

Hardrock and Phosphate Mining in Idaho

A Report by the

Idaho Conservation League

And

Boulder-White Clouds Council

*Lead author:
Tom Blanchard*

*With support from:
Charlie Baun
Lynne Stone
Dallas Gudgell
Justin Hayes*

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This report was written and produced as a joint project of the Idaho Conservation League and the Boulder-White Clouds Council.

For additional information regarding these organizations please contact them directly.

Idaho Conservation League
PO Box 844
Boise, ID 83701
(208) 345-6933
icl@wildidaho.org
www.wildidaho.org

Boulder-White Clouds Council
PO Box 6313
Ketchum, ID 83340
(208) 774-3067
bwcc@wildwhiteclouds.org
www.wildwhiteclouds.org

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1. Executive Summary

Over 140 years of mining has left Idaho and the West with enormous amounts of environmental degradation: poisoned streams, major Superfund sites, huge open pit mines, vast waste dumps and tailing piles.

This report is intended to provide an up-to-date “snapshot” of mining sites and issues in Idaho. It will chronicle mines, clean up sites, agencies, pertinent laws, and touch on relevant issues.

The intent of this report is not to shake our finger at the past but to help conservation minded people wrap their hands around the present. This report provides the Idaho conservation community, and other interested parties, with information necessary to evaluate current mining issues and plan and prioritize future conservation work.

Many different minerals are mined in Idaho. Two types -- hardrock and phosphates -- are the primary focus of this report. Hardrock and phosphate mines have features that impact the land and communities more than other types of mines. The size of operations, the potential to release toxic materials in the mining process, and the complex refining processes required to produce a marketable product, all combine to threaten both ecological and community health.

While hardrock mines are dispersed throughout Idaho, phosphate mines are clustered in the southeast corner of the state.

Depending on the location of a mine, any combination of six federal and three state agencies share regulatory or oversight responsibility for permitting, monitoring, and the clean up of mine sites that cause environmental damage or threaten public health and safety. These nine agencies sometimes use provisions from more than a dozen oversight rules and regulations.

This report presents Idaho specific information important mining issues. The status of individual mines, agencies, bonding and mining cleanup/Superfund sites. Three different classes of mines are reviewed: proposed mines, active mines and mines in closure. While proposed mines and active mines are fairly self-explanatory, the concept of “closure”

requires some explanation. Closure is a process mandated by law to try to ensure that closed mines do not pose a threat to public health and safety or the environment. Closure in Idaho is regulated by the Idaho Department of Lands (IDL) under the 1971 Surface Mining Act.

Under Idaho law, all surface mines are supposed to be required to return the land to an acceptable post-closure state. Typically, the plan addresses water runoff and sediment control, infiltration of water to tailing and waste dumps, reclamation of disturbed lands through land contouring/shaping, seeding and revegetation, etc. These activities are bonded in an effort to ensure completion. While it appears that the existing regulatory and oversight rules are addressing all relevant concerns, it is often the case that practice is different than theory. When there are failures in the bonding process taxpayers are left footing the bill.

Proposed Hardrock Mines and Explorations in Idaho

Mining exploration activities in the United States have been in relative decline since 1997. Trends may change though, with commodity prices (especially gold) edging upwards and the Bush Administration's pledge to encourage mineral and energy development in the United States.

There are currently four proposed mining projects that affect Idaho: the Idaho Cobalt Project, Rock Creek, Golden Hand and Sultana Resources.

The total number of exploration projects on United States Forest Service (USFS), Bureau of Land Management (BLM), state, and private land in 2002 is not known. However, there are thousands of active mining claims in Idaho. If commodity prices begin to move upwards, it would be reasonable to expect many of these claims to develop into full-scale mining proposals.

Active Hardrock Mines in Idaho

There are four active hardrock mines in Idaho. The Lucky Friday and Galena mines are silver/lead mines located in the Silver Valley, the Rescue gold mine is located near Warren; all are underground mines. Idaho's only active hardrock surface mine is the Thompson Creek Mine, a 2,500-acre open pit molybdenum mine, located south of Challis.

Hardrock Mines in Closure in Idaho

With one exception, all thirteen of the Idaho hardrock mines undergoing closure are gold mines built in the 1970's and 80's. At that time, advances in mining technology and rising gold prices resulted in a large number of mines being permitted in Idaho. Falling gold prices have caused many of these mines to cease operations.

The closure process for these gold mines has not gone smoothly. Three of the mining companies have declared bankruptcy. Three of the gold mines in closure have experienced cyanide and metals releases exceeding clean water standards and triggered Superfund/CERCLA actions. Three mines ended operations prematurely due to low commodity prices.

The following Hardrock mines are in closure in Idaho: Copper Cliff, Beartrack, Black Pine, Champagne, Delamar, Stone Cabin, Grouse Creek, Stibnite, Thunder Mountain, Lighting Peak, Yellowjacket, Yellow Pine and the Blackbird Cobalt Mine.

Phosphate Mining in Idaho

Phosphate mining shares hardrock mining's Idaho regulatory conditions. However, contrary to most mining in Idaho, the phosphate industry is in reasonably good economic health. Because this industry is likely to remain economically viable in Idaho for many years to come, it will likely be the segment of the industry that defines important issues for mining in areas of bonding, reclamation, CERCLA response, and public participation under state and federal laws.

Southeast Idaho lies within the Western Phosphate Field that covers portions of Idaho, Utah, Montana and Wyoming. Phosphate is the largest industrial mineral produced in Idaho. Idaho production of phosphates constitutes over 12% of the national production. Currently there are four open pit operations that produce over 5.4 million metric tons of ore per year. Its industrial uses are largely for fertilizer and pure phosphate for phosphoric acid.

Today five international companies mine and/or process phosphate in Idaho: J.R. Simplot Company, Monsanto, Rhodia, NuWest Industries (Agrium), and Astaris (formally FMC).

In 1996, BLM reported the death of livestock grazing in or near certain streams, associated with the large phosphate waste dumps of southeast Idaho. Since that time, selenium, in concentrations higher than allowable under the Clean Water Act (CWA), has been reported at four open mining operations and 11 closed mine sites in the four county area.

Proposed Phosphate Mines in Idaho

Four phosphate mines, all located in a 20x20 mile box near the town of Soda Springs in southeast Idaho are currently being proposed with EIS documents expected soon. These mines are: North Rasmussen Ridge-Agrium, Manning Creek and Deer Creek Mines, Sulfur Canyon Mine-Simplot, Trail Creek Mine.

Active Phosphate Mines in Idaho

Idaho has four active phosphate mines. The mines are open pit operations that deliver ore to two fertilizer plants and two elemental phosphate plants. All four sites are experiencing selenium releases associated with their waste dumps.

These mines are: Astaris' s Dry Valley Mine, J.R. Simplot's Smoky Canyon Mine, P4 Production's Enoch Valley Mine, NuWest 's Rasmussen Ridge Mine.

Phosphates Mines in Closure in Idaho

There are a large number of phosphate pits and underground mines that were not properly closed. In addition, the Idaho Department of Lands is currently tracking closure and remediation plans for thirteen inactive open pit phosphate mines, operated by the four major phosphate companies.

Bonding in Idaho

Bonds are financial instruments to try to ensure that mining companies have sufficient funds to cover the expected costs of reclamation after operations cease. When a mine is permitted, a Plan of Operation, including a closure-reclamation section, is approved by the permitting agency. The cost of that closure activity is supposed to be developed in the Plan of Operations.

Unfortunately, the practice of bonding does not always work as well as the principle of bonding.

If the cost of clean up is underestimated in the Plan of Operation then the mine is under-bonded -- leaving the agency no simple recourse for further collection. In these instances, taxpayers frequently become liable for clean up costs.

At the state level there are three agencies involved with bonding for mining operations. Under the Idaho Surface Mining Act, the Idaho Department of Lands has the responsibility to bond all surface-mining activities, regardless of land ownership.

There are significant limitations to Idaho's bonding provisions. For instance, the Surface Mining Act of 1971 specifically limited the amount of reclamation bonding to \$2,500 per acre. For perspective, the Beartrack mine closure is estimated to cost \$14,630/acre. Idaho law does provide for bonding levels greater than \$2,500/acre, but this is the exception, not the rule.

Idaho's Department of Environmental Quality (IDEQ) is authorized to require bonds on any cyanidation process. However, the maximum bond amount that IDEQ can require is set at \$100,000. The Idaho Department of Water Resources (IDWR) is authorized to require a bond for dams. The bond is to insure that the impoundment can be placed in a safe and maintenance free condition in the event of abandonment prior to complete closure.

Public interest groups have found that a general difficulty with Idaho bonding processes is that there is no meaningful public participation. Idaho does not provide for public hearings, scoping, or comments on bonding issues.

Because bonds are based on a planned closure, bonds do not deal well with incidents of unintended toxic releases or significant material changes. Many mines today experience such incidents and are unprepared for the financial fall out. From our review of the 13 Idaho gold mines in closure, it can be seen that final closure according to the plan of operation is not the norm.

CERCLA / Superfund Summary

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA – often called Superfund) was created in 1980 in reaction to communities that had suffered extraordinary health and safety problems from toxic contamination. Under CERCLA, any of the three federal agencies (EPA, USFS, BLM) can initiate Removal Actions to protect human health and safety and to protect the environment

Idaho currently has six sites on the Superfund list. Three of these sites-- Bunker Hill Mining and Metallurgy Site, Eastern Michaud Flats area near Pocatello and the Monsanto site near Soda Springs-- are related to mining and mineral processing activity. In addition, there are three mining sites -- Triumph Mine tailings, Blackbird Mine site, and Stibnite/Yellow Pine mining area -- being proposed for formal listing.

There have been a number of mining related CERCLA actions – short of formal Superfund listings -- taken in Idaho. A few examples include work at the Grouse Creek Mine near Challis and the Missouri Mine near Idaho City to control cyanide leaks and efforts to control arsenic releases at the Tolache Gold Mine in Atlanta. Many other examples exist.

Barriers to Responsible Mining in Idaho

There are legal, financial, political and institutional barriers to responsible mining, mine clean up and reclamation in Idaho.

The 1872 Mining Law holds that mining is the highest and best use of the public lands. The fact that royalties are not assessed for hardrock mining on public lands and the Patent process, which sells public lands to mining claimants at a price set in 1872, create incentives for mining projects that, under rational circumstances, would not be economical.

At the state level, the Idaho Surface Mining Act reclamation standards are not stringent enough and the scope of mines that the Act applies to is too narrowly defined. For instance, the Act does not regulate underground mining.

In many instances, bonding – especially state bonding – does not reflect the real costs of closure. For all practical purposes, the state reclamation bond is

limited to \$2,500 per acre under the Surface Mining Act and reclamation frequently exceeds that amount. Bonding needs to reflect realistic effects, and as conditions change, bonding must be modified. In Idaho, public participation in bonding is not required by state statute.

Idaho officials have traditionally advocated for “states’ rights” and bristled at federal efforts to limit the actions of individuals and corporations. Political alliances built over the last century shape the landscape today, especially in mining. Hardrock mining in Idaho has been in decline for years, but the political connections remain. As Thomas Powers points out in his book *Lost Landscapes and Failed Economies*, decisions on natural resources are frequently based on the mythology of the past, not current information.

The Thompson Creek Mine (TCM) is an example of all of these failings.

The Thompson Creek Mine has been extracting molybdenum from public lands for nearly twenty years and has never paid royalties. The mine’s open pit and associated tailings piles, impoundments, etc., have caused grave environmental harm to the area.

Last year TCM received a patent for 1,995 acres of federal land. The land was sold to the mining company for \$5/acre (total cost, \$9,975.)

TCM looked to the patent not only to add to its private holdings but also to escape the oversight of the federal agencies and the public exposure of the relatively open federal oversight process. State regulatory agencies are now in charge of overseeing the operation and eventual closure of this mine.

In closing...

There is much work to be done in Idaho.

Thousands of mining claims lay in waiting. Even small shifts in technology and global economy could trigger a flood of new mines in Idaho. Several hardrock and phosphate mines are moving through the proposal process now – only time will tell if these mines are developed in a responsible manner.

Idaho’s active mines need constant oversight to assure compliance with relevant laws. And, the sheer number of mines in some stage of closure

indicates that attention must be paid to this slow moving but important issue. Failure to adequately clean up and close these sites will virtually guarantee a toxic legacy for Idaho and a burden for taxpayers.

2. Introduction

Commercial mining in Idaho began with a gold discovery on the Clearwater River by Elias Pierce in 1860. Shortly thereafter, Congress passed the 1872 Mining Act, stipulating that mining had the highest priority on America's public lands. That law, and 140 years of mining, has left Idaho and the West with enormous amounts of environmental degradation: poisoned streams, major Superfund sites, many square miles of land disturbed by open pits, waste dumps and tailing piles.

Despite significant mining impacts on Idaho's land and water, there is no single database or official report which tracks or lists all the mining activities and associated clean up projects. The Idaho Geological Survey (IGS) does maintain an inventory of mines ranging from historical/inactive operations, to gravel pits, to several open pit mines over a thousand acres in size. There are over 9,500 records in the database.

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Mines may be broken into categories based on mineral type: hardrock (metallic ores such as gold, silver, zinc, and cobalt); agricultural minerals (phosphate, lime); energy minerals (coal); placer deposits (gold, silver, garnets); industrial minerals (limestone, pumice, perlite, clay, sand and gravel); decorative stone (Oakley Stone, limestone), and other miscellaneous materials.

While all of these categories of mines are found in Idaho, two types -- hardrock and phosphates -- will be the primary focus of this report. Hardrock and phosphate mines have features that impact the land and communities more than others types of mines. The size of operations, the potential to release toxic materials in the mining process, and the complex refining processes required to produce a marketable product, all combine to threaten both ecological and community health.

While hardrock mines are dispersed throughout Idaho, phosphate mines are clustered in the southeast corner of the state.

Depending on the location of a mine, any combination of six federal and three state agencies share regulatory or oversight responsibility for permitting, monitoring, and the clean up of mine sites that cause environmental damage or threaten public health and safety. These nine agencies sometimes use provisions from more than a dozen oversight rules and regulations.

Regulatory requirements vary widely according to an agency's mandate and applicable laws. A mine may have a single agency act as lead (i.e. responsible for permitting and oversight), or a shared lead involving multiple agencies. Sometimes agency roles are unclear and frequently agency roles are subject to political pressure.

Three Tribes -- the Coeur d'Alene, Nez Perce, and Shoshone-Bannock -- are actively monitoring mines on their traditional lands. The Tribes have unique regulatory and management authority on these lands. Federal and state Agencies must consult with the Tribes on all issues related to those lands. As a result, Tribes have a role in planning and decision making that is much greater than the general public's role.

This confusing web is one of the hurdles that conservationists face when trying to tackle mining issues. Ten conservation organizations are involved, to varying degrees, in Idaho mining activities and/or providing public education in Idaho. Idaho conservation groups have been very successful in raising select key issues concerning mining in Idaho and nationally. Castle Peak was saved from a huge open pit mine that would had devastated the White Clouds Mountains and one of Idaho's great mountain peaks. Grouse Creek mine is a national poster child for mining reform. The Idaho Surface

Mining Law was revised and improved due to input from conservation groups. The work done in the Silver Valley to raise awareness of the magnitude of pollution and human health issues has been intense and ongoing for nearly two decades. While there is no statewide strategy for dealing with mining issues, there is a solid core of dedicated individuals working on a daily basis to protect the public interest in Idaho's resources.

3. Hardrock Mining in Idaho

Proposed Mines and Explorations

During the late 1990's, increasingly stringent environmental conditions discouraged mineral exploration in North America. During the same period, metal commodity prices dropped to the lowest level since the 1970's. As a result, mining companies began moving exploration activities overseas seeking a "better" (meaning fewer regulatory conditions and lower labor costs) climate for mineral development.

In addition, in a revision to the mining claims maintenance rules, miners were required to pay \$100 annual fee in place of traditional assessment work. The number of claims on federal lands dropped by 40%. As a result, mining exploration activities in the United States have been in relative decline since 1997.

Trends are changing though, with commodity prices, especially gold, edging upwards and the Bush Administration's pledge to encourage mineral and energy development in the United States. Mining also discovered that these foreign investments were risky. The result: over the last two years, foreign investments have declined and interest in North American exploration is growing.

The following hardrock mine proposals and explorations will affect Idaho:

- Idaho Cobalt Project (ICP) -- A proposed cobalt, copper and gold mine located 45 miles west of Salmon, near the former Blackbird Mine Superfund site. ICP would drain into Panther Creek, which was polluted by the Blackbird Mine's toxic run-off, and where attempts at clean up

have been ongoing for years. The Salmon/Challis National Forest is preparing an Environmental Impact Statement (EIS) on the Plan of Operations and expects to issue alternatives in the Spring of 2002.

- Rock Creek -- A proposed copper and silver mine in Montana 900 feet under the Cabinet Mountains Wilderness. It would drain polluted mine water directly into the Clark Fork River and Lake Pend Oreille. The mine may require water treatment in perpetuity. With treatment, mine discharge would meet Water Quality Standards (WQS), but only after dilution in a mixing zone using the Clark Fork River. A Record of Decision (ROD) by the Forest Service recently approved the mine's Plan of Operation. The Rock Creek Alliance strongly opposes allowing mine water into the Clark Fork and is appealing this decision.

The developer, Frank Duval, has a long history with bad mining operations. Duval was a founder of Pegasus Gold, bankrupt operators of the Zortman-Landusky mines in Montana and Black Pine Gold Mine in Idaho (See section regarding mines in closure), and several other bankrupt mining ventures.

- Golden Hand -- This gold exploration project is located 100 miles northeast of McCall in the Frank Church River of No Return Wilderness. Exploration would reopen 2.7 miles of road in the wilderness, drill 71 test holes, excavate 700 feet of trenches, and construct several hundred feet of low standard road. Scoping will begin this year, 2002.
- Sultana Resources – Sultana has purchased the old Empire Mine in the White Knob Mountains near Mackay. There was informal discussion with the USFS in 2000 regarding a proposal to reopen this area. The proposal called for an open pit, acid-leach, and copper/zinc extraction process. No known formal documents have been submitted. Sultana has held previous mining interests in the troubled Corlotta Copper Mine in Arizona.

Explorations

Other exploration is ongoing across Idaho. The total number of exploration projects on USFS, BLM, state and private land in 2002 is not known. However, the attached map entitled, "Idaho Mine Claim Density,"

demonstrates that there are thousands of active mining claims in Idaho. If commodity prices should begin to move upwards, it would be reasonable to expect many of these claims to develop into full-scale mining proposals.

Active Hardrock Mines

There are four active hardrock mines in Idaho. Three are underground mines and one, Thompson Creek Molybdenum Mine, is a surface mine.

Please refer to the enclosed map entitled, “Idaho Active/Inactive Mine Types” for an overview of the location of these mines.

Underground Hardrock Mines

- Lucky Friday – This silver mine, owned by Hecla Mining Company, is located in north Idaho’s Silver Valley. Hecla recently announced plans to high grade the remaining ore to extend the employment of its existing workforce. The expense of further development, due to extreme depth (6,000+feet), triggered the decision to end mining after current high grading operations are complete. This mine is the last operating mine in Hecla’s U.S. holdings.
- Galena -- This silver/lead mine is located in the Silver Valley and is owned by Coeur d’Alene Mines Corporation. The mine employs approximately 200 people. Recent explorations have increased reserves and targeted significant areas for development work. However, silver prices are so low (\$4.46/lb) that the company has reported a net loss for the past several years. If economic factors turn around, this mine could potentially continue to operate (due to significant remaining ore deposits) for a considerable time.
- Rescue – This is a small gold mine located near Warren, forty miles east-southeast of Riggins, on the South Fork of the Salmon River. The mine was recently sold to Barramundi Gold Ltd., a larger development company. The Rescue Mine has submitted a plan change to construct dewatering trenches for the mill’s tailings impoundment. The Payette National Forest will begin the scoping process to gather public concerns and input sometime in 2002.

Hardrock Surface Mines

There is currently only one active hardrock surface mine in Idaho.

- Thompson Creek Mine (TCM) – This 2,500 acre open pit molybdenum mine is located south of Challis and has been operating since 1983. The mine recently reduced its work force to 60 people and is on a partial work schedule due to low commodity prices. It is estimated that the mine has three to five years left in operations.

Thompson Creek recently received the patent for 1,995 acres of USFS land. Consequently, the mine is now being regulated by the Idaho Department of Lands (IDL), for operations and bonding, Idaho Department of Water Resources (IDWR) for dam safety, and Idaho Department of Environmental Quality (IDEQ) for water and air quality.

Thompson Creek Mine: a case study in mining problems – by Lynne Stone.

Thompson Creek Molybdenum Mine (TCM)-- located between Stanley and Challis, is Idaho's largest mine at 2,500 acres. This mega-mine is a serious concern for Idahoans who care about the Salmon River country. It is just five miles from and 2,000 feet above the Salmon River. TCM started molybdenum production in 1983 with annual production of 12-18 million pounds. Molybdenum (a.k.a. "moly") is used to strengthen steel, in lubricants, and for automobile airbags.

Low moly prices have caused the mine's work force to drop from 195 people in 1998 to 60 in 2002. Once touted as being a 50-year project, TCM may only operate another 3-5 years, or close sooner if prices continue to drop. The mine's gigantic tailings dam, mile-long 1500-foot deep open pit and massive waste rock dumps will need monitoring and maintenance for decades, perhaps centuries.

There are five key concerns at Thompson Creek:

1. Bruno Creek tailings facility: a 500-acre impoundment fills Bruno Creek canyon and contains over 100 million tons of processed mine waste, some containing pyrite. Eventually, depending on the mine's life, the tailings facility will double in size to 200-million tons. The impoundment is held back by a 600-foot sand embankment ("the sand dam").

Bruno Creek flows into Squaw Creek, then the Salmon River. Events such as landslides, earthquakes, embankment erosion or water systems failures could expose pyrite to air and water, causing Acid Mine Drainage to form, sending acid and dissolved metals downward toward the Salmon River.

In 1994, Idaho conservationists broke the news that AMD had been forming on the embankment since 1987. After denying AMD's existence on the gold-colored, 600-foot high embankment, agencies and the mine finally took action in the late 1990's to remove and/or bury acid-forming sands on the dam's face. However, pyrite-laden waste rock is still being placed within the impoundment.

The mine and IDWR engineers are on record claiming the tailings facility is safe. Other experts including EPA personnel have expressed doubt about the dam's stability. One threat is an earthquake. TMC is only 30 air miles from the 1983 Mt. Borah earthquake center, which measured 7.3 on the Richter scale.

2. Thompson Creek open pit: the mile-long pit eventually will be 1500-feet deep and is expected to fill over the next 300 years with 600-feet of water of unknown quality. The mine's 1980 EIS said the pit water would "be like a mountain lake". There is dispute whether the pit water will be toxic, a special concern for waterfowl in the Salmon River canyon area.

3. Buckskin and Pat Hughes Creek waste dumps: moly mining produces vast amounts of waste rock and two formerly beautiful canyons are now destroyed by these waste dumps. Eventually Buckskin and Pat Hughes Creek valleys will contain 600-million tons of overburden, including some ore containing pyrite and other metals. Both creeks drain into Thompson Creek, a significant Salmon River tributary. Like other features at

TCM, these waste rock dumps will need monitoring for perpetuity, and perhaps water quality treatment if/when AMD develops.

4. Transportation of hazardous materials: truck accidents along the winding Salmon River highway, and into the river itself, have occurred. So far, the substances spilled (including bags of moly) have reportedly not killed fish or contaminated the water. Trucks hauling moly and/or other products sometimes go through the Wood River Valley via Galena Summit, threatening another of Idaho's premier rivers, the Big Wood.

5. Inadequate bonding. After years of delay, in part because of conservationists objections, TCM recently received the patents for 1,995 acres, paying just \$5.00 an acre. The total cost was just \$9,975 -- an outrageously low amount for public land belonging to all Americans. Since TCM now owns the land on which it mines, Idahoans have less access to information about mine operations, its problems and plans. With patenting, the Idaho Department of Lands has taken over from the Salmon-Challis National Forest as the lead regulating agency. EPA with assistance from IDEQ continues to oversee the NPDES permit for the mine's water discharge points

The mine's bond stands at \$19 million, an absurdly inadequate amount considering the mine's size and what will be required for reclamation. Bonding does not include the costs associated with the construction of the water quality treatment plant(s), or the high cost of water treatment, should it be required.

Another non-bonded liability: the cost of producing rock and soil needed for capping the tailings facility and waste rock dumps. Capping material is to be generated from mine operations between now and closure. The cost: estimated at \$108 million. If Thompson Creek shuts down and fails to stock pile the material, then the state must. Obviously, the \$19 million dollar bond does not cover this. IDL is currently negotiating with TCM to determine how the capping material will be produced. (See Bonding Section for more on TCM bonding dilemmas.)

Hardrock Mines in Closure

Mine closure is a process mandated by law to try to ensure that closed mines do not pose a threat to public health and safety or the environment. Closure in Idaho is regulated by the IDL under the 1971 Surface Mining Act.

Under Idaho law, all surface mines are supposed to be required to return the land to an acceptable post-closure state. Typically, the plan addresses water runoff and sediment control, infiltration of water to tailing and waste dumps, reclamation of disturbed lands through land contouring/shaping, seeding and revegetation, etc. These activities are bonded in an effort to ensure completion. While it appears that the existing regulatory and oversight rules are addressing all relevant concerns, it is often the case that practice is different than theory. When there are failures in the closure and bonding process taxpayers are left footing the bill. For a discussion on bonding issues please refer to the bonding section of this report.

If the mine is on public land, the federal permitting agency will include closure requirements in the Plan of Operation and bond for them. In theory, most of the conditions associated with Idaho law would be considered and included. Additionally, all water discharge must be covered by National Pollution Discharge Elimination System (NPDES) permits. That includes storm water run-off, mine water discharge and processing water. These federal standards do apply to underground mines.

With only one exception, all Idaho hardrock mines undergoing closure are gold mines built during the 1970's and 80's. The exception is the Blackbird Mine, a cobalt and copper operation. Interest in gold exploded in the 1970's with the advent of improved technology, cyanidation in heap and vat leach operations, and the rise of the commodity price of gold from \$450 to nearly \$800/ounce. As a result, a large number of mines were permitted in Idaho. Falling gold prices have caused many of these mines to cease operations.

The closure process for these gold mines over the past 20 years has not gone smoothly. Three of the twelve companies -- Pegasus Mining Company (Blackpine Mine), Dakota Mining Company (Stibnite) and Alta Gold (Copper Cliffs Mine) -- have declared bankruptcy. The bonds for closure

and reclamation have been called in for each case. Black Pine Mine is completing closure according to plan with the bond money. The State of Idaho is currently facing an estimated \$4 million liability at Stibnite for clean up, because the company has no assets available for recovery costs. The Alta Gold operations were quite small and clean up estimates are not available at this time. A fourth company, Hecla Mining, has non-bonded liabilities of hundreds of millions of dollars that may end up as taxpayer obligations. Many agency observers speculate that Hecla might eventually declare bankruptcy.

Three of the thirteen mines in closure -- Yellow Pine, Grouse Creek Mine and Stibnite Mine -- have experienced cyanide and metals releases exceeding clean water standards and triggering Superfund/CERCLA actions. A fourth mine, the Yellowjacket Mine near Salmon, released cyanide at its heap leach pad in the 1970's. It later processed its ore at Preachers Cove Cyanide Mill on the Yankee Fork, which was also closed because of a cyanide release. For a fuller explanation of the Superfund law or CERCLA (Comprehensive Environmental Response, Compensation and Liability Act-CERCLA) please refer to the CERCLA section of this report.

Three mines -- Beartrack, Delamar and Stone Cabin -- ended operations prematurely due to low commodity prices. Meridian Mining Company's Beartrack Mine, near Salmon, has closed prematurely due to low ore values and declining gold prices. Delamar and Stone Cabin mines, in Owyhee County near Silver City, are in "inactive status" -- hoping for gold prices to rise to allow continued operations.

Under Idaho law, if a mine ceases operation for any reason and becomes inactive, it must resume activity within three years or begin closure. Delamar and Stone Cabin mines have reached the three-year limit and are currently requesting to renegotiate their inactive status. Technically, they need to begin closure.

The following hardrock mines are in closure in Idaho:

- Copper Cliffs Mine – This gold mine is located in the Seven Devils area of Hells Canyon. The owner, Alta Gold, declared bankruptcy. Closure is under study by the state with cost estimates expected in 2003. The bond has been called by the state. Of the 12 gold mines in closure, this is the only non-cyanide operation.

- Beartrack – This gold mine is located in Leesburg, 33 miles west of Salmon. Meridian Mining Company discontinued operations before completing its nine-year plan of operation due to low metal prices. Closure has recently begun. A cyanide heap leach pad is being treated with bio-agents, but will continue to drain for years. The pit water and pit walls are being studied for remediation, with a final closure plan due February 2002.
- Black Pine – This gold mine is located southeast of Twin Falls on the Sawtooth National Forest. When Pegasus Mining Company declared bankruptcy, it affected numerous mines in the West, including this open pit, heap leach mine. The bond was called to complete closure and appears to be covering the cost. Complete closure is expected in 2003.
- Champagne Mine – This gold mine is located in the Arco area. The reclamation bond has been released from the IDL. IDEQ still holds its cyanidation bond.
- Delamar and Stone Cabin – These two gold mines are located in Jordan Valley, within Owyhee County. The two mines are owned by Kinross Mining Company. Delamar is a vat leach operation using land application for its effluence disposal. The mines are temporarily closed due to commodity prices. Kinross is negotiating with the state for an extension of their operating permits.
- Grouse Creek - Grouse Creek is located three miles up Jordan Creek on the Yankee Fork of the Salmon River, downstream of Stanley. Hecla Mining Company owns this open pit, heap leach operation. Grouse Creek has had problems from the beginning. The mine destroyed a small lake/wetland meadow complex below an area of geologic landslide activity. The tailings dam itself is built upon an ancient landslide. Construction on a mine haul road in 1994 triggered a new landslide that blocked over 100 yards of Jordan Creek. A broken slurry line released cyanide directly into Jordan Creek, killing fish. Hecla failed to properly assess the ore body, and as soon as mining began they recognized that there was less than half the gold estimated. Within two years the company had written off over \$120 million invested in the project; they described it as a "black hole" and the operation was closed. At the time of

closure in early 1997 over 258 violations to the discharge permit had resulted in a \$85,000 fine.

A CERCLA time critical removal action has been in process for over two years due to leakage in the tailings pond liner. Cyanide was found in Jordan Creek in amounts lethal to fish in 1998. The leaks are being intercepted by collection wells but to date no actions have been taken to dewater the impoundment. Additionally, a CERCLA related Engineering Evaluation and Cost Analysis (EECA) is in process and will be out March 2002 for public comments.

- Stibnite -- located on the South Fork of the Salmon River 50 miles east of McCall. The owner, Dakota Mining Company, declared bankruptcy in 1998. The state was left with an estimated \$1 million clean up cost to control seepage of cyanide and metals from the spent ore deposits. This year the state of Idaho recommended that Stibnite be listed as a Superfund site. The EPA has wanted to propose this site for many years but had deferred to Idaho's judgment. Stibnite has had several smaller CERCLA time-critical removal actions (see CERCLA section) over that past ten years. Much more work has yet to be done on the Bradley tailings pile, which is leaking contaminants (primarily arsenic), into the surface water of the South Fork of the Salmon River.
- Thunder Mountain and Lighting Peak Mines – These gold mines are located on Mortar Creek, a tributary of the Middle Fork of the Salmon, 60 miles east of McCall. Both mines are owned by Coeur d'Alene Mining Company and both utilized heap-leach systems. Reclamation is underway and the completion will trigger the release of the bond, which is anticipated in 2002.
- Yellowjacket Mine -- This open pit, cyanide heap leach gold mine is located at Yellowjacket, 50 miles west of Salmon. Owned by U.S. Antimony Corp under John Lawrence, this mine has had a long history of non-compliance with the operating plan. The ore was shipped to Preachers Cove, also owned by John Lawrence, for cyanide processing. Preacher's Cove closed after a significant cyanide release in 1994. A CERCLA response was taken by the USFS. The mill has not been permitted to operate since that date. The loss of the mill led to the closure of Yellowjacket.

- Yellow Pine – This gold mine is located 50 miles east of McCall on the South Fork of the Salmon River. Hecla Mining Company owns this open pit, heap leach gold mine. EPA took CERCLA action to contain seepage from the leach pad that was contaminating water with cyanide and metals. The Yellow Pine Mine is within the Stibnite/Yellow Pine Mine proposed Superfund site.
- Blackbird Cobalt Mine – This cobalt mine is located 45 miles west of Salmon and impacts several Panther Creek tributaries. Blackbird was proposed for Superfund listing. A Consent Decree with the private Blackbird Site Group (Norranda is the historical operator) for a non-time critical CERCLA removal action (see CERCLA summary) is underway. In 2001, Panther Creek had its entire flood plain rebuilt in order to remove arsenic soils. The mine continues to produce AMD that threatens streams and will require a water treatment plant. The proposed ICP is located above of a portion of the Blackbird site.

Silver Valley/Coeur d'Alene Superfund: One BIG mess – literally and figuratively.

No discussion of current mining activities would be complete without a discussion of the Coeur d'Alene mining region. The Coeur d'Alene basin issues are complex-- active mines, closed mines, CERCLA actions, Abandon Mine Lands, a Superfund site.

In 1884, silver and gold discoveries in the mountains between Montana and Idaho led to a rush to the "Coeur d'Alenes" and the opening of the world's largest silver-producing region. Since that time over \$4 billion has been produced for mining companies and their investors. In the process, toxins and metals have been discarded into the waterways, soils and air of the Coeur d'Alene watershed encompassing over 3,400 square miles. Smelter slag and waste was regularly dumped into the streams to be carried away in the spring floods. Discharge from the smelter stack carried volatilized metals and contaminants into all reaches of the watershed where they precipitated into the soils.

A survey of the Coeur d'Alene River in 1932 found no living fish from Wallace to the lake. After the great fire of 1910 the forest did not grow back in much of that area due to heavy metal soil contamination. Today the Coeur d'Alene region is recognized by EPA as the most severely damaged watershed of the state. The true extent of damage is unknown, but the plume of metal in river sediments extends from the mining/smelter regions near Wallace and Kellogg through Lake Coeur d'Alene and into the Spokane River as far as the junction with the Columbia River.

In 1974, Gulf Resources, owners of the Bunker Hill Smelter, knowingly operated the smelter after the baghouse, which filters the stacker emissions, had been destroyed in a fire. In three months the communities suffered more lead pollution than they had in the past 20 years combined. The highest human blood lead level ever recorded was in a family with three children in Wallace. A class action suit has recently been filed to determine the extent of damage and financial responsibility.

In 1983, EPA designated a small portion of the basin as a Superfund site. The site, a 21 square mile area near Kellogg encompasses the Bunker Hill Mine area known as "the Box" has already used up \$127 million of EPA clean up money.

Additional portions of the watershed area are being considered for Superfund listing: an 1,300 square mile area that extends downstream 150 miles from the mountain peak borders of Idaho/ Montana to the Idaho/Washington border.

EPA has recently released its draft clean up plan for the Coeur d'Alene basin. Estimates are that the clean up will initially cost \$359 million. It is possible that costs could escalate to \$1.4 billion. This plan does not adequately address significant lake bottom deposits of heavy metals or the contaminated Spokane River in the State of Washington.

Future work in this area will center on finalizing EPA proposals, addressing Washington State's concerns, Idaho's efforts to wrestle control from EPA and the question of funding and implementation. Resolving these issues will take many more years.

4. Phosphate Mining in Idaho

Phosphate mining shares hardrock mining's Idaho's regulatory conditions. However, contrary to most mining in Idaho, the phosphate industry is in reasonably good economic condition. Because this industry is likely to remain economically viable in Idaho for many years to come, it will likely be the segment of the industry that defines important issues for mining in areas of bonding, reclamation, CERCLA response, and public participation under state and federal laws.

Phosphate mining began in the early 1900's in southeast Idaho to supply fertilizer to a young agriculture industry. Most of the mines were underground and small in size. After WWII, technology changed and a growing demand fueled large-scale extraction of phosphate. At this time, open-pit mining became the predominant phosphate mining method. Today five international companies mine and/or process phosphate in Idaho: J.R. Simplot Company, Monsanto, Rhodia, NuWest Industries (Agrium), and Astaris (formally FMC).

The phosphate deposits are concentrated in the four southeast counties of Bear Lake, Bannock, Caribou and Bingham.

Southeast Idaho lies within the Western Phosphate Field that covers portions of Idaho, Utah, Montana and Wyoming. Phosphate is the largest industrial mineral produced in Idaho. Idaho production of phosphates constitutes over 12% of the national production. Currently there are four open pit operations that produce over 5.4 million metric tons of ore per year. Its industrial uses are largely for fertilizer and pure phosphate for phosphoric acid.

In 1996, BLM reported the death of livestock, which were grazing in or near certain streams associated with the large phosphate waste dumps of southeast Idaho. Since that time, selenium, in concentrations higher than allowable under the Clean Water Act (CWA) has been reported at four open mining operations and eleven closed mine sites in the four county area.

Selenium is a naturally occurring metal that is released when waste rock surrounding the phosphate deposit is moved to expose the phosphate ore. Contact with air and water oxidizes selenium, allowing the metal to dissolve and migrate via subsurface and surface waterways. Root systems are able to

access the element and absorb it into their foliage. Selenium is bio-accumulative. Animals eating these plants absorb the element and are subject to selenium poisoning, a condition where sulfur in the body is replaced by selenium. This can be lethal. Consumption of animals with high levels of selenium, by humans or other animals, continues the accumulation in the food chain.

In 2000, an agreement between all state, federal and tribal management agencies was signed to coordinate a response to the toxic release of selenium. Under that agreement the IDEQ was designated as the lead agency coordinating an Area Wide Investigation to determine the extent of contamination, characterize the sites, establish response alternatives and priorities, and recover costs. The Greater Yellowstone Coalition is actively monitoring and attending the advisory committee meetings for this study.

The Area Wide Investigation will continue into 2005. In 2001, Consent Agreements with the major phosphate companies (Simplot, Monsanto, Rhodia, NuWest Industries, and Astaris [FMC]) were made for financial support of remediation efforts. In 2002, proposed remedial actions are to be finalized.

As a part of the Area Wide Investigation, the USGS has evaluated 19 sites that collectively have a land surface disturbance of over 22 square miles. This does not include many of over 80 historic mine sites; a number of them unreclaimed open pit operations. Many of these "orphaned" properties will be handled under the Abandoned Mine Lands programs of the Forest Service or BLM at taxpayer expense. The IDL holds 17 bonds for reclamation ranging from \$2,300 to over \$2.4 million dollars. These bonds reflect the language and administrative interpretation of the 1971 Idaho Surface Mining Act. These phosphate closures, as well as gold mine closures, will be a major test of the effectiveness of that Act.

The phosphate industry is reasonably robust nationally and locally. There have been major mergers and partnerships in the last four years and no bankruptcies. While Astaris has closed its operation (FMC) in Pocatello, it has recently participated in a \$100 million joint venture with NuWest Industries (Agrim) to open a purified phosphoric acid plant in Soda Springs. Currently, four mines -- Astaris' Dry Valley Mine, J.R. Simplot's Smoky Canyon Mine, Monsanto's Enoch Valley Mine and NuWest's Rasmussen Ridge mine -- employ about 600 people and feed ore to four

plants that employ another 1,200 people. All four of the major companies are aggressively looking for new discoveries. Four NEPA actions are currently under development for expansion of mining in the area.

Proposed Mines and Explorations

Four phosphate mines are currently being proposed, with Environmental Impact Statement documents expected soon. These mines are:

- North Rasmussen Ridge-Agrium
- Manning Creek and Deer Creek Mines
- Smoky Canyon Mine-Simplot
- Trail Creek Mine

All of these phosphate proposals are located in a 20x20 mile box near the town of Soda Springs in southeast Idaho.

Active Phosphate Mines

Idaho has four active phosphate mines. Collectively, these mines produce more than 5.4 million tons of ore per year. All four mines are located in the area just northeast of Soda Springs. Please refer to the enclosed map entitled, "Idaho Active/Inactive Mine Types," for an overview of the location of these mines.

The mines are all open pit operations that deliver ore to two fertilizer plants and two elemental phosphate plants in Soda Springs. All four sites are experiencing selenium releases associated with their waste dumps, and in 2001 the four owners signed a Consent Order with state and federal agencies and the Shoshone-Bannock Tribes agreeing to pay costs associated with the study and remediation of the selenium releases.

These mines include:

- Astaris' s Dry Valley Mine opened in 1992 with 215 acres.
- J.R. Simplot's Smoky Canyon Mine opened in 1984 with 479 acres.
- P4 Production's Enoch Valley Mine opened in 1989 with 235 acres.
- NuWest 's Rasmussen Ridge Mine opened in 1991 with 137 acres.

Phosphates Mines in Closure

In Idaho's phosphate belt there are a large number of phosphate pits and underground mines that were not closed properly. In addition, the IDL is currently tracking closure and remediation plans of thirteen inactive open pit phosphate mines. Significant selenium releases exceeding state and federal water quality standards have been detected at many of the inactive mines' waste dumps. BLM is also investigating and characterizing fourteen closed and abandoned underground mines with no known ownership.

The phosphates companies and their inactive mines in closure are:

- P4Productions:
 - 1) 90% Ridge Contingency, 24 acres
 - 2) Enoch Valley, 742 acres
 - 3) Blackfoot Contingency, 227 acres

- Solutia
 - 1) South Rasmussen Ridge, 366 acres

- J.R. Simplot
 - 1) Conda, 608 acres, operated from 1920-1984.
 - 2) Diamond Creek, 16 acres, operated in the 1960's
 - 3) Lanes Creek, 221 acres, operated from 1978-1988

- NuWest Industries
 - 1) Maybe Canyon, 221 acres, operated 1965-1993
 - 2) South Maybe Canyon, 720 acres, operated 1965-1993
 - 3) North Maybe Canyon, 209 acres, operated 1965-1993
 - 4) Champ, 158 acres, operated from 1982-1985
 - 5) Mountain Fuel, 290 acres, operated 1985-1993

- Rhodia
 - 1) Woolly Valley, 327 acres, operated 1955-1989

5. Abandoned Mines in Idaho

There are nearly 9,500 entries in the Idaho Geologic Survey's (IGS) listing of mines in Idaho. The list, "Idaho Bureau of Mining and Geology, Map Series," consists of over 20 books with maps. Many of these 9,500 are "dog holes" or disturbances of less than 100 square feet. However, some are significant disturbances that contributed extensive pollution to the environment. Under the Abandoned Mine Lands (AML) program the Idaho Geologic Survey has contracted with land agencies to inventory and characterize mine sites throughout Idaho for health and safety. Sites are rated as high, medium or low risk. After being rated, the sites are prioritized, and remediated by the various state and federal agencies as funds allow.

Much of Idaho's inventory work is complete. Nearly 1200 sites have been characterized since 1994. Of 684 northern Idaho forest sites visited, 249 sites (36%) displayed evidence of physical hazards and 218 (31%) sites pose environmental hazards in need of remediation. Of the 218 with environmental hazards, 109 sites had tailings waste in contact with waterways. In the USFS Region 4, which makes up the southern Idaho forests, the survey is about 85% complete.

There have been persistent efforts over the past ten years by the agencies to reclaim properties and eliminate hazards. Many known mine shafts and adits close to urban areas have been sealed or otherwise closed by agency personnel. If there is a known owner or Principle Responsible Party (PRP) the land agencies initiate negotiations for clean up. If there is no known owner, clean up is done as funds allow, and at taxpayer expense.

Federal money for mine clean up is limited by annual budgets. BLM and USFS funding comes primarily from watershed restoration and minerals funds. Remediation moves through a number of steps: preliminary assessment (PA); principle responsible party (PRP) investigation and negotiation; remedial investigation (RI); site characterization; engineering evaluation and cost analysis (EECA); and finally, contract and management for clean up services. Each of these steps involves a specific funding request. The entire process can take seven to ten years of continuous effort.

Using CERCLA/Superfund for abandoned mine clean-up

Federal land agencies have access to agency specific CERCLA funds for removal or remedial actions. CERCLA is triggered when there is a *significant* environmental or public health threat, or where a site poses an

environmental threat and has no known owner. For more information on these issues, please refer to the CERCLA section of this report.

State Funding for Abandoned Mines

State money for cleaning up abandoned mine sites is available via the Idaho Abandoned Mine Fund. The fund was originally authorized to collect 2% of all mine license taxes and was yielding about \$100,000/year. The tax rate was reduced by the Legislature in 2000 to only 1%. The yield for this year is estimated at \$50,000. Of that amount, IDL only gets 34% for reclamation. The tax commission estimates that it cost more to administer the fund than it actually receives. Due to budget constraints, they are currently able to focus only on abandoned mines located on State Endowment Lands. There are currently three sites on the IDL project list for clean up -- a smelter site at Nicolia, a site in Jordan Valley, and a tailings pile in north Idaho. With mining activities in the state declining, it is likely that this fund will continue to shrink.

6. Agency Description and Roles

It is helpful to know the agency players and their legal and political context. The following summarizes key regulatory agencies in Idaho. Please refer to Appendix II for specific information about agency contacts and Appendix IV for a more detailed list of Idaho law effecting mining.

Federal Agencies

- The U.S. Forest Service (USFS) and Bureau of Land Management (BLM) are the federal land holding agencies. These two are the lead agencies for regulation, reclamation, bonding, and clean up on federal (public) lands. They operate under the requirements of the 1872 Mining Law, National Environmental Planning Act (NEPA), Federal Land Policy and Management Act (FLPMA), Clean Water Act (CWA), Endangered Species Act (ESA), and others.

- The Environmental Protection Agency (EPA) is the primary environmental enforcement agency. They derive their authority from the National Contingency Planning Act (NCP) and the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). EPA is involved with various mining aspects: issuing permits for the National Pollution Discharge Elimination System (NPDES), monitoring for toxic releases in water and air, and subsequent clean-up/removal actions.
- The U.S. Fish and Wildlife Service (USFWS) is the federal agency responsible for Endangered Species Act management on continental land and waters. The USFWS provides Biological Opinions on endangered species that establish terms and conditions for mitigation and monitoring impacts in areas where mining effects those species.
- The National Marine Fisheries Service (NMFS) provides Biological Opinions on endangered marine species. In Idaho, NMFS is involved with issues affecting salmon and steelhead and has direct authority to manage salmon as an endangered species.
- The National Oceanic and Atmospheric Administration (NOAA) is the parent agency of the NMFS and provides additional scientific analysis and research for CERCLA sites with marine (i.e. salmon/steelhead) impacts. NOAA works on Blackbird Mine and Grouse Creek Mine to give guidance to the CERCLA Response Team managing those sites.
- The U.S. Geological Survey (USGS), while not a regulatory or oversight agency, is a critical resource regarding mining issues. The USGS conducts many relevant research studies and has a wealth of data and experience with mining related issues.

Historical Roles: BLM, USFS and EPA

Mine regulation is complicated because the three primary federal agencies have different operation guidelines and subsequent agency objectives and cultures. BLM is an agency that was created in 1946 by merging the General Lands Office and the Grazing Service. Their mandate was to regulate mining and grazing and dispose of western lands. The USFS was initiated as a land reserve agency with a mission to protect the public commodity interest of

the forest resources. These two agencies, by their history, are not advocates for resource conservation. They are "permitting" agencies and facilitate private use of the public land. There is a growing exception to this historical viewpoint. A shift from resource extraction to more sustainable resource management is slowly taking place. However, these agencies tend to reflect politics of the federal Administration.

Conversely, the EPA was created to clean up industrial damage and has strong regulatory powers and enforcement mandates. This enforcement mandate is frequently in conflict with destructive management practices at the local level and has made EPA a focal point of distrust for the State of Idaho and state and federal agencies.

State Agencies

- The Idaho Department of Lands (IDL) is the state's land management agency and is directed by the Idaho Land Board. When dealing with mining, IDL operates primarily under the Idaho Surface Mining Act of 1971. IDL regulates and monitors mining on all state and private lands, determines bonding amounts, and interprets the reclamation standards required for mine closures. IDL was created to manage state lands for the greatest return to the State Endowment Fund. Resource extraction has historically been IDL's primary goal and it traditionally has been viewed as being more sympathetic to industry (mining, timber, grazing, etc.) than environmental protection.
- Idaho Department of Water Resources (IDWR) is authorized by the Idaho Dam Safety Act to regulate mines with water impoundments over thirty feet in height. This includes dam safety oversight and bonding requirements.
- Idaho Department of Environmental Quality (IDEQ) holds bonds for mines that use cyanide and also certifies that the National Pollution Discharge Elimination System (NPDES) discharge permits, under Clean Water Act (CWA), meet state standards. In cases where state water standards are not being met, IDEQ becomes a regulatory agency. IDEQ plays a key role for the state in all CERCLA/Superfund actions.

Politics Influences Agencies

The role of regulatory agencies is complicated by the highly politicized nature of mining issues. All levels of government may affect regulatory activities and permit approval. Miners have influence with politicians who may lean on agencies. For example, Idaho's Governor Dick Kempthorne publicly stated "I foresee no regulatory obstacles which may form a hindrance to the successful permitting of the Sunshine (Idaho Cobalt) Project" (*Salmon Recorder Herald*, Aug. 9, 2001). Governor Kempthorne said this before the mine's plan was even submitted. These signals coming from the Governor, who serves as the Chair of the Idaho Land Board, send a strong message to the Idaho agencies reviewing the permits for mining activity.

Federal agencies in Idaho have traditionally been under great political pressure from local communities, politicians and the state's regulatory agencies. The pressure is very evident in North Idaho's polluted Silver Valley. Here, some members of the local community, backed by county commissioners, the State Land Board, and Idaho Congressional delegation members have put considerable pressure on the EPA. In the 2002 "State of the State" address, Governor Kempthorne, referring to the EPA Coeur d'Alene Superfund proposal, openly invited the EPA to leave the state.

7. Bonding

Bonds are financial instruments to try to ensure that mining companies have sufficient funds to cover the expected costs of reclamation after operations cease. Bonds for reclamation are held by state and federal land managing agencies (USFS, BLM, and IDL) and by other regulating state agencies (IDEQ and IDWR). When a mine is permitted, a Plan of Operation, including a closure-reclamation section, is approved by the permitting agency. The estimated cost of that closure activity, including the cost for a third party to contract those services (administrative overhead and profit), is ideally covered by the bonds. Unfortunately, the practice of bonding does not always work as well as the principle of bonding.

Federal Bonding

Federal agencies bond mining activities that impact their lands based on the Plan of Operation (POO). The company submits the POO to the federal agency. The agency then performs an Environmental Impact Study (EIS) or Environmental Assessment (EA) and selects a preferred alternative. That alternative will contain engineering estimates for enumerated steps in closure and reclamation plan and cost estimates. The bonds are based on these estimates.

After public comment, a final decision is made by the permitting agency. All surface mines in Idaho are also subject to the Idaho Surface Mining Act. Federal standards will include the Act's conditions. Federal agencies can require additional conditions as necessary or required by law (i.e., the Endangered Species Act, Clean Water Act, etc.).

If the estimates in the plan are not accurate or underestimated, the agency does not have simple recourse for further collection. Bonds represent a contract that guarantees specific reclamation performances. In this regard, the text of the POO becomes the legally binding and guiding document. Any change in bonding after initial permitting must be accomplished through negotiation.

A key point here is that if all steps are not articulated in the plan, and if costs estimates are not accurate, the bond may not cover all contingencies. For example, Thomson Creek Mine (TCM) was originally permitted and bonded in 1982. It lacked numerous significant details and had no provisions for overhead. Subsequent renegotiation of that bond moved to correct some inadequacies, but TCM remains considerably under-bonded. As a result, there is a significant threat that clean-up will proceed slowly and that taxpayers will be forced to pay the bill.

On the other hand, the Beartrack Gold Mine POO was more detailed. The bond covers leach pad detoxification and cover, pit lake stabilization, pit wall reclamation, mill site and roadways reclamation, waste dump stabilization and reclamation, and indirect costs. Only time will tell if this proves sufficient.

State Bonding

At the state level there are three agencies involved with bonding for mining operations. IDL, under the Idaho Surface Mining Act, has the responsibility to bond all surface-mining activities, regardless of land ownership. IDEQ is responsible for bonding cyanidation processes and IDWR is responsible for bonding dam safety.

Idaho has developed an extensive list of standards for reclamation that must be addressed in the closure and reclamation plan and bonded. Those standards are based on public health and safety and environmental protection. However, there are significant limitations to those standards. For instance, there are no provisions for hydrologic or geophysical reclamation. Additionally, the Surface Mining Act of 1971 exempted all mining operations prior to the Act. All underground mining operations are also exempt.

Further, the Act specifically limited the amount of reclamation bonding to \$2,500 per acre. For perspective, the Beartrack mine closure is estimated to cost \$14,630/acre. The Black Pine mine is nearly closed and will cost approximately \$9,531/acre. The Grouse Creek site, with significant geophysical and hydrological reclamation costs, is estimated to cost over \$78,000/acre. If one of those mines were to default on its clean up obligations, based on Idaho bond limits, state taxpayers could end up paying the difference.

The Idaho Surface Mining Act does provide for the Director of IDL to raise the bond level if a determination is made that the state is at risk. However, serious failures occur (i.e., Grouse Creek) or bankruptcy is eminent (Black Pine), the companies involved are usually not in a position to absorb the financial burden of additional bonding.

Idaho's Department of Environmental Quality (IDEQ) is authorized to require bonds on any cyanidation process. The bond is intended to cover closure and administrative cost of a failed system. However, the maximum bond amount that IDEQ can require is set at \$100,000. As gold mine cyanidation operations close, the true costs for closing cyanidation processes are becoming more evident. Estimates are considerably higher than the

current Idaho cap of \$100,000. For example, the USFS bond estimate for the leach pad detoxification at Beartrack is currently set at \$2 million.

The IDWR is authorized to require a bond for dams. The bond is to insure that the impoundment can be placed in a safe and maintenance free condition in the event of abandonment prior to complete closure. There are two significant features in dam safety bond rules: (1) The Director can revise the bond at any time if it is determined to be necessary, and (2) the bond amount should reflect the current costs associated with closing the operation, rather than closing costs at the assumed completion date. And, unlike cyanidation and reclamation bonds, there is no cap on the bond amount for dam safety.

The general difficulty with Idaho bonding processes is that there is no meaningful public participation. Idaho does not provide for public hearings, scoping, or comments on bonding issues. Idaho agencies have been mixed in their openness to the public. Some are quite cooperative, especially at the field level, while some are extraordinarily closed.

Because bonds are based on a planned closure, bonds do not deal well with incidents of unintended toxic releases or significant material changes. Many mines today experience such incidents and are unprepared for the financial fallout. From our review of the 13 Idaho gold mines in closure, it can be seen that final closure according to the plan of operation is not the norm. Three companies declared bankruptcy. Three mines are involved in CERCLA led removal actions. Three mines closed or discontinued operations due to low commodity prices or low ore value, and did not complete their plan of operation.

Current bonding methods have no ability to address the worst case scenarios. In the case of Grouse Creek, which closed due to failure to estimate the ore body properly, a major cyanide leak developed, resulting in an estimated \$41 million closure cost. Current bonding at Grouse Creek is for \$7 million. In another example of under funded bonds, Hecla Mining Company is involved in four CERCLA/Superfund sites and has an estimated unbonded liability of over \$250 million. The unfunded liability will fall to the state and federal taxpayers.

A final example of bonding inadequacies can be seen in the transfer of oversight of the Thompson Creek molybdenum mine (TCM) from the Forest

Service to the State of Idaho via the patenting of lands at the mine in 2001. As a result of the TCM patents (public land becoming private) the state has assumed oversight responsibility for the mine. IDL staff reviewed the closure plan and discovered that it depended on the accumulation of nearly \$108 million of sand and rock materials to cap the site. The closure plan schedule was accelerated by several years when the company recently decided not to continue with Phase V of the operations plan which would have provided the needed materials. If the mine were to be abandoned today, the state would be liable for that additional \$108 million closure costs.

Falling molybdenum prices have put TCM in such financially dire conditions that it claims it cannot afford to pay for the additional bonding. IDL has the authority to raise the bond level above Idaho's \$2,500 cap at any point based on a hearing determination and renegotiation with the company. TCM is said to be concerned about the negative public exposure of such a hearing. Discussions on how that capping material deficit will be made up are currently in process. The Land Board will make the final decision.

8. CERCLA / Superfund Summary

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) was created in 1980 in reaction to communities that had suffered extraordinary health and safety problems from toxic contamination. Under CERCLA, any of the three federal agencies (EPA, USFS, BLM) can initiate Removal Actions (RA) independent of each other to protect human health and safety and to protect against environmental degradation.

CERCLA provides for responses to public health and safety on at least four levels:

Emergency response

This action is taken as a result of an immediate threat to the environment and/or community. An example would be a truck accident that resulted in the spill of hazardous materials and demanded immediate response. This type of action does not require or expect to be subject to public review. There are no examples related to mining in Idaho in the past five years.

This five-year hiatus is partially explained by the fact that each mine is now required to have an emergency response plan to address such cases. An example of such an instance is a Thompson Creek Mine truck accident that spilled 33,000 pounds of molybdenum into the Salmon River in October 2001. Here, the company's hazardous material team responded to the spill immediately and clean up was accomplished within 48 hours. If EPA had felt a need to have a site presence to assure appropriate clean up, that incident would have been a CERCLA removal and EPA would have authority to collect its costs from the company.

Time-Critical Removal Action (TCRA)

This action is available for removal actions aimed at spills or releases that are immediate threats to public health and safety or the environment. TCRA may not have planning segment of longer than six months, but may have longer time frames to carry out the response alternatives. In addition there is an expenditure limit for any removal of \$2 million. Mining related examples in Idaho include:

- Grouse Creek Mine – In 1998 the Salmon-Challis National Forest initiated a time critical removal action at the Grouse Creek Mine on Jordan Creek, a tributary to the Yankee Fork of the Salmon River. While the Forest Service initiated the action, they met with EPA and IDEQ as joint leads in this ongoing removal. Hecla's tailings impoundment which contained approximately 450 million gallons of water, was leaking cyanide into Jordan Creek and subsurface waterways. The impoundment is so full there is a threat of a spillover into Jordan Creek and poisoning the Yankee fork and mainstream Salmon River only 10 miles away. The USFS, with significant influence from IDEQ and EPA, initiated a time critical removal action to dewater the impoundment. After thirty months of negotiations, no action to dewater has been taken. The preliminary estimated cost for clean up and closure for Grouse Creek is \$41 million. Hecla has a bond for less than \$7 million.
- Clayton tailing pile and mill site -- The EPA initiated a time-critical removal action to stabilize the tailings pile that was eroding into Kinnikinic Creek, just miles from the Salmon River with its migrating and spawning salmon and steelhead. EPA took the lead because Clayton

Silver Mining Company had dissolved in bankruptcy. A Panamanian company with no U.S. assets currently owns the mine as a result of the bankruptcy. Clean up was completed in 2001. Funding was provided under the CERCLA removal fund.

Non-Time Critical Removal Actions

This action is available for removals aimed at spills or releases that may have a planning period of longer than six months, have an expenditure limit of two million dollars, and are not of such size or complexity to merit the longer NPL listing. Waivers to the two million-dollar caps are available under certain conditions.

Examples of non-time critical removal actions related to mining in Idaho include:

- Tolache Gold Mine, Atlanta -- EPA as lead agency orchestrated the stabilization of two tailing piles and remediation on 60 acres contaminated with arsenic by the collapse of a tailings impoundment.
- Missouri Mine, Idaho City -- USFS, as lead agency, supervised the clean up of an abandoned cyanide silver mine that had heavy metals and cyanide contamination in tailings waste, several settling ponds and general mill site that were threatening water ways.
- Blackbird Mine -- EPA as lead agency is remediating the site. (See NPL listing actions below for more information).
- Most USFS and BLM abandoned mine land actions in southern Idaho and all pending abandoned phosphate waste dump remediations in southeast Idaho are expected to be remediated under CERCLA non-time critical removal actions.

An important difference between time-critical and non-time-critical removals is the requirement for an Engineering Evaluation and Cost Analysis (EECA), which allows for public comments on the removal alternatives. Time-critical removals have no provisions for public participation. In these cases the agencies have an obligation to create a community relations plan for the dissemination of information, but there is

no channel for public access in the decision making process. The public has been shut out of the process at Grouse Creek since 1998.

National Priority List (NPL)

The National Priority Listing (NPL), or, as it is more commonly known, the Superfund List, is a list of sites that have a long term planning window and reclamation costs that exceed two million dollars. The conditions for listing a site on the Superfund list are:

- The site has been ranked as significant under the Hazard Ranking System; or
- The Public Health Service has issued a health advisory that recommends removing people from the site;
- The EPA determines that the site poses a significant threat to public health; and
- EPA anticipates it will be more cost-effective to use its remedial authority (available only at NPL sites) rather than use its emergency removal authority to respond to the site.

Idaho currently has six sites on the NPL list. Three of these sites are related to mining or mineral processing activity. In addition, there are sites being proposed for formal listing.

Designated NPL/Superfund sites related to mining:

- Bunker Hill Mining and Metallurgy Site (a.k.a. "The Box") – This site is located near Kellogg. The EPA designated the 21 square mile Bunker Hill site after years of delay by Idaho officials and contrary to the State of Idaho's wishes. See the Silver Valley summary for greater detail.
- Eastern Michaud Flats – This site is located near Pocatello . The site contains two adjacent phosphate ore processing facilities – Simplot and the former FMC plant.
- Monsanto – This site is located near Soda Springs. It is a mining mill site associated with the phosphate mines in that region.

Proposed NPL/Superfund sites related to mining

- Triumph Mine Tailings – This site is located near Ketchum. The Triumph is a lead/silver mine/mill site. The tailings pile and surrounding area have high levels of arsenic and lead. EPA proposed Triumph for the NPL after being notified by the Blaine County Planning & Zoning Commission that a proposal to build a subdivision on the tailings pile was brought to the county. After a heated reaction to the proposed NPL listing by the local community and the State of Idaho (who was a major Principle Responsible Party (PRP) with significant liability) the EPA negotiated a Memorandum of Understanding (MOU) with the state. It allowed IDEQ to take the lead in clean up and remediation actions. The mine site remains on the NPL proposal list and work is being done under a non-time critical CERCLA removal action. Remediation should be complete in 2002 and the site is being considered for "delisting" from the NPL.
- Blackbird Mine Site – This site is located 45 miles west of Salmon. Blackbird was proposed for NPL listing by the EPA because of acid mine drainage (AMD), arsenic and other heavy metal contamination of waterways and soils. The mining companies, then active at the site, negotiated a Consent Degree with the EPA allowing clean up and remediation to proceed with a non-time critical CERCLA removal action. Clean up is continuing.
- Stibnite/Yellow Pine Mining Area – This site is located east of McCall and near the town of Yellow Pine. The state has just proposed Stibnite for listing in 2001. Stibnite is a historic mining area with gold, antimony and tungsten. Contamination comes from modern cyanide leakage, and heavy arsenic releases associated with the Bradley tailing pile.

Blackbird and Triumph are being remediated through non-time critical CERCLA removal actions and are not likely to be formally listed.

Funding CERCLA/Superfund

CERCLA actions are funded through federal appropriations from two funds: the removal fund and the remediation fund.

The “removal fund” is available for emergency, time-critical and non-time critical removals. In order to access these funds, CERCLA site managers write an action memorandum detailing the exact nature of the hazardous threat. Except for emergencies, that action memo is then judged competitively with other proposals from the region for a limited annual appropriation. Mining is only one of multiple industries that competes for the same funds.

In 2001, the removal budget for the entire northwest region (Alaska, Washington, Oregon, Montana and Idaho) was only \$3.5 million. That same year, Idaho’s Clayton mine removal action was estimated to cost over \$2 million (it eventually \$1.5 million). Clayton -- one mine -- used up nearly half of the annual appropriation for the entire region. It is apparent that clean up actions are expensive, and that insignificant funds are being dedicated.

The “remediation fund” is solely reserved for removal actions on NPL (i.e. Superfund) sites. Site managers must follow the same competitive path to receive funding.

Idaho’s response to CERCLA

During the 1980's the Superfund activity in Idaho consisted of identifying and characterizing sites with potential for environmental contamination. Government installations and military bases were immediately identified, as were landfills, mine sites and other industrial operations known to release pollutants. Early clean up activity centered on the closure of landfills. Mines were identified as toxic contributors, but were not the focus of extensive clean up activity.

The mix of activities has changed dramatically since 1990. Most low risk industrial sites have been corrected, and a majority of the uncontrolled landfills have been closed. Today, half of 63 sites listed for CERCLA removal actions represent mining sites (see Appendix III for CERCLA mining sites and a map noting the location of these sites). Further, for every site on the CERCLA list there are three to four mines being prepared for CERCLA action as funds become available. This trend will likely continue until the number of abandoned mine sites of concern is reduced from its current level of 250+ sites.

A significant shift in state policy occurred in the 1990's. Early on the EPA had recognized the Bunker Hill smelter site as a major source of pollution. However, there was great resistance over defining the extent of the problem from some local citizens, the mining industry and the state's elected leadership. The "Box" was not designated as a Superfund site until 1983. Efforts are underway to expand the Superfund area.

Then in 1994, the Triumph tailings pile came under review by the EPA. Triumph was very small in comparison to the Bunker Hill site. Angry over dealing with the EPA in the Silver Valley, Idaho officials were concerned about the future economic and political repercussions of NPL listings. Triumph could set a precedent, and every contaminated mining site in Idaho might end up on the NPL register. Officials feared that mining companies, as PRP's, would have limited leverage in determining clean up activities and consequent liabilities. Communities with NPL sites believed themselves economically blacklisted by banking and lending institutions, and felt shut out by EPA bureaucracy. As a consequence, Idaho edged towards a policy to intervene in mining NPL proceedings in order to shield the industry and avoid the stigma that Superfund listing would have for local residents.

While some Idahoans bristles at federal (especially EPA) intervention, they do acknowledge that they are not in a position of authority to compel EPA to abandon its congressional mandate. In addition, the state wants to access the financial assistance for clean up available from CERCLA funds. As a result, many toxic clean up activities associated with abandoned mines in Idaho take place under the Superfund Accelerated Clean up Model (SACM) authority of CERCLA.

SACM allows and encourages states to be the lead agency. At the same time, the intent of the Superfund law is to insure that the party responsible for the hazardous release is also liable for payment of costs associated with the clean up. The PRP's are encouraged to enter agreements that guide PRP participation in the planning, execution and follow up for removal actions.

This provides the state the greatest leverage in guiding the selection of remediation alternatives, controlling costs, and protecting important industrial allies. This follows the model developed in Triumph, and is being used in the proposed clean up of many of the phosphate sites. It is the object of negotiations in the Silver Valley.

We can expect to see non-time critical removal actions regarding "orphan" phosphate sites and abandoned mines clean up used with greater frequency in the future. Also, it is unlikely that Idaho will be the primary lead in most of these abandoned and orphaned cases because there is likely to be no industry party to lobby against federal actions. Those actions will be led by federal land management agencies (USFS and BLM). It is also likely that the state (using SACM) will take the lead at those sites where a significant industrial ally is involved or where a local community has objections to federal leadership. Predictably this will be the case in the large phosphate mines of eastern Idaho and in the Silver Valley outside of "the Box".

9. Barriers to responsible mining, mine clean up and reclamation

Legal

The 1872 Mining Act directs that mining is the highest and best use of the public lands. This grants mining a priority above all other uses. Most regulators believe that they can not deny a mining proposal. Former Secretary of Interior Bruce Babbitt took action several years ago to deny mining its absolute right, citing FLPMA and the need to protect national resources, but this precedent are being overturned by the current Administration.

The patent process under the 1872 law sells public lands to mining claimants at prices well below the current true market value of the land. Thompson Creek Mine is an example this folly. Last year, 1,995 acres of public land was sold to the mining company for \$5/acre (total cost \$9,975.) The story has a twist on it. TCM looked to the patent not only to add to its private holdings but also to escape the oversight of the federal agencies and the public exposure of the NEPA process. Grouse Creek is also currently moving towards patent approval.

Hardrock mining on public lands is not assessed royalties under the 1872 law. Oil, coal and gas, on the other hand, are assessed a 12% royalty. This denies the public an economic return on lost resources and compensation for damages. Idaho has produced billions of dollars of mineral value yet the

federal treasure has not received any royalties. In turn, Idaho has received billions of dollars of environmental and human health damage. The Silver Valley history is a prime example of this damaging formula.

Sometimes CERCLA procedures circumvent public participation and oversight. When Grouse Creek was placed under a time-critical removal action, the public had no input into the decision. The lead agencies directed the action based on consultation with an interagency team. Decisions were made by the three lead agencies, or their superiors in Washington and Boise, in a manner that was at best difficult to follow and document, much less comment on.

State bonding limits do not reflect the real costs of closure. The cyanide bond is limited to \$100,000 and there are no examples where a cyanide closure has been accomplished for that amount. When Hecla discovered cyanide in the ground and surface water at Grouse Creek, there was no renegotiation of the bond to insure clean up, now estimated at \$41+million.

For all practical purposes, the state reclamation bond is limited to \$2,500 per acre under the Surface Mining Act and reclamation frequently exceeds that amount. Bonding needs to reflect realistic effects, and as conditions change, bonding must be modified. If TCM closed today, Idaho would face a \$108 million liability.

Public participation in bonding is not required by state statute. When TCM renegotiated its bond after it was patented, no public comment period or review was offered. The only opportunity for comment comes when a concerned party follows the activity and through personal contact with agency staff is able to offer an informal suggestion or comment.

Idaho Surface Mining Act reclamation standards for returning land to historical contours are limited to mines with disturbances of two acres or less. Those mines larger than two acres are required to bring slopes to "the lowest practical grade". The angle of repose against a pit wall would be a more natural slope. Backfill of pits is not addressed. Similarly, Idaho's standards fail to address pit walls terraced faces.

Idaho's Surface Mining Act does not regulate underground mining. Sub-surface disturbances on private and state lands currently are under no regulations for closure and reclamation. The Silver Valley has historically

been an underground mining district. Those mines, and future underground proposals, are currently unregulated by the state except for mine safety and infractions against the clean air/water acts. Surface disturbances associated with underground mines on state and private lands escape regulation as well.

Financial

Systematic site characterization of abandoned mines is moving well in Idaho, but abandoned mine clean up is sorely under-funded. Funding sources include CERCLA funds, Idaho mineral royalty, and special watershed funds within the BLM and USFS. The total funds available in any one year are usually only enough to work on one or two smaller projects. Larger projects take multiple years of planning and budgeting. In the northern forest districts, with over 400+ hazards noted, the Idaho Geological Survey reports that clean up processes will take decades to complete.

Political and Institutional Barriers

Idaho officials have traditionally advocated for “states’ rights” and bristled at federal efforts to limit the actions of individuals and corporations. Political alliances built over a century ago shape the landscape today, especially in mining. Hardrock mining in Idaho has been in decline for years, but the political connections remain. Thomas Powers points out in his book *Lost Landscapes and Failed Economies* that decisions on natural resources are frequently based on the mythology of the past, not current information.

Institutional memory and agency characteristics limit the potential for promoting environmental protection. As discussed in the previous section that described agency roles, each agency has a different mandate and history that guides and limits its response.

The current Secretary of the Interior, Gale Norton, has signaled her willingness to pursue "mining reform". Norton’s reform will likely reflect the current Administration’s desire to increase mineral and energy development. Reasonable speculation suggests that some effort to change the 1872 Mining Act will occur in the next two years, led by the mining industry and its powerful allies like Senator Larry Craig. There is great

concern in the conservation community that this reform will be “sham-reform”.

All of these factors combine to create a climate that fosters the development and operation of mines that would not be economical under rational economic and political circumstances.

10. Options for future conservation work related to mining in Idaho

There is much work to be done in Idaho.

Thousands of mining claims lay in waiting. Even small shifts in technology and global economy could trigger a flood of new mines in Idaho. Several hardrock and phosphate mines are moving through the proposal process now – only time will tell if these mines are developed in a responsible manner.

Idaho’s active mines need constant oversight to assure compliance with relevant laws. And, the sheer number of mines in some stage of closure indicates that attention must be paid to this slow moving but important issue. Failure to adequately clean up and close these sites will virtually guarantee a toxic legacy for Idaho and a burden for taxpayers.

PLEASE REFER TO THE SEPARATE DOCUMENT RELATED TO THIS SECTION FOR AN OVERVIEW OF POTENTIAL AREAS FOR FUTURE WORK.

APPENDIX I

Idaho Conservation Organizations Working on Mining in Idaho

Please see the enclosed map entitled, “Idaho Conservation Organizations – Scope of Influence” for an approximation of the areas in which individual groups work.

Organization

Contact

Idaho Conservation League

Justin Hayes
Boise, Idaho 83701
208-345-6933, ext. 24
jhayes@wildidaho.org

Boulder-White Clouds Council

Lynne Stone
PO Box 6313
Ketchum, ID 83340
(208) 774-3067
bwcc@wildwhiteclouds.org

Friends of the Clearwater

Gary Mcfarlane
P.O. Box 9241
Moscow, Idaho 83843
208-882-9755
gary@wildrockies.org

Greater Yellowstone Coalition

Marv Hoyt
162 No. Woodruff Ave.
Idaho Falls, Idaho 83401
208-522-7927
mhoyt@greateryellowstone.org

Idaho Rivers United

Sara Eddie
P.O. Box 633
Boise, ID 82701
208-343-7481
sarad@idahorivers.org

Kootenai Environmental Alliance

Barry Rosenberg
P.O. Box 1598
Coeur d'Alene, Idaho 83816
208-667-9093
barry@kealliance.org

The Lands Council

Neil Beaver
921 W. Sprague Avenue, # 205
Spokane, WA 99201
509-838-4912
nbeaver@landscouncil.org

The Mineral Policy Center

Bonnie Gestring
P.O. Box 8383
Missoula, MT 59807
(406) 549-7361
bgestring@mineralpolicycenter.org

Steve D'Esposito
1612 K ST NW
Washington DC, 20006
202-887-0317
sdesposito@mineralpolicycenter.org

The Rock Creek Alliance

Mary Mitchel
1319 N Division
Sandpoint, Idaho 83864
208-265-8272
Maryrca@bossig.com

The Silver Valley People's Action Coalition

Barbara Miller
P.O. Box 362
Kellogg, Idaho 83837
208-784-8891
paccrccp@imbris.com

Independent Contractor for Idaho mining issues

Tom Blanchard
P.O. Box 225
Bellevue, Idaho 83313
208-788-4450
tjblanchard@earthlink.net

Tribes Working on Mining in Idaho

Tribal staff monitor mining issues on a constant basis. The three Tribes most involved are the Coeur d'Alene, Nez Perce, and Shoshone-Bannock. Please see the enclosed map entitled, "Approximate Scope of Tribal Work on Mining" for an approximation of the areas in which individual Tribes work or consider important to their interests.

Tribes are sovereign nations. This status places them at a decidedly different level than not-for-profit conservation groups. The Tribes, through treaty rights, have a significantly larger authority to press their interests. They, by treaty, sit as equals with the state. In the case of CERCLA, the Tribes, as with the state, have the power to take the lead in clean up actions. Also, all federal agencies have a legal obligation to consult with the Tribes on a government to government level on all issues. As a result, the Tribes sit on the interagency teams, receive documents and materials at the draft stage, and have opportunities to comment on decisions as they evolve.

Tribe	Contact
Nez Perce	Barbara Inyan, Water Quality 208-843-7386
Shoshone-Bannock	Jeff Anderson, Fisheries Biologists 208-478-3764
Coeur d'Alene	

APPENDIX II: Government Agencies

U.S. Forest Service Region I (Northern Idaho)

Jim Sheldon, Missoula Mt., 406-329-3577 Region I USFS is working on a GIS data base for its mine data but will be four to five years before completion.

For Locatable Mineral – Active Mines, contact geologists or minerals personnel for each separate forest:

Panhandle, Jeff Johnson, Coeur d'Alene, 208-765-7442

Clearwater, Vern Bratz, Orofino, 208-476-8322

Nez Perce, Mike Magee, Grangeville, 208-983-1950

Jo Ellis, Minerals, Red River RD, 208-842-2245

For Abandoned Mines under CERCLA: Ray Tesoro, Missoula, Mt., 406-329-3523

U.S. Forest Service Region IV, Southern Idaho

Active mines: Tom Buchta, Ogden, Utah, 801-625-5663 (There is a database that identifies mines permits from 1988-1998 with 680+ entries)

For Locatable Minerals – Active Mines, contact the geologists or minerals personnel for each forest:

Salmon-Challis NF: Ray Henderson, Salmon, 208-756-5231

Caribou NF: Steve Robinson, Pocatello, 208-236-7573

Boise NF: Jim Curtis, Boise, 208-373-4136

Payette NF: Jim Egnew, McCall, 208-634-0614

Sawtooth NF: Jeff Garbardi, Twin Falls, 208-737-3205,

For USFS Abandoned Mines under CERCLA, Maggi Manderbach, Ogden, Utah 801-635-5271

For Phosphate Mines, Jeff Jones, Pocatello, 208-239-7610

Bureau of Land Management, (BLM)

Mines Statewide, Steve Moore, Boise, 208-373-3864

Phosphate Mines, Peter Overlandocker, Boise, 208-373-3884

Idaho Department of Lands (IDL)

There are five field representatives and twelve offices statewide to provide mine inspections and field reports of activities.

For Metal and Phosphate Mines:

Scott Nichols, Chief, Bureau of Minerals, Boise, 208-334-0261

Eric Wilson, Mineral Land Reclamationist, Boise, 208-334-0232

Sandra Brown, office manager, Boise, 208-334-0247

Idaho Department of Water Resources (IDWR)

For Dam/Impoundment Permitting under the Idaho Dam Safety Act,
Dave Hollingshead, Boise, 208-327-7900

Idaho Department of Environmental Quality (IDEQ)

IDEQ has regional offices throughout the state to handle issues for that region. Contact the regional office for key staff in your area of concern.

Department Head: Steve Allred, Boise, 208-373-

Metal Mines esp. Stibnite, Bruce Schuld, Boise, 208-373-0502

Phosphate Mines, Rick Clegg, Soda Springs, 208-336-6160

Silver Valley Superfund site and Ketchum, Rob Hanson, Boise 208-373-0290

Environmental Protection Agency (EPA),

Boise Operation Office, Dave Tomton or Fran Allen, Boise 208-378-5746

Grouse Creek, Stibnite and phosphates, Matt Wilkening, Boise, 208-378-5760

Clayton Silver Mine, Greg Wiegler, Boise, 208-378-5773

Blackbird Mine, Fran Allen, Boise, 208-378-5746

Silver Valley, Sheila Echman, Seattle, 206-553-0455

Idaho Geological Survey (IGS),

For statewide historical mine data base – all historical mines with over 9,500 entries, Vickie Mitchell, 208-885-7243, Moscow. This database has been

printed in years past as the Idaho Bureau of Mining and Geology's "*Mines and Prospects Map Series*", with 20 books of maps giving names, addresses, locations and some descriptions. This historical database is being prepared for electronic and GIS format presentation in the unforeseeable future.

For current mining activities, contact Virginia Gillerman, 208-426-4002, vgillerm@boisestate.edu at Boise State University. Virginia's database is largely in notes only. There are an estimated 250 mining sites that have been characterized and prioritized for clean up under the AML program.

United States Geologic Survey (USGS)
Phil Moyle Spokane, WA 509-368-3109

APPENDIX III: Idaho CERCLA Mining Sites

Please see the enclosed map entitled, "Idaho CERCLA Mining Sites" for the location of these sites. The site numbers on the map correspond to the numbers listed below.

There are currently 64 CERCLA related sites in Idaho. A significant subset of these sites is mining related.

Below is a list of mining related CERCLA sites in Idaho. For more information on these sites, visit the EPA web site devoted to this issue.

<http://www.epa.gov/superfund/sites/cursites/idccity.htm>

Listed by City and Site Name

[BLANK CITY]

ELEMENTAL PHOSPHORUS SLAG

ATLANTA [Map Site # 1]

TALACHE MINE

USDA FS BOISE NF: MONARCH MINE STAMP MILL

BAYVIEW [Map Site # 2]

GOLD CREEK-SHOSHONE MILL F

BELLEVUE [Map Site # 3]

MINNIE MOORE MINE

BIG CREEK [Map Site # 4]

USDA FS PAYETTE NF: MCCRAE MINE

BONANZA [Map Site # 5]

GROUSE CREEK MINE

CAMBRIDGE [Map Site # 6]

RED LEDGE MINE

CLAYTON [Map Site # 7]

CLAYTON SILVER MINE & ASSOC PROPERTIES

COBALT [Map Site # 8]

USDA FS SALMON NF: BLACKBIRD MINE

COEUR D ALENE [Map Site # 9]

COEUR D'ALENE GROUNDWATER CONTAMINATION

CONDA [Map Site # 10]

USDA FS CARIBOU NF: SOUTH MABEY CANYON CROSS

VALLEY FILL SITE

FORT HALL [Map Site # 11]

FORT HALL SITE
 GROUSE [Map Site # 12]
 USDOI BLM CHAMPAGNE CREEK MINE
 IDAHO CITY [Map Site # 13]
 USDA FS BOISE NF: MISSOURI MINE
 KETCHUM [Map Site # 14]
 USDA FS SAWTOOTH NF: BASSETT GULCH MILL
 KOOTENAI [Map Site # 15]
 USDOI BLM LOWER COEUR D'ALENE RIVER
 LOWMAN [Map Site # 16]
 DEADWOOD MINE AKA PILGRIM MINE
 USDA FS BOISE NF: URANIUM MILL TAILINGS
 PINEHURST [Map Site # 17]
 CONSTITUTION MILLSITE TAILINGS & ROCKDUM
 DENVER TAILINGS PILE
 DOUGLAS MINE
 LIBERAL KING MILLSITE & TAILINGS
 NABOB MILLSITE & MINE
 SIDNEY MILLSITE
 USDOI BLM PINE CREEK
 PLACERVILLE [Map Site # 18]
 USDA FS BOISE NF: BELSHAZZAR MINE
 POCATELLO [Map Site # -- this site is not shown on the map]
 EAST MCIHAUD FLATS
 SALMON [Map Site # 19]
 HARMONY MINE & MILL SITE
 SILVER CITY [Map Site # 20]
 JORDAN CREEK HISTORIC MINING AREA
 SMELTERVILLE [Map Site # 21]
 BUNKER HILL MINING & METALLURGICAL COMPLEX
 SODA SPRINGS [Map Site # 22]
 MONSANTO CHEMICAL CO. (SODA SPRINGS PLANT)
 SOUTHEAST IDAHO SELENIUM PROJECT
 STIBNITE [Map Site # 23]
 CINNABAR MINE
 STIBNITE/YELLOW PINE MINING AREA
 TRIUMPH [Map Site # 24]
 TRIUMPH MINE TAILINGS PILES
 WALLACE [Map Site # 25]
 JACK WAITE MINE & MILL SITE

APPENDIX IV: Summary of Idaho Mining Law

Idaho Surface Mining Act 1971 with amendments

- Authority is vested in the Land Board, with the IDL acting in their behalf
- Exempts underground mines and mining prior to 1971
- Reclamation requirements:
 - Sediment control
 - Clearing and grubbing limits
 - Salvage of topsoil and overburden for later reclamation
 - Road construction and rehabilitation
 - Backfilling and grading at closure
 - Waste disposal and protection from erosion and chemical impact
 - Settling pond criteria
 - Tailing impoundment criteria and rehabilitation
 - Revegetation of disturbed areas
- Sets time limits for inactive status at three years, triggers closure after that time
- Sets bonding requirements
 - Amounts and basis for calculation
 - Limits bonding to \$2,500/acre of active operation
 - Types of bonds allowed: surety bond, collateral bond, or letter of credit
 - Provides for bond conditions oversight
 - Addresses bond forfeiture
 - Provides for bond release at completion of reclamation according to the plan
- Provides no provisions for public participation

Idaho Dam Safety Act, 1978, rules of 1993

Provides for bonding on all impoundment structures over 30 feet, the purpose of which is to provide means by which the tailings impoundment can be placed in a safe maintenance-free condition if mine is abandoned.

- Delegates the Director as authority
- Sets basis for cost calculation by engineer
- Assures current costs conditions prevail
- Allows for the Director to raise amount if they determines it necessary

Idaho Code, Title 39, Chapter 1, 1988

Provides for rules for ore processing by cyanidation

- Vests authority in the Department of Health and Welfare, Division of Environmental Quality (DEQ). The DEQ is elevated to the Department of Environmental Quality in 2000
- Provides for permit to construct, operate and close ore processing facility
- Provides for financial assurance for permanent closure of the facility
- Limits financial assurance to \$100,000
- Provides for type of bond: surety bond, collateral bond, insurance policy, or closure trust
- Provides for release of bond after reclamation or its value exceeds estimated work

APPENDIX VI: List of Acronyms

ACOE	Army Corp of Engineers
AMD	Acid Mine Drainage
AML	Abandoned Mine Lands
ARD	Acid Rock Drainage
BA	Biological Assessment
BLM	Bureau of Land Management
BWCC	Boulder-White Cloud Council
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CWA	Clean Water Act
EECA	Engineering Evaluation and Cost Analysis
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FLPMA	Federal Land Policy Management Act
ICL	Idaho Conservation League
ICP	Idaho Cobalt Project
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Department of Fish and Game
IDL	Idaho Department of Lands
IDWR	Idaho Department of Water Resources
IGS	Idaho Geological Survey
MAM	Mineral Area Management
MOU	Memorandum of Understanding
NEPA	National Environmental Protection Act
NMFS	National Marines Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollution Discharge Elimination System
NPL	National Priority Listing
NTCRA	Non Time-Critical Removal Action
PO	Plan of Operation
PRP	Principle Responsible Party
RA	Removal Action
ROD	Record of Decision
SACM	Superfund Accelerated Clean-up Model
TCM	Thompson Creek Mine
TCRA	Time-Critical Removal Action
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Services
WQS	Water Quality Standards