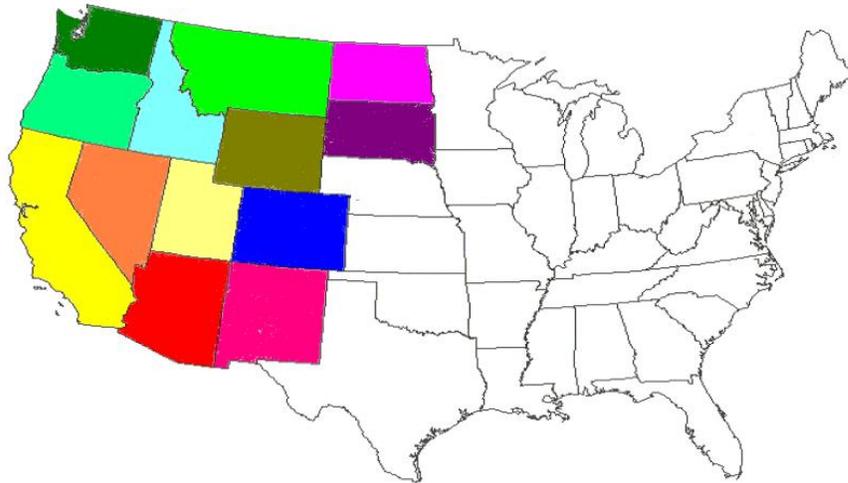




STATE MINING AND GEOLOGY BOARD

A Comparison of Regulatory Surface Mining Programs in the Western United States



**Department of Conservation
Resources Agency**

September 2007

**This Information Report No. 2007- 04
of the State Mining and Geology Board was presented, in part,
at its meeting held on July 12, 2007.**

**This report does not set forth policy, but rather presents information that the SMGB
considers in setting policy.**



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TABLE OF CONTENTS

ABSTRACT

BACKGROUND

SOURCES OF DATA AND METHODOLOGY

Interstate Mining Compact Commission

U.S. Bureau of Land Management 43 CFR-3809

Individual State Web Sites

Fraser Institute Surveys of Mining Companies

DATES OF ENACTMENT OF SURFACE MINE RECLAMATION REQUIREMENTS

THE IMPACT OF FEDERAL LAND OWNERSHIP IN THE WEST

BASIC REGULATORY MODELS USED BY THE WESTERN STATES FOR SURFACE MINING

Federal driven

State driven

Local driven

Mixed

SURVEY HIGHLIGHTS

FURTHER CONSIDERATIONS OF THE STATE MINING AND GEOLOGY BOARD

FOR FURTHER READING

LIST OF FIGURES

- Figure 1. The thirteen western states compared in the California State Mining and Geology Board survey regarding surface mining.
- Figure 2. Web cover-sheet and questions from the 2000 Non-Coal mining questionnaire used by the Interstate Mining Compact Commission (IMCC). The responses of the western states are included in Appendix 1.

- Figure 3. The western states began establishing reclamation laws in 1971. As part of their reclamation legislation, Colorado and California became the first states to require their state geological surveys to initiate local (CO) or statewide (CA) inventories of remaining economic deposits of construction aggregate. (Data Source: IMCC).
- Figure 4. The initial emphasis on reclamation began in the coal industry in 1939, eventually broadening to include all other mineral commodities. (Data Source: IMCC).
- Figure 5. The sharp contrast in federal land ownership west of the 100th Meridian clearly defines a fundamental difference between the eastern and western United States (Data Source: Berger, 2003).
- Figure 6. The “split estate” issue, showing the amount of land within each state where subsurface mineral rights are owned by the United States Bureau of Land Management. (Data Source: Berger, 2003).
- Figure 7. The basic regulatory models used by the western states. (Data Source: IMCC).
- Figure 8. Regulation of mining on Indian lands.
- Figure 9. Regulation of mining on privately owned lands.
- Figure 10. Regulation of underground mining.
- Figure 11. States applying severance taxes on mining.
- Figure 12. Threshold acreages for triggering mining permits.
- Figure 13. States requiring backfilling for reclamation of certain types of mines.
- Figure 14. Fraser Institute relative rankings of the thirteen western states.
- Figure 15. Useful references on western states reclamation laws and mining.

APPENDICES

- Appendix A:** A Comparison of State Mining Regulatory Programs in Selected States (supplemented questions from the Interstate Mining Compact Commission with answers from the Western States)
- Appendix B:** Surface Management Regulations for Locatable Mineral Operations (43 CFR 3809)

A Comparison of Regulatory Surface Mining Programs in the Western United States

David J. Beeby¹

Abstract

The regulatory surface mining programs in thirteen Western States were compared with California's regulatory program under the Surface Mining and Reclamation Act of 1975 (SMARA). Periodic state surveys from the Interstate Mining Compact Commission were the primary source of data and provided succinct summaries. Coupled with direct interviews and extensive use of individual state web pages the different regulatory models used by the western states could be sorted into four groups, based upon who issued mining permits. Differences and similarities were noted and are included in this summary. In addition a similar analysis was used made by the United States Bureau of Land Management (USBLM) as part of their "Surface Management Regulations for Locatable Mineral Operations (43 CFR-3809)." That analysis presents a federal perspective focusing on sovereignty and is also included in this summary.

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INTRODUCTION

Background

In 2003 a comparative study of regulatory surface mining programs in the western states was conducted at the request of former Executive Officer Dr. John Parrish on behalf of the State Mining and Geology Board (SMGB). Although a formal report was prepared which included details of each state's "SMARA-Type" program, a synopsis of this study had not been previously presented to the SMGB. The initial intent of the 2003 study was to determine whether other states required backfilling as a reclamation requirement, but this was quickly expanded to include a more complete comparison of their total programs. The thirteen states included in the comparison were Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming (Figure 1). Additionally the mining policies and program of the United States Bureau of Land Management (USBLM) were evaluated.

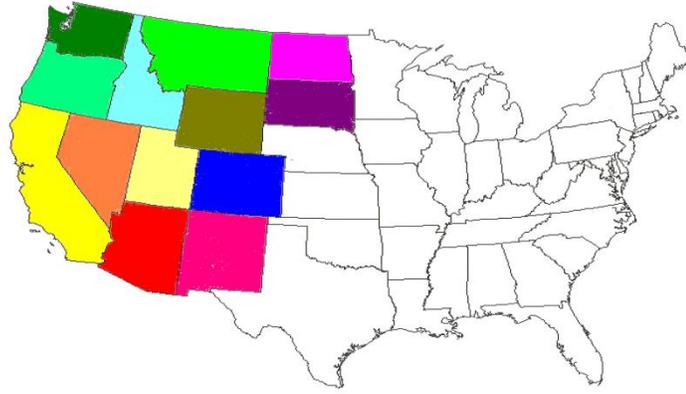


Figure 1. The thirteen western states compared in the California State Mining and Geology Board survey regarding surface mining.

SOURCES OF DATA AND METHODOLOGY

The study contained four separate parts:

Interstate Mining Compact Commission (IMCC)

The first part of the survey was based upon the “*Non-coal mineral resources questionnaire and report*” developed by the Interstate Mining Compact Commission (IMCC). The IMCC was founded in 1970 and is a multi-state governmental agency / organization composed of 23 member states and 5 associate member states. The IMCC Member States include Alabama, Arkansas, Illinois, Indiana, Kentucky, Louisiana, Maryland, Missouri, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, and West Virginia. The Associate Member States are Alaska, Colorado, New Mexico, Utah, and Wyoming. California is not a member of the IMCC. Of the 13 “western” states included in this SMGB review of regulatory programs, none are members and four (all coal producers) are associate members of the IMCC. This may reflect the early emphasis of the IMCC on issues dominated by coal mining and Surface Mining Control and Reclamation Act (SMCRA).

The IMCC represents the natural resource interests of its member states with a focus on natural resource protection and mined land reclamation. The states are officially represented by their Governors who serve as Commissioners. The Commission operates through several committees composed of duly appointed representatives of the Governors from their respective Departments of Natural Resources or Environmental Protection. The Commission exercises several powers on behalf of the states, all of which are of a study, recommendatory or consultative nature. The Commission does not possess regulatory powers, as some Compacts do. The Commission provides a forum for interstate action and communication on issues of concern to the member states.

It is the potential to stimulate the development and production of each state's mineral wealth through effective regulatory programs that draws many of the states together in the prosecution of the Commission's work. Given the environmental sensitivities associated with this objective, a significant portion of the Commission's work is dedicated to the environmental protection issues naturally associated with this mineral development. While its

mining efforts were initially focused upon coal and the reclamation of coal mines, all types of mining, including underground mining, are now covered by the questionnaires, which are updated about every five years.

Past IMCC non-coal surveys were conducted using the answers provided by the states in 1990, 1995, and 2000. Not all of the western states participated in the most recent (2000) survey, and not all of those that did participate answered all the questions. Therefore, the 2000 non-coal survey was updated in 2003 through the use of the individual state websites and telephone contact with the individual states. The questions asked and the modified responses are included as Appendix A. The web address for the IMCC and its non-coal survey is <http://www.imcc.isa.us/NonCoal/TOC.htm>. A new survey is currently in progress (2007) by the IMCC and the results of that new survey will likely be posted at the same address.

U.S. Bureau of Land Management 43 CFR-3809

The second part of this comparison of western states regulatory surface mining programs was a review of an important Environmental Impact Statement (EIS) prepared by the US BLM in 1999 entitled "SURFACE MANAGEMENT REGULATIONS FOR LOCATABLE MINERAL OPERATIONS (43 CFR-3809). Figure 3 shows the cover of this EIS. The website where this document and other pertinent information relating to the regulations can be found is located at <http://www.blm.gov/nhp/Commercial/SolidMineral/3809/>.

This EIS dealt with the 1872 Mining Act and contained a valuable appendix summarizing state mining programs from the perspective of the Federal Government, relative to proposed 3809 regulations. The materials utilized for this comparison are included as Appendix B to this report.

Individual State Websites

The third part of this study was comprised of a survey of websites of western states' homepages to determine which state agencies regulated and tracked surface mining. Contact persons were identified and program organization and structure were examined, as were appropriate laws, regulations and guidelines regarding the regulation of Surface Mining. The results of the comparison were compiled into a written report for the SMGB (refer to Appendix A of this report) as well as a set of seventeen 3-ring binders covering the various states and the USBLM. The binders are available as a reference resource at the SMGB's office in Sacramento.

The web-pages are now approximately four or more years out-of-date, so may no longer contain definitive information. However, because of the diversity and complexity of government structure in thirteen different states, finding the relevant arms of state government that house mining, reclamation, and legal oversight is no small task. So, if only for the pertinent web addresses, the collection has lasting value.

Fraser Institute Surveys of Mining Companies

The fourth and final part of this study was a review of the most recent of the Fraser Institute Surveys of Mining Companies. The Fraser Institute is a private conservative libertarian “think tank” from Vancouver, British Columbia. The Institute periodically conducts a detailed survey of several hundred precious-metal mining company executives and exploration managers and publishes the results on their website at www.fraserinstitute.ca.

The goal of the Fraser Institute is to provide direct and anonymous industry feedback to state lawmakers and policy and decision makers as to the impact their regulations have on the attractiveness of their state, province, or country as an exploration target for the precious metals mining industry. This is a very valuable service to the states, and one that would be impossible to conduct internally.

A high score in the Fraser Institute means the state, province, or country is viewed in a positive light as an attractive target for mining. A low score means it is not. To receive a high score a state must not only have high geologic potential for the occurrence of precious metals, but must meet other industry expectations regarding economics, infrastructure, ease and predictability of permitting, governmental stability, and environmental regulations and their cost. The environmental values in different parts of the world are of course highly variable, as is political stability and the opportunity for a mine to be operated at an acceptable level of profit or even at all.

When a company has the entire world within which to operate, a heavily regulated state with a high level of public environmental consciousness and commitment provides a far lower profit opportunity than a more permissive state, thus, fares comparatively badly in the Fraser Institute Surveys.

DATES OF ENACTMENT OF SURFACE MINE RECLAMATION REQUIREMENTS

It is interesting to note the timing of enactment of surface mining reclamation requirements of some type by the various states (Table 1, Figure 2). While many states, such as Arizona in 1912, had encoded regulations regarding mine safety, only eight states nationwide had addressed issues of mined land reclamation prior to the era of increased environmental awareness beginning in the mid-1960's. The first western state to enact reclamation laws was Idaho in 1971, some 33 years after the pioneering legislation in the state of West Virginia. California followed suit in 1975. Arizona was the last of the western states to enact reclamation laws in 1996.

Table 1**States Which Have Enacted Surface Mine Reclamation Requirements**

1	West Virginia	1930	16	Minnesota	1969
2	Indiana	1941	17	Idaho	1971
3	Illinois	1943	18	Montana	1971
4	Pennsylvania	1945	19	Washington	1971
5	Ohio	1947	20	Oregon	1972
6	Kentucky	1954	21	Colorado	1973
7	Maryland	1955	22	CALIFORNIA	1975
8	Virginia	1966	23	Utah	1975
9	Tennessee	1967	24	Wyoming	1975
10	Oklahoma	1967	25	North Dakota	1976
11	Georgia	1968	26	South Dakota	1983
12	Iowa	1968	27	Nevada	1990
13	Kansas	1968	28	New Mexico	1993
14	Alabama	1969	29	Arizona	1996
15	Maine	1969			

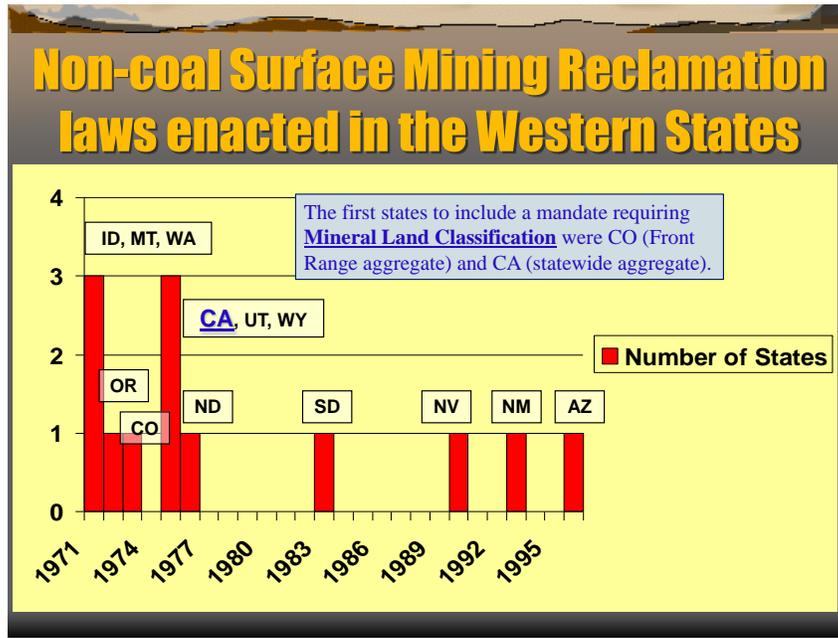


Figure 2. The western states began establishing reclamation laws in 1971. As part of their reclamation legislation, Colorado and California became the first states to require their state geological surveys to initiate local (CO) or statewide (CA) inventories of remaining economic deposits of construction aggregate. (Data Source: IMCC).

It is clear that coal was the initial mined commodity that came to the minds of state legislators with regards to mined land reclamation. Figure 3 shows the progression of reclamation laws beginning with coal and then expanding to cover metals and ultimately all surface mining, finally including construction aggregate – sand, gravel, and crushed stone.

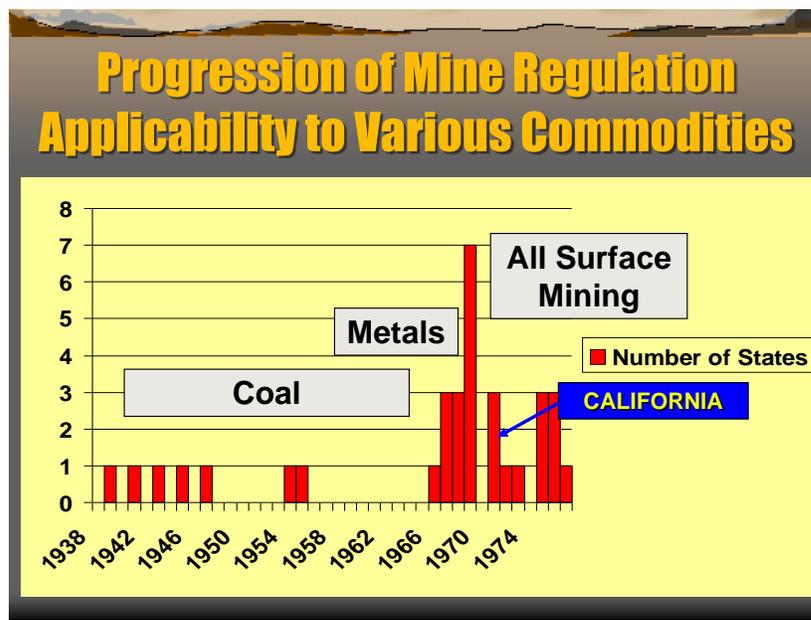


Figure 3: The initial emphasis on reclamation began in the coal industry in 1939, eventually broadening to include all other mineral commodities. (Data Source: IMCC).

THE IMPACT OF FEDERAL LAND OWNERSHIP IN THE WEST

Of primary importance in defining the differences between the western and the eastern states is the large percentage of lands falling under the management of the Federal Government west of the 100th Meridian. Along with the high acreage of Indian lands, Federal land ownership is an artifact of western migration and settlement in the nineteenth century. Two excellent illustrations of this large acreage of Federal land come from *“Reclaiming the American West”* by Alan Berger, published in 2002 by the Princeton Architectural Press (Figures 4 and 5). Berger’s illustrations did not cover the far western states of California, Oregon, and Washington, so that data has been added. As can be seen from Figure 4, percentages of land under Federal ownership vary from a low of 26% (Washington) to a high of 85% (Nevada). The Federal government controls 42% of the land in California.

Because Federal lands are relatively under-populated compared to privately owned lands, they are attractive exploration targets for the mining companies of the world. Regulation of mining on those federally owned lands can have jurisdictional complexity and potentially overlapping regulation between different governmental agencies. Different states handle these overlaps differently.

An additional complication on federal and formerly federal lands is the issue of the split estate, where the surface rights have been deeded to one owner and the subsurface or mineral rights have been retained by the federal government. Figure 9 shows the percentage of subsurface mineral ownership by the United States Bureau of Land Management for each state, which ranges from less than 1% (Washington) to almost 80% (Nevada). It is the position of some states, including California, that state mining and reclamation laws apply to ALL lands within the state.

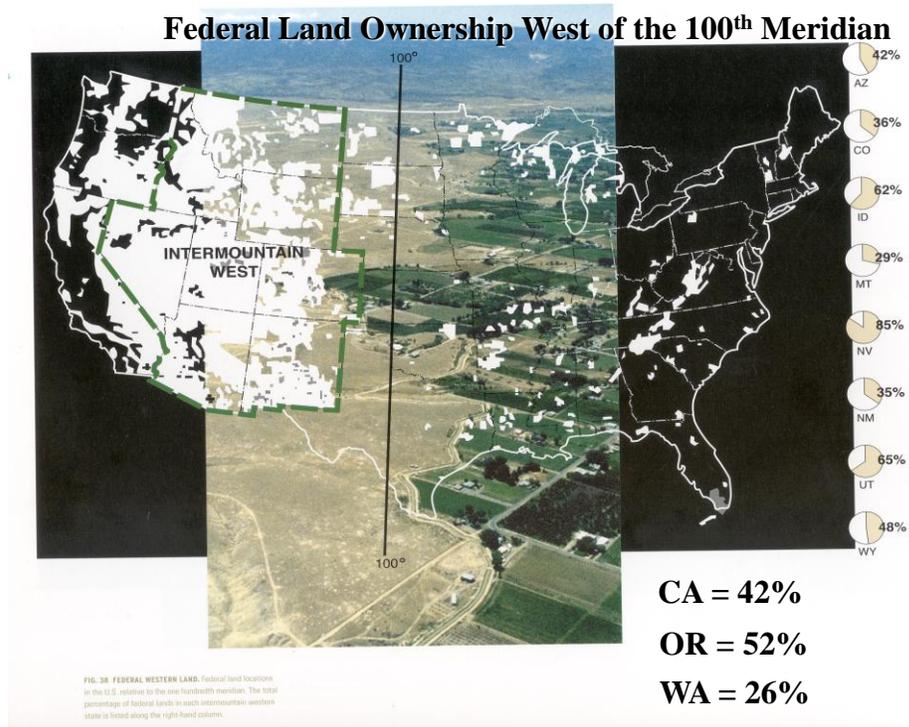


Figure 4. The sharp contrast in federal land ownership west of the 100th Meridian clearly defines a fundamental difference between the eastern and western United States. (Data Source: Berger, 2003).

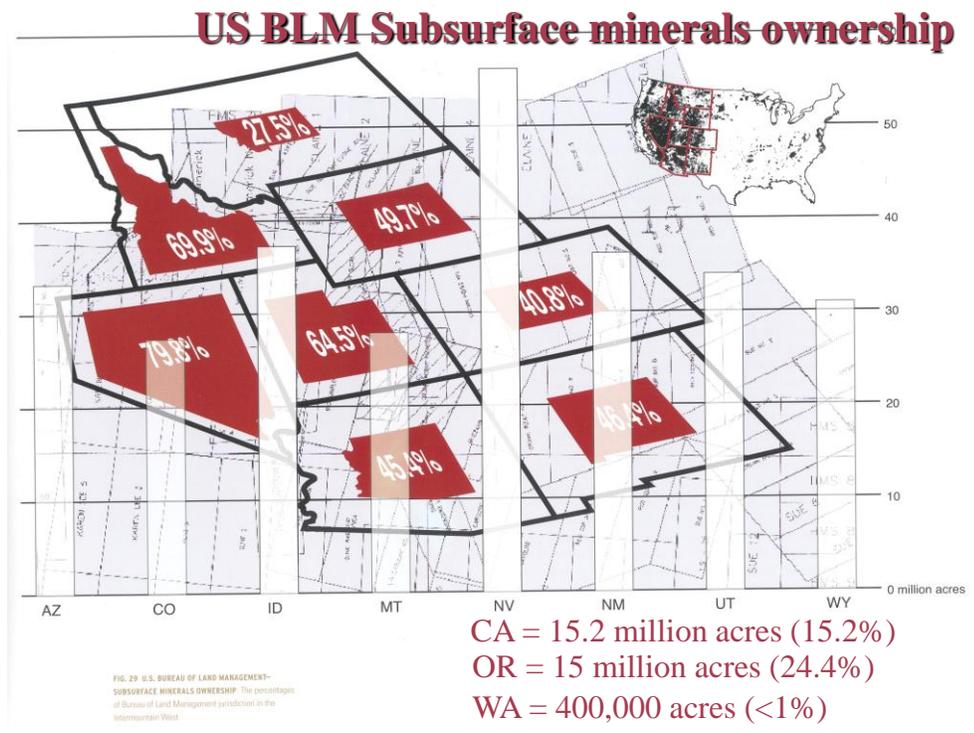


Figure 5. The “split estate” issue, showing the amount of land within each state where subsurface mineral rights are owned by the United States Bureau of Land Management. (Data Source: Berger, 2003).

BASIC REGULATORY MODELS USED BY THE WESTERN STATES FOR SURFACE MINING

One of the interesting findings of this comparison of the differences in western states' surface mining regulatory programs was the great variety of different governmental structures in place, and the relationships between State, Federal, Local, and Indian laws and regulations.

It was concluded that there were four different regulatory models in play in the 13 western states based upon what entity issues mining permits (Figure 6). These four regulatory models are outlined below:

Federal driven (Federal-centric), where federal regulations are used as a model for or in place of separate state regulation. Given the dominance of Federal Land ownership in Nevada it is not surprising that Nevada uses this basic model. It may be surprising that it is the only state in this category.

State driven (State-centric), where state regulations are used over Federal regulation and permits are granted by the states, with input from local government. This is the dominant model in the west, and is followed by Colorado, Idaho, Montana, Oregon, New Mexico, South Dakota, Utah, Washington, and Wyoming.

Local driven (with State Oversight; Local-centric), where individual County and City Governments issue all Mining Permits and enforce mining regulation. California is unique among the western states in many ways, this being one of them. California has been a "home-rule" state since 1850, where all land-use decisions, including those regarding mining, are made at the local level (City or County). Permits must comply with all applicable state and federal law, but the final conditional mining permit is issued by local government. This can introduce a great deal of uncertainty into the permit process – a strong negative factor as reflected in the Fraser Institute Survey.

Mixed, where each city issues permits on city lands, the state issues permits on state lands, the Indians issue permits on Indian lands, and the Federal Government issues permits on Federal land. Counties do not issue mining permits. This is a unique model to Arizona, the newest western state to adopt mine reclamation regulations.

Only one state did not have a model, that being North Dakota, where surface mining is not regulated by the state, though relevant Federal environmental laws must be respected.

It is difficult to make any definitive assessment as to which regulatory model is best, as each different state makes its own decisions on how to best serve its voters varied needs. What would be politically favorable in California might be political suicide in Nevada for example. Potential problems with California's local driven model are not difficult to conceive. Local control may be felt by the minerals industry to allow for more influence by a local permit applicant, but perhaps at the expense of an economically level competitive playing field?

What are the ramifications of a local jurisdiction being blessed with an abundance of mineral resources while its neighbors have none? Should a jurisdiction with a no-growth Board of Supervisors prevent the opening of a mine badly needed by the surrounding region?

As far as governmental efficiency goes, the best model would be the simplest, where one set of state enforced regulations would apply across the board to an entire state regardless of land ownership, and this is the dominant model in the west, applying to 9 of the 13 states surveyed.

An even simpler model of efficiency is practiced in Nevada, where federal law takes precedent for mining permits and reclamation standards. This is also extremely predictable for the mining industry, a factor that has not gone unnoticed by responders to the Fraser Institute Survey, which routinely gives Nevada a very high score as a desirable exploration target.

Arizona's laws are very egalitarian, with each major type of land owner adhering to their own set of regulations. It would seem to eliminate redundancy and controversy between differing jurisdictions, though who has supremacy when a mine site straddles jurisdictions is unknown. It could also result in two adjacent mines in different jurisdictions operating under entirely different conditions on their use-permits. This might result in one mine having an unfair competitive advantage over its neighbor, even though both would be operating entirely within applicable law. The Arizona law is relatively new and will be interesting to follow as legal precedents are established in the future.

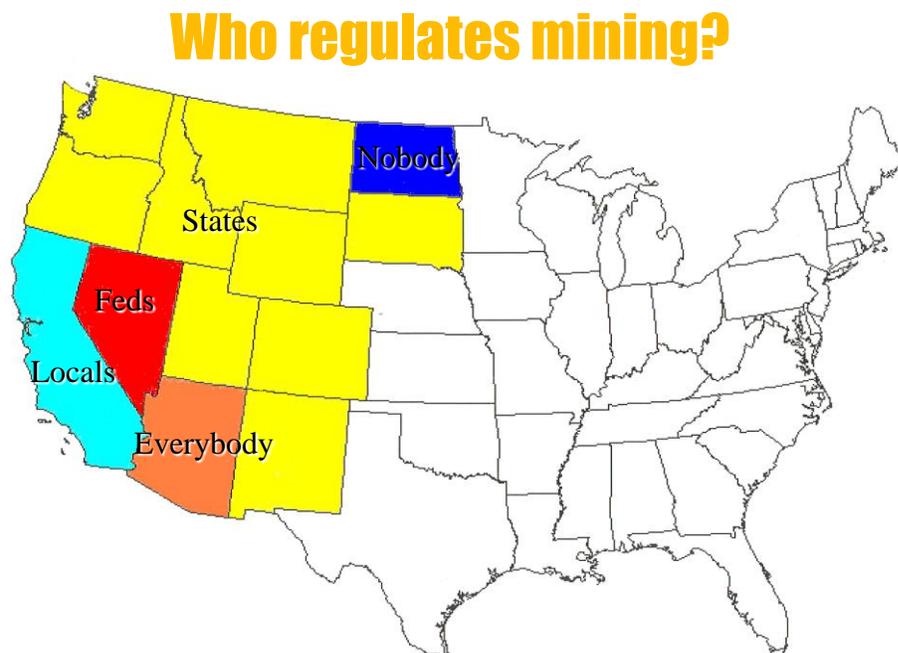


Figure 6: The basic regulatory models used by the western states. (Data Source: IMCC).

SURVEY HIGHLIGHTS

The specific details of the 2003 study are too voluminous to include here, and are included in their entirety as Appendix 1, but some highlights of the comparison include:

- Only California and Colorado apply mining regulations to Indian lands (Figure 7).



Figure 7. Regulation of mining on Indian lands.

- Arizona and Washington do not regulate mining on privately owned land (Figure 8).



Figure 8. Regulation of mining on privately owned lands.

- Idaho, North Dakota, and Washington do not regulate underground mining (Figure 9).



Figure 9. Regulation of underground mining.

- California, Colorado, Idaho, Montana, and South Dakota are the only western states with some type of Severance Tax based on mineral production (Figure 10).

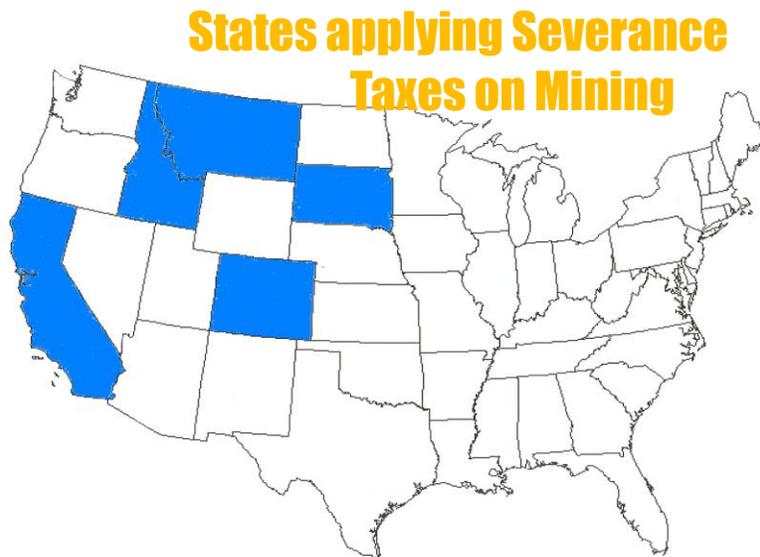


Figure 10. States applying severance taxes on mining.

- New Mexico, Colorado, and Idaho all have smaller disturbance thresholds triggering permit requirements than California (Figure 11).



Figure 11. Threshold acreages for triggering mining permits.

- Only California and Idaho require backfilling, and Idaho only for pits of 2 acres or smaller (Figure 12).



Figure 12. States requiring backfilling for reclamation of certain types of mines.

- All thirteen states require some type of Performance Bond or Financial Assurance.
- Fives states (CO, MT, NM, OR and SD) have a required public comment process in place prior to the release of a Financial Assurance.
- Different states have different acceptable Financial Assurance types – Nevada is unique with its “Bond Pool” concept.
 - Collateral (AZ, CO, ID, MT, NM, UT and WY)
 - Mortgage of real estate (CO, UT, WA and WY)
 - Self Bonding (AZ, NV, UT and WY)
 - Bond Pool (NV)
 - Cash (AZ, NV, NM and WA)
 - Negotiable securities (UT and WY)
- California is one of seven western states that do not maintain annual statistical information regarding the number of acres under permit, the number of acres disturbed by mining each year, or the number of acres reclaimed each year. Only six states (CO, NV, SD, UT, WA and WY) maintain annual statistical information regarding number of acres under permit, average acres reclaimed each year, and number of exempt or non-regulated mines.

The Fraser Institute 2005/2006 Annual Survey of Mining Companies scores California mining policy as the least favorable for investment of all western states (Figures 13 and 14).

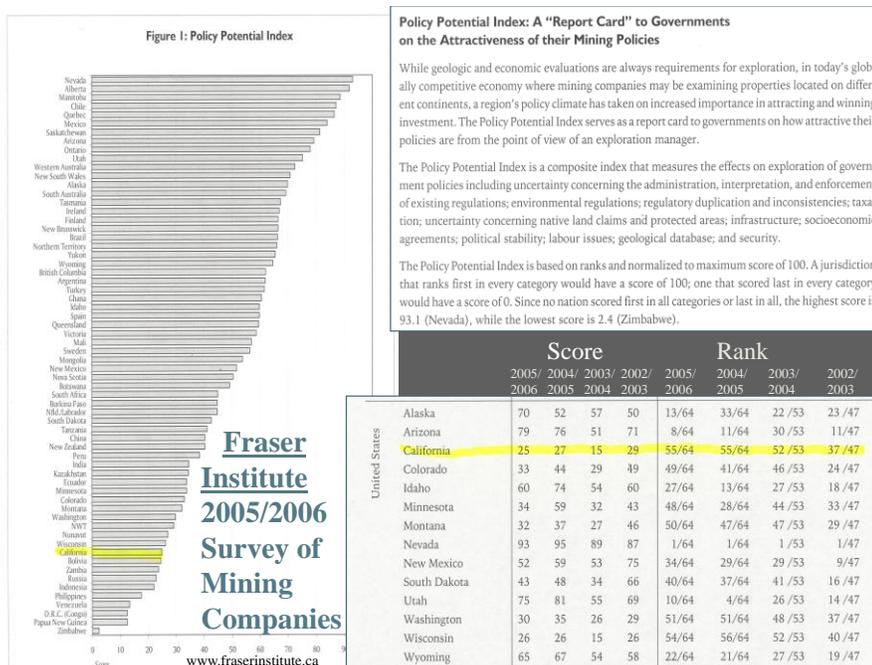


Figure 13: Fraser Institute rankings of states and countries with environments and policies favorable to mining.

**Fraser Institute Rankings for Policy Potential
(favorable to mining) for selected Western States
(2004/2005)**



**Highest Number means least favorable public policies toward mining.
Note that CALIFORNIA ranks last.**

Figure 14. Fraser Institute relative rankings of the thirteen western states.

FURTHER CONSIDERATIONS OF THE SMGB

Items for further discussion and consideration by the SMGB include:

1. Does the 2003 study need updating?
2. Should closer ties with other states and the USBLM be pursued?
3. Could the Nevada's Bond Pool be an additional Financial Assurance mechanism worth considering?
4. Could the SMARA Database be a valuable source of statistical data of interest to many outside users?
5. Should additional survey questions on reclamation cost per acre, or forfeited Financial Assurances, for example, be suggested to the IMCC?

FOR FURTHER READING

While not all of the following references have been cited in this brief Information Report, all are highly recommended for those interested in additional information about mining regulations or mine reclamation in the western United States.

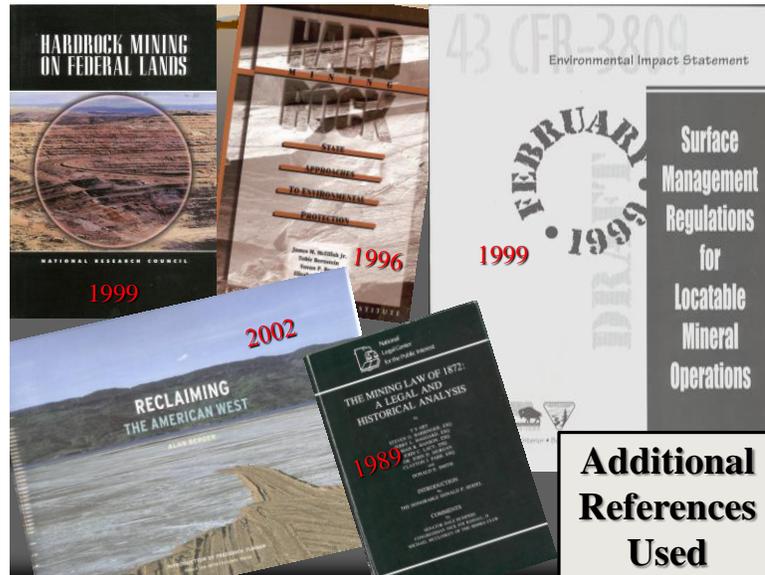


Figure 15. Useful references on western states reclamation laws and mining.

Berger, Alan; 2002; ***Reclaiming the American West***, Princeton Architectural Press; New York; 225 pages.

National Research Council; 1999; ***Hardrock Mining on Federal Lands***; National Academy of Sciences; National Academy Press; Washington D.C.; 247 pages.

Ary, T.S., Barringer, Steven G., Haggard, Jerry L., Hanson, Brian R., Lacy, John C., Morgan, John D., Parr, Clayton J., and Smith, Donald E.; 1989, ***The Mining Law of 1872: A Legal and Historical Analysis***; National Legal Center for the Public Interest; Washington D.C.; 162 pages.

McElfish, James M. Jr., Bernstein, Tobie, Bass, Susan P., Sheldon, Elizabeth; ***Hard Rock Mining – State Approaches to Environmental Protection***; 1996; Environmental Law Institute; Washington D.C.; 358 pages.

United States Bureau of Land Management; 1999; ***Surface Management Regulations for Locatable Mineral Operations (43 CFR 3809) – Draft Environmental Impact Statement***, U.S. Department of the Interior USBLM, Washington D.C.; 229 pages plus 28 pages (glossary) plus 21 pages (references) plus 4 pages (index) plus 226 pages (appendixes).

California Geological Survey; 2000, ***California Surface Mining and Reclamation Policies and Procedures, Third Revision; Special Publication 51***; Sacramento, California, 109 pages.

APPENDIX A

A Comparison of State Mining Regulatory Programs in Selected States

Including:

**Arizona, California, Colorado, Idaho,
Montana, Nevada, New Mexico,
North Dakota, Oregon, South Dakota,
Utah, Washington, and Wyoming**

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This survey is based upon the “*Non-coal mineral resources questionnaire and report*” developed by the INTERSTATE MINING COMPACT COMMISSION, using the answers provided by the states in 1990, 1995, and 2000, updated where necessary and where possible through the use of the individual state websites and contact with the individual states.

Because this report was heavily based upon the past efforts of the Interstate Mining Compact Commission (IMCC), some background on that organization is in order.

What is the Interstate Mining Compact Commission?

The IMCC is a multi-state governmental agency / organization that represents the natural resource interests of its member states. First envisioned in 1964, the Commission came into existence in 1970 with the entry of its first four states (Kentucky, Pennsylvania, North Carolina, and Oklahoma). Since that time, 13 additional states have enacted legislation bringing them into the Compact, and 3 additional states have become associate members as they pursue enactment of legislation which will make them full members. The Commission established its headquarters in the Northern Virginia suburbs of Washington, D.C. in 1988. The states are officially represented by their Governors who serve as Commissioners. The Commission operates through several committees composed of duly appointed representatives of the Governors from their respective Departments of Natural Resources or Environmental Protection. The IMCC appears to have been originally focused on issues associated with coal mining and the regulations impacting it (SMCRA – the federal Surface Mining Control and Reclamation Act of 1977) though has broadened its interests to all surface mining issues, both coal and non-coal.

What Does the IMCC Do?

The Commission exercises several powers on behalf of the states, all of which are of a study, recommendatory or consultative nature. The Commission does not possess regulatory powers, as some Compacts do. The Commission provides a forum for interstate action and communication on issues of concern to the member states. It is the potential to stimulate the development and production of each state's mineral wealth

through effective regulatory programs that draws many of the states together in the prosecution of the Commission's work. Given the environmental sensitivities associated with this objective, a significant portion of the Commission's work is dedicated to the environmental protection issues naturally associated with this mineral development. It is the significant value and clout that comes from "compacting" together and speaking with a strong, united voice that can make a difference in each state's efforts to implement effective regulatory programs that will conserve natural resources and secure a vibrant state (and thus national) mineral economy.

IMCC Initiatives:

- Liaison with Federal government and Congress
- Monitoring of regulatory and legislative developments
- Development and communication of State positions and recommendations on Federal rulemakings and national legislation
- Information gathering and dissemination
- Coalition building with related State organizations
- Interaction with environmental and industry groups
- Public mining and minerals education outreaches

Issues pursued by IMCC:

- Mine waste regulation under the Resources Conservation and Recovery Act (RCRA)
- Regulatory implementation issues arising under the Surface Mining Control and Reclamation Act (SMCRA) such as: primacy, federal oversight, enforcement, the Applicant/Violator System, bonding, citizen participation, and environmental protection standards
- Reform of the 1872 Mining Law
- Groundwater and stormwater regulations
- Inactive and abandoned mine reclamation
- Zoning and other land use restrictions

Committees of the IMCC:

- Abandoned Mine Lands
- Awards
- Education Work Group
- Finance & Administrative
- Environmental Affairs, Coal Section
- Environmental Affairs, Noncoal Section
- Mine Safety and Health
- Resolutions

What is the purpose of the IMCC?

The Mining Compact is designed to be advisory and not regulatory and its defined purposes are to:

- Advance the protection and restoration of the land, water, and other resources affected by mining
- Assist in the reduction or elimination or counteracting of pollution or deterioration of land, water and air attributable to mining
- Encourage (with due recognition of relevant regional, physical, and other differences) programs in each of the party states which will achieve comparable results in

protecting, conserving and improving the usefulness of natural resources, to the end that the most desirable conduct of mining and related operations may be universally facilitated

- Assist the party states in their efforts to facilitate the use of land and other resources affected by mining, so that such may be consistent with sound land use, public health and public safety, and to this end study and recommend, wherever desirable, techniques for the improvement, restoration, or protection of such land and other resources
- Assist in achieving and maintaining an efficient and productive mining industry and increasing economic and other benefits attributable to mining.

Which states are members?

The 17 IMCC Member States include Alabama, Arkansas, Illinois, Indiana, Kentucky, Louisiana, Maryland, Missouri, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, and West Virginia. The three Associate Member States are New Mexico, New York, and North Dakota. California is not a member of the IMCC. Of the 13 “western” states included in this SMGB review of regulatory programs, only two (New Mexico and North Dakota) are members or associate members of the IMCC. This may reflect the early emphasis of the IMCC on issues associated with coal mining and SMCR.

How do non-Member states participate with the IMCC?

IMCC research and publications, as well as access to their COALEX legal research database, is available to ALL states, not just IMCC Members and Associate Members. The COALEX database has provided a search service to all states since 1984, and to date, 350 specific research reports have been generated. An index is available online at www.imcc.isa.us/ under the heading “COALEX topical list”. While it’s focus is on coal, a broad range of issues are evaluated, including land-use, permitting, financial assurances, definitions, the regulatory process, and mined-land reclamation. Many of these COALEX research reports would seem to have direct applicability to implementation of SMARA by the California State Mining and Geology Board and the California Department of Conservation. The IMCC COALEX Search Service provides legal research and support services, free of charge, to all states, whether or not they are member states of the IMCC. Thus, all state personnel may access COALEX by contacting the IMCC office and requesting a COALEX Search. While the preferable method of requesting information is in writing, you may also request information by calling the IMCC office.

The IMCC Non-Coal Reports:

The current version (2001) of the IMCC non-coal report is available on the web at www.imcc.isa.us/ under the heading “Publications”. It evolved over time based on feedback from the participating states, which were polled on non-coal mining issues initially in 1985. The 1985 survey questions were revised in 1989 when a new 29-question form was mailed to all 50 of the states. Responses were received from 47 of the 50 states, the most complete response received to date. The results were compiled into a series of tables that were published by the IMCC in 1990. In 1996 the questionnaire was revised again to include 33 questions and distinguish surface from underground mining. Only 39 of the states responded to this effort and the results were published by the IMCC as the 1997 Non-Coal Mineral Resources Report. Of the states included in this summary comparison of the western states, Idaho, Montana, and Utah chose not to participate, although they had responded to the earlier 1990 survey. The 1997 survey is the last “paper-published” edition of the report. The

1997 report was put online on the IMCC website and has been electronically updated as new material is received from the states. The most revision was entered in July, 2001.

The specific questions are those used in the most recent IMCC questionnaire (2000). Answers given directly by the individual states from the 2000 survey are shown in black. A summary of the question topics are:

- QUESTION 1A (Regulation of non-coal solid minerals)
- QUESTION 1B (Source of operating fund)
- QUESTION 1C (Areas regulated)
- QUESTION 1D (Regulation history)
- QUESTION 2 (Date of legislation)
- QUESTION 3 (Regulatory framework)
- QUESTION 4A (State requirements and terms for underground mining)
- QUESTION 4B (Exemptions)
- QUESTION 5 (Pre-mining environmental data)
- QUESTION 6 (Lateral distance prohibitions)
- QUESTION 7 (Documentation requirements)
- QUESTION 8 (Fee requirements)
- QUESTION 9A (Public comment process)
- QUESTION 9B (Public comment process)
- QUESTION 9C (Public comment process)
- QUESTION 10A (Types of acceptable bonds)
- QUESTION 10B (Bonding amounts required)
- QUESTION 10C (Bonding amounts required)
- QUESTION 11 (Bond forfeiture and permit blocking)
- QUESTION 12A (Enforcement procedures available)
- QUESTION 12B (Enforcement procedures available)
- QUESTION 13 (Mining and reclamation standards)
- QUESTION 14A (Post-mining land uses following reclamation)
- QUESTION 14B (Post-mining land uses following reclamation)
- QUESTION 15 (Abandoned mine lands: Incentives for reclaiming)
- QUESTION 16 (Abandoned mine lands: Pre-law affected lands)
- QUESTION 17A (State non-coal abandoned mine lands inventory)
- QUESTION 17A-D (Abandoned mine lands)
- QUESTION 18 (Personnel and administration)
- QUESTION 19 (Personnel and budget)
- QUESTION 20A (NPDES regulatory responsibility)
- QUESTION 20B (Air regulatory responsibility)
- QUESTION 20C (Groundwater regulatory responsibility)
- QUESTION 20D (Mine waste regulatory responsibility)
- QUESTION 20E (Hazardous/solid waste regulatory responsibility)
- QUESTION 20F (Dam safety responsibility)
- QUESTION 20G (Mine safety and health responsibility)
- QUESTION 21 (Statistics – Number of regulated operations)
- QUESTION 22 (Statistics – Number of acres under permit)
- QUESTION 23 (Statistics – Acres reclaimed per year)
- QUESTION 24 (Number of site inspections per year)
- QUESTION 25 (Statistics – Number of non-regulated or exempt operations)
- QUESTION 26 (Mineral commodities)

QUESTION 27 (Most significant problems)

QUESTION 28 (Special experience available)

QUESTION 29 (State publications useful to other states)

QUESTION 30 (Value and tonnage on non-coal solid mineral production)

QUESTION 31 (Other comments)

QUESTION 32 (Request for forms; not included)

QUESTION 33 (State contact person)

QUESTION 1A:

Regulation of non-coal solid minerals

Does your state regulate the SURFACE mining of non-coal solid minerals on:
(Question 1a in 1990 IMCC survey, but surface and underground mining were not differentiated)

State	Federal lands	State lands	Indian lands	Private lands
Arizona (AZ) ¹	<i>N</i>	Y	<i>N</i>	Y (<i>metals only</i>)
California (CA) ²	Y	Y	<i>Y</i>	Y
Colorado (CO)	Y	Y	<i>Y</i>	Y
<i>Idaho (ID)</i>	<i>Y</i>	<i>Y</i>	<i>N</i>	<i>Y</i>
<i>Montana (MT)</i>	<i>Y</i>	<i>Y</i>	<i>N</i>	<i>Y</i>
Nevada (NV)	Y	Y	N/A	Y
New Mexico (NM)	Y	Y	N	Y
North Dakota (ND) ³	N	N	N	N
Oregon (OR)	Y	Y	N	Y
South Dakota (SD) ⁴	Y	Y	N	Y
<i>Utah (UT)</i>	<i>Y</i>	<i>Y</i>	<i>--</i>	<i>Y</i>
Washington (WA)	Y	Y	N	N
Wyoming (WY)	Y	Y	N	Y

¹⁾ AZ: The Arizona State Mine Inspector regulates Metals mining on Private land. The Arizona State Lands Department regulates all mining on state trust lands. Cities regulate mining within their jurisdictions. Counties do not have regulatory authority over mining. Only the federal government regulates federal lands, and the specific tribes regulate mining on their own Indian lands.

²⁾ CA: Materials mined on Military Bases, Indian Reservations, or on Federal Land within California are generally not subject to SMARA regulation if that material is used on-site and not sold commercially.

³⁾ ND: Although no state agency regulates sand, gravel and scoria mining in North Dakota, state law requires these mine operators to file an annual report with the State Soil Conservation Committee on their mining activities. The report includes the tonnage or cubic yards mined and acreages that were disturbed and reclaimed. Reclamation of the affected lands must be carried out according to a reclamation plan agreed to by the landowner and mine operator. If the agreed to reclamation work is not completed, the law allows the landowner to sue the mine operator for damages.

⁴⁾ SD: Has a state mining program that operates under authority of state law. Mining is also regulated through federally delegated programs such as NPDES, Air Quality, etc.

QUESTION 1A (continued):

Regulation of non-coal solid minerals

Does your state regulate the UNDERGROUND mining of non-coal solid minerals on:
(Question 1a in 1990 IMCC survey, but surface and underground mining were not differentiated)

State	Federal lands	State lands	Indian lands	Private lands
Arizona (AZ) ¹	<i>N</i>	Y	<i>N</i>	Y (<i>metals only</i>)
California (CA) ²	Y	Y	<i>Y</i>	Y
Colorado (CO)	Y	Y	<i>Y</i>	Y
<i>Idaho (ID)</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>N</i>
<i>Montana (MT)</i>	<i>Y</i>	<i>Y</i>	<i>N</i>	<i>Y</i>
Nevada (NV)	Y	Y	N/A	Y
New Mexico (NM)	Y	Y	N	Y
North Dakota (ND)	N	N	N	N
Oregon (OR)	Y	Y	N	Y
South Dakota (SD) ³	Y	Y	N	Y
<i>Utah (UT)</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>
Washington (WA)	N	N	N	N
Wyoming (WY)	Y	Y	N	Y

¹ AZ: The Arizona State Mine Inspector regulates Metals mining on Private land. The Arizona State Lands Department regulates all mining on state trust lands. Cities regulate mining within their jurisdictions. Counties do not have regulatory authority over mining. Only the federal government regulates federal lands, and the specific tribes regulate mining on their own Indian lands.

² CA: Where surface workings incident to underground mining disturb more than 1,000 cubic yards of overburden in an area of more than one acre, it is subject to SMARA regulation. Otherwise, it is not.

³ SD: Has a state mining program that operates under authority of state law. Mining is also regulated through federally delegated programs such as NPDES, Air Quality, etc.

QUESTION 1B:

Source of operating fund

What is the source of your operating funds to regulate SURFACE mining? (Similar to Question 1b in 1990 IMCC survey, which did not include “fines and penalties”, and surface and underground mining were not differentiated)

State	General revenue	Operator (Permit) fees	Fines, penalties	Special taxes (Severance, etc.)	Federal funding
Arizona (AZ)	Y	N	N	N	N
California (CA)	Y	Y	Y	N	N
Colorado (CO)	Y	Y	N	Y	N
<i>Idaho (ID)</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y?</i>	<i>--</i>
<i>Montana (MT)</i>	<i>Y</i>	<i>Y (funds abandoned mine work)</i>	<i>Y (funds abandoned mine work)</i>	<i>Y (funds abandoned mine work; also Bonds)</i>	<i>N</i>
Nevada (NV)	N	Y	N	N	Y
New Mexico (NM)	N	Y	Y	N	N
<i>North Dakota (ND)</i>	<i>N¹</i>	<i>N¹</i>	<i>N¹</i>	<i>N¹</i>	<i>N¹</i>
Oregon (OR)	N	Y	N	N	N
South Dakota (SD)	Y	Y	N ²	N ³	Y ⁴
<i>Utah (UT)</i>	<i>Y</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>--</i>
Washington (WA)	N	Y	--	--	--
Wyoming (WY)	Y	N	N	N	N

¹⁾ *ND does not regulate the mining of non-coal solid minerals*

²⁾ SD: Deposited in a special account to address emergency clean ups (Regulated Substance Response Fund).

³⁾ SD: Severance tax on precious metals goes to general fund.

⁴⁾ SD: Federally delegated programs only.

QUESTION 1B (continued):

Source of operating fund

What is the source of your operating funds to regulate UNDERGROUND mining? (Similar to Question 1b in 1990 IMCC survey, which did not include “fines and penalties”, and surface and underground mining were not differentiated)

State	General revenue	Operator (Permit) fees	Fines, penalties	Special taxes (Severance, etc.)	Federal funding
Arizona (AZ)	Y	N	N	N	N
California (CA)	Y	Y	Y	N	N
Colorado (CO)	Y	Y	N	Y	N
<i>Idaho (ID)</i>	<i>N¹</i>	<i>N¹</i>	<i>N¹</i>	<i>N¹</i>	<i>N¹</i>
<i>Montana (MT)</i>	<i>Y</i>	<i>Y (funds abandoned mine work)</i>	<i>Y (funds abandoned mine work)</i>	<i>Y (funds abandoned mine work; also Bonds)</i>	<i>N?</i>
Nevada (NV)	N	Y	N	N	Y
New Mexico (NM)	N	Y	Y	N	N
<i>North Dakota (ND)</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>
Oregon (OR)	N	Y	N	N	N
South Dakota (SD)	Y	Y	N ³	N ⁴	Y ⁵
<i>Utah (UT)</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>
Washington (WA)	--	--	--	--	--
Wyoming (WY)	Y	N	N	N	N

¹⁾ *ID does not regulate underground mining*

²⁾ *ND does not regulate the mining of non-coal solid minerals*

³⁾ SD: Deposited in a special account to address emergency clean ups (Regulated Substance Response Fund).

⁴⁾ SD: Severance tax on precious metals goes to general fund.

⁵⁾ SD: Federally delegated programs only.

QUESTION 1C:

Areas regulated

What areas do you regulate for SURFACE mines? (Similar to Question 1c in 1990 IMCC survey, which had different choices, and surface and underground mining were not differentiated)

State	Public health & safety	Mining operations	Reclamation	Processing plants	Loading facilities	Environmental controls	Exploration drilling
Arizona (AZ)	Y	Y	Y	Y	Y	Y	Y
California (CA) ¹	Y	Y	Y	Y	Y	Y	Y
Colorado (CO)	Y	Y	Y	Y	Y	Y	Y
<i>Idaho (ID)</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>?</i>	<i>?</i>	<i>Y</i>	<i>Y</i>
<i>Montana (MT)</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
Nevada (NV)	Y	Y	Y	Y	Y	Y	Y
New Mexico (NM)	Y	Y	Y	Y	Y	Y	Y
<i>North Dakota (ND)</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>
Oregon (OR)	N	Y	Y	Y	Y	Y	Y
South Dakota (SD)	Y	Y	Y	Y	Y	Y	Y
<i>Utah (UT)</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>
Washington (WA)	-	--	Y	--	--	--	Y
Wyoming (WY)	Y	Y	Y	Y	Y	Y	Y

¹CA: Jurisdiction to regulate does not mean we always do. If no threat, we don't regulate.

²*ND does not regulate the mining of non-coal solid minerals*

QUESTION 1C (continued):**Areas regulated**

What areas do you regulate for UNDERGROUND mines? (Similar to Question 1c in 1990 IMCC survey, which had different choices, and surface and underground mining were not differentiated)

State	Public health & safety	Mining operations	Reclamation	Processing plants	Loading facilities	Environmental controls	Exploration drilling
Arizona (AZ)	Y	Y	Y	Y	Y	Y	Y
California (CA) ¹	Y	Y	Y	Y	Y	Y	Y
Colorado (CO)	Y	Y	Y	Y	Y	Y	Y
<i>Idaho (ID)</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>
<i>Montana (MT)</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
Nevada (NV)	Y	Y	Y	Y	Y	Y	Y
New Mexico (NM)	Y	Y	Y	--	Y	Y	Y
<i>North Dakota (ND)</i>	<i>N³</i>	<i>N³</i>	<i>N³</i>	<i>N³</i>	<i>N³</i>	<i>N³</i>	<i>N³</i>
Oregon (OR)	N	Y	Y	Y	Y	Y	Y
South Dakota (SD)	Y	Y	Y	Y	Y	Y	Y
<i>Utah (UT)</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>
Washington (WA)	--	--	--	--	--	--	Y
Wyoming (WY)	Y	Y	Y	Y	Y	Y	Y

¹) CA: Jurisdiction to regulate does not mean we always do. If no threat, we don't regulate.

²) *ID does not regulate underground mining*

³) *ND does not regulate the mining of non-coal solid minerals*

QUESTION 1D:

Regulation history

Has your state ever regulated the mining of non-coal minerals? If so, when were the regulations in place? When were they repealed? (Not asked in 1990 IMCC survey)

State	Y/N	If so, when were the regulations in place?	When were they repealed?
Arizona (AZ)	Y	Mines & Minerals, Title 27--1972; AZ State Mining Inspector Worker Safety since statehood in 1912; AZ Revised Statutes, Title 27; Environmental A.R.S. Title 49, July 1, 1987; <i>AZ Revised Statutes, Title 27; Mined Land Reclamation, A.R.S. Title 2749, July 1, 1997.</i>	N\A
California (CA)	Y	SWRCB--first draft circa 1975, current regs. in effect since 1984; SMARA effective since 1976	N\A
Colorado (CO)	Y	Began in 1973	N\A
<i>Idaho (ID)</i>	<i>Y</i>	<i>Idaho Statutes, Title 47: Mines and Mining, Chapter 15: Surface Mining - Began in 1971</i>	<i>N\A</i>
<i>Montana (MT)</i>	<i>Y</i>	<i>Montana Statutes Annotated, Title 82, Chapter 4. Began in 1971, Major revisions 1974.</i>	<i>N\A</i>
Nevada (NV)	Y	Water pollution control regulations--May 1989; Reclamation regulations--October 1990	N\A
New Mexico (NM)	Y	Statute passed 1993; regulation passed 1994	N\A
<i>North Dakota (ND)</i>	<i>Y</i>	<i>Prior to 1990</i>	<i>Sometime between 1990 and 1995</i>
Oregon (OR)	Y	Enacted 1972	N\A
South Dakota (SD)	Y	First state laws enacted early 1970's; major recodification 1982; major new rules promulgated 1988--10 chapters currently; two separate state statutes currently regulate mining	N\A
<i>Utah (UT)</i>	<i>Y</i>	<i>Mined Land Reclamation in 1975</i>	
Washington (WA)	Y	Laws enacted in 1971	N\A
Wyoming (WY)	Y	Open Cut Lands Reclamation Act--1969; Environmental Quality Act--1973	N\A

QUESTION 2:

Date of legislation

What is the date of the state legislation establishing your state regulatory authority, and any amendments? ([Question 2 in 1990 IMCC survey](#))

State	Date of legislation	Amendments
Arizona (AZ)	<i>1986 (Environmental); 7/1/97 (Mined Land Reclamation Title 27)</i>	N/A
California (CA)	Circa 1972 (Porter-Cologne Water Quality Control Act); <i>1975 (Mined Land Reclamation)</i>	Storm water program under NPDES is most recent addition; <i>SMARA authority: 1975, amended 19 times: 1980, 1984, 1985, 1986, 1987, 1990 (x2), 1991, 1992 (x2), 1993 (x2), 1994, 1995 (x2), 1996 (x2), 1997, 1999.</i>
Colorado (CO)	1973 (Original legislation)	Amended in 1977, 1979, 1982, 1986, <i>1988</i> , 1990, 1992, 1995.
<i>Idaho (ID)</i>	<i>1971</i>	<i>Amended 1987 and a few times over the years.</i>
<i>Montana (MT)</i>	<i>1971, 1973, 1974</i>	<i>1973, 1974(x2), 1975 (x2), 1977 (x2), 1979 (x2), 1981, 1983, 1985 (x2), 1987, 1989 (x3), 1991(x2), 1993, 1995 (x2), 1997, 1999, 2000, 2001 (x2)</i>
Nevada (NV)	NRS519A, 6/89 (Reclamation); NRS445A, 1973 (Water pollution control--other discharges)	N/A
New Mexico (NM)	Early 1930's (Safeguarding); <i>1989 (Mining and Reclamation)</i> ; 1993 (Mining Act)	N/A
<i>North Dakota (ND)</i>	<i>Surface Mining: N/A</i> <i>Subsurface Mining: 1968</i>	<i>Surface Mining: N/A</i> <i>Subsurface Mining: 1987</i>
Oregon (OR)	1972	Nearly every session since 1981 (<i>1979, 1981, 1983, 1985, 1987, 1989...</i>).
South Dakota (SD)	<i>1983</i> ; Numerous changes throughout the years.	-- (<i>1987, 1988, 1989,...</i>).

<i>Utah (UT)</i>	<i>1975</i>	<i>1986, 1987</i>
Washington (WA)	1971	1993, Surface Mine Reclamation Act amended.
Wyoming (WY)	<i>Reclamation: 1973,</i> <i>Safety: 1969</i>	Numerous amendments <i>1980, 1987, 1988, ...</i> (most coal related); 1979, in-situ mining.

QUESTION 3:

Regulatory framework

If your state regulates the mining of non-coal solid minerals, have you ever promulgated SURFACE mining regulations for non-coal solid minerals? (Question 3 in 1990 IMCC survey, but surface and underground mining were not differentiated)

State	Non-coal solid minerals <u>surface</u> mining regulations promulgated	If yes, when?
Arizona (AZ)	Y	Arizona State Mine Inspector - worker safety - since 1912; Mine Land Reclamation <i>since 1997</i> .
California (CA)	Y	1984; SMARA 1976
Colorado (CO)	Y	Ongoing since 1973
<i>Idaho (ID)</i>	<i>Y</i>	<i>Ongoing since 1971 (1982 in 1990 IMCC report).</i>
<i>Montana (MT)</i>	<i>Y</i>	<i>Ongoing since 1971</i>
Nevada (NV)	Y	10/90, Surface Reclamation
New Mexico (NM)	Y	1993
<i>North Dakota (ND)</i>	<i>Y</i>	<i>1976</i>
Oregon (OR)	Y	1972 & subsequent sessions.
South Dakota (SD)	Y	Laws on mining since 1970's; new regs. 1988. (Under authority of SDCL 45-6B. Does not apply to mine licensing under SDCL 45-6.)
<i>Utah (UT)</i>	<i>Y</i>	<i>1975</i>
Washington (WA)	Y	1971
Wyoming (WY)	Y	1975

QUESTION 3 (continued):

Regulatory framework

If your state regulates the mining of non-coal solid minerals, have you ever promulgated UNDERGROUND mining regulations for non-coal solid minerals? (Question 3 in 1990 IMCC survey, but surface and underground mining were not differentiated)

State	Non-coal solid minerals <u>underground</u> mining regulations promulgated	If yes, when?
Arizona (AZ)	Y	<i>Safety</i> since 1912, Arizona State Mine Inspector. <i>Environmental since 1987; Reclamation since 1997.</i>
California (CA)	Y	1984; SMARA 1976 ¹ .
Colorado (CO)	Y	Ongoing since 1973.
<i>Idaho (ID)</i>	<i>N</i>	<i>The surface regulations cover surface impacts of underground mining?</i>
<i>Montana (MT)</i>	<i>Y</i>	<i>Ongoing since 1971</i>
Nevada (NV)	Y ²	1975, Mine safety.
New Mexico (NM)	N	The surface regulations cover surface impacts of underground mining.
<i>North Dakota (ND)</i>	<i>N/A</i>	<i>N/A</i>
Oregon (OR)	Y	1972 & subsequent sessions.
South Dakota (SD)	Y	Same as surface mining. Only applies to surface affects & impacts to environmental media.
<i>Utah (UT)</i>	<i>?</i>	<i>?</i>
<i>Washington (WA)</i>	<i>?</i>	<i>?</i>
Wyoming (WY)	Y	1975.

- 1) CA: If there is no "waste" deposited on land and no threat to water quality, an underground mine can be exempted from SWRCB regulations.
- 2) NV: Statutes, not regulations. Statute is highly prescriptive--regulations not needed. (NRS Chapter 512.)

QUESTION 4A:

State requirements and terms for UNDERGROUND mining:

Do you require a(n): (Similar to Question 4 in 1990 IMCC survey, which did not include “Transferable”, and surface and underground mining were not differentiated)

KEY: (1) = Permit; (2) = License; (3) = Reclamation plan; (4) = Other (specified)

State	Type(s) of document(s) required	Duration	Renewable?	How often?	Transferable?
AZ	(3) Only if 5 or more acres disturbed.	Life of mine.	--	--	--
CA	(1); (3) ¹	No set term.	Y	No set term.	Y
CO	(1); (3)	Life of mine.	--	--	Y
<i>ID</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>	<i>N²</i>
<i>MT</i>	<i>(1), (2) metals only, (3)</i>	<i>Life of mine.</i>	<i>Y</i>	<i>No set term.</i>	<i>Y</i>
NV	(3)	Life of mine.	N/A	N/A	Y (Approval required)
NM	(1); (3)	Life of mine.	--	--	Y
<i>ND</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
OR	(1); (3) ³	Life of mine.	Y	Yearly.	Y
SD	(1); (2); (3) ³ (SDCL 45-6 & -6B)	(1)(3) Life of mine. (2) Annual.	(2) Y	(1) Yearly fee & report required. (2) Annual.	Y
<i>UT</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>
<i>WA</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>
WY	(1); (2); (3)	Life of mine.	N/A	N/A	Y

¹⁾ CA: Only to the surface disturbance & surface deposited waste associated with the mine.

²⁾ *ID does not regulate underground mining.*

³⁾ OR, SD: Reclamation plan is a component of the overall permit.

QUESTION 4A (continued):

State requirements and terms for SURFACE mining:

Do you require a(n): (Similar to Question 4 in 1990 IMCC survey, which did not include “Transferable”, and surface and underground mining were not differentiated)

KEY: (1) = Permit; (2) = License; (3) = Reclamation plan; (4) = Other (specified)

State	Type(s) of document(s) required	Duration	Renew-able?	How often?	Transferable ?
AZ	(3); (4) Cyanide leach	(3) Life of mine.	Y	(3) If changed. (4) Annually.	(3) Y. (4) N.
CA	(1); (3)	No set term.	Y	5 years.	Y
CO	(1); (3)	Life of mine.	--	--	Y
<i>ID</i>	<i>(3)</i>	<i>Life of project</i>			
<i>MT</i>	<i>(1), (2) metals only, (3)</i>	<i>Life of mine</i>	<i>Y</i>	<i>No set term</i>	<i>Y</i>
NV	(1) "Zero discharge" water pollution control;(3)	5 years. 3) Life of mine.	(1) Y. (2) N/A.	N/A	(1) N. (3) Y (Approval required).
NM	(1); (3)	Life of mine.	--	--	Y
<i>ND</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
OR	(1)	Life of mine.	--	Yearly.	Y
SD	(1); (2); (3) ³ (SDCL 45-6 & -6B)	(1)(3) Life of mine. (2) Annual.	(2) Y.	(1) Yearly fee & rpt required. (2) Annual.	Y
<i>UT</i>	<i>(1); (3)</i>	<i>Life of Mine</i>	<i>Y</i>	<i>5 years or discretionary</i>	<i>--</i>
WA	(1); (3)	(1) Until terminated. (3) Until needs to be modified.	(1) Pay every year.	--	(1) Y.
WY	(1); (2); (3)	Life of mine.	N/A	N/A	Y

³⁾ SD: Included in permit application.

QUESTION 4B:**Exemptions**

Does your state provide an exemption from permitting? If so, for what categories?
(Not asked in 1990 IMCC survey)

State	Does your state provide for an exemption?	If so, for what categories?
AZ	<i>Y</i>	<i>No permit is required for disturbances of less than 5 acres.</i>
CA	Y	A waste discharge reg. (permit) is waived if there is no threat to water quality. Reclamation waived if project <1000y ³ or 1 acre.
CO	<i>Y</i>	<i>Exemption from reclamation if material does not leave site; If material is "Moss Rock" collected with hand tools and pickup truck; If intent of excavation is not mining even if material is processed and sold off site.</i>
<i>ID</i>	<i>?</i>	<i>?</i>
<i>MT</i>	<i>Y</i>	<i>Small miners <5 acres disturbed with no Hg or Cyanide used, etc.. Government mines are exempted from financial assurances, but need a permit & reclamation plan. Fed mines on Fed land for exclusive Fed use are exempt from permit. Mines on federal land are exempt if federal regs are equivalent to MT's and an MOU is in place. Exposures of outstanding geological phenomena may be exempted from reclamation.</i>
NV	Y	Small miner: <5 acres/year & <36,500 tpy processed; Require informational filing.
NM	Y	Recreational mining.
<i>ND</i>	<i>N/A</i>	<i>--</i>
OR	Y	Land disturbed prior to 1972 is exempt from reclamation plan & bond. Operations below 5000 cubic yards & 1 acre are exempt.
SD	Y	Previously affected land w/in a mine permit boundary is not covered if not affected by the new mining operation; Recreational gold panning exempt if only hand held equipment is used; People mining gravel for their own use do not need a mine license; State & local gov't. are exempt from license fees & bonding.
<i>UT</i>	<i>?</i>	<i>?</i>
WA	Y	If <3 acres of disturbed area, no need for reclamation permit.
WY	Y	Private use; Govm't. agencies with similar reclamation standards; <10 acres.

QUESTION 5:

Pre-mining environmental data

What, if any, pre-mining environmental data is required as part of the application? (Not asked in 1990 IMCC survey)

KEY: (1) = Hydrology; (2) = Geology; (3) = Land use/Zoning; (4) = Air quality; (5) = Other (specified)

State	What, if any, pre-mining environmental data is required as part of the application?
AZ	(1)(2)(3) & (4) = ADEQ Aquifer Protection Permits; (5) = Sect. 404 & 401 ADEQ.
CA	(1); (2); (3); (4); (5)
CO	(1) & (2) = Baseline characterization; (3) = local issue--need special use permit; (4) = Handled by Dept. of Health; (5) = Baseline soils & vegetation; Geochemistry as needed.
<i>ID</i>	?
<i>MT</i>	(1); (2); (3); (4); (5) = archaeological, historical, ethnological, cultural, climatological, fish and wildlife, soil, vegetative cover, prime farmland & agricultural productivity surveys.
NV	(1); (2); (3); (4) = Maybe; (5) = Native plant/coverage data.
NM	(1); (2); (3); (4) = All required for new/existing mines; (5) = Wildlife for new/existing mines.
<i>ND</i>	<i>N/A</i>
OR	(1); (2); (3); (4)
SD	(1); (2); (3); (4); (5) ¹ = Historic & archaeologic, soils, vegetation, wildlife, fish, aquatics, meteorological (in some cases), geotechnical info., engineering data, geochemical testing of waste for acid mine drainage & metals, construction quality assurance plans.
<i>UT</i>	<i>N/A</i>
WA	(1); (2); (3); (4)
WY	(1) = Location of wells, quality & quantity of surface & groundwater; (2) = General description; (3) = Pre & post-mining land use description; (4) = Separate permit from Air Quality Division.

¹⁾ SD: Varies with the site-specific nature of a given mining operation. All of this would typically be required for a large-scale heap leach gold mine. May not be required for a small-scale mine with minimal potential impacts.

QUESTION 6:

Lateral distance prohibitions

What lateral distance prohibitions exist with respect to: (Not asked in 1990 IMCC survey)

KEY: (1) = Adjacent properties; (2) = Public roads; (3) = Public utilities (Telephone, Gas and Power lines); (4) = Gas / Oil wells; (5) = Rivers / Streams; (6) = Significant historic features; (7) = Wetlands; (8) = Mining depth (and proximity to adjoining property); (9) = Public water supplies; (10) = Groundwater protection?

State	What Lateral Distance Prohibitions Exist?
AZ	N/A (<i>These might be covered by conditional use permits if mines are within city jurisdiction</i>)
CA	(5) = Out of 100-year flood plain ¹
CO	(1)(2)(3)(4)(6)(8) & (9) = 200 ft.
<i>ID</i>	<i>?</i>
<i>MT</i>	<i>(1), (2), (3), (4), (5), (6), (7), (8), (9), (10) Set by the state on a mine by mine basis.</i>
NV	(5)(6)(7)(9) & (10) = Condition of permit.
NM	None.
<i>ND</i>	<i>N/A</i>
OR	Minimum are 50 ft. but actuals generally exceed and are determined on site specific basis.
SD	(1)(2)(3)(4)(5)(6)(7)(8)(9) & (10) = All depends on site specific circumstances. Can apply permit conditions to restrict disturbance in such areas.
<i>UT</i>	<i>?</i>
WA	(1)(2)(3)(4)(5)(6)(7)(8)(9) & (10) = All site by site basis.
WY	(1) = 300 ft. of occupied dwelling, public building; (2)(3)(4)(5)(6)(7)(8)(9) & (10) = No distance prohibitions, but are treated on a site by site basis.

¹) CA: Counties could establish prohibitions for all categories listed (except floodplain) under the CA Environmental Quality Act (CEQA).

QUESTION 7:

Documentation requirements

What documentation is required to authorize entry onto a permit area? How is it verified?
(Not asked in 1990 IMCC survey)

State	What Documentation is Required to Authorize Entry Onto a Permit Area? How is it Verified? (Note: " * " responses refer to requirements for <i>state personnel</i> to enter permit area. Others = requirements for <i>operators</i> to enter/begin operations.)
AZ	--
CA	None required by statute or regulation, but Dept. policies usually encourage that we coordinate with permittee.*
CO	Agreement with landowner in form of lease. We do not get involved in property rights disputes.
<i>ID</i>	<i>?</i>
<i>MT</i>	<i>The operator must first obtain a mine site permit from the state.</i>
NV	N/A
NM	--
<i>ND</i>	<i>N/A</i>
OR	Land owner signature. Also, on private land, county land use approval.
SD	Copies of deeds or leases often included in permit application. We check ownership in some cases through the County Register of Deeds Office or BLM for mining claims.
<i>UT</i>	<i>?</i>
WA	DNR mine inspector can enter permit area at any time.*
WY	Applicant must submit a sworn statement that he has the right to mine. Where the surface owner is different than the mineral owner, must provide surface owner consent.

QUESTION 8:***Fee requirements***

Indicate the type and amount of fee required for UNDERGROUND mining. (Question 5 in 1990 IMCC survey, but surface and underground mining were not differentiated)

KEY: (1) = Permit; (2) = License; (3) = Reclamation; (4) = Application; (5) = Acreage; (6) = Severance Tax; (7) = Other (Specified)

State	Fee Type:	Fee Amount	Renewal Fee	Modification/ Amendment Fee
AZ	(3); (6)	(3) = \$3/acre affected. (6) = Varies	--	--
CA ¹	(1); (7) = Annual (Reporting)	(1) = Varies ²	(7) = Annual	--
CO	(4); (7) = Annual.	(4) = \$75-\$8,000. (7) = \$281-\$1,000.	--	(4) = \$150-\$7,000.
<i>ID</i>	<i>None (as of 1990)</i>			
<i>MT</i>	<i>(1); (3); (4); (5); (6);</i>	<i>(1) = \$50+\$500 (3) = actual cost to reclaim site (4) = \$25 (5) = \$200- \$10,000/acre; \$5,000 minimum/site (6) = variable</i>	<i>--</i>	<i>--</i>
NV	(1); (3); (5).	(1) = Varies; (3) = \$500-\$2,000; (5) = \$1.50/acre public land or \$2.50/acre private land (annual).	(1) = Varies.	(1) = Varies.
NM	(1); (3); (4); (5).	(1) = Variable; (3) = Variable; (4) = Variable; (5) = Variable.	(1) = None.	(1) = \$0-\$5,000.
<i>ND</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
OR ³	(4)	(4) = \$675 maximum.	(4) = Annually- not to exceed \$525.	(4) = maximum \$400 in addition to annual renewal fee.

SD	(1) SDCL 45-6B; (2) SDCL 45-6; (3); (4): (4); (6).	(1) = Large scale \$1,000. Small scale \$100; (2) = \$100; (3) & (4) = Same as permit; (6) = Precious metals severance tax ⁴ .	(1) = Large scale \$100. Small scale \$50; (2) = \$100; (3) & (4) = Same as permit. (All = annual.)	(1) = Large scale \$1,000. Small scale \$100; (2) = None; (3) & (4) = Same as permit. (No fees for minor technical adjustments.)
<i>UT</i>	<i>None (as of 1990)</i>			
<i>WA</i>	<i>?</i>			
WY	(1) = Permits; (2) = License; (5) = Acreage; (6) = Severance Taxes.	(1) = \$100.00; (2) = \$25.00; (5) = \$10/acre (\$2,000 max.); (6) = Varies.	N/A	(1) = \$200.00; (2) = N/A; (5) = \$10/acre (\$2,000 max.).

¹⁾ CA: Waste discharge permit fees vary. Small simple projects = small fees. Large complex projects = large fees. (Fees range \$600-\$10,000.)

²⁾ CA: County issues mining permits. Fees vary from hundreds to thousands of dollars.

³⁾ OR: Metal mines using flotation or chemical processing pay actual cost of permitting.

⁴⁾ SD: The precious metals severance tax is \$4/ounce plus 10% of net proceeds. Additional tax is required based on the price of gold as follows: \$1 more per ounce if price is \$500 or more; \$2 more per ounce if price is \$600 or more; \$3 more per ounce if price is \$700 or more; & \$4 more per ounce if price is \$800 or more.

QUESTION 8 (continued):

Fee requirements

Indicate the type and amount of fee required for SURFACE mining. (Question 5 in 1990 IMCC survey, but surface and underground mining were not differentiated)

KEY: (1) = Permit; (2) = License; (3) = Reclamation; (4) = Application; (5) = Acreage; (6) = Severance Tax; (7) = Other (Specified)

State	Fee type:	Fee amount	Renewal fee	Modification/Amendment fee
AZ	(3); (6).	(3) = \$3/acre disturbed. (6) = Varies.	--	--
CA ¹	(1); (7) = Reporting.	(1) = Varies ² .	(7) = Annual.	--
CO	(4); (7) = Annual.	(4) = \$75-\$8,000. (7) = \$281-\$1,000.	None.	(4) = \$150-\$7,000.
<i>ID</i>	<i>None (1990)</i>			
<i>MT</i>	<i>(1); (3); (4); (5); (6);</i>	<i>(1) = \$50+\$500 (3) = actual cost to reclaim site (4) = \$25 (5) = \$200- \$10,000/acre; \$5,000 minimum/site (6) = variable</i>	<i>--</i>	<i>--</i>
NV	(1); (3); (5); (7).	(1) = Varies. (3) = \$500-\$2,000 ⁷ . (5) = \$1.50/acre public land or \$2.50/acre private land (annual). (7) = \$100 for certain exploration projects.	(1) = Varies.	(1) = Varies.
NM	(1); (3); (4); (5).	(1) = Variable; (3) = Variable; (4) = Variable; (5) = Variable.	--	(1) = Variable.
<i>ND</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>

OR ³	(4)	(4) = \$675 maximum.	(4) = Annually-- not to exceed \$525.	(4) = Maximum \$400 in addition to annual renewal fee.
SD	(1) SDCL 45- 6B; (2) SDCL 45- 6; (3); (4); (6).	(1) = Large scale \$1,000. Small scale \$100. (2) = \$100. (3) & (4) = Same as permit. (6) = Precious metals severance tax.	(1)(3) & (4) = Large scale \$100. Small scale \$50. (2) = \$100. (All = annual.)	(1)(3) & (4) = Large scale \$1,000. Small scale \$100. (2) = None. (No fees for minor technical adjustments.)
<i>UT</i>	<i>None (1990)</i>			
WA ⁴	--	--	--	--
WY	(1); (2); (5).	(1) = \$100. (2) = \$25. (5) = \$10/acre (\$2,000 maximum).	N/A	(1) = \$200. (2) = N/A. (5) = \$10/acre (\$2,000 maximum).

¹⁾ CA: Waste discharge permit fees vary. Small simple projects = small fees. Large complex projects = large fees. (Fees range \$600-\$10,000.)

²⁾ CA: County issues mining permits. Fees vary from hundreds to thousands of dollars.

³⁾ OR: Metal mines using flotation or chemical processing pay actual cost of permitting.

⁴⁾ WA: \$650 fee for sand and gravel and industrial. Approximately \$20,000 for metal mines.

QUESTION 9A:

Public comment process

Does your law provide for a public comment process at any of the following stages?
(Question 6 in 1990 IMCC survey)

State	Does your law provide for a public comment process at any of the following stages?				
	Regulatory Development	Permit Review	Bond Release	Citizen Complaints	Other
AZ	Y	Y/N ¹	N	Y	N
CA	Y	Y	N	Y	--
CO	Y	Y	Y	Y	Y
<i>ID</i>	<i>N</i>	<i>Y</i>	<i>N</i>	<i>Y</i>	<i>--</i>
<i>MT</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>	<i>Y</i>
NV	Y	Y	N	Y	--
NM	Y	Y	Y	Y	--
<i>ND</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
OR ²	Y	Y	Y	--	--
SD ³	Y	Y	Y	Y	--
<i>UT</i>	<i>Y</i>	<i>Y</i>	<i>N</i>	<i>Y</i>	<i>--</i>
WA ⁴	--	--	--	--	--
WY	Y	Y	N	Y	N

¹⁾ AZ: No permits required for mining. Required for APP.

²⁾ OR: Answers reflect for chemical process mining. For aggregate mining the public input occurs during the local land use decision process.

³⁾ SD: Under the mining law there is a notification process. When an application is received, interested persons are notified. A public notice is also published when the application is complete. A contested case hearing is publicly held for contested permits. We typically welcome public comment at any time during the process, although it is not specified in law. On controversial applications, at times we hold informational meetings to get comments.

⁴⁾ WA: Proposals reviewed under State Environmental Protection Act (SEPA), similar to NEPA.

QUESTION 9B:***Public comment process***

Does your law provide an opportunity for a public hearing to be held? If so, within a certain time period? Please indicate the time period if applicable: ([Question 6 in 1990 IMCC survey](#))

State	Does your law provide for a public hearing to be held?	If so, within a certain time period? Please indicate the time period if applicable:
AZ	Y	60-120 days.
CA	Y	No set time period in regulations, but must comply with the state's open meeting law (not less than 10 days notice).
CO	Y	Usually within 30 days of submittal of application & again with decision.
<i>ID</i>	<i>N</i>	
<i>MT</i>	<i>Y</i>	<i>No set time period in regulations.</i>
NV	Y	Most issues within 60 days.
NM	Y	Within 30 days of date of public notice publication.
<i>ND</i>	<i>N/A</i>	<i>N/A</i>
OR	Y	Formally for chemical process permits only.
SD	Y	45-6B only--large scale. A hearing is to be held by the SD Board of Minerals & Environment for any contested permit within 90 days of receipt of a complete application. A final decision is to be rendered within 120 days. There is a provision that allows the Dept. to request a 45 day extension from the applicant. Small scale times are somewhat compressed.
<i>UT</i>	<i>N</i>	
WA	Y	(SEPA) Depends on type.
WY	Y	20 days after end of public comment period.

QUESTION 9C:

Public comment process

What types of appeal procedures does your law provide for (e.g. Administrative, Judicial)?
How long after a public hearing until a permit decision is required? ([Partially covered in Question 6 in 1990 IMCC survey](#))

State	What types of appeal procedures does your law provide for? (e.g. Administrative, Judicial)?	How long after a public hearing until a permit decision is required?
AZ	Administrative Procedures Act	As long as the Agency can take
CA	Administrative appeals allowed	N/A
CO	Administrative & Judicial	Average: 30 days
<i>ID</i>	<i>?</i>	<i>?</i>
<i>MT</i>	<i>Administrative followed by Judicial</i>	<i>30 days</i>
NV	Appeal to State Environmental Commission; Judicial appeal allowed after administrative decision	15 days
NM	Administrative through judicial.	--
<i>ND</i>	<i>N/A</i>	<i>N/A</i>
OR	Contested case hearing--Court of Appeals (applicants & operators); Circuit Court for public.	--
SD	Decisions of the Board may be appealed to the Circuit Court.	In most cases the decision is rendered at the hearing. In complex cases requiring findings of fact & conclusions of law, decision may be delayed 30 days.
<i>UT</i>	<i>?</i>	<i>?</i>
WA	Administrative & Judicial	For reclamation permit, 30 days after final SEPA decision
WY	Administrative & Judicial	60 days after an informal conference; 15 days after receipt of findings from a formal hearing

QUESTION 10A:

Types of acceptable bonds

Is a Performance Bond Required? If so, what areas are required to be bonded (i.e. entire permit area; proposed affected area; haul roads; processing or stockpile areas)? (Similar to Question 7 in 1990 IMCC survey, which does not cover the areas required to be bonded)

State	Is a Performance Bond required?	If so, what areas are required to be bonded (i.e. entire permit area; proposed affected area; haul roads; processing or stockpile areas)?
AZ	Y	Reclamation - all disturbed areas. Aquifer Protection Permit - all areas.
CA	Y	Bond covers cost of closing features such as tailing ponds, heap leach residue & water quality monitoring. SMARA: all surface disturbances.
CO	Y	Any type of mine related disturbance, including all but permit area listed above.
<i>ID</i>	<i>Y</i>	<i>?</i>
<i>MT</i>	<i>Y</i>	<i>Reclamation - all disturbed areas.</i>
NV	Y	Proposed affected area; haul roads; processing & stockpile areas.
NM	Y	Any disturbance within a permit area including: entire permit area, proposed affected area, haul roads, processing areas, and stockpile areas.
<i>ND</i>	<i>N/A</i>	<i>N/A</i>
OR	Y	Actual cost of reclamation; Dio. 37 (chemical process) - actual cost of reclamation & environmental contingency bond.
SD	Y	All acres to be affected.
<i>UT</i>	<i>Y</i>	<i>Site specific</i>
WA	Y	All areas disturbed & related to mining.
WY	Y	Entire permit area.

QUESTION 10B:

Bonding amounts required

What types of bonds are acceptable? (Question 7A in 1990 IMCC survey)

KEY: (1) Certificate of deposit; (2) Surety; (3) Collateral; (4) Letters of credit; (5) Mortgage of real estate; (6) Self-bonding; (7) Bond pool; (8) Other (specified)

State	What types of bonds are acceptable?
AZ	(1); (2); (3); (4); (6); (8) = Self insurance, trust, corporate financial test, annuities, cash.
CA ¹	(1); (2); (4); (8) = trust funds.
CO	(1); (2); (3); (4); (5); (6)
<i>ID</i>	<i>(1); (2); (3); (4)</i>
<i>MT</i>	<i>(1); (2);(3)?; (4)</i>
NV	(1); (2); (4); (6); (7); (8) = Cash (Same for all mining. Not applicable to oil/gas & geothermal.)
NM	(1); (2); (3); (4); (8) = 3rd party guarantee and cash.
<i>ND</i>	<i>N/A</i>
OR	(1); (2); (4)
SD	(1); (2); (4) (Note: Bond is not based on commodity--See answer to question 10B.)
<i>UT</i>	<i>(1); (2); (3); (4); (5); (6); (8) = Negotiable securities</i>
WA	(1); (2); (4); (5); (8) = Cash.
WY	(1); (2); (3); (4); (5); (6); (8) = <i>Negotiable securities</i>

¹⁾ CA: Varies by regional office.

QUESTION 10C:

Bonding amounts required

What is the amount per acre required under your bonding procedures? (Similar to Question 7 in 1990 IMCC survey)

State	What is the amount per acre required under your bonding procedures?
AZ	3 rd party actual costs.
CA	Bond values established on the basis of threat to water quality, not acreage disturbed. SMARA: cost of reclamation.
CO	We bond for the actual cost to reclaim the proposed or actual affected area.
<i>ID</i>	<i>\$1,800 per acre</i>
<i>MT</i>	<i>Actual cost for state to reclaim to the permitted second use.</i>
NV	Bond is calculated on cost to the state to reclaim per permit requirement.
NM	Cost of reclamation by a third party.
<i>ND</i>	<i>N/A</i>
OR	Actual cost of reclamation as determined by the Dept., including supervision & contracting costs.
SD	Under 45-6B large scale bond is based on actual cost to conduct reclamation as if state would have to hire third party contractor. Small scale is maximum \$2,500. 45-6 requires \$500/acre or statewide \$20,000 blanket bond.
<i>UT</i>	<i>Site specific</i>
WA	(Rate schedule on file at IMCC offices.)
WY	Site specific.

QUESTION 11:

Bond forfeiture and permit blocking

If a bond is forfeited is there a mechanism for permit blocking? (Not asked in 1990 IMCC survey, but related to Question 9, which was not asked in the 1995 or 2000 IMCC surveys)

State	If a bond is forfeited, is there a mechanism for permit blocking?
AZ	N
CA	N -- Never had to deal with this.
CO	Y
<i>ID</i>	<i>N</i>
<i>MT</i>	<i>N</i>
NV	N
NM	Y
<i>ND</i>	<i>N/A</i>
OR	Y
SD	Y -- Would depend on circumstances--rarely happens.
<i>UT</i>	<i>Y</i>
WA	Y
WY	Y

QUESTION 12B:

Enforcement procedures available

Are civil penalty assessments based upon the seriousness of the violation? . (Not asked in 1990 IMCC survey)

State	Are civil penalty assessments based upon the seriousness of the violation?
AZ	N
CA	Y
CO	Y
<i>ID</i>	<i>?</i>
<i>MT</i>	<i>Y</i>
NV	Y
NM	Y
<i>ND</i>	<i>N/A</i>
OR	Y
SD	Y (and other factors such as negligence, degree of willfulness, cooperation, etc.)
<i>UT</i>	<i>?</i>
WA	Y
WY	Y

QUESTION 13:

Mining and reclamation standards

Do your law and or rules, regulations, or policies provide specific standards for the following mining and reclamation activities? . (Question 13 in 1990 IMCC survey)

KEY: (1) Debris & contaminant removal; (2) Backfilling; (3) Sloping/Grading; (4) Land Leveling; (5) Erosion control (Topsoiling); (6) Mulching; (7) Drainage; (8) Temporary vegetation; (9) Permanent vegetation; (10) Blasting; (11) Fugitive dust; (12) Water quality; (13) Water quantity; (14) Disposal of processing waste; (15) Fly ash; (16) Fish & Wildlife; (17) Cultural resources

State	Specific standards provided for in each state's law &/or rules, regulations, or policies for the indicated mining and reclamation activities:		
	Law	Rules/Regulations	Policies
AZ	(3); (12); (13); (14); (15); (16); (17)	(3); (12); (13); (14); (15); (16); (17)	(12); (13); (14); (15)
CA	(1); (12); (13); (14); (16); (17)	All except (13) & (15). (2) = Not regs., performance standards.	
CO	All except (11).	All except (11) & (17).	(1)(12)(13)(17)
<i>ID</i>	<i>(1); (3); (5); (7); (9); 11-17 were not listed in the 1990 survey.</i>	<i>(1); (3); (5); (7); (9); 11-17 were not listed in the 1990 survey.</i>	
<i>MT</i>	<i>While all the activities except (15) are mentioned, specific standards for most are lacking.</i>	<i>While all the activities except (15) are mentioned, specific standards for most are lacking.</i>	
NV	(1); (3); (4); (5); (7); (11); (12); (13); (14); (16); (17)	(1); (2); (3); (4); (5); (6); (7); (9); (11); (12); (14); (15); (16)	(1); (6); (7); (11); (12)
NM	(2); (3); (5); (7); (9); (10); (12); (13); (16); (17)	(1); (2); (3); (5); (7); (9); (10); (12); (13); (16); (17)	
<i>ND</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
OR	(1); (3); (4); (5); (6); (7); (8); (9); (11); (12); (13); (14); (16)	(1); (3); (4); (5); (6); (7); (8); (9); (11); (12); (13); (14); (16)	(10); (17); (2) = where appropriate.
SD	(1); (2); (3); (4); (5); (9); (10); (11); (12); (14); (16); (17)	All except (15).	

<i>UT</i>		<i>(1); (2); (3); (4); (5); (6); (7); (8); (9); (10); 11-17 were not listed in the 1990 survey.</i>	
WA	(1); (2); (3); (4); (5); (6); (7); (8); (9); (10); (11); (12); (13)		
WY	(1); (2); (5); (7); (9); (10); (12); (13); (16)	All except (4), (11) & (15).	(2); (5); (6); (7); (9); (12); (13); (16); (17)

QUESTION 14A:

Post-Mining land uses following reclamation

Estimate by percentage the post-mine land uses following completion of reclamation activities. (Question 14 in 1990 IMCC survey)

(ALL NUMBERS ARE PERCENTAGES)

State	Grassland/ Pastureland	Woodland/ Forestland	Wildlife	Water (Lakes & Ponds)	Residential/ Commercial	Recreation	Cropland
AZ	35	5	50	3	3	2	2
CA	35	--	5	20	10	--	30
CO	-- ¹	-- ¹	-- ¹	5	5	5	5
<i>ID</i>	<i>45</i>	<i>45</i>	<i>5</i>	<i>2</i>	<i>1</i>	<i>1</i>	<i>1</i>
<i>MT</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>	<i>?</i>
NV	--	--	90 ³	10	--	--	--
NM	30	20	50	--	20	--	--
ND	60	.5	1	.5	.5	--	37.5
OR	--	--	--	--	--	--	--
SD	78/89 ⁵	--	19/1 ⁵	0/1 ⁵	1/1 ⁵	2/0 ⁵	0/8 ⁵
<i>UT</i>	<i>8</i>	<i>2</i>	<i>75</i>	<i>0</i>	<i>5</i>	<i>10</i>	<i>0</i>
WA	15	30	5	15	20	5	10
WY	97 ⁷	<1	97 ⁷	1	<1	<1	<1

¹⁾ CO: Combination of grassland/pastureland, woodland/forestland, & wildlife = 80%.

³⁾ NV: Wildlife/grazing.

⁵⁾ SD: Two sets of figures provided (divided by / in chart). First figure = under 45-6B/second figure = under 45-6.

⁷⁾ WY: Most lands have joint grassland & wildlife use.

QUESTION 14B:

Post-Mining land uses following reclamation

Are there contemporaneous reclamation requirements? If so, what are the specific conditions and time frames? (Not asked in 1990 IMCC survey)

State	Are there contemporaneous reclamation requirements?	If so, what are the specific conditions and time frames?
AZ	Y	Concurrent with mining unless not possible.
CA	Y	Reclamation plan must have schedule that provides for reclamation as early as possible.
CO	Y	Reclamation to occur as economically & technologically possible. No later than 5 years after completion of mining.
<i>ID</i>	<i>?</i>	<i>?</i>
<i>MT</i>	<i>Y</i>	<i>Encouraged, but not required. No later than 2 years after completion of mining.</i>
NV	N	Encouraged, but not required.
NM	Y	Must be done for new mines if practical.
ND	Y	To be worked out by the contractor and landowner.
OR	N	Encouraged, but not required.
SD	Y	Under SDCL 45-6B Rules on concurrent reclamation. Not specific. A plan with timetables must be submitted with the application. Interim reclamation must be completed within 2 years if no further disturbance is scheduled to occur within that timeframe.
<i>UT</i>	<i>?</i>	<i>?</i>
WA	Y	Segmented reclamation usually required. All reclamation must be completed 2 years after mining is completed.
WY	Y	The permit is used to define what is contemporaneous for that site.

QUESTION 15:**Abandoned mine lands: Incentives for reclaiming pre-law affected lands**

Does your law provide incentives for reclaiming pre-law affected lands? What types of incentives? (Question 10 in 1990 IMCC survey)

State	Does your law provide incentives for reclaiming pre-law affected lands?	Types of incentives (Bond credits; Fee waiver or reduction; Exemption from certain reclamation standards; Other?)
AZ	N	--
CA	N	Newly passed law limits liability for those reclaiming abandoned mines out of the goodness of their hearts.
CO	N	--
<i>ID</i>	<i>N</i>	<i>--</i>
<i>MT</i>	<i>N</i>	<i>--</i>
NV	N	--
NM	Y	Exemption from certain reclamation standards.
<i>ND</i>	<i>N/A</i>	<i>N/A</i>
OR	Y	Bond credits; Awards.
SD	Y	Under 45-6B, can be used as reclamation credit to go toward future expansions if plans are approved by the Board. Existing operations are limited to 200 additional acres for expansions without reclaiming existing disturbed land.
<i>UT</i>	<i>N</i>	<i>--</i>
WA	N	--
WY	N	--

QUESTION 16:

Abandoned mine lands: Pre-law affected lands and re-mining

Does your law provide that an operator may reclaim pre-law affected lands in lieu of reclaiming land affected under the existing permit as part of the current reclamation plan?
(Similar to Question 11 in 1990 IMCC survey, which is worded differently)

State	Does your law provide that an operator may reclaim pre-law affected lands in lieu of reclaiming land affected under the existing permit as part of the current reclamation plan?	Does your state have specific regulations regarding re-mining?
AZ	N	N
CA	N	N
CO	Y	N
<i>ID</i>	<i>N</i>	<i>?</i>
<i>MT</i>	<i>N?</i>	<i>Y</i>
NV	N	N
NM	N	N
ND	N	N
OR	N	N
SD	N	N
<i>UT</i>	<i>N</i>	<i>?</i>
WA	N	Y
WY	N	N

QUESTION 17A:

State non-coal Abandoned Mine Lands inventory

Does your state have a non-coal AML inventory or an estimate of the extent of abandoned non-coal solid mineral lands? If so, please provide a characterization of that inventory or estimate in the chart below: (Similar to Question 12 in 1990 IMCC survey, which is less specific but also covers AML reclamation and funding)

KEY: (1) = Number of mine openings; (2) = Number of hazardous structures; (3) = Acres of mine dumps; (4) = Acres of disturbed land; (5) = Acres of subsidence-prone areas; (6) = Miles of highwall; (7) = Miles of polluted water; (8) = Total number of abandoned acres; (9) = Total number of abandoned mine sites

State	Is there a state AML inventory or estimate?	If so, characterization of that inventory or estimate:
AZ	Y	(1) = 100,000; (3)(4) = not estimated; (9) = 100,000 (each opening or pit counts as 1).
CA	Y	(9) = Approx. 15,000 total, about 100 are known water quality problems.
CO	Y	(1) = 18,000 remain; (2) = Approx. 500?; (3)(4) & (8) = Unknown; (7) = 1,300; (9) = Not inventoried.
<i>ID</i>	<i>Y</i>	<i>500 acres</i>
<i>MT</i>	<i>Y</i>	<i>Only on USFS and BLM lands; 8,000 sites in database.</i>
NV	Y	(1) = Inventoried = 8,043 (inventoried as of 9/1/00); (2)(3)(4)(5)(6)(7) & (8) = Unknown; (9) = Estimate 50,000 sites that could pose physical hazard to people. Estimate <100 with water pollution issues--none flowing into streams or rivers.
NM	Y	(1) = Approx. 25,000.
<i>ND</i>	<i>N/A</i>	<i>N/A</i>
OR	Y	In patchwork form--BLM has an inventory, USFS has an inventory & the state has partial inventory, but these have not been combined to provide actual numbers by type.
SD	Y	An inventory of mines in the Black Hills is complete. Many of the sites were found through literature searches and review of U.S. Forest Service and Bureau of Land Management databases. Some field surveys were also done.
<i>UT</i>	<i>Y</i>	<i>8,400 acres</i>

WA	--	(9) = Inventory 800 sites that produced >\$2,000.
WY	--	--

QUESTION 17A-D:

Abandoned Mine Lands

Question 17A: Does your state have an abandoned mine land program for non-coal minerals? (Similar to Question 12 in 1990 IMCC survey, but not explicitly asked)

Question 17B: Are there any mining regulations for abandoned mines? (Part of Question 12 in 1990 IMCC survey)

Question 17C: Are any funds from the SMCRA AML fund used for non-coal AML work? (Part of Question 12 in 1990 IMCC survey)

Question 17D: Are other state funds available for non-coal AML work? If so, identify the source. (Not asked in 1990 IMCC survey)

State	17A	17B	17C	17D
AZ	Y	N	N	N
CA	--	Y ¹	N	Y ²
CO	Y	N	Y	Y ³
<i>ID</i>	<i>?</i>	<i>N</i>	<i>N</i>	<i>?</i>
<i>MT</i>	<i>Y</i>	<i>Y?</i>	<i>Y</i>	<i>Y, bond sales and severance tax on metal mines.</i>
NV	Y	Y	N	Y ⁴
NM	N	N	Y	Y ⁵
ND	N	Y	N	N
OR	-- ⁶	N	N	Y ⁷
SD	N	N	N	N
<i>UT</i>	<i>?</i>	<i>N</i>	<i>Y</i>	<i>?</i>
WA	Y (No \$)	N	N	N
WY	--	--	--	--

¹ CA: Chapter 15 regulations for active mines sometimes are applied.

² CA: Source: EPA 319 grants money collected as fines.

³ CO: Source: Gaming taxes; non-point source funds.

⁴ NV: Source: Fees: \$1.00 per mining claim recordation. Assessment: \$20 per acre on an approved Federal Plan of operating.

⁵ NM: Source: Penalties.

⁶ OR: We have the authority to develop one but there is no budget.

⁷ OR: On a project-by-project basis we have accomplished some AML reclamation.

QUESTION 18:

Personnel and Administration

Is the non-coal law administered by same state agency/division as the coal law?
(Question 15 in 1990 IMCC survey)

State	Non-coal law administered by same state agency, etc. as coal law?	If not, what agency/division/section administers the non-coal law?
AZ	N	State Mine Inspector, Department of Environmental Quality.
CA	N	State Water Resources Control Board, Office of Mined Land Reclamation. (Do not have a coal program.)
CO	Y	
<i>ID</i>	<i>Y</i>	
<i>MT</i>	<i>Y</i>	<i>Department of Environmental Quality, Permitting and Compliance Division administers both in two different Bureaus. Coal is handled by the Energy Industrial Minerals Bureau; Most other commodities by the Environmental Management Bureau.</i>
NV	N/A	NV Division of Environmental Protection, NV Division of Minerals (AML Program). No coal is mined in NV.
NM	Y	
ND	N	ND State Soil Conservation Committee.
OR	N	OR is not a primacy coal state under SMCRA.
SD	Y	SD is not a program state under SMCRA, but the state's laws still apply to coal. Both noncoal & coal mining are regulated by the Minerals & Mining Program, Division of Environmental Services, Department of Environment & Natural Resources.
<i>UT</i>	<i>Y</i>	
WA	N	Department of Natural Resources, Geology Division.
WY	Y	

QUESTION 19:

Personnel and Budget

How many full-time employees are assigned to the non-coal solid minerals program?

What is the annual budget for your non-coal regulatory program? (Similar to Question 16 in 1990 IMCC survey, but budget information not requested)

State	How many full-time employees are assigned to the non-coal solid minerals program?	What is the annual budget for your non-coal regulatory program?
AZ	ASMI = 11	ASMI \$750,000
CA	None dedicated to "mining" at State or Regional Water Boards; Office of Mined Land Reclamation = 19.	No separate budget for Chapter 15.
CO	23.9	\$2.2 million
<i>ID</i>	<i>4 (1990)</i>	<i>?</i>
<i>MT</i>	<i>19 (in 2 Bureaus). Energy Industrial Minerals Bureau has 5; Environmental Management Bureau has 14.</i>	<i>\$1.5 million (for 2 Bureaus). Energy Industrial Minerals Bureau has \$469,000; Environmental Management Bureau has \$1+million.</i>
NV	27 (Dept. of Minerals = 9; Dept. of Environmental Protection = 18)	Estimate \$1.5-\$2.0 million
NM	--	Approximately \$500,000
ND	N/A	N/A
OR	7	\$500,000
SD	12	Approximately \$500,000 for mining & mineral exploration.
<i>UT</i>	<i>3 (1990)</i>	<i>?</i>
WA	15	Approximately \$700,000
WY	11	\$520,000

QUESTION 20A:

NPDES Regulatory responsibility

Is the NPDES responsibility handled by the same agency/division that issues permits? If not, what is the name of the other agency/division/section? ([Question 17a in 1990 IMCC survey](#))

(NPDES stands for “National Pollutant Discharge Elimination System”, an EPA Program)

State	Is NPDES responsibility handled by same agency/division that issues permits?	If not, what is the name of the other agency/division/section:
AZ	--	Federal/AZ Department of Environmental Quality.
CA	N	SWRCB, NPDES Unit.
CO	N	CO Department of Health.
<i>ID</i>	<i>N</i>	<i>EPA/Division of Environment</i>
<i>MT</i>	<i>?</i>	<i>--</i>
NV	Y	--
NM	N	Environmental Department.
ND	N	Health Department
OR	N	--
SD	N	Surface Water Program.
<i>UT</i>	<i>N</i>	<i>Bureau of Water Pollution Control/Air Quality</i>
WA	N	Ecology.
WY	N	Water Quality Division of Department of Environmental Quality.

QUESTION 20B:

Air regulatory responsibility

**Is the air responsibility handled by the same agency/division that issues permits?
If not, what is the name of the other agency/division/section? (Question 17b in 1990
IMCC survey)**

State	Is air responsibility handled by same agency/division that issues permits?	If not, what is the name of the other agency/division/section:
AZ	--	Counties.
CA	N	Air Resources Control Board.
CO	N	CO Department of Health.
<i>ID</i>	<i>N</i>	<i>EPA/Division of Environment</i>
<i>MT</i>	<i>Y</i>	<i>The Department of Environmental Quality</i>
NV	Y	--
NM	N	Environmental Department.
ND	N	Health Department.
OR	N	--
SD	Y	Air Quality Program.
<i>UT</i>	<i>N</i>	<i>Bureau of Water Pollution Control/Air Quality</i>
WA	N	Ecology or county.
WY	N	Air Quality Division of Department of Environmental Quality.

QUESTION 20C:***Groundwater regulatory responsibility***

Is the groundwater responsibility handled by the same agency/division that issues permits? If not, what is the name of the other agency/division/section? ([Question 17c in 1990 IMCC survey](#))

State	Is Groundwater responsibility handled by same agency/division that issues permits?	If not, what is the name of the other agency/division/section:
AZ	--	AZ Department of Environmental Quality.
CA	N	SWRCB, Chapter 15.
CO	Y	--
<i>ID</i>	<i>N</i>	<i>Dept. of Water Resources</i>
<i>MT</i>	<i>Y</i>	<i>The Department of Environmental Quality</i>
NV	Y	--
NM	N	Environmental Department.
ND	N	Health Department.
OR	Y	To some degree.
SD	Y	Mining Program & Groundwater Quality Program have varying authorities.
<i>UT</i>	<i>N</i>	<i>Bureau of Water Pollution Control/Air Quality</i>
WA	N	Ecology.
WY	Y	--

QUESTION 20D:

Mine waste regulatory responsibility

Is the mine waste responsibility handled by the same agency/division that issues permits?
If not, what is the name of the other agency/division/section? ([Question 17d in 1990 IMCC survey](#))

State	Is mine waste responsibility handled by the same agency/division that issues permits?	If not, what is the name of the other agency/division/section:
AZ	--	AZ Department of Environmental Quality.
CA	N	SWRCB, Chapter 15.
CO	Y	--
<i>ID</i>	<i>Y</i>	<i>--</i>
<i>MT</i>	<i>Y</i>	<i>The Department of Environmental Quality</i>
NV	Y	--
NM	N	Environmental Department.
ND	N	--
OR	Y	To some degree.
SD	Y	--
<i>UT</i>	<i>Y</i>	<i>--</i>
WA	N	Ecology.
WY	Y	--

QUESTION 20E:

Hazardous/solid waste responsibility

Is hazardous/solid waste responsibility handled by the same agency/division that issues permits? If not, what is the name of the other agency/division/section? ([Question 17e in 1990 IMCC survey](#))

State	Is hazardous/solid waste responsibility handled by the same agency/division that issues permits?	If not, what is the name of the other agency/division/section:
AZ	--	AZ Department of Environmental Quality.
CA	N	Department of Toxic Substances.
CO	Y	--
<i>ID</i>	<i>N</i>	<i>EPA/Division of Environment</i>
<i>MT</i>	<i>Y</i>	<i>The Department of Environmental Quality</i>
NV	Y	--
NM	N	Environmental Department.
ND	N	Health Department
OR	N	--
SD	N	Waste Management Program.
<i>UT</i>	<i>N</i>	<i>Division of Environmental Health / Division of Water Rights</i>
WA	N	Ecology.
WY	Y	Hazardous waste is handled by Solid & Hazardous Waste Division of DEQ.

QUESTION 20F:

Dam safety responsibility

Is dam safety responsibility handled by the same agency/division that issues permits? If not, what is the name of the other agency/division/section? (Question 17f in 1990 IMCC survey)

State	Is dam safety responsibility handled by the same agency/division that issues permits?	If not, what is the name of the other agency/division/section:
AZ	--	ASMI & Water Resources.
CA	N	Department of Water Resources & Dam Safety.
CO	N	State engineer.
<i>ID</i>	<i>N</i>	<i>Department of Water Resources</i>
<i>MT</i>	<i>N</i>	<i>Department of Natural Resources and Conservation, Dam Safety Bureau: Privately owned Dams = Water Operations Bureau (Michele Lemieux (406) 444-6613); State Dams = State Water Projects Bureau (Kevin Smith (406) 444-2962).</i>
NV	N	Division of Water Resources.
NM	N	State Engineer's Office and Corps of Engineers.
ND	N	State Water Commission
OR	N	--
SD	N	Water Rights Program.
<i>UT</i>	<i>N</i>	<i>Division of Dam Safety</i>
WA	N	Ecology.
WY	N	State Engineer Office.

QUESTION 20G:

Mine safety and health responsibility

Is mine safety & health responsibility handled by the same agency/division that issues permits? If not, what is the name of the other agency/division/section? (Not asked in 1990 IMCC survey)

State	Is mine safety & health responsibility-same agency/division that issues permits?	If not, what is the name of the other agency/division/section:
AZ	Y	ASML.
CA	N	CA Occupational Safety & Health Administration.
CO	Y	--
<i>ID</i>	<i>?</i>	<i>?</i>
<i>MT</i>	<i>N</i>	<i>Montana Department of Labor and Industry, Safety and Health Bureau</i>
NV	N	Division of Industrial Relations Mine Inspector.
NM	N	State Mine Inspector.
<i>ND</i>	<i>N/A</i>	<i>N/A</i>
OR	N	--
SD	N	Mine Safety & Health Administration.
<i>UT</i>	<i>?</i>	<i>?</i>
WA	N	Federal Mine Safety & Health Administration, & Labor & Industry.
WY	N	State Mine Inspector.

QUESTION 21:

Statistics—Number of regulated operations

How many regulated mining operations are there in your state? (Similar to Question 18 in 1990 IMCC survey, but surface and underground mining were not differentiated)

State	Number of regulated mining operations in the state:	
	Underground	Surface
AZ	4 with 35 or more employees & 8-10 small operators (2-10 employees).	14
CA	33	114 with WDR's/1,400 permitted.
CO	90	1,671
<i>ID</i>	<i>N/R</i>	<i>N/R</i>
<i>MT</i>	<i>N/R</i>	<i>1,065 total, including underground</i>
NV	N/A ¹	N/A ¹
NM	<5	182 (Includes sand & gravel).
<i>ND</i>	<i>N/A</i>	<i>N/A</i>
OR	1	830
SD	0	45-6B = 50; 45-6 = 2,084.
<i>UT</i>	<i>(included in Surface figure)</i>	<i>184 (1990)</i>
WA	1 active (several undergoing closure).	1,259
WY	10	830

¹) NV: Total is 320. Some operations are both underground and surface.

QUESTIONS 22 & 23:

Statistics—Number of acres permitted and reclaimed

Question 22: How many acres are under permit in your state? (Question 19 in 1990 IMCC survey)

Question 23: How many acres on average are reclaimed per year in your state: (Question 20 in 1990 IMCC survey)

State	Number of acres under permit:	Average acres reclaimed per year:
AZ	--	--
CA	--	--
CO	161,729	Unknown
<i>ID</i>	<i>N/R</i>	<i>300</i>
<i>MT</i>	<i>N/R</i>	<i>--</i>
NV	121,735	81
NM	No data.	No data.
<i>ND</i>	<i>--</i>	<i>--</i>
OR	--	--
SD	45-6B = 7,131; 45-6 = 11,825.	45-6B = 98; 45-6 = 750.
<i>UT</i>	<i>19,426</i>	<i>75</i>
WA	40,000	4,000
WY	519,241	Unknown

QUESTION 24:

Statistics—Number of site inspections per year

Question 24A: Is there a minimum number of site inspections required per year?
(Question 21a in 1990 IMCC survey)

Question 24B: If so, how many? (Question 21b in 1990 IMCC survey)

Question 24C: How many inspections were actually conducted on regulated mines included in Question 21 during 1995? (Question 21c in 1990 IMCC survey)

State	<u>Column 1: Is there a minimum number of site inspections required per year?</u> Column 2: If so, how many? Column 3: How many inspections were actually conducted on regulated mines included in question 21 during 1995?		
	Column 1:	Column 2:	Column 3:
AZ	Y	Annually/quarterly.	Approximately 52.
CA	Y	Annual (based on filing date).	SMARA: 840. Regional Board staff to inspect on an annual basis.
CO	N	--	(In 1994) 767
<i>ID</i>	<i>Y</i>	<i>1</i>	<i>N/R</i>
<i>MT</i>	<i>Y</i>	<i>1 or 3 if cyanide is used or minesite is >1000 acres</i>	<i>?</i>
NV	Y	At least yearly.	653 in 1999.
NM	Y	Quarterly; monthly on actively reclaiming sites.	Approximately 300.
<i>ND</i>	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>
OR	N	Dictated by performance measure. We do 600-800 per fiscal year.	725
SD	N ¹	--	(End of 1999) 45-6B = 278; 45-6 = 348.
<i>UT</i>	<i>N</i>	<i>N/R</i>	<i>80</i>

WA	Y	Metals = 4; all others = 1.	1,500 or more.
WY	Y	1 per mine per calendar year.	Unknown.

¹⁾ SD: Under 45-6B only a pre-permitting inspection is required. However, each permitted operation is inspected once per year and the gold mines are inspected a number of times per year.

QUESTION 25:**Statistics—Number of non-regulated or exempt operations**

What is your estimated number of non-regulated or exempt mining operations (if applicable) in your state? (Not asked in 1990 IMCC survey)

State	Estimated number of non-regulated or exempt mining operations:	
	Underground	Surface
AZ	N/A	N/A
CA	--	--
CO	Approximately 30 requests for an exemption are granted annually (underground and surface total).	Approximately 30 requests for an exemption are granted annually (underground and surface total).
<i>ID</i>	?	?
<i>MT</i>	?	?
NV	Unknown	Unknown
NM	0	Approximately 120.
<i>ND</i>	--	--
OR	Approximately 2-5.	Total exemption = 405. Limited exemption (pre 1972) = 120.
SD	1 (under 45-6B).	0
<i>UT</i>	?	?
WA	--	500-1,000
WY	0	--

QUESTION 26:

Mineral Commodities

Respondents were asked to indicate those mineral commodities (listed on the questionnaire) that are *currently being produced* in the state. Responses are listed below by state: ([Question 22 in 1990 IMCC survey](#))

Arizona:

Surface/Regulated: Cement, Clays (Kaolin, Common Clay, Fuller's Earth), Copper, Diatomite, Gem Stones, Gypsum, Lime, Molybdenum (By-Product), Perlite, Pumice and Volcanic Cinder, Sand and Gravel, Sand - Silica, Silver (By-Product), Stone (Crushed), and Stone (Dimension).

Surface/Regulated Minor Non-Metals: Bentonite and Zeolites.

Underground/Regulated: Copper, Gold, Iron Oxide Pigments, Lead (Galena), Mercury (Production is Insignificant), Molybdenum (By-Product), Silver (By-Product), Uranium (Stand By), and Zinc (Sphalerite) (By-Product).

California:

Surface/Regulated: Boron (Solution), Calcium and Calcium Compounds, Cement, Clays (Kaolin, Common Clay, Fuller's Earth), Diatomite, Feldspar, Nepheline Syenite, and Aplite, Gem Stones, Gold, Gypsum, Iron Ore, Lithium (Solution), Peat, Perlite, Rare-Earth Minerals and Metals, Salt, Sand and Gravel, Sand - Silica, Shale, Shell, Stone (Crushed), Stone (Dimension), Talc and Pyrophyllite, and Tungsten.

Surface/Regulated Minor Non-Metals: Zeolites and Wollastonite.

Surface/Non-Regulated: Lime, Limestone and Dolomite.

Underground/Regulated: Gold.

Colorado:

(Note: Some commodities listed may not be produced at this time, but would be regulated if they were.)

Surface/Regulated: Abrasive Materials, Aluminum, Asbestos, Barite, Beryllium, Bismuth, Boron, Bromide (Bromine), Cadmium, Calcium and Calcium Compounds, Cement (National), Chromium, Clays (Kaolin, Common Clay, Fuller's Earth), Cobalt, Copper, Diatomite, Feldspar, Nepheline Syenite, and Aplite, Fluorspar, Gallium, Gem Stones, Gold Graphite, Gypsum, Iron Ore, Kyanite and Related Materials, Lead (Galena), Lightweight Aggregate, Lime, Limestone and Dolomite, Lithium, Magnesium, Magnesium Compounds, Manganese, Mica Serecite (Scrap Mica), Molybdenum, Nickel, Nitrogen, Oil Shale, Peat, Perlite, Phosphate Rock, Platinum-Grown Materials, Pumice and Volcanic Cinder, Rare-Earth Minerals and Metals, Phenium, Sand and Gravel, Sand - Silica, Shale, Silicon, Silver, Sodium Compounds, Sodium, Stone (Crushed), Stone (Dimension), Sulfur and Pyrites, Tar Sands, Tack and Pyrophyllite, Thorium, Titanium, Topsoil, Tungsten, Uranium, Vanadium, Vermiculite, Zinc (Sphalerite), Zirconium and Hafnium.

Surface/Regulated Minor Metals: Arsenic, Cesium and Rubidium, Germanium, Thallium, Indium, Magnetite, Selenium, and Tellurium.

Surface/Regulated Minor Non-Metals: Bentonite, Iodine, Zeolites, Quartz Crystal, Strontium, and Wollastonite.

Underground/Regulated: Abrasive Materials, Aluminum, Asbestos, Barite, Beryllium, Bismuth, Boron, Bromide (Bromine), Cadmium, Clays (Kaolin, Common Clay, Fuller's Earth), Copper, Diatomite, Feldspar, Nepheline Syenite, and Aplite, Fluorspar, Gallium, Gem Stones, Gold, Graphite, Gypsum, Iron Ore, Kyanite and Related Materials, Lead (Galena), Lightweight Aggregate, Lime, Limestone and Dolomite, Lithium, Magnesium, Magnesium Compounds,

Manganese, Mica Serecite (Scrap Mica), Molybdenum, Nickel, Nitrogen, Oil Shale, Peat, Perlite, Phosphate Rock, Platinum-Grown Materials, Pumice and Volcanic Cinder, Rare-Earth Minerals and Metals, Phenium, Sand and Gravel, Sand - Silica, Shale, Silicon, Silver, Solium Compounds, Sodium, Stone (Crushed), Stone (Dimension), Sulfur and Pyrites, Tar Sands Talc and Pyrophyllite, Thorium, Titanium, Topsoil, Tungsten, Uranium, Vanadium, Vermiculite, Zinc (Sphalerite), Zirconium and Hafnium.

Underground/Regulated Minor Metals: Arsenic, Cesium and Robidium, Germanium, Thallium, Indium, Magnetite, Selenium, and Tellurium.

Underground/Regulated Minor Non-Metals: Bentonite, Iodine, Zeolites, Quartz Crystal, Strontium, and Wollastonite.

Idaho:

Montana:

Nevada:

Surface/Regulated: Barite, Cement, Chert, Clays (Kaolin, Common Clay, Fuller's Earth), Copper, Diatomite, Gem Stones, Gold, Gypsum, Lightweight Aggregate, Lime, Limestone and Dolomite, Lithium, Magnesium Compounds, Mercury, Perlite, Pumice and Volcanic Cinder, Salt, Sand and Gravel, Sand - Silica, Silver, Stone (Crushed) and Stone (Dimension), Sulfur and Pyrites.

Surface/Regulated/Minor Non-Metals: Bentonite, Zeolites, Quartz Crystal.

Surface/Non-Regulated: Topsoil.

Underground/Regulated: Gold, Mercury, Perlite, Silver.

New Mexico:

Surface/Regulated: Abrasive Materials, Calcium and Calcium Compounds, Copper, Gold, Gypsum, Iron Ore, Lightweight Aggregate, Limestone and Dolomite, Mica Serecite (Scrap Mica), Molybdenum, Perlite, Pumice and Volcanic Cinder, Salt, Sand - Silica, Silver, Stone (Dimension), Tin, Uranium, and Vanadium.

Surface/Regulated/Minor Non-Metals: Zeolites and Quartz Crystal.

Surface/Non-Regulated: Potash, Sand and Gravel, and Stone (Crushed).

Underground/Regulated: Copper, Gold, Potash, Salt, Silicon, Silver, Uranium, and Vanadium.

Underground/Regulated/Minor Non-Metals: Quartz Crystal.

Underground/Non-Regulated: Pumice and Volcanic Cinder, Sand and Gravel, Sand - Silica, Silver and Stone (Dimension), Tin.

Underground/Non-Regulated/Minor Non-Metals: Zeolites.

North Dakota:

Surface/Non-Regulated: Clays (Kaolin, Common Clay, Fuller's Earth), Sand and Gravel, Scoria and Stone (Crushed).

Oregon:

Surface/Regulated: Abrasive Materials, Cement, Clays (Kaolin, Common Clay, Fuller's Earth), Diatomite, Gem Stones, Gold (Placer), Lightweight Aggregate, Lime, Limestone and Dolomite, Perlite, Pumice and Volcanic Cinder, Sand and Gravel, Sand - Silica, Shale, Stone (Crushed), Stone (Dimension) and Topsoil.

Surface/Regulated/Minor Non-Metals: Asphalt-Native and Zeolites.

Surface/Non-Regulated: Gem Stones.

South Dakota:

Surface/Regulated: Beryllium (Pegmatite), Cement, Clays (Kaolin, Common Clay, Fuller's Earth), Columbium and Tantalum (Pegmatite), Feldspar Nepheline Syenite, and Aplite (Pegmatites), Gem Stones (Rose Quartz), Gold, Gypsum, Iron Ore, Lightweight Aggregate, Lime, Limestone and Dolomite, Lithium (Pegmatite), Mica Serecite (Scrap Mica)(Pegmatite), Sand and Gravel, Sand - Silica, Shale, Silver, Stone (Crushed) and Stone (Dimension). The following have been produced historically, but non actively mined today: Tin (Pegmatites), Tungsten and Uranium.

Surface/Regulated/Minor Non-Metals: Bentonite.

Underground/Non-Regulated: Gold, Sand and Gravel, Sand - Silica, Shale and Silver.

[South Dakota:](#)

[Utah:](#)

Washington:

Surface/Regulated: Calcium and Calcium Compounds, Cement, Clays (Kaolin, Common Clay, Fuller's Earth), Diatomite, Feldspar, Nepheline Syenite, and Aplite, Gem Stones, Gold, Lead (Galena), Lime, Magnesium, Pumice and Volcanic Cinder, Sand and Gravel, Sand - Silica, Shale, Silicon, Silver, Stone (Crushed), Stone (Dimension), Topsoil and Zinc (Sphalerite).

Surface/Regulated/Minor Non-Metals: Bentonite, Zeolites and Quartz Crystal.

Wyoming:

Surface/Regulated: Calcium and Calcium Compounds, Chromium, Diatomite, Gem Stones, Gold, Gypsum, Lightweight Aggregate, Lime, Limestone and Dolomite, Rare-Earth Minerals and Metals, Sand and Gravel, Sand - Silica, Shale, Silver, Stone (Crushed), Stone (Dimension), Topsoil and Uranium.

Surface/Regulated/Minor Non-Metals: Bentonite and Zeolites.

Underground/Regulated: Gold and Silver.

QUESTION 27:

Most significant problems

What are the most significant problems in non-coal minerals mining in your state? Check all that apply and rank the top five: (Question 23 in 1990 IMCC survey)

KEY: (1) = Blasting; (2) = Fugitive dust; (3) = Water quality; (4) = Visual screening; (5) = Safety; (6) = Reclamation; (7) = Land use / Zoning; (8) = Groundwater withdrawal; (9) = Ground de-watering; (10) = Sinkholes / Subsidence; (11) = Erosion / Sedimentation; (12) = Traffic; (13) = Reclamation bonds; (14) = Other (specified)

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
AZ ¹	3	1		2	5							4		
CA			X		X	2	5	X	X		X	3	4	1 ²
CO			4	2			1					3	6	5,7 ³
<i>ID</i>			<i>2</i>	<i>1</i>		<i>4</i>					<i>3</i>		<i>5</i>	
<i>MT</i>	<i>4</i>		<i>3</i>			<i>1</i>	<i>2</i>						<i>5</i>	
NV			4		5			3	2				1	
NM	5	2	1			X		4			X		3	
ND			2			1		3		5	4			
OR ⁷	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SD	5	X	X	X		3	X				2		4	1 ⁸
<i>UT</i>		<i>5</i>	<i>2</i>	<i>X</i>		<i>3</i>	<i>X</i>	<i>X</i>		<i>X</i>	<i>4</i>	<i>X</i>	<i>1</i>	
WA			X			X	X					X		
WY	3			2			1							

¹⁾ AZ: Most problems are associated with sand & gravel operations.

²⁾ CA: Acid mine drainage.

³⁾ CO: Noise.

⁷⁾ OR: OR is so diverse that depending on the area any of the listed problems may be the "problem of the day."

⁸⁾ SD: Acid mine drainage at gold mines.

QUESTION 28:

Special experience available

Does your agency/related agencies have special experience in any area of mining that may be made available to others? (Similar to Question 24 in 1990 IMCC survey, which did not include “resource evaluation”)

KEY: (1) = Blasting; (2) = Operation of seismograph; (3) = Water quality; (4) = Air quality; (5) = Sinkholes (formation, prevention); (6) = Resource evaluation; (7) = Erosion control; (8) = revegetation; (9) = Mine engineering & planning; (10) = Mining geology; (11) = Hydrology; (12) = Public safety / Mine safety; (13) = Hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) &/or Toxic Substances Control Act (TSCA); (14) = Other (specified)

State	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
AZ	X	X	X	X	X	X	X	X	X	X	X	X	X	
CA		X	X				X	X		X	X	X	X	X ¹
CO	X		X				X	X		X	X	X		X ²
<i>ID</i>							<i>X</i>	<i>X</i>						
<i>MT</i>		<i>X</i>	<i>X</i>						<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>		
NV			X	X		X	X	X	X	X	X	X	X	
NM	X	X	X				X	X	X	X	X	X		
ND			X			X	X		X	X	X			
OR	X						X			X				
SD		X	X	X		X	X	X	X	X	X			X ³
<i>UT</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>		<i>X</i>							
<i>WA</i>										<i>X</i>				
WY	X	X									X			

¹⁾ CA: Acid mine drainage.

²⁾ CO: Geochemistry, Geo. stability problems.

³⁾ SD: Acid mine drainage prediction & control.

QUESTION 29:

State publications useful to other states

List Publications developed in your state that may be useful to other states. Identify as to type (technical, general information, legislative, etc.). Please provide the date of the publication, and a contact person for this information. ([Question 25 in 1990 IMCC survey](#))

Arizona:

California:

Contact: Rick Humphreys, 916/657-0759, for this information:

- Report to Legislature: *Acid Generation Potential Tests*, 1990, 90-18CWP.
- State of the Art: *Predicting Contaminant Transport in the Vadose Zone*, 1990, 90-17CWP.
- Technical Advisory Committee's Report on Abandoned Mines*, 1994.

Colorado:

Georgia:

Contact: Jeff Cown, Program Manager, 404/362-2696, for this information.

- Surface Mining Act*
- Rules for Surface Mining*
- Surface Mining Land Use Plan*
- Surety Bond and Letter of Credit Format*

Idaho:

Illinois:

Contact: Michael Falter, 217/782-9976, for this information:

- Surface Mining for Minerals Other Than Coal in Illinois*
- Blasting and Explosives Division*
- Legislation: *HB 1486*
- IL Administrative Code, Part 300, Title 62: Mining*
- Legislation: *Surface-Mined Land Conservation and Reclamation Act (as Amended)*

Indiana:

Contact: Jack McGriffin, 317/232-1551, for any available information.

Kentucky:

Contact: Roy McQueary, 502/564-2340, for any available information.

Louisiana:

Contact: Anthony Duplechin, 504/342-5528, for any available information.

Maine:

Contact: Mark Stebbins, 207/287-3901, for this information:

- Metallic Mineral Mining - Baseline Monitoring Plans*, March 1993.

Maryland:

Contact: C. Edmon Larrimore, 410/631-8055 (E-mail: elarrimore@mde.state.md.us), for any available information.

Mississippi:

Contact: Ken McCarley, 601/961-5515, for any available information.

Missouri:

Contact: Charles A. Stieffermann, 573/751-4041, for this information:

- Laws and Regulations

Montana:

Nevada:

Contact: Alan R. Coyner, 702/687-5050. The following are available on Nevada's web site: www.minerals.state.nv.us:

- L6: *Permits Required Before Mining or Milling Can Begin*
- \x95: *Nevada Major Mines*, Published Annually.
- \x95: *Nevada Mineral Industries*, Published Annually.
- \x95: *Nevada Exploration Survey*, Published Annually.

New Jersey:

Contact: Howard Black, Chief of Inspection & Enforcement, Office of Safety Compliance, NJ Dept. of Labor, CN386, Trenton, NJ 08625-0386, for any available information.

New Mexico:

New York:

Contact: Steve Potter, 518/457-0100, for this information:

- Brochure on *Creating Wetlands Through Mined Land Reclamation*, April 1995.
- Guidance to Staff for Creating Wetlands as Part of Unconsolidated Surface Mining Reclamation*, April 1995.
- Resource Extraction Management Practices Catalogue for Nonpoint Source Pollution Prevention and Water Quality Protection in New York State*, November 1994.

North Carolina:

Contact: Caroline Medlin, 919/733-4574, for the first four of the following technical information listings, and Tracy Davis, 919/733-4574, for the final listing:

- Erosion and Sediment Control Planning and Design Manual*, 1988.
- Erosion and Sediment Control Field Manual*, 1991.
- Erosion and Sediment Control Inspector's Guide*, 1993.
- Erosion and Sediment Control Video Modules*, 1991.
- Surface Mining Manual, A Guide for Permitting, Operation and Reclamation*, 1997.

North Dakota:

Contact: Scott Hochhalter, 701/328-2650, for this information:

- Legislative, *Surface Mining Reports Law*.

Ohio:

Contact: William Boyle, 937/599-1445, for this information:

- *Wildlife Habitat Enhancement of Mined Lands*, (General Information), 1994.
- *Report on Ohio Mineral Industries*, (General Information), Produced Annually.

Oklahoma:

Contact: Douglas Schooley, 405/521-3859, for any available information.

Oregon:

Contact: Dawn Marshall, 541/967-2039, for this information:

- *Best Management Practices Manual*.
- *An Economic Analysis of Construction*.
- *Aggregate Markets and the Results of a Long Term Forecasting Model*.

Pennsylvania:

Contact: J. Scott Roberts, P.G., 717/787-5103, for any available information.

\x95 *Annual Report on Mining Activities*, published annually, general information.

South Carolina:

Contact: David Scaturro, 803/896-4264, for any available information.

South Dakota:

Contact: Eric Holm, 605/773-4201, for this information:

- Under SDCL 45-6B we are required to prepare an acreage report and a summary of large scale gold mining in South Dakota on an annual basis. We print a limited number to minimize costs.

Tennessee:

Contact: TN Division of Geology Publications, 13th Floor, L & C Tower, 401 Church Street, Nashville, TN 37243-0445, for this information:

- Various publications available on coal, limestone and dolomite, phosphate, clays, etc.

Utah:

Virginia:

Contact: Gary Potter, 804/951-6313, or Ron Mullins, 804/951-6315 for this information:

- *Mineral Mining Law and Regulations*, 1978, Consists of environmental law, regulations, revegetation guidelines and drainage handbook.
- *Mineral Mine Safety Laws of Virginia*, 1999 Edition - Contains worker safety laws, certification and mine licensing information.
- *Safety and Health Regulations for Mineral Mining 1998* - Contains worker safety regulations including blasting.
- *Education and Training Course Catalog for Mineral Mining 1996* - Provides a listing and description of courses available from Division of Mineral Mining.
- *Education & Training Plan for Mineral Mining*, 1996; A plan developed by Division of Mineral Mining staff to provide training and assistance. A summary is also available.
- *General Mineral Miner Course Guide*, 1998; Provides an overview of mining practices and hazards associated with mineral mining.
- \x95 *Record Book for Mineral Mine Operators 1999* - Contains forms for maintaining records and information required by the mining laws of Virginia.
- \x95 *Public Hearings Informational Brochure* - Contains information on the public hearing process related to mineral mining permits.

Washington:

Contact: Dave Norman, 360/902-1439, for this information:

•*Best Management Practices for Reclaiming Surface Mines in Washington and Oregon*, January 1996.

•*Washington Geology*, Periodical.

•*Surface Mining in Washington: Regulatory Responsibilities of Federal, State, and Local Government Agencies 1994*, January 1994.

•*Reclamation of Sand and Gravel Mines*.

•*Reclamation of Quarries*.

Wyoming:

QUESTION 30:**Value and tonnage of non-coal solid mineral production**

What is the value and amount of non-coal solid mineral production in your state for the last year of record (Year, Value, Tonnage)? ([Question 26 in 1990 IMCC survey](#))

State	Year	Value	Tonnage
AZ	1995	\$4,176,877,000	Unknown
CA	1995	\$2.7 billion	--
CO	1992	\$388.5 million	Unknown
<i>ID</i>	<i>1986</i>	<i>\$246.7 million</i>	<i>N/R</i>
<i>MT</i>	<i>1988</i>	<i>\$463.4 million</i>	<i>N/R</i>
NV	1999	\$2.7 Billion	Not Additive
NM	1998	\$890,000,000 estimated	14 million estimated
ND	1995	\$16 million estimated	3.5 million estimated
OR	1995	\$240 million at mine mouth	--
SD	1998	\$269 million	Not Available
<i>UT</i>	<i>1988</i>	<i>\$990 million</i>	<i>N/R</i>
WA	--	--	--
WY	1994 production	\$222,343,338	31,842,538

QUESTION 31:

Other comments (Question 27 in 1990 IMCC survey)

Arizona:

California:

As can be seen by responses, we do not have a single mine permitting agency.

Colorado:

Value information in question 30 is provided by CO Geological Survey.

Idaho:

Montana:

Nevada:

New Mexico:

North Dakota:

Oregon:

South Dakota:

Utah:

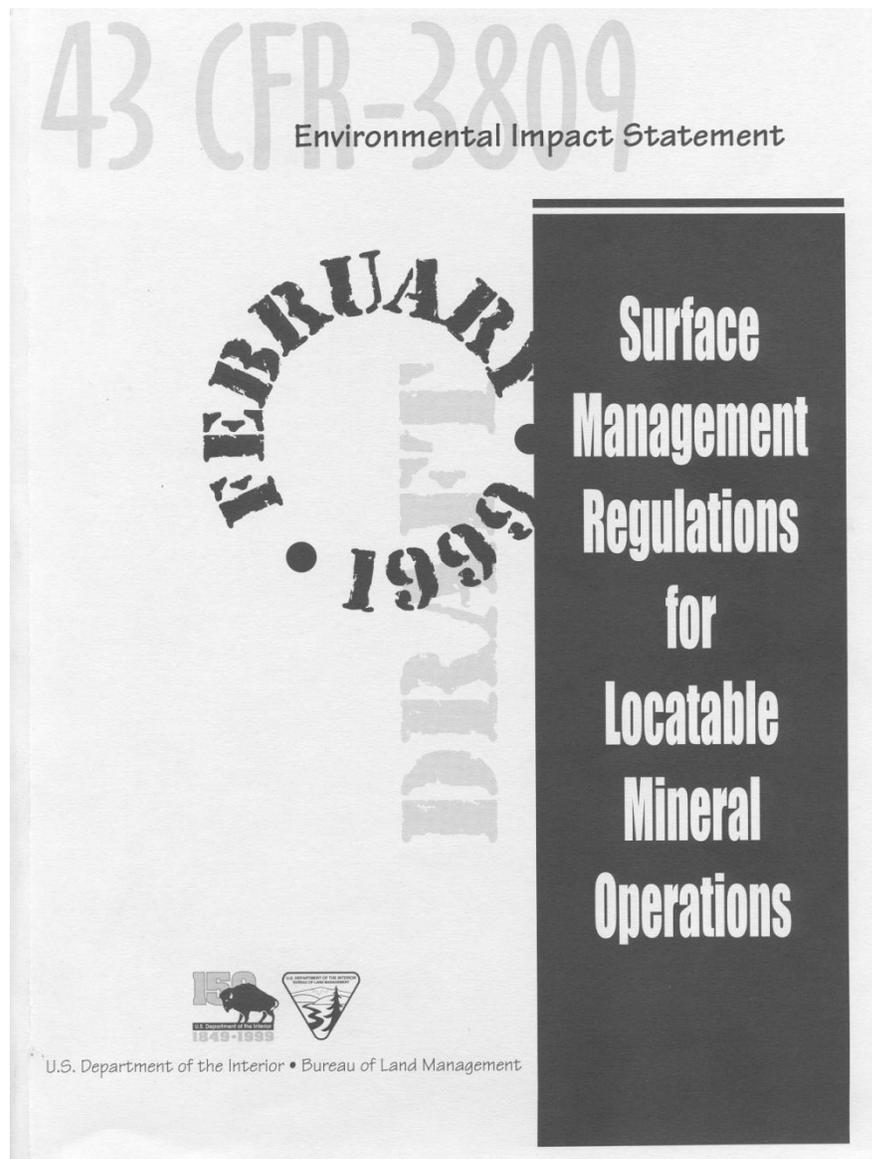
Washington:

Wyoming:

QUESTION 33:**State contact person** (Question 29 in 1990 IMCC survey)

State	Contact Person/Title	Agency	Phone Number
AZ	Douglas K. Martin, State Mine Inspector, or Bill Hawes, Asst. Mine Inspector	1700 W. Washington, #403, Phoenix, AZ 85007-2805	(602) 542-5971
CA	Jim Pompy & Rick Humphreys	Pompy = CA Dept. of Conservation; Humphreys = SWRCB	Humphreys = (916) 657-0759
CO	H. Bruce Humphries, Minerals Program Supervisor	Division of Minerals and Geology	(303) 866-3567
<i>ID</i>	<i>Thomas R. Markland, Chief</i>	<i>Department of Lands, Bureau of Minerals</i>	<i>(208) 334-3569</i>
<i>MT</i>	<i>Robin Mcculloch, Associate Research Mining Engineer</i>	<i>Montana Bureau of Mines and Geology</i>	<i>(406) 496-4171</i>
NV	Alan R. Coyner, Administrator	NV Division of Minerals, 400 W. King Street, #106, Carson City, NV 89703,	(775) 687-5050
NM	Kerrie Neet, Bureau Chief, or Fernando R. Martinez, Program Manager	Mining & Minerals Division, Energy, Minerals & Natural Resources Dept.	(505) 827-5988 or (505) 827-1173
ND	Scott Hochhalter, Soil Conservation Coordinator	ND State Soil Conservation Committee	(701) 328-5125
OR	Gary Lynch, Supervisor, Mined Land Reclamation	OR Dept. of Geology and Mineral Industries	(541) 967-2039
SD	Robert Townsend, Administrator, Minerals & Mining Program	Division of Environmental Services, Dept. of Environment & Natural Resources, 523 E. Capitol, Joe Foss Bldg., Pierre, SD 57501	(605) 773-4201
<i>UT</i>	<i>D. Wayne Hedberg, Permit Supervisor</i>	<i>Division of Oil Gas and Mining</i>	<i>(801) 538-5340</i>
WA	Dave Norman	DNR, Geology Division, PO Box 47007, Olympia, WA 98504	(360) 902-1439
WY	Richard Chancellor, Administrator	Land Quality Division, 122 W. 25th St., Cheyenne, WY 82002	(307) 777-7046

APPENDIX B
SUMMARY OF
STATE MINING
REGULATIONS/PROGRAMS



APPENDIX B

SUMMARY OF STATE MINING REGULATIONS/PROGRAMS

TABLE OF CONTENTS

Alaska

Arizona

California

Colorado

Idaho

Montana

Nevada

New Mexico

Oregon

Utah

Washington

Wyoming

ALASKA

Locatable mineral activities on BLM lands in Alaska are regulated by the Department of Natural Resources (DNR) according to Section AS 27.19.010 of the Alaska State Code. This regulation is accomplished through a variety of state regulatory programs and permits that apply to reclamation and clean water requirements for mineral activities on state, private, and federal lands.

Plan Threshold and Submission Requirements

Alaska has no "casual use" exemption, nor does it require a permit for disturbances of less than 5 acres. Notification for these operations is similar to BLM requirements. The use of suction dredges with intake diameters of 6 inches or less is exempt from regulation. Information for Notice- and Plan-level operations is submitted to DNR and BLM using the Annual Placer Mining Application (APMA). DNR in turn notifies all other involved agencies- Fish and Game, Army Corps of Engineers, etc. This notification simplifies the permitting process because the involved agencies are informed by the state, and miners do not have to do the work on their own. In accepting this form, BLM has reserved the right to request more information from the claimant or operator for the NEPA evaluation.

The Alaska definition of "project area" does not include roads and camp areas.

Performance Standards

Alaska has site-specific standards for surface water resources as well as operational and reclamation standards. The Alaska Department of Environmental Conservation (DEC) sets ground water requirements on a site-specific basis. These requirements usually consist of standards set by EPA. DEC conducts monitoring. Variances can be granted on a site-specific basis. The state has topsoil and backfilling standards. Revegetation requirements are general, including stabilization of the site that allows for reestablishing the renewable resources on the site within a reasonable period of time by natural processes. The technology-based operational standards used are "best management practices" (BMP).

Alaska requirements governing cyanide operations or acid rock drainage are handled by DEC. The state has the authority to regulate all chemical applications used in mining.

Resource Protection Standards

Alaska does not have a specific statutory provision to protect threatened and endangered species, although Title 16 applies to fish and wildlife. Alaska has no specific regulation of eaves and cave resources but offers statutory protection to both historical (National Historic Preservation' Act) and archaeological and paleontological resources.

Alaska has no state National Environmental Policy Act (NEPA) law or process. Alaska uses a "large mine project process" for obtaining public input in reviewing significant mines. No special provisions apply to consultation with American Indian governments.

Enforcement, Shut Down, and Bonding

The staff of the Alaska DNR Division of Mining consists of five people, including two inspectors. Operations are inspected when convenient or needed. There is no fixed schedule. The state handles bonding for BLM. Regulations for shut-down operations are similar to those proposed by BLM. Administrative actions are first used against an operator or claimant to remedy a noncompliance. When administrative actions fail, money for reclamation is acquired from the statewide bond pool. The state then pursues the operator or claimant in civil court to recover money spent on reclamation and administrative costs. Alaska statutes define no specific criminal or civil penalties for mining.

Significant Differences

Substantive regulatory differences between the Alaska State Program and the existing 3809 regulations are in two areas: (1) Operations using 6-inch or smaller intake diameters are exempted from filing a Notice-type documents for suction dredging, and (2) no regulations provide for the specific control of acid rock drainage and cyanide operations.

ARIZONA

Currently Arizona State Mined Land Reclamation Rules apply only to private land. The Arizona Department of Environmental Quality issues an Aquifer Protection Permit. The Arizona Department of Water Resources issues permits for drilling if certain conditions are met. And state and local governments issue other permits. While other federal, state, and local permits are required for exploration and mining, BLM takes the lead for the lands it manages. No broad state permit applies. In addition, a "mining summit" has been established in Arizona with most federal, state, and local regulators and industry representatives participating. Its purpose is to develop a process for industry and regulators to communicate, coordinate, and facilitate a more efficient permitting process. This process is now in the development stage.

Plan Threshold and Submission Requirements

While there is no "casual use" exemption as such, Arizona does not require a permit for disturbances under 5 acres. Notification for these operations is similar to BLM requirements. No state criteria exist for suction dredge thresholds.

Arizona's information requirements for Plans and Notices are functionally equivalent to BLM'S. The Arizona term for a project area is "mining facility." The definition of mining facility appears consistent with the definition of "project area" in both the existing and proposed regulations. But the State Mined Land Reclamation Rules apply only to private land.

Performance Standards

The State Department of Environmental Quality has a monitoring program as part of its Aquifer Protection Permit. The monitoring program applies to both surface and ground water.

The standards require the use of the "best available demonstrated control technology" (BADCT) resources as well as operational and reclamation standards. The state has standards for ground water and water quality monitoring under its Aquifer Protection Permit. There are no standards for backfilling. The Aquifer Protection Permit has revegetation requirements, but Arizona BLM's opinion is that BLM should establish revegetation standards for post-mining use. The Mining Summit may resolve perceived conflicts. The State Mined Land Reclamation Rules have topsoil and revegetation requirements, but the state rules do not apply to BLM-managed land. The State Mined Land Reclamation Rules allow for variances from an approved reclamation plan if the variance will not endanger public safety and will not be inconsistent with the law. The state rules apply only to private land.

The Arizona Department of Environmental Quality regulates acid-forming rock and leaching facilities under its Aquifer Protection Permit. Arizona BLM is unaware of any state-established inspection frequencies for operations using cyanide or other leachates. Currently Arizona BLM accepts the Department of Environmental Quality standards in the absence of a showing that state standards will result in unnecessary or undue degradation.

Resource Protection Standards

The Arizona Department of Agriculture protects listed plant species, and the Arizona Department of Game and Fish protects listed animal species.

Arizona has authority to protect cave resources. There are provisions for environmental review and public participation of submissions to the Arizona State Mine Inspector, Arizona Department of Environmental Quality.

Arizona protects state lands in conformance with both the National Historic Preservation Act and the Archaeological Resources Protection Act, and burial sites for all lands within the state.

Enforcement, Shut Down, and Bonding

The state handles bonding for reclamation and mine closure. Bond criteria range from accepting a statement of financial capability to posting the required bond. Arizona does not require consultation with American Indian governments.

The state rules provide for a fine not to exceed \$ 1,000 per day and not to exceed \$15,000. The penalty for unreclaimed, shut-down operations is forfeiture of the reclamation bond. As previously stated, the state rules apply only to private land.

Significant Differences

Arizona and BLM have similar review and public involvement processes and rules for controlling cyanide or other leachate and acid rock drainage. But state rules apply only to private land, and the federal, state, and local regulators have yet to establish firm policies for joint review of permit applications. These policies and agreements are under development.

CALIFORNIA

Mining activities, including locatable mineral activities (3809) on BLM-administered lands are regulated by several California state laws. A short summary of the important California regulations for mining are outlined in the following paragraphs.

Surface Mining and Reclamation Act (SMARA) is based on the Public Resource Code, Division 2, Chapter 9, Section 27 1 0 et seq. This act establishes procedures and standards that affect reclamation and the conduct of surface mining on private, federal, and state lands. The enforcement of SMARA is delegated to a lead agency, usually the county. (It could also be a city). Additionally, the county can write its own ordinances that exceed the reclamation standards in SMARA.

California Environmental Quality Act (CEQA) is the California counterpart to the National Environmental Policy Act. CEQA requires California state and local agencies to determine the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible.

Porter-Cologne Water Quality Control Act is based on the Water Code 13000 et seq. and regulates the discharge of waste that could affect state waters subject to waste discharge requirements (WDR). One of six Regional Water Quality Control Boards (RWQCB) reviews a mining proposal, holds public meetings, and requires a separate reclamation bond.

Fish and Game, Code Section 5650 makes it illegal to permit the passage of any substance deleterious to fish, plants, or bird life to the waters of the state, unless authorized by regional board waste discharge requirements or a federal permit for which Clean Water Act, Section 401 state certification is issued.

California Endangered Species Act, Fish and Game Code 2050 et seq., makes it illegal to "take" state-listed endangered, threatened, or candidate species, except as authorized by California Department of Fish and Game.

Plan Threshold and Submission Requirements

Mining operations that disturb less than one acre or remove less than 1,000 cubic yards of material are exempt from the SMARA regulations. California has no state equivalent to the 3809 definitions of casual use or Notice-level mining activity. Plans are required for all cyanide operations regardless of size. California's information requirements for permitting are generally more stringent than BLM'S. California's suction dredging regulations do not conflict with BLM'S. The California definition of project area does not include areas outside the mining facility.

Performance Standards

The Surface Mining and Reclamation Act (SMARA) contains detailed performance standards for mining within the state. The SMARA regulations (revised 1/97) are listed at code 3700, article 9, on page 22. The code includes the following:

- 3701. Definitions.
- 3702. Financial Assurances.
- 3703. Performance Standards for Wildlife Habitat.
- 3704. Performance Standards for Backfilling, Re-grading, Slope Stability, and Re-contouring.
- 3705. Performance Standards for Revegetation.
- 3706. Performance Standards for Drainage, Diversion Structures, Waterways, and Erosion Control.
- 3707. Performance Standards for Prime Agricultural Land Reclamation.
- 3708. Performance Standards for Other Agricultural Land.
- 3709. Performance Standards for Building, Structures, and Equipment Removal.
- 3710. Performance Standards for Stream Protection, Including Surface and Groundwater.
- 3711. Performance Standards for Topsoil Salvage, Maintenance, and Redistribution.
- 3712. Performance Standards for Tailings and Mine Waste Management.
- 3713. Performance Standards for Closure of Surface Openings.

Resource Protection Standards

California Endangered Species Act (Fish and Game Code 2050 et seq) makes it illegal to "take" a state-listed endangered, threatened, or candidate species except as authorized by the California Department of Fish and Game. The taking can lead to a misdemeanor prosecution, fines, and incarceration.

The State Historic Preservation Office (SHPO) agency regulates historical, cultural, and archaeological sites.

Enforcement, Shut Down, and Bonding

Under the SMARA regulations, enforcement, inspection, and bonding are decentralized to the 58 counties in California. Some of the more populated counties have full-time inspectors, but rural counties usually assign this task to the county planning or engineering department. Because of a lack of funding and trained technical people, some counties have ignored mining on federal lands and concentrated their efforts on private property.

Significant Differences

Substantive regulatory differences between the California state program and the existing 3809 regulations include the following:

1. The allowance for disturbance under 1,000 cubic yards per acre requires no Plan (casual use).
2. California has more stringent data requirements for mining plans.

3. California has no Notice-level operations; an operation requires a mining plan or is "casual use" per 3809.
4. Mandatory Regional Water Control Board reclamation bond can't be jointly held with any other agency, including BLM.
5. Counties charge mining proponents financial fees to review mine plans (actual expenses) and conduct mine inspections.
6. Some of the counties (e.g. Mono) have instituted mining ordinances that are careful to avoid zoning laws but onerous on environmental studies. The result is to discourage mining on both private and federal lands.

COLORADO

Locatable mineral activities on BLM lands in Colorado are regulated by the Colorado Mined Land Reclamation Board (CMLRB), based on sections C.R.S. 34-32-101 and C.R.S. 34-32.5-101 of the State Code. This regulation is accomplished through the Division of Minerals and Geology (DMG) administering the CMLRB Hard Rock/Metal Mining Rules and Regulations. The CMLRB regulatory program applies to all hard rock mineral activities on all lands in the state.

Plan Threshold and Submission Requirements

Colorado does not have casual use or Notice thresholds for mining activity. Disturbances involving less than 1,600 square feet are exempt from regulation. Suction dredging is not regulated by DMG; it is presumed to be within the <1,600 sq. ft. exemption. The significant threshold in Colorado regulation is that between prospecting and mining. A notice of intent is required for prospecting, regardless of acreage disturbed. A permit application, and issuance of a Reclamation Permit, is required for all mining activity, regardless of disturbed acreage.

The Colorado information requirements for Plans and Notices are functionally equivalent to BLM's (generally more detailed and comprehensive) except possibly for prospecting involving more than 5 acres. Colorado's definition of project area excludes access, pipelines, and other facilities that lie outside the mine area.

Performance Standards

Colorado has extensive operational and reclamation performance standards but not a concept of best available technology and practices or best management practices. Strict engineering standards have to be met for operations involving cyanide leaching or acid rock drainage. Standards for ground water and surface water are all inclusive. The state conducts or requires water quality monitoring for certain operations, requires backfilling when suitable for site conditions, and has requirements for topsoil, re-contouring, and revegetation. Colorado maintains comprehensive testing, control, and monitoring procedures for acid-forming and leaching operations. The state's performance standards are generally more comprehensive than BLM'S, especially for operations disturbing less than 5 acres.

Colorado has authority to regulate cyanide and acid rock drainage operations but requires no set inspection schedule.

Resource Protection Standards

Colorado does not have a specific statutory provision to protect threatened and endangered species but does have special protection measures for fish and wildlife. Colorado considers protection to both historical (National Historic Preservation Act) and paleontological resources.

There is no state National Environmental Policy Act (NEPA) law although Colorado Mined Land Reclamation Board hearings provide a process for public involvement. Colorado does not provide specific statutory or regulatory protection under the National Historic Preservation Act or the Archaeological Resources Protection Act, or to caves or cave resources. No

special provisions apply to consultation with American Indian governments, but they can request hearings before the Colorado Mined Land Reclamation Board.

Enforcement, Shut Down, and Bonding

The staff of the Colorado Division of Minerals and Geology consists of 18 people, including 15 inspectors. Operations are inspected as needed, depending on the type of operation, resources involved, and operator. The state requires bonding of all operations. Prospecting disturbance is bonded at a minimum of \$2,000/acre. Reclamation permits issued for mining require a bond for 100% of expected costs of closure and reclamation. Regulations pertaining to shut down operations do not conflict with those proposed by BLM. Operating without a permit, or in violation of the terms of a Notice/Permit results in civil penalties and substantial fines. The Colorado Mined Land Reclamation Board issues cease and desist orders and can seek injunctive relief in state court.

Significant Differences

Substantive regulatory differences between the Colorado state program and the existing 3809 regulations include disturbance of <1,600 ft' and suction dredging not being regulated and all prospecting is considered Notice-level activity, regardless of acreage involved. Conversely, all mining is Plan-level activity. Colorado has no set inspection schedule for acid rock drainage and cyanide operations. Colorado requires that prospecting (notices of intent) remain confidential with the Division of Minerals and Geology. The Colorado Mined Land Reclamation Board issues reclamation permits for all mining operations.

IDAHO

Locatable mineral activities on BLM lands in Idaho are regulated by the Idaho Department of Lands, the Department of Water Resources, and the Division of Environmental Quality under Titles, 39, 42, and 47 of the Idaho Code. This regulation is accomplished through a variety of state regulatory programs and permits that apply to mineral activities regardless of land ownership or surface management agency.

Plan Threshold and Submission Requirements

Idaho does not require a permit for suction dredging or placer mining involving less than half an acre, or for underground mining. The use of suction dredges with intake diameters of 8 inches or less is exempt from regulation. Notice-type documentation is required for exploration involving less than 5 acres, but this notification is required only after the fact.

The information required by Idaho for Plans is generally as comprehensive as that required by BLM. For Notices the state requires less detail. The Idaho definition of project area does not conflict with BLM'S. It includes "overburden disposal areas, mined areas, mineral stockpiles, roads, tailings ponds, and other areas disturbed at the surface mining operation site."

Performance Standards

Idaho uses best management practices (BMP) operational standards for water resources. There are generally no variances. The state has specific, detailed standards for ground water and for water quality monitoring. Idaho has topsoil and revegetation standards and requires backfilling for mines where the pit is 2 acres or smaller. Where operations disturb 2 acres or more, all waste piles and depressions must be contoured to the lowest practicable grade. Idaho requires testing, control, and monitoring of acid-forming and leaching operations.

Idaho has requirements for governing testing, control, and monitoring of cyanide operations and acid rock drainage but no set schedule for inspections.

Resource Protection Standards

Idaho has statutory protection for threatened and endangered species as well as for fish and wildlife. Idaho has no state National Environmental Policy Act law, although the decision-making process allows for public involvement and review. Idaho does give statutory protection to historical, archaeological, and paleontological resources but not to caves and cave resources. Native American governments are given the opportunity to comment where affected by a proposed operation.

Enforcement, Shut Down, and Bonding

The staff of the Surface Mining Section of the Idaho Department of Lands consists of 10 people, all of whom are involved in field inspections. Operations are inspected on a case-by-case basis, depending on the sensitivity of the resources. The state handles bonding, with

maximum bond coverage of \$2,500/acre. Regulations for shut-down operations require reclamation after 3 years and do not conflict with BLM's proposed regulations. Civil penalties for noncompliance with the rules or an approved plan provide for a penalty of not less than \$500 or more than \$2,500 for each day of violation after notice of violation. The Director of the Department of Lands is also authorized to seek injunctive relief against operators.

Significant Differences

The following provisions of the Idaho state program substantially differ from the existing 3809 regulations: suction dredges under 8 inches in diameter are exempt from permitting; no permit is required for underground mining; documentation for Notice-type operations is required within 7 days of the beginning of operations; no set inspections are required for cyanide and acid rock drainage operations; no specific state protection is given to cave resources; \$2,500/acre is the ceiling for bond amounts.

MONTANA

Locatable mineral activities on BLM lands in Montana are regulated by the Montana Department of Environmental Quality (DEQ), Environmental Management Bureau, through a variety of state regulatory programs and permits that apply to mineral activities regardless of land ownership or surface managing agency.

Plan Threshold and Submission Requirements

Montana does not have casual use or Notice thresholds, but the Department of Environmental Quality issues three types of permits under the Montana Metal Mine Reclamation Act (MMRA): an exploration license, a small miner exclusion statement (SMES), and operating permits. Mining of bentonite is covered under the Open Cut Act.

Under the Montana Metal Mine Reclamation Act an exploration license is required for any mechanized exploration, regardless of amount of land involved, including for road building and drilling, trenching, or construction of exploration adits or shafts.

Small-mine operators who disturb less than 5 acres and are not using chemical processing or engaging in placer mining may obtain a small miner exclusion statement.

An operating permit is required for all placer mines, mines using chemical processing, or mines disturbing more than 5 acres. General requirements include mine plans, processing plans, reclamation plans, monitoring plans, rock characterization and handling plans, and environmental baseline data (especially for water).

Performance Standards

All exploration disturbance must be reclaimed.

The small miner exclusion statement (SMES) exempts hardrock operators from performing reclamation. Nevertheless, the SMES operator still must comply with state water quality laws. Suction dredge operators must obtain a 310 permit from the county conservation district, regardless of suction dredge size.

Operating permit requirements vary by size, type, location, and complexity of the project issues. All disturbed lands must be reclaimed to achieve comparable stability and utility to adjacent undisturbed lands. Montana does not automatically require mine pit backfilling, but backfilling is considered during application review and environmental analysis. Areas not backfilled must be mitigated to limit impacts as described in the Montana Metal Mine Reclamation Act.

Under the Open Cut Act, bentonite operators need not reclaim disturbance or obtain a mining permit (called an open cut contract) for bentonite exploration or for mining of less than 1 0,000 cubic yards of material from any one site. Above that level a mining and reclamation plan is required.

Resource Protection Standards

The issuance of permits to operators under the above acts is considered a state action and requires the Department of Environmental Quality to comply with the Montana Environmental Policy Act (MEPA). MEPA is similar to the National Environmental Policy Act, with provisions for public involvement and preparing environmental assessments or EISs. MEPA has no provisions for formal appeals, but Montana law allows for up to 90 days for filing suit in state court.

Montana has no state processes analogous to the National Historic Preservation Act for identifying and mitigating impacts to historic properties. Montana does have a requirement to consider cultural resources.

Montana also has no state law analogous to the federal Endangered Species Act or Migratory Bird Treaty Act. Since takings under these acts are prohibited independently of any BLM requirements, the state project review conditions approval on compliance with these federal statutes.

Montana has no formal requirement for government-to-government consultation between the state and American Indian governments similar to the federal process. As a matter of practice, however, the state involves the tribal governments much as they do the counties, and the MEPA process allows for active participation by any citizen or governmental unit.

Enforcement, Shut Down, and Bonding

The staff of the Department of Environmental Quality (DEQ), Environmental Management Bureau consists of 19 people, including 13 inspectors. All permitted operations are inspected at least once yearly. Larger operations and operations using cyanide are inspected at least four times a year. Operations with potential for acid rock drainage are inspected as determined to be proper by DEQ.

For all exploration a bond must be posted in the amount of the estimated actual cost for the reclamation to be performed by the DEQ. For operating permits reclamation bonds are based on the actual cost for the agency to implement the approved reclamation plan. This bond amount is reviewed at least every 5 years. Several major mines have been required to provide long-term bonding for establishing trust funds. The trust funds are to be used for post closure water capture and treatment over an indefinite period of time. A reclamation bond must also be posted for bentonite operations.

Violations of the above acts are punishable by fines. Failure to comply with other Montana environmental laws such as the Water Quality Act or Air Quality Act are also punishable by fine, and operations may be enjoined from continuing.

Significant Differences

Montana has no state requirement for reclaiming small operations that do not use chemicals and disturb less than 5 acres [SMES (small miner exclusion statement) Operations]. Montana also does not require small bentonite operators conducting exploration or mining less than 10,000 cubic yards, to reclaim disturbance.

Montana does consider small exploration projects disturbing less than 5 acres as a state action subject to the Montana Environmental Policy Act and requiring a reclamation bond, whereas BLM would not consider the same project a federal action subject to the National Environmental Policy Act and does not require a reclamation bond for Notice-level projects. The state bonds small exploration projects and small chemical processing and placer operations for reclamation. BLM cannot require a reclamation bond for these small projects conducted under Notices.

NEVADA

Locatable mineral activities on BLM lands in Nevada are regulated by the Nevada Division of Environmental Protection under Nevada Administrative Code NAC 445A.350 through 445A.447 and NAC 519A.010 through 519A. The NAC 445A regulations govern design, construction, operation, and closure of mining operations. The NAC 519A regulations cover reclamation and closure to a post-mining productive land use for mining and exploration projects.

Locatable mineral activities that will ultimately become mining operations are regulated through a variety of state programs and permits. The Division of Minerals monitors mineral production and manages the State Bond Pool. The Division of Environmental Protection programs regulate air quality, solid waste management, hazardous waste management, ground water, and mining. Permits include air quality, solid waste management, hazardous waste management, ground water, mining, National Pollutant Discharge Elimination System (NPDES) discharge, storm water under NPDES, general permits, and underground injection control. The Division of Water Resources regulates the appropriation of public waters, tailings dam permits, and mineral exploration hole plugging. The Division of Wildlife monitors endangered wildlife, industrial artificial pond permits, and dredging permits. The Division of Health issues permits for sanitation facilities and radioactive materials licenses. The State Fire Marshal Division issues hazardous materials permits and monitors fire and life safety.

Plan Threshold and Submission Requirements

Nevada does not require a reclamation permit for Notice-level operations under 5 acres or operations that mine less than 36,500 tons per year. Water pollution control permits (PCP) are issued for any size of operation that uses process fluids. Leaching operations require a PCP regardless of size.

Nevada does not have a "casual use" threshold or no specific criteria for suction dredging at a casual use level.

Information required for state permits is generally the same as that required by BLM, except for riparian and wildlife habitat information.

Performance Standards

Nevada has performance standards for ground water as well as monitoring requirements. The state has revegetation standards consistent with BLM and considers a requirement for backfilling open pits on a case-by-case basis. Open pits and rock faces, however, can be excluded by regulation. The state has the authority to regulate the testing, control, and monitoring of acid-forming materials (for pit lakes and dumps) and to control operations that use process fluids. Nevada performance standards cover air, water, and other resources and allow variances through a permit modification process.

Nevada generally inspects large mines that use cyanide or produce acid-forming materials three times per year or more, medium-sized mines three times per year, and small mines yearly.

Resource Protection Standards

Nevada does not have a specific statutory provision to protect threatened and endangered species and does not offer statutory protection to historical, archaeological, paleontological, or cave resources.

Nevada has no state NEPA law but uses a process for public involvement in the review and permitting process for mines. No special provisions require consultation with American Indian governments, but these governments can comment through the state's public comment process.

Enforcement, Shut Down, and Bonding

The staff of the Nevada Division of Environmental Protection, Bureau of Mining Regulation and Reclamation consists of 18 people, including three inspectors. Operations are inspected one to three times per year with no fixed schedule unless problems are found. Then the frequency is increased. The state handles bonding through a state bond pool for small operators up to \$1 million. The state also allows for corporate guarantees and holds bonds for private lands. There is no bonding for Notice-level operations. Regulations pertaining to shut-down operations differ from those proposed by BLM. Operators are required to file a final permanent closure plan 2 years before shutting down. Operations are allowed to shut down temporarily but must maintain site integrity.

Significant Differences

Substantive regulatory differences between the Nevada state program and the existing 3809 regulations include no state equivalent for Notices for exploration less than 5 acres and no baseline information required for riparian or wildlife habitat for permits. Nevada accepts corporate guarantees in lieu of a bond, and BLM Nevada accepts the state's corporate guarantees. Nevada has no specific state statutes for threatened and endangered species, the National Historic Preservation Act, the Archaeological Resources Protection Act, or cave resources protection.

NEW MEXICO

Locatable mineral activities on BLM lands in New Mexico are regulated by the Mining and Minerals Division (MMD) of the New Mexico Energy, Minerals, and Natural Resources Department under the authority of the New Mexico Mining Act of 1993. The New Mexico Mining Act Rules are published in New Mexico Statutes, Section 69-36-1, et. seq.

Permits are required for various levels of mining and exploration on the basis of the area of proposed surface disturbance, the volume of material to be removed, or both. The New Mexico Mining Act distinguishes between new and existing operations. Existing operations, those grandfathered at the time of the effective date of the act, are subject to less regulation than new operations. BLM surface management regulation standards are most comparable to the state's "new operations" standards. The state regulatory program applies to federal, state, and private land. It does not apply to Indian land.

Plan Threshold and Submission Requirements

New Mexico has a casual use type exemption for "prospectors, gold panners, and rock collectors causing no or very little surface disturbance and not using mechanized sluices or dredges." To be exempt, excavations must involve less than 2 cubic yards/year.

New Mexico's Notice-type mining permit is called a general permit. A general permit is issued upon application, with the operator's agreeing to the permit terms upon signing it. A General permit (wet) is for operations in water, including all suction dredging, regardless of hose intake size. Wet operations must not exceed 2 cubic yards/day and 100 cubic yards/year. Dry operations must not exceed 200 cubic yards/year, with no more than 25/cubic yards and 2 acres unreclaimed at one time.

Plan-type permits (i.e. require an application, review, and approval) include both exploration and mining and are categorized as minimal impact and other than minimal impact. The minimal/ non-minimal impact threshold is based on the total area of proposed surface disturbance, the total volume of material to be removed, or both. Additionally, any permit, including a general permit, may be upgraded to a non-minimal impact permit if the operation falls within or exhibits at least one of nine disqualifying characteristics, which include disturbing environmentally sensitive areas and other specifically listed environmental risks, such as leaching operations and potential for release of acid or toxic substances.

Information requirements and performance standards for state permits are equivalent to those required by BLM regulations. The state's "permit area" is equivalent to BLM's "project area."

Performance Standards

Operations must meet New Mexico State water quality standards as enforced by the State Environmental Department (ED), which regulates both surface and ground water quality. In conjunction with Mining and Minerals Division, the Environment Department, under state

water quality regulations, can regulate the testing, control, and monitoring of acid-forming materials and control leaching operations.

The New Mexico Mining Act Rules include standards for topsoil and revegetation. Backfilling is required "only when needed to achieve reclamation objectives that cannot be met through other mitigating measures." The most appropriate technology and the best management practices must be used in mining and reclamation. At least two inspections per year are required under the Mining Act for all active mining operations. Under certain conditions, a variance from a performance standard may be granted.

Resource Protection Standards

Under various authorities the State of New Mexico protects game animals and migratory birds. The State Wildlife Conservation Act protects state-designated threatened and endangered species, but this law lacks the enforcement authority of the federal Endangered Species Act.

The State of New Mexico has a cave protection law that protects caves, including those on federal land.

A variety of state historic and prehistoric resources protection acts (including protection of ancient burial sites) apply to state and private lands only. The National Historic Preservation Act and Archaeological Resources Protection Act apply to federal lands. BLM coordinates with the State Historic Preservation Division in enforcing these laws on federal land.

No state statutes are specific to protecting paleontological resources.

New Mexico has no state National Environmental Policy Act (NEPA) law, but the Mining Act requires an "environmental evaluation" as well as public notification and participation as part of the permitting process. The Mining Act does not include any special provision for consulting with American Indian governments. Locatable-type mining activities on Indian lands are not regulated under the act.

Enforcement, Shut Down, and Bonding

The staff of the Mining Act Reclamation, Bureau of Mining and Minerals Division consists of seven persons, five of whom perform inspections along with their other duties. Active operations are inspected twice a year.

Financial assurance (bonding) is required of all new operations except operations under a general permit and certain minimal impact operations. The amount of financial assurance is the cost of a third party to reclaim the operation.

An operator may qualify for a permit for standby status if operations are inactive for more than 180 days.

The state may issue a notice of violation (NOV) if the violation does not cause imminent danger to health and safety or significant imminent environmental harm. A NOV fixes a time for abatement and may involve a civil penalty. A cessation order (CO) is issued if a violation

causes imminent danger to health and safety or significant imminent environmental harm or if a NOV is not timely abated. A cessation order may also involve a civil penalty.

Significant Differences

The state issues seven permits, depending upon whether an operation is new or existing; minimal impact or non-minimal impact; mining or exploration. The minimal/non-minimal impact thresholds are based on total surface disturbance, the amount of material extracted, or both. Additionally, nine specific resource and environmentally sensitive criteria can place a minimal impact permit into a non-minimal status. These factors preclude a direct comparison of the state permitting system with BLM's two-tier system.

New Mexico's Plan-type permits require financial assurance (bonding), but not all Notice-type permits require bonding. No financial assurance is required for general permits, minimal impact exploration permits, and minimal impact mining permits of less than 2 acres total disturbance.

OREGON

Locatable mineral activities on BLM lands in Oregon are regulated through several agencies. The Oregon Department of Geology and Mineral Industries (DOGAMI) issues permits and inspects surface mineral exploration, development, and production operations on lands in the state and is the lead coordinating agency for state mining regulations. Other state permitting agencies include the Oregon Department of Environmental Quality, the Oregon Water Resources Board, and the Oregon Division of State Lands.

Plan Threshold and Submission Requirements

An Operating Permit is not required for mining less than 50 cubic yards within streambeds and streambanks or if an operation moves less than 5,000 cubic yards or disturbs less than 1 acre per year. All other operations require a permit and approval. Oregon's requirements for Plans and Notices are generally the same as BLM'S. The Oregon definition of project area does not conflict with BLM'S.

Performance Standards

Oregon has a chemical mining rule (Chapter 632, Division 37) governing operations that use leaching methods.

Oregon standards for ground water protection require that the operator maintain pre-mine quantity and quality. Monitoring and reporting programs include surface and ground water, water balance of the process system, leak detection system, and fish and wildlife injury and mortality. The reclamation and closure plan section includes about 18 provisions for protecting public health, safety, and the environment. Backfilling is considered on a case-by-case basis. The technology-based operational standards used are "best available, practicable, and necessary technology" for chemical processing.

Resource Protection Standards

The following provisions to protect fish and wildlife are developed by the Department of Fish and Wildlife: zero mortality, covering and containing wastewater facilities to preclude wildlife access, no overall net loss of habitat value, and no loss of existing critical habitat. Oregon offers statutory protection to historical (National Historic Preservation Act) and cultural sites (Archaeological Resources Protection Act), but not to paleontological or cave resources. No state National Environmental Policy Act (NEPA) law or process applies to mining operations. No special provisions apply to consultation with Native American governments.

Enforcement, Shut Down, and Bonding

The staff of the Oregon Mined Land Reclamation Program/Department of Geology and Mineral Industry consists of eight people, including four inspectors. Oregon imposes civil penalties of not less than \$200 per day and not more than \$50,000 per day for any violation.

UTAH

Locatable mineral activities on BLM lands in Utah are regulated by the Department of Natural Resources, Division of Oil, Gas and Mining (DOGM), Minerals Reclamation Program under the Utah Mined Land Reclamation Act, Title 40-8, Utah Code Annotated, 1975 as amended. This regulation is accomplished through a variety of state programs and permits that apply to mineral activities on state, private, and federal lands within Utah.

Plan Threshold and Submission Requirements

Utah has a "casual use" type exemption. A permit is not required if no significant surface resource disturbance and no mechanized earth-moving equipment are involved. Recreational dredging and sluicing application provisions do not conflict with BLM'S.

The DOGM issues three types of permits under the Utah Mined Land Reclamation Act: Notice of Intention to Conduct Exploration, Notice of Intention to Commence Small Mining Operations, and Notice of Intention to Commence Large Mining Operations. A Notice of Intention to Conduct Exploration does not require DOGM approval unless the proposed activity involves more than 5 acres. A Notice of Intention to Conduct Small Mining Operations does not require DOGM approval but may not exceed 5 acres at any time. A Notice of Intention to Conduct Large Mining Operations is filed on operations that disturb more than 5 surface acres at any time and must be approved by DOGM before mining begins. In addition, a reclamation contract must be executed before mining can begin.

The definition of "project area" is functionally equivalent to BLM'S. Filing requirements are similar to the information BLM requires. An annual permit fee is required.

Performance Standards

Utah encourages the use of best available technology (BAT) for mining activity and best management practices (BMP) for water quality protection. The state has specific standards for ground water quality and may require ground water monitoring. Utah also requires suitable soil material to be stockpiled for later redistribution and re-contouring. In addition, the site must be re-vegetated to 70% of pre-mining vegetative ground cover. Roads, pads, dams, impoundments, trenches, pits, waste piles, and spoil piles must be reclaimed. Highwalls must be reduced, but open pits need not be backfilled.

Utah has authority to regulate the testing, control, and monitoring of acid-forming materials or operations that use leaching. Utah also has standards for ground water (BMP) that BLM does not have and provides variances for operational and reclamation standards. Standards for Notice- and Plan of Operations-type operations are similar to those required by BLM. DOGM requires inspections of all mining operations but on an as-needed basis.

Resource Protection Standards

Utah state law protects fish and wildlife, specifically threatened and endangered species, but not plant species. Utah offers statutory protection for archeological and paleontological resources but not caves and cave resources.

Utah has no state National Environmental Policy Act (NEPA) law. The public is given notice and may appeal Board of Oil, Gas and Mining decisions only for large mining operations.

Enforcement, Shut Down, and Bonding

The staff of the Utah Minerals Reclamation Program consists of five people, including three inspectors. Operations are inspected on an as-needed basis. Utah bonds Plan-type operations and exploration that disturbs more than 5 acres. Regulations for shutting down mining operations require state notification. Mining operations may have to be reclaimed after 5 years of continued suspension and must be reclaimed when the suspension periods exceed 10 years.

The Board of Oil, Gas and Mining may take any enforcement action authorized by law, including requiring the operator to comply, abate, mitigate, cease operations, forfeit surety, or reclaim an operation. In addition, a civil suit or any other lawful action may be taken.

Significant Differences

Substantive differences exist between the Utah state program and the existing 3809 regulations. Utah requires no set schedule for inspecting any mining operations, no protection for caves and cave resources, no protection for threatened and endangered plant species, and the collection of permit fees. Utah's archeological and paleontological resource statutes, while helpful, are not considered equivalent to federal laws.

WASHINGTON

Locatable mineral activities on BLM lands in Washington are regulated by the Department of Natural Resources (DNR) and the Department of Ecology (DOE) under the State Code.

Plan Threshold and Submission Requirements

Washington does not require a permit for disturbing less than 3 acres, nor does it have special provisions for leaching operations. The information that the State of Washington requires for plans is generally equivalent to that required by BLM. The Washington definition of project area does not conflict with BLM'S, but surface mine access roads are not included in the state definition of "disturbed areas."

Performance Standards

Washington State has a general requirement for preserving topsoil and for revegetation but no requirement for backfilling. The state does not require the testing, control, and monitoring of acid-forming materials, and there is no state authority relating to operations that use leaching. Washington has no technology-based operational standards, such as best management practices or best available technology. Washington also has no requirements governing cyanide operations or acid rock drainage resulting from mining.

Resource Protection Standards

Washington has no state protection for eaves and cave resources. It offers statutory protection to cultural resources (NHPA) but not to paleontological resources.

Washington has a State Environmental Policy Act, which is functionally equivalent to the National Environmental Policy Act and allows for public comment in the environmental review and decision-making process for mining. No special provisions apply to consulting with American Indian governments.

Significant Differences

The Washington State program and the existing 3809 regulations differ in that Washington has a 3-acre exemption on "casual use" type operations; has no specific requirements relating to cyanide or acid rock drainage; has no state protection for eaves, cave resources, or paleontological resources; and has no technology-based performance standards.

WYOMING

Locatable mineral activities on BLM lands in Wyoming are regulated by the Wyoming Department of Environmental Quality, Land Quality Division (DEQALQD) based on Section 35-1 1 -(401-437) of the State Code. Regulation is accomplished through a variety of state regulatory programs and permits that apply to mineral activities on all lands in the state: private, state, and federal.

Plan Threshold and Submission Requirements

The level of noticeability of a perceived impact or disturbance dictates whether written authorization is required by BLM or the Department of Environmental Quality. The use of mechanical equipment or other methods that noticeably disturb the land will always initiate permit, license, notice, plan, or other use authorization. The Land Quality Division issues the following authorizations:

1. **Letter of Authorization** for small disturbances with minimal, infrequent impacts such as a smaller than 3-inch recreational suction dredging.
2. **Exploration by Drilling Permit** for all exploratory drilling for locatable minerals.
3. **Exploration by Dozing Permit** for all exploration work done by mechanical earthmoving equipment.
4. **Limited Mining Operations Permit** for a mining disturbance of 10 acres or less for the life of the mine. This permit can be obtained only for limestone, feldspar, sand, gravel, scoria, ballast, dolomite, or shale.
5. **Small-Mining Permit** for an operation involving 10,000 yards or less of overburden and 10 acres of affected land in any 1 year.
6. **Regular Mining Permit** for all larger mining operations not covered under other permits, licenses, or authorizations.

Wyoming has no acreage threshold per se for locatable mineral operations. Information required for Land Quality Division (LQD) authorizations is functionally equivalent to Notices and Plans required by BLM, except LQD requires information in much greater detail. The Wyoming definition of project area does not conflict with BLM'S. The BLM and LQD cooperative agreement states the following: "Consistency must be maintained in the application of criteria for delineating the project areas. All lands included in a permit to mine, including roads, are part of the project area, but only the federal surface estate is subject to BLM review."

Performance Standards

Wyoming has standards for ground water resources as well as a monitoring program. The state requires topsoil preservation, revegetation, and partial backfilling. Wyoming also has authority to test, control, and monitor acid-forming materials for their impact to water quality

but not operations that use leaching since Wyoming has no leaching operations. In situ uranium leaching is heavily regulated. The technology-based operational standards used are "best technology currently available."

Wyoming's performance standards for ground water are not covered by BLM. The state has a process to obtain variances to its performance standards. Notice-type operations are subject to the same performance standards as are Plan-type operations. The state has no specific requirements governing cyanide operations or acid rock drainage, but these operations would be permitted and inspected like other operations that could contaminate the land and surface and ground waters.

Resource Protection Standards

Wyoming has no specific statutory provision to protect threatened and endangered species, although fish and wildlife are protected under the federal Endangered Species Act. Wyoming also has no state law like the National Historic Preservation Act for identifying and mitigating impacts to historic properties. But the Wyoming State Historic Preservation Officer (SHPO) is consulted before surface-disturbing operations. Wyoming offers no statutory protection to caves or cave resources unless they contain historic or cultural values.

Wyoming has a state National Environmental Policy Act law but uses a public process for obtaining input in the environmental review and decision-making process for mine approval. Wyoming has no special provisions for consulting with American Indian governments.

Enforcement, Shut Down, and Bonding

The staff of the Wyoming LQD consists of 45 people, including 24 inspectors. Permitted operations are inspected at least annually with other inspections as deemed proper by LQD.

The state has a bonding program for full reclamation of all mining operations. The bond is basically either \$ 1,000 per acre of affected land or the estimated cost of reclamation as outlined in a written proposal computed by established engineering principles. Bond amount can be modified with justification.

If an operator is in noncompliance with the requirements of the permit to mine, a notice of noncompliance (NON) is issued. If the NON requirements are not met in the prescribed time action will be initiated to pull the bond, terminate the operation, and have the Wyoming Attorney General bring suit to recover cost of reclamation if the bond is inadequate. Persons violating the provisions of the Environmental Quality Act are subject to a temporary or permanent injunction and a penalty not to exceed \$ 1 0,000 for each violation for each day during which the violation continues.

Regulations for shut-down operations allow for temporary cessation of operations for periods up to 5 years. State regulations do not conflict with BLM regulations.

Significant Differences

The Wyoming Land Quality Division requires the bonding of all noticeable surface-disturbing operations whereas BLM cannot require a bond for Notice-level operations.

Regulatory differences between the Wyoming State program and the existing 3809 regulations include the following. Wyoming exercises some control of casual use-type operations; requires bonding for all operations; has no specific program for cyanide, acid rock drainage, and leaching (except in situ) operations; does not inspect cyanide operations since there are none; and offers no protection for cave resources.