such large national environmental groups is that they do not get to hear from the grassroots movement.¹⁵² The national environmental groups fear that if there is any tampering with the Clean Water Act, it will become too relaxed and ineffective.¹⁵³ Yet before there was lobbying to have a Good Samaritan Provision, people like Eckardt C. Beck were questioning how there was going to be funding to clean up contaminations.¹⁵⁴

Because the Clean Water Act has such strong teeth to try to hold violators responsible for their actions, volunteers are not easily able to step in and clean up a site without being forced to also take on the liability.¹⁵⁵ As Bill Simon, coordinator for the Animas River Stakeholder Group, explained that “[i]f you touch the water, you need a permit.”¹⁵⁶ The Summit Daily newspaper also reported that in his argument for a Good Samaritan provision to permit volunteer clean-up organization to act without liability Simon argues “[s]tringent provisions in the Clean Water Act can pin perpetual liability on any group that fiddles with tainted water seeping from old mine workings.”¹⁵⁷ This would force volunteer organizations working to clean-up the toxins to be held accountable for the discharges as soon as they begin the clean-up.¹⁵⁸

Bill Simon does not believe that all improvements of water quality regarding contaminations from mines are hindered by the lack of a Good Samaritan provision.¹⁵⁹ He believes that if water is not allowed to enter the old mines, it would not be contaminated and no liability would exist.¹⁶⁰ Just so long as the organization working on it steers clear from the

¹⁵¹ *Id.*

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ Beck, *supra* note 95.

¹⁵⁵ Berwyn, *supra* note 147

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

discharge end of the mine, they would be liability free.¹⁶¹ This is a farfetched goal, because to be able to prevent water from entering the old mine workings would be seemingly impossible.

There are so many underground water sources that could unknowingly become contaminated.

As with most mining districts, the Leadville Mining District has had many owners that should be held responsible for any environmental damage that has occurred because of their activities. However, trying to lock down which of the owners is responsible is virtually impossible. This leaves little funding for the clean-up outside of governmental agencies. However, the Clean Water Act does not have a complete or even adequate Good Samaritan provision that would allow volunteers to enter into clean-up projects without any liability.

During September 2007 National Summit of Mining Communities meeting, communities were advocating reform of the Clean Water Act.¹⁶² The EPA has recently begun to take steps to implement somewhat of a Good Samaritan provision that will “lessen the potential” of liability for volunteer clean-up efforts.¹⁶³ However it says lessen not remove the possibility of liability for volunteers. This is because the volunteers would need to attempt to enter into an agreement with the EPA, which would prevent a governmental action against the volunteers.¹⁶⁴ There is still the chance that the volunteers could be subject to third party liability actions.¹⁶⁵

The problem of not having a Good Samaritan provision in the Clean Water act has created problems for communities that want to clean the contamination on their own, without being labeled a Superfund Site. Receiving this label is difficult on communities, as it hinders

¹⁶¹ Berwyn, *supra* note 147

¹⁶² *Id.*

¹⁶³ *Settlements in particular programs*, 2 L. of Env'tl. Prot. § 9:113.1(Current through April 2010).

¹⁶⁴ *Id.*

¹⁶⁵ *Id.*

what most mining towns have left for an economy, tourism.¹⁶⁶ This very thing happened in Creede, Colorado.¹⁶⁷ The townspeople of Creede had been working to clean up the contamination caused by the booming mining days of the past, but the Clean Water Act stopped them.¹⁶⁸ The Clean Water Act is supposed to be a driving force in cleaning and maintaining the nation's waters, but it back fired. After a 1993 Supreme Court ruling that held that anyone that tries to clean the water from abandoned mines becomes liable for the discharges from those mines indefinitely.¹⁶⁹

Thankfully, the EPA has recently begun to take steps to implement somewhat of a Good Samaritan provision that will “lessen the potential” of liability for volunteer clean-up efforts.¹⁷⁰ However it says lessen not remove the possibility of liability for volunteers. This is because the volunteers would need to attempt to enter into an agreement with the EPA, which would prevent a governmental action against the volunteers.¹⁷¹ There is still the chance that the volunteers could be subject to third party liability actions.¹⁷² This is a big risk that volunteer organizations would be taking and without this protection, the Clean Water Act and the EPA are still hindering volunteer clean-up. Basically, “[w]hile the EPA and state regulatory agencies support and

¹⁶⁶ Scott Rappold, *Creede confronts an ugly past*, (July 26, 2008) available at <http://www.gazette.com/articles/creede-38643-past-ugly.html>.

¹⁶⁷ Creede is another Colorado mining town that is located approximately 111 miles from Leadville. It was primarily a silver mining town, but since all of the mines have been closed it relies mostly on tourism. After learning that rain was washing mine tailings and waste rock into Willow Creek which runs into the Rio Grande River—a water source for some five million downstream users, the townspeople of Creede wanted to take action. They began projects to prevent the contaminated water to run into Willow Creek and other measure to clean the area. Rappold, *supra* note 149.

¹⁶⁸ *Id.*

¹⁶⁹ *Id.*

¹⁷⁰ *Settlements in particular programs, supra* note 163.

¹⁷¹ *Id.*

¹⁷² *Id.*

encourage voluntary remediation efforts, absolute protection from third-party suits can only come from 'legislative action.'¹⁷³ This legislative action has not yet been seen.

V. CONCLUSION

At the end of the day, it should not matter who cleans up a contaminated region, whether it was from mining or dumping. If a group of citizens wants to take a stand and do something about, it does not make sense to hold them liable from that day forward. Liability should come from the act that created the problem and not the act that fix the problem. If the EPA and Bureau of Reclamations are not able to fully clean up a contaminated area, then help should be willingly accepted. If it comes down to trying to find liability for future releases, it would not hurt to try to go after the original source. The original source would have been the liable part had the Good Samaritan not stepped in and the damage was likely reduced for the original polluter had the Good Samaritan not been there.

For this reason, governmental agencies like the Bureau of Reclamation, the EPA, and private potentially responsible parties need to be held accountable for their part in the contamination. Reasonable solutions need to be considered to lessen the risk and possibility for contaminates to reach water sources.

¹⁷³ Kevin Murray, *The Watershed Approach to Remediation: Clean Water or Quagmire?*, 46 Rocky Mountain Foundation—Institute 13 (2000) (citing *State of the Watershed: Report-1997, Clear Creek, Colorado 2* (1997)).