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# Hardrock Mining in the West

## The Past Four Decades Prove the Pollution Persists

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Hardrock mining for gold, uranium and other metals has left behind serious problems: contaminated rivers and streams, toxic sediments, poisoned wildlife, and degraded water supplies. Some dismiss these problems as “historic,” contending that environmental laws and regulations adopted over the past 40 years are adequate and additional safeguards unnecessary.



Photo: Stuart Jennings, Montana State

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# THE 1970s

- 1970 ● **Clean Air Act Enacted**
- 1971 ● **New Mexico Game & Fish Department finds no fish in the Red River below molybdenum mine.**  
Between 1966 and 1976, the mine has 80 spills.<sup>1</sup> The site is added to the Superfund National Priority List in 2000.<sup>2</sup>
- 1972–1976 ● **Federal Water Pollution Control Act Enacted**
- 1973 ● **Endangered Species Act Enacted**
- 1975 ● **Mike Horse dam fails, flushing 100,000 tons of tailings into Montana creek and Upper Blackfoot River.**  
The spill kills all aquatic life in a 10-mile stretch.<sup>3</sup> In 2004, the Forest Service declares the dam “compromised;” toxic metal releases continue in 2006.<sup>4</sup>
- 1976 ● **Federal Land Policy & Management Act Enacted**
  - **Resource Conservation & Recovery Act Enacted**
  - **Mining in the National Parks Act Enacted**
- 1978 ● **Sudden subsidence at a Colorado underground mine drains an overlying lake entirely.<sup>5</sup>**
  - **Surface Mining Control and Reclamation Act Enacted**
- 1979 ● **New Mexico tailings dam breaks, releasing nearly 94 million gallons of acidic, radioactive wastewater into Rio Puerco.<sup>6</sup> Groundwater contamination results in a 1983 Superfund listing.**



Photo: Stuart Jennings, Montana State

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The potential for considerable environmental damage due to [The General Mining Law of 1872] has led some Federal and State land managers, as well as EPA, to agree that the Mining Law of 1872 is outdated and should be revised.”

Office of Inspector General, Environmental Protection Agency, 2004

# THE 1980s

- 1980–1986 ● **Comprehensive Environmental Response, Compensation, and Liability Act Enacted** (Superfund)
- 1981 ● **Cyanide heap leach operation in Washington is abandoned one year after start-up.** The state takes emergency action to protect water supplies. EPA completes cleanup in 1997.<sup>7</sup>
- 1982 ● **New Mexico's Northeast Church Rock uranium mine closes.** Twenty-two years later, the company submits a plan to reclaim the mine.<sup>8</sup>
- **Mine dewatering pumps are turned off at Montana's Berkeley mine.** The massive pit begins to fill with acidic water.<sup>9</sup> In 1995, more than 300 snow geese perish in the pit.<sup>10</sup> In 2002, costs to protect local drinking water are projected to run to \$110 million.<sup>11</sup>
- **Four years after start-up, operation to recover metals from previously mined ores is abandoned.**<sup>12</sup> Cyanide and lead contamination at the New Mexico site brings 1983 Superfund listing.<sup>13</sup>
- 1984 ● **Hazardous & Solid Waste Amendments Adopted**
- 1986 ● **Chino mine spills 16,200 gallons of wastewater into New Mexico's Whitewood Creek.** Investigators find that the mine has released significant quantities of heavy metals and acids to the creek and groundwater.<sup>14</sup>
- **Newly opened California gold mine experiences spills and equipment failures.** Operations cease in 1994; as the mine pit fills, arsenic levels rise unexpectedly.<sup>15</sup> After state and county lawsuits, cleanup begins in 2006.<sup>16</sup>
- **Over 1,500 birds are killed at the newly opened Paradise Peak heap leach operation.**<sup>17</sup> In 1993, mining and milling ends, and the Nevada site changes ownership.<sup>18</sup> After the new owner's bankruptcy, the site is abandoned.<sup>19</sup> Reclamation costs may top \$21 million.<sup>20</sup>
- 1989 ● **Carson Hill gold mine in California spills 91,450 gallons of cyanide solution into the Melones Reservoir.**<sup>21</sup>
- **Norse-Windfall site in Nevada is abandoned without reclamation.** A 1995 investigation identifies contamination with arsenic, mercury, cyanide and other pollutants.<sup>22</sup>

“  
**Hardrock mining . . . presents taxpayers with an especially serious risk of having to pay cleanup costs for thousands of abandoned, inactive, and operating mines in the United States.**”

Government Accountability Office, 2006



# THE 1990s



Photo: Jim Pompy, California Dept. Conservation

- 1990 ● **Clean Air Act Amendments Adopted**
- **More than 1,000 waterfowl die at McCoy/Cove gold mine.**<sup>23</sup> Nevada wildlife officials contend that bird deaths escalated after mine expansion in 1988.<sup>24</sup>
- **Construction begins on pipeline to carry wastewater from the Mountain Pass mine.** Between 1984 and 1993, 727,000 gallons spill from the mine in the Mojave National Preserve. In 1996, spills exceed 350,000 gallons.<sup>25</sup>
- **Morning Star mine closes.**<sup>26</sup> In 1984 the California underground mine is converted to an open pit and heap leach.<sup>27</sup> The National Park Service cites a range of problems, including dead wildlife, heavy metal contamination and cyanide leaks.<sup>28</sup> In 2007, the mine remains unreclaimed.<sup>29</sup>
- **Tailings leak from Alaska's Red Dog mine, discoloring Red Dog Creek and the Ikalukrok Creek.**<sup>30</sup> In 2001, the National Park Service finds elevated levels of lead, cadmium and zinc in Cape Krusenstern National Monument. A 2004 study finds wide areas of the Monument with elevated levels of metals.<sup>31</sup>
- 1991 ● **Nevada's Johnston mill closes after five years of operation.** A 1997 investigation finds elevated levels of arsenic, cyanide and other contaminants.<sup>32</sup>
- 1992 ● **Colorado calls on EPA emergency crews to prevent overflow of acidic, cyanide-laden wastewaters from abandoned gold mine.**<sup>33</sup> The Summitville gold mine becomes a Superfund national priority in 1994. Acid and cyanide drainage kills nearly 20 miles of the Alamosa River.<sup>34</sup>
- **South Dakota finds trout fishery impacted from acid mine discharge four years after issuance of mine permit.**<sup>35</sup>
- 1994 ● **Cyanide leaking from the Pony Mill's wastewater ponds is discovered in a residential drinking water well in Montana.**<sup>36</sup>
- 1995 ● **Seven million gallons of leaching solution is released from storage ponds to the East Fork of Beaver Dam Wash in Utah.**<sup>37</sup>
- 1996 ● **After 15 years, Montana's Zortman Landusky mine closes.** Water quality problems persist after the owners declare bankruptcy.<sup>38</sup> By 2005, the state puts nearly \$20 million into a trust fund for perpetual treatment of water pollution.<sup>39</sup>
- 1997 ● **The Gold Quarry mine in Nevada releases about 245,000 gallons of cyanide-laden waste into James Creek.** Cyanide levels are measured at more than 60 times the drinking water limit.<sup>40</sup>
- **More than 300,000 cubic yards of waste rock and tailings spill into Pinto Creek at an active Arizona copper mine.** More than eight acres of creek bed and upland area are buried under as many as 42 feet of debris.<sup>41</sup>
- **Blowout from the tailings impoundment of an Idaho mine sends 30,000 cubic yards of contaminated wastes into Montezuma Creek,** leaving 25 acres of wetlands covered with tailings to a depth of one foot.<sup>42</sup>
- 1998 ● **Heavy metal and cyanide-contaminated wastewater from the Homestake mill operation causes a fish kill in South Dakota.**<sup>43</sup>
- **Spills from the Lucky Friday mine, opened in 1987, pollute Idaho's South Fork River.** The state predicts seven years for the affected fishery to return to pre-mining population levels.<sup>44</sup>
- 1999 ● **Company fails to complete cleanup, and wastes from Idaho mine threaten portions of the Salmon River fishery.**<sup>45</sup> In 2001, the Stibnite mining area is added to the Superfund priority list.

# THE 2000s

- 2000 ● **Over 100 migratory and resident waterfowl die at the Phelps Dodge Tyrone mine in New Mexico.**<sup>46</sup>
- **Nevada's Yerington mine site is abandoned, with 92 million gallons of acidic, metal-laden wastewater left on-site.** The abandoned facility poses serious problems from radionuclide contamination.<sup>47</sup>
- **South Dakota governor asks EPA to place the Gilt Edge mine on the Superfund list.** Request comes after the state spends \$1.3 million to prevent overflow of acid wastewaters at the mine opened in 1986.
- 2002 ● **Libby vermiculite mine that operated through 1990 becomes a Superfund priority.** Ore from the mine contains a dangerous form of asbestos; hundreds of mine workers and Libby residents are diagnosed with asbestos-related diseases.<sup>48</sup>
- 2003 ● **Idaho's Grouse Creek mine is declared an "imminent and substantial endangerment."** Superfund authorities are used for emergency dewatering of tailings impoundment<sup>49</sup> at the site once hailed as "state of the art."<sup>50</sup> Cleanup costs are estimated at \$60 million.<sup>51</sup>
- 2005 ● **Washington's Midnite uranium mine is added to the Superfund list.** After operations ceased in 1981, investigation reveals contamination of surface water, sediments and groundwater.<sup>52</sup>
- 2006 ● **Forest Service costs for Beal Mountain mine reach \$4.2 million; Montana's share is \$2.5 million.**<sup>53</sup> The government takes over cleanup, after the owners abandon operation that began in 1989.
- 2007 ● **Oregon's Formosa mine is added to the Superfund list.** The Canadian mining company that operated the copper and zinc mine between 1990 and 1993 abandoned it in 1994.<sup>54</sup> Contamination covers 18 stream miles, affecting protected coho and steelhead salmon.<sup>55</sup>

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The mineral processing and mining sectors generate more wastes that are corrosive or contain toxic metals than any other industrial sector.”

Environmental Protection Agency, 2004



For additional information, contact Velma Smith, at 202-887-8859 or go to:  
[www.PewMiningReform.org](http://www.PewMiningReform.org)

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