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Governing Western Mineral Resources: The Emergence of Collaboration

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ABSTRACT

Collaborative decision making about the environmental consequences of mineral development is an important policy-making tool for federal and state policy makers, local officials, environmental advocates, and citizens. This article addresses the role of collaboration and consensus building in mining and energy mineral development. Consensus building about mineral development strategies and negotiation of mitigation and reclamation actions have been used effectively to address mining's social, economic, and environmental impacts. In the context of an evolving national energy policy, the article discusses the implications of mining history, traditions, law, and regulatory innovations that can be used to shape consensus about mining policy and mining's negative impacts. The article identifies the ways that collaborative planning and consensus building are rooted in the history of mining and mineral development and concludes with recommendations to improve collaborative decision making in mining and energy minerals development in the Western United States.

INTRODUCTION/OVERVIEW

Increasing demands to formulate domestic oil and natural gas and energy policies by the Bush Administration are leading to ever increasing pressure to develop mineral resources in the western United States.[1] These domestic energy policies are further exacerbated by present political disruption in the Middle East. Concurrently, and as a result of the energy boom of the 1950s and 1970s, mining and oil

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1. Charles Wilkinson, *The West Braces for Big Buildup II*, HIGH COUNTRY NEWS, June 4, 2001, at 16.

exploration companies have proposed new leasing, exploration, and development, resulting in economic benefits as well as adverse environmental and community impacts.[2] How will local and state governments address these conditions? How will regulatory choices be made and enforcement actions carried out? In what ways will the public have a role in shaping the policies and managing the resulting impacts? Collaborative decision making about polices for and the consequence of natural resources and mineral development is an important avenue open to federal and state policy makers, citizens, and local officials. The techniques and methods to build consensus about development strategies, mitigation and reclamation actions, and environmental protection offer powerful methods to address these questions.

This article is about the role of collaboration and consensus building in mining and energy mineral development in the West. It argues that not only are collaborative planning and consensus building important tools, but also they are rooted in the history of mining and mineral development. It examines the history and context for policy making for mining and governing mineral resources in the western United States. The article outlines the development of key policies and the emergence of environmental laws and important regulatory changes that lead to opportunities and examples of consensus building and provides examples of collaborative decision making on issues with environmental, social, and economic impacts. In the context of an evolving national energy policy, the article discusses the implications of mining law, history, and traditions in the West that lead to opportunities for future collaboration. The article concludes by making several recommendations to improve collaborative decision making and consensus building in western mining and development of energy minerals.

I. THE MINERAL RESOURCE AND ITS VALUE

Mining is an essential part of the nation's economy. According to the National Mining Association in 1999, the value of both production and income from energy minerals (*e.g.*, coal, oil, gas) and non-fuel minerals and metals (*e.g.*, gold, silver, platinum, diamonds, sapphires, emeralds, rubies) was $57 billion.[3] At the same time, domestic reserves of oil and gas were estimated to be worth more than $328 trillion.[4] At the

2. GARY W. MALAMUD, BOOMTOWN COMMUNITIES 1-6 (1984).

3. National Mining Association, *Statistics: National Statistics* (on file with author).

4. U.S. Department of Energy, Energy Information Administration (EIA), Office of Oil and Gas, U.S. CRUDE OIL, NATURAL GAS AND NATURAL GAS LIQUID RESERVES: 1999 ANNUAL REPORT, ix, 10 (Dec. 2000).

local level, the industry spends more than half of its total income on products and services that support exploration and production and expends 90 percent of its total income on payroll. Mining also spends its direct income on business growth, indirect expenses, and taxes to local, state, and federal government.[5] In 1999, the mining industry alone employed 535,352 workers at an average annual income of $54,653.[6]

The 19 western states[7] contribute a substantial share of the economic value of non-fuels mineral mining in the United States. Five of the top 10 mineral-producing states are in the West. California ranks first among mineral producing states in the nation, followed by Nevada (second), Arizona (third), Texas (fifth), and Utah (tenth).[8] Further, the combined $20 billion contribution of the western states is almost 50 percent of the total value of minerals produced nationally. California's $3.3 billion contribution alone represents almost eight percent of the total. The top three states—California, Nevada, and Arizona—contribute $8.5 billion, representing 22 percent of the nation's income from mining, while the average annual income of miners in the western states of $49,737 is slightly below the national average (Table 1).[9]

Western states also lead the nation in the production of energy minerals. The National Coal Resources Assessment report (NCRA) by the U.S. Geological Survey showed that the Powder River Basin of Wyoming and Montana had a 20- to 30-year supply of "coal desirable for development for use in electric power generation...plentiful, clean, and compliant with EPA emission standards."[10] The coal and natural gas development boom in the region generated more than $900 million of income in both 1999 and 2000.[11]

5. National Mining Association, *Statistics: Mining in Your State* (on file with author).

6. *Id.*

7. Located west of the 100th meridian, the 19 western states include California, Nevada, Arizona, Texas, Utah, Alaska, Wyoming, New Mexico, Washington, Idaho, Kansas, Colorado, Montana, Oklahoma, South Dakota, Nebraska, Hawaii, North Dakota, and Oregon.

8. National Mining Association, *Statistics: Mining in Your State* (on file with author).

9. *Id.*

10. Margaret Ellis et al., *Preliminary Report on Coal Resources of the Wyodak-Anderson Coal Zone, Powder River Basin, Wyoming and Montana*, U.S. Geological Survey Open-File Report 98-0789-A, *at* http://greenwood.cr.usgs.gov/pub/open-file-reports/ofr-98-0789-a (last modified Apr. 13, 1999).

11. Terry McCarthy, *High Noon in the West*, TIME, July 16, 2001, at 24.

TABLE 1
Western States: Mining Statistics and Economic Data

State	No. of Mines	Rank	Total Value	Employment	Average Annual Income	Dir + Indir Gain	Coal Consumption	State + Loc Rev
Alaska	239	12	1.101	9,400	$79,665	1.602	993	39.0
Arizona	245	3	2,480	11,400	51,452	16.731	19,812	141.0
California	622	1	3.320	23,400	66,241	51.470	2,064	113.0
Colorado	389	25	0.574	13,000	67,455	7.435	18,325	74.0
Hawaii	34	45	0.860	21,600	52,312	1.452	0	4.8
Idaho	233	23	0.406	2,600	39,705	1.972	55,000	14.0
Kansas	349	24	0.601	6,400	33,524	4.011	19,003	29.0
Montana	275	28	0.497	5,100	45,525	1.903	10,198	98.0
Nebraska	179	42	0.156	1,200	31,738	2.214	11,219	12.0
Nevada	176	2	2.880	11,900	55,743	10.623	7,763	147.0
New Mexico	185	21	0.715	13,600	43,551	4.415	16,224	208.0
North Dakota	229	48	0.406	3,500	43,020	1.092	24,542	37.0
Oklahoma	173	31	0.441	28,600	48,685	4.030	18,353	20.0
Oregon	409	55	0.319	1,900	36,286	5.145	2,154	33.0
South Dakota	285	38	0.254	1,200	41,652	1.487	2,649	36.0
Texas	545	5	1,860	146,800	69,584	30.813	102,157	128.0
Utah	259	10	1.290	7,800	46,154	5.840	15,335	128.0
Washington	390	22	0.662	3,100	43,642	10.226	5,724	42.0
Wyoming	201	14	1.010	15,800	49,079	5.528	27,679	507.0
Totals	5417		19.832	328,300		167.989	359,194	1818.8

The value of coal produced annually in the United States remained at a constant level from 1996 through 1999 at just over $1.9 billion per year.[12] However, the last decade has seen a steadily increasing share of coal production shift from Appalachia and the mid-western states to the West. In 1994, Appalachia produced 467 million short tons[13] of coal, and the western states produced 408 million short tons. By the year 2000, Appalachia was producing 420 million short tons, while the West produced 567 million short tons, with Wyoming producing sixty percent of that amount.[14] With an estimated 19 billion short tons in recoverable reserves, the level of production will steadily increase. (See Table 2.[15])

Most of the nation's oil and gas reserves are also located in the West. Alaska, California, and Texas account for 65 percent of domestic oil reserves.[16] Add Colorado, Montana, Nebraska, New Mexico, North Dakota, Utah, and Wyoming and the total contribution becomes 78 percent.[17] Western states also account for 63 percent of U.S. natural gas reserves.[18] Texas leads the nation, providing eight percent of the total

12. National Mining Association, *Statistics: Mining in Your State* (on file with author).

13. A short ton is defined as 2000 pounds or 0.907 metric tons. WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 1399 (Philip Babcock Gove ed., 1981).

14. National Mining Association, *Statistics: Salient Statistics of the Coal Industry in the United States* (on file with author).

15. National Mining Association, State Coal Statistics, United States (on file with author).

16. EIA, *supra* note 4 at 20, 31.

17. *Id.*

18. *Id.*

(37.58 trillion cubic feet).[19] Together Texas, Alaska, New Mexico, Oklahoma, and Wyoming account for 32 percent of all reserves.[20]

Given the recent shift in national energy policy to a greater focus on production, particularly of energy minerals, the contribution of the mineral-rich West can be expected to continue increasing.[21] This being the case, there will be more and more opportunities for collaborative decision making in western mining.

TABLE 2
Western States Mining Statistics & Economic Data

State	No. of Mines	Rank	Employment	Coal Production
Wyoming	22	1	4,412	337,119
Texas	14	5	2,464	53,072
Montana	6	6	927	41,102
Colorado	12	9	1,863	29,989
North Dakota	4	10	na	31,135
New Mexico	7	12	1,687	29,156
Utah	15	13	1,837	26,373
Arizona	2	17	na	11,787
Washington	2	17	513	4,101
Oklahoma	10	21	205	1,661
Alaska	1	22	120	1,565
Kansas	2	23	18	409
Total	97		14,046	567,469

II. THE FRAMEWORK FOR GOVERNANCE

A. The Origins of Mining Law

Mining in this country is as old as the European settlement of the West. From the beginning, the strategic role of mining in the national economy was based in age-old traditions and in public policy practices encompassing far more than legal technicalities.[22] From the earliest days of the Union, federal land policy provided for unfettered access to public land and encouraged dreams of instant wealth.[23] While resource development policies throughout the world are rooted in early Roman law, the local rules and regulations in the mining camps of the western

19. *Id.*
20. *Id.*
21. *See* NATIONAL ENERGY POLICY DEVELOPMENT GROUP, RELIABLE, AFFORDABLE, AND ENVIRONMENTALLY SOUND ENERGY FOR AMERICA'S FUTURE § 5 (May 2001).
22. GEORGE CAMERON COGGINS & CHARLES F. WILKINSON, FEDERAL PUBLIC LAND AND RESOURCES LAW xix (1981).
23. *Id.*

United States derived from the cultural heritage of the miners themselves.[24] Early U.S. mining codes and practices derived from the laws of colonial England, France, Spain, and Mexico.[25] The Gold Rush miners introduced key social and economic institutions, in particular those regulating mining claims and dispute resolution.[26]

The early Romans encouraged mineral production by allowing miners in conquered nations to continue mining. Poor miners themselves, the Romans allowed miners in conquered lands to prosper, taxing only a portion of the processed minerals.[27] In the Middle Ages, German warlords imitated the Romans by encouraging existing miners and leasing land for new mining initiatives. Like the Romans, the Germans granted miners unprecedented freedom and encouraged new development by according the miners property rights to their mines. Germanic land laws established the institutional framework for early U.S. property law and public decision making as they related to validating mining claims.[28]

In the Middle Ages, one of the most important freedoms granted to conquered nations was the right of miners to traverse common lands for the purpose of claiming mining land as personal property.[29] In virtually all statutes governing mining claims in northern Europe, Spain, Mexico, and South America, an individual could assert rights to a mining claim; the state would then validate the claim based on legal recognition of the exact location of the mining operation. Such laws are based on the principle of superior right by reason of first claim, frequently referred to as "The Doctrine of Priority."[30]

B. The California Gold Rush: The First Boomtowns

Gold was discovered in California in 1848, one year after ratification of the treaty in which Mexico ceded California, Arizona, New Mexico, Texas, and part of Colorado to the United States.[31] The Spanish and Mexican law of 1661, *Recopilacion de las Leyes de Los Reynos de las Indias* (The Laws of the Indies), detailed not only procedural laws for the

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24. 1 WILSON I. SNYDER, MINES AND MINING § 54 (1902).

25. William E. Colby, *The Freedom of the Miner and Its Influence on Water Law, in* LEGAL ESSAYS IN TRIBUTE TO ORRIN KIP MCMURRAY 67, 77, 79 (Max Radin & A.M. Kidd eds., 1935).

26. *Id.*

27. *Id.* at 68.

28. Charles Howard Shinn, *Land Laws of Mining Districts, in* II JOHN HOPKINS UNIVERSITY STUDIES IN HISTORY AND POLITICAL SCIENCE, 552, 553 (Herbert B. Adams ed., 1884).

29. Colby, *supra* note 25, at 69.

30. *Id.* at 70.

31. A.H. RICKETTS, AMERICAN MINING LAW xxv (3d ed. 1931).

formation of settlements in the Americas but also a framework for the layout and governance of mining settlements and methods of assaying minerals and establishing rights to mining properties. The Laws of the Indies formed the basis for rules and practices of mine surveying in the ceded territory[32] and for the investment in mining infrastructure as a condition of continued ownership.[33] The Laws of the Indies shaped land distribution and mine ownership throughout California, New Mexico, Arizona, Texas, and Colorado prior to 1848, and from then on provided a foundation for California's district mining laws in most areas of the state.[34]

The California Gold Rush of 1849 and 1850 covered an area of more than fifty thousand square miles (nearly the area of Illinois) and ultimately extended through seven western states and British Colombia. Social conditions in early California mining had not progressed much beyond those of feudal Europe; out of necessity miners made laws for themselves. At this time, the United States was experiencing an explosion of cultural, social, and economic diversity. In addition to claiming land and resources, the Gold Rush absorbed and transformed people and cultures. The mining communities were created by the collective will of miners, merchants, civic leaders, and residents, with a host of competing interests at work.[35]

The early days of these "instant communities" were a low point in American frontier history. Greed shaped mining camp society while "competition, jealousy and racism fueled unprecedented, nearly uncontrollable individual and mass violence."[36] Nevertheless, each mining district created laws, and the patterns of laws and customs throughout the West were surprisingly similar.[37] Before the Gold Rush and long before the General Mining Act of 1872, miners were calling meetings, electing mining district officers, deciding the limits of their authority, and establishing laws intended to keep peace and foster

32. 1 JOHN A ROCKWELL, A COMPILATION OF SPANISH AND MEXICAN LAW, IN RELATION TO MINES, AND TITLES TO REAL ESTATE, IN FORCE IN CALIFORNIA, TEXAS, AND NEW MEXICO; AND IN THE TERRITORIES ACQUIRED UNDER THE LOUISIANA AND FLORIDA TREATIES, WHEN ANNEXED TO THE UNITED STATES 20 (1851).

33. *Id.* at 19-21 (also containing a translation of the mining ordinances of New Spain—Gamboas mining ordinances—the laws in relation to mines of gold, silver, and quicksilver, contained in the *Novisima Recopilacion*, and the laws and decrees of Mexico, on the subject of mines, colonization, and the right of foreigners to hold real estate; and extracts from the mining laws of California, together with "A Digest of Common Law on the Subject of Mines and Mining").

34. 1 SNYDER, *supra* note 24, at 41.

35. KEVIN STARR & RICHARD J. ORSI, ROOTED IN BARBAROUS SOIL: PEOPLE, CULTURE, AND COMMUNITY IN GOLD RUSH CALIFORNIA vi (2000).

36. *Id.* at vii.

37. *Id.*

prosperity.[38] As long as the federal government remained silent on local issues, miners retained free access to all public land and instituted their own mechanisms for resolving disputes. The mining district laws and dispute arbitration methods that emerged bore striking resemblances to English, German, and Spanish laws formed centuries earlier.[39]

Such political and social tenor as was found in the mining communities was described by Jean-Jacques Rousseau in his *Social Contract* as a "harmless and altogether new form of socialism...[with] 'lawless'[ness] according to strict legal interpretations, but wonderfully blessed with the essence and spirit of true self-government."[40]

There was wide variety in the methods used to settle disputes in the mining district, but arbitration and ad hoc juries were the most popular.[41] In some camps, disputes were referred to a standing committee of five miners, and one or more members of this committee could, at the request of the disputants, act as a "miners-jury," that is, as arbiters. In other camps, a committee of three miners was elected to enforce the general laws and call public meetings to discuss issues affecting the district. In one community, arbitration provisions were unusually precise: "Whenever any dispute shall arise respecting claims or water privileges each party shall choose two disinterested persons, the four thus selected shall choose a fifth, and the five thus selected shall then hear evidence, according to the laws of the precinct."[42] The social and institutional context for making public policy and resolving disputes was one of self-rule in which district laws were traditionally ratified by miners in semi-formal annual meetings. Occasionally, two or three mining districts found it in their interest to form a confederation, but these alliances were infrequent and often ineffectual as a means of regional governance.[43]

The long and complex evolution of the mining towns ultimately resulted in settlements supported with modern institutional and legal systems. The residents created vital, active communities reflecting the design and layout of towns throughout the continent.[44] Today, mining

38. Shinn, *supra* note 28, at 554.

39. Colby, *supra* note 25, at 79.

40. Shinn, *supra* note 28, at 599.

41. *Id.* at 557. By 1851, most mining claim laws were variations of the six principles adopted in Jackass Gulch: First, each person could hold one claim, not exceeding 100 square feet. Second, purchases of existing claims must be recorded in a bill of sale. Third, a "jury" of five persons would decide questions of ownership. Fourth, notices of claims must be posted on the chosen ground and renewed every ten days. Fifth, there must be a sufficiency of water and five days absence from a claim constitutes forfeiture. Sixth, the rules extend over Jackass and Soldier gulches. *Id.*

42. *Id.* at 567.

43. *Id.* at 556.

44. STARR & ORSI, *supra* note 35, at 1.

towns in California, Nevada, South Dakota, and Montana delight visitors with European street patterns, public buildings, open spaces, compact development, and spectacular settings.

C. Federal Intervention and the General Mining Law of 1872

The laws of the California mining districts formed the basis for mining laws in Oregon, Nevada, Arizona, Idaho, and the Canadian province of British Colombia. These fundamental principles in turn formed the basis for national legislation. In July 1866, Congress passed the Mining Act of 1866, the first federal mining statute.[45] Six years later, in 1872, the federal government re-codified the law as the General Mining Law based on the fundamental principles established in the mining districts and codified in state law.[46] The purpose of this statute was to codify private citizens' right of access to mineral deposits, for purposes of exploration, occupation, and purchase:

> Except as otherwise provided, all valuable mineral deposits in land belonging to the United States, both surveyed and un-surveyed, shall be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States and those who have declared their intention to become such, under regulations prescribed by law, and according to the local customs or rules of miners in several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States.[47]

Although there have been several attempts to amend or repeal the law, it remains largely unchanged today. In 1920, in response to increasing demands for energy, Congress removed oil and gas from the 1872 General Mining Law and created the Mineral Leasing Act authorizing the leasing of public lands for coal, oil, and gas development.[48] In return for leasing rights, the Act empowered the federal government to collect oil and gas royalties.[49]

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45. RICKETTS, *supra* note 31, at xxv.

46. *Id.* at xxii. The constituent elements of system of mining laws and the General Mining Law of 1872 are generally understood to be, first, the customs and regulations of the miners themselves; second, state and federal legislation and federal treaties; third, Spanish and Mexican law; and fourth, judicial decisions. *Id.*

47. COGGINS & WILKINSON, *supra* note 22, at 335.

48. U.S. Bureau of Reclamation, *Minerals and Mining Laws and Regulations* (on file with author).

49. 1 ROCKY MOUNTAIN MINERAL LAW FOUNDATION, LAW OF FEDERAL OIL AND GAS LEASES § 2.06 (2000).

D. Modern Mining Regulation and the Era of Environmental Protection

In the early 1950s, national security was the driving force for mining exploration, producing a boom in uranium exploration and development throughout the West. Federal policies promoted uranium mining to supply atomic warheads and support the emerging nuclear electric utility industry. In spite of the growth of federal policy to support and promote uranium as the new energy mineral, during the latter part of the 1950s, increasing environmental awareness led to tougher enforcement of leasing laws and restriction of mining claims on federal land.[50]

In 1969, passage of the National Environmental Policy Act (NEPA)[51] forever changed the way federal agencies would regulate mining. NEPA set forth the principle that alternatives for federal actions resulting in environmental impacts must be examined with public participation and full disclosure. The law established mechanisms intended to make rational environmental choices, promote "productive and enjoyable harmony between man and his environment," prevent damage to the environment, and ensure the health and welfare of citizens, among other things.[52]

Prior to 1969, the U.S. Forest Service had taken the unofficial position that it lacked authority to regulate mining in national forests. In 1970, with growing pressure from environmental advocacy groups and from lawsuits under NEPA, the Forest Service determined that it did have authority not only to manage mineral resources but to regulate the surface effects of mining as well. By 1974, the Agency promulgated comprehensive regulations governing mining resources.[53] The regulations helped guide the agency in making decisions about the necessity for an environmental impact statement under NEPA in addition to the much less onerous Environmental Assessment Report.[54]

In the decade after NEPA was enacted, the mining industry was forced to respond to more than a dozen new or amended federal environmental laws and regulations, including the Clean Air Act,[55] the Federal Water Pollution Control Act (Clean Water Act),[56] the Safe

50. ROBERT G. PRUITT, JR., DIGEST OF MINING CLAIM LAWS 2 (5th ed. 1996).

51. The National Environmental Policy Act of 1969, Pub. L. 91-190, 83 Stat. 852 (codified as amended at 42 U.S.C. §§ 4321-4347 (2000)).

52. National Environmental Policy Act, 42 U.S.C. § 4321.

53. COGGINS & WILKINSON, *supra* note 22, at 378-79.

54. *Id.* at 380-84.

55. Ch. 360, 69 Stat. 322 (codified as amended at 42 U.S.C.A. §§ 7401-7671g (2000)).

56. Ch. 758, 62 Stat. 1155 (1948) (codified as amended at 33 U.S.C. §§ 1251-1387 (2000)).

Drinking Water Act,[57] and the Toxic Substance Control Act.[58] During the 1980s and 1990s, passage of the Comprehensive Environmental Response Compensation and Liability Act,[59] Endangered Species Act,[60] Migratory Bird Treaty Reform Act,[61] and amendments to the Solid Waste Disposal Act[62] put even more regulatory pressure on the mining industry.[63] During this period most western states developed their own environmental regulations and mine reclamation laws.

At the same time environmental regulation was becoming the order of the day, other forces were giving new impetus to mineral development. The energy crisis of the late 1970s spurred a boom in coal and oil development and prompted President Jimmy Carter in 1976 to announce the Synfuels Program, undertaken to develop synthetic fuels and reduce American dependence on foreign oil. The Synfuels Program had the effect of loosening federal regulation and accelerating oil exploration and energy product development from shale oil and coal on public lands.[64] Since then, the development of energy resources has been "one of the nation's highest natural resource priorities."[65]

By 1977, the regulatory climate had shifted, and tighter coal mining regulations were enacted under the Surface Mining Control and Reclamation Act (SMCRA).[66] This act was designed to prevent contaminants produced in coal mining from entering the ground water, and it required mining operations to submit mine reclamation and operation plans prior to receiving permits.[67]

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57. Pub. L. No. 93-523, 88 Stat. 1661 (1974) (codified as amended at 42 U.S.C. §§ 300f-300j(25) (2000)).

58. Pub. L. No. 94-469, 90 Stat. 2003 (1976) (codified as amended at 15 U.S.C. §§ 2601-2692 (2000)).

59. Pub. L. No. 96-510, 94 Stat. 2767 (1980) (codified as amended at 42 U.S.C. §§ 9601-9675 (2000)).

60. Pub. L. No. 93-205, 87 Stat. 884 (1973) (codified as amended at 16 U.S.C. §§ 1531-1544 (2000)).

61. Pub. L. No. 105-312, 112 Stat. 2956 (1998).

62. Solid Waste Disposal Act Amendments of 1980, Pub. L. No. 96-482, 94 Stat. 2334 (codified as amended at 42 U.S.C. §§ 6933-6956 (2000)).

63. National Mining Association, *Federal Environmental Laws*, *at* http://www.nma.org/policy/reclamation/fed_laws.asp (last visited June 27, 2003).

64. Ironically, in 1976 the passage of the Federal Land Policy Management Act (FLPMA), Pub. L. No. 94-579, 90 Stat. 2744 (codified as amended at 43 U.S.C. §§ 1701-1785 (2000)), further imposed new recording and filing requirements on mining companies and required the development of Resource Management Plans, which were open for public comment.

65. COGGINS & WILKINSON, *supra* note 22, at 397.

66. Pub. L. No. 95-87, 91 Stat. 447 (1977) (codified as amended at 30 U.S.C. §§ 1201-1338 (2000)).

67. U.S. Bureau of Reclamation, *Minerals and Mining Laws and Regulations* (on file with author).

The Act established a framework for public participation in mining and mine reclamation issues, along the same lines as the public discussions NEPA had initiated for environmental actions in the late 1960s. SMCRA required that the public be involved in scoping, evaluating, and approving mining regulatory initiatives and reclamation plans. The door was now open for public dialogue and negotiation between mining interests, environmental advocates, and affected communities.

III. THE EMERGENCE OF COLLABORATION

As the new regulations brought the mining debate to the local level, the ensuing debates about development on public lands led to the use of negotiation and collaboration as tools in the decision making process. The Federal Land Policy and Management Act of 1976[68] required that the Bureau of Land Management (BLM) and the Forest Service balance economic benefits with environmental costs in planning uses for public land.[69] The 1976 Act also required an inventory of all public lands and resources, as well as preparation of land use plans, in accordance with specified criteria. The law did not, however, impede the right of access to public lands or the right to develop subsurface minerals.[70] These laws and the resulting regulations provided the avenue for environmental groups and local communities to question the intentions and decisions of federal agencies and land use actions. The creation of the land use plans and their requirements for public comment and review provided the basis for initial discussions and negotiations about mining and land use decisions.

A. Establishing the Context for Public Dialogue

The Surface Mining Reclamation and Control Act of 1977 established a requirement for public dialogue about the impacts of mining. Focusing on surface disturbances and mine reclamation standards, SMCRA required that a reclamation plan be in place before a new mine could be opened.[71] In the case of existing mines, it required environmental studies and site plans for restoring the land for non-mining purposes upon closure of the mine. SMCRA's Statements of Findings and Policy pointed out that

68. 43 U.S.C. §§ 1701-1782 (2000).
69. COGGINS & WILKINSON, *supra* note 22, at 581.
70. 1 ROCKY MOUNTAIN MINERAL LAW FOUNDATION, *supra* note 49, at 28.
71. COGGINS & WILKINSON, *supra* note 22, at 427.

> surface mining operations result in disturbances of surface areas that burden and adversely affect commerce and the public welfare by destroying or diminishing the utility of the land for commercial, industrial, residential, recreational, agricultural, and forestry purposes, by causing erosion and landslides, by contributing to floods, by polluting the water, by destroying fish and wildlife habitats, by impairing natural beauty, by damaging the property of citizens, by creating hazards dangerous to life and property, by degrading the quality of life in local communities, and by counteracting governmental programs and efforts to conserve soil, water and other natural resources.[72]

The findings concluded that interagency and public cooperation was necessary to prevent or mitigate adverse environmental impacts of surface mining. SMCRA stipulates that strip mines must be reclaimed and that a plan for reclamation must be submitted and approved prior to starting operations.[73] Implementation policies contained in the Act also required that each agency "assure that appropriate procedures are provided for public participation in the development, revision, and enforcement of regulations, standards, reclamation plans, or programs established by the Secretary and States under this Act."[74] However, instead of simply providing for public comment on alternatives offered by the industry, as with NEPA, SMCRA required that the public be involved in drafting and approving all mine reclamation and closure plans.[75]

The energy crisis of the late 1970s also provided the impetus for federal, state, and local authorities to sort out responsibility for the social and economic effects of mining. Collaboration and negotiation became widespread in deciding mining issues, principally because of two factors: the regulatory environment that developed with the energy boomtowns of the 1970s and the evolution of mining laws in the 1980s and 1990s.

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72. This statement is now codified at 30 U.S.C. § 1201(c) (2000).

73. Public Law 95-87, Section 513, U.S. Department of the Interior, Office of Surface Mining, *Surface Mining Law, available at* http://www.osmre.gov/SMCRA (last visited June 25, 2003).

74. *Id.*

75. *Id.* § 508.

B. Energy Minerals and OPEC: The New Boomtowns

As the world energy crisis emerged in the 1970s and Americans fumed in long gas lines, mining companies scrambled to develop new sources of energy minerals. The federal government, which owns 80 percent of the natural resources in the Rockies and 50 percent of the land, naturally looked to the mineral plentiful West. Along the western slope of the Rocky Mountains, rich deposits of oil and gas extend from Montana to Arizona along the Overthrust Belt. Montana, Wyoming, and Colorado hold vast and rich reserves of coal and oil shale.[76] However, though extensive mineral deposits existed in the West, the urban infrastructure to sustain mineral development was not yet in place. Towns and counties throughout the West were about to grapple with rapidly expanding populations and the consequent demands on infrastructure and services: schools, fire, police, water, and housing were about to be in as short supply as the money to finance them. Who would pay?

Since energy minerals policies were aimed at promoting development, small towns located near coal and oil reserves throughout the West were transformed as thousands of miners and support workers poured in. Coal development increased the population of Montana by more than 300,000 people in a decade. Between 1976 and 1979, Ridgely, Colorado, grew from 1900 to 9000 people, while Grants, New Mexico, grew from 9000 to 14,000 in the same time period.[77] The population of Gillette, Wyoming, grew from 3500 to more than 9000 in 1976, and to 37,000 by 1985.[78]

Energy companies, civic leaders, and state and federal officials struggled to deal with the social and economic consequences of this rapid development. There was no clear way either to assess the costs or apportion financial responsibility for such rapid growth. Public policies for coping with the costs of housing, police, fire protection, schools, and utilities were not yet in place.

As localities struggled to absorb the social and economic effects of the boom, federal and state policy makers tried to sort out whether the costs should be borne by the federal government, which set national energy policy; the state governments, which collected mining severance taxes; or the local communities, which enjoyed the economic benefits of

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76. MALAMUD, *supra* note 2, at 121.

77. *Id.* at 122-24.

78. Lawrence Susskind & Michael O'Hare, *Managing the Social and Economic Impacts of Energy Development*, 7 (Summary Report: Phase 1 of the MIT Energy Impacts Project, Laboratory of Architecture and Planning, Massachusetts Institute of Technology, 1977) (on file with author).

mining. Some argued that the mining companies creating the boom should themselves internalize these costs. The upshot of these debates was the establishment of a framework for negotiations between governmental jurisdictions and energy companies to determine how to compensate communities for local impacts of mining.

Local officials learned that they could influence both the public image of a mining company and mining executives' perceptions of the community. By demonstrating a capacity for self-help, communities could negotiate effectively for housing, emergency services, and other construction-related needs. Residents, local leaders, state officials, and energy company executives collaborated to deal with the impacts of new mining and exploration, negotiating the amount, kind, and source of compensation.[79]

State governments, responding to the new assertiveness of the localities, increased severance taxes, established energy impact funds, instituted community development authorities, and issued tax-free revenue bonds to aid local communities. Many states also increased debt limits for local governments, provided direct grants to affected communities, and increased local governments' share of the severance tax.[80] In some states, such as South Dakota, severance tax policy and the environmental effects of mining projects were subjects of negotiation among state regulators and federal agencies holding mineral rights.[81]

The federal government increased the share of royalties it returned to the states under the Mineral Leasing Act of 1920.[82] It also established special housing programs, instituted aid for infrastructure construction, and developed public safety programs. The Western Governor's Policy Office (WESPO) argued that the federal government should grant low interest loans to states and communities to help deal with local effects of energy mining and to ensure that federal decisions to develop new sites would also "trigger a simultaneous action that will mitigate negative social and economic impacts."[83]

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79. Stanley A. West, *Opportunities for Community-Company Cooperation in Mitigating Energy Facility Impacts* 3 (Energy Impacts Project, Laboratory of Architecture and Planning, Massachusetts Institute of Technology, 1977) (on file with author).

80. Susskind & O'Hare, *supra* note 77, at 39-43.

81. James R. Richardson & Kathryn J. Hildebrand, *Uranium Mining in South Dakota: A Case of Negotiated Development* 1-4 (June 1979) (unpublished manuscript) (on file with author).

82. Susskind & O'Hare, *supra* note 78, at 39.

83. MALAMUD, *supra* note 2, at 205.

C. Mining Regulation and Collaborative Efforts

With increasing experience in negotiating local, state, and federal programs came the increased ability to find collaborative solutions to complex development dilemmas. By the late 1970s, environmental groups, mine developers, and regulators were experimenting with negotiation of regulatory and facility-siting issues and mediation of environmental disputes. After a decade of NEPA-related litigation of the environmental effects of development and regulatory decisions, all parties were looking for a better way to work together and resolve disputes.[84]

In 1989, in Prescott, Arizona, the Forest Service and BLM initiated a broad citizen participation process to decide the scope of an Environmental Impact Statement (EIS) to assess a private/federal land exchange for development of a copper mine in the Prescott National Forest. The proposed mine had been dogged by conflict, beginning with its proposal in the early 1970s and culminating in a public meeting in 1984 at which more than 800 people showed up to hear from a panel of industry and government representatives. The panel, moderated by Arizona Congressman Bob Stump, included representatives of the Forest Service, the BLM, Prescott County, and the Phelps Dodge mining company.

The panel faced citizen wrath over inadequate environmental impact information, accusations of collusion among the federal agencies, and evident mistrust of the mining company.[85] Following the meeting, the Forest Service agreed to require a full EIS as part of a "comprehensive plan for citizen participation that would...permit all interested parties to have an opportunity to be informed...[and to avoid] public conflict."[86]

The impact-statement scoping process, spanning four months, encouraged dialogue between the citizens of Prescott and federal officials. Before any public meetings were held, an independent facilitation team met with citizens and community leaders to hear local perspectives, build public trust in the process, and establish an agenda for scoping the EIS. A program of public education on the issues was initiated and public meetings were scheduled. Avenues were created for

84. Lawrence E. Susskind et al., *Resolving Environmental Disputes: Approaches to Intervention, Negotiation, and Conflict Resolution*, 3-20 (Environmental Impact Assessment Project, Massachusetts Institute of Technology, 1978) (on file with author).

85. James R. Richardson, *Negotiating Community Consensus in Preparing Environmental Impact Statements, in* ENVIRONMENTAL MEDIATION: THEORY AND PRACTICE 5-9 (1994).

86. *Id.* at 11.

citizens to help guide the technical studies after the scoping process was complete.[87]

The process culminated in an EIS outline that the citizens and public officials trusted and felt was legitimate. This early experience demonstrated how open, face-to-face discussions between mining project proponents, regulators, and citizens could result in clear, credible regulatory judgments.[88]

Another example of collaboration was the Stillwater Good Neighbor Agreement between the Northern Plains Resource Council, the Stillwater Protective Association, and the Cottonwood Resource Council. Representatives of these groups worked for more than a year to come to an agreement and establish a procedure for making determinations about the environmental, social, and environmental effects of the Stillwater Mining Company's operations in Montana.

Since 1978, citizens, state officials, and mining companies in Montana had struggled with mine expansion, environmental contamination, and other issues relating to Stillwater's operations. National environmental groups pressed mine owners in Montana to operate in the "greenest, lowest-impact manner possible."[89] After the environmental groups took the State of Montana to court in 1993, citizens in Melville, Montana, began to work with the Stillwater Mining Company to negotiate a legally binding Good Neighbor Agreement. The resulting agreement required the company to exceed federal and state standards for environmental monitoring and protection and for monitoring the impact of population growth due to expansion of the mine's operations. It also guaranteed that local citizen and environmental groups would not challenge future company proposals to expand operations or requests for new mining permits.[90]

The Good Neighbor Agreement established a council representing all parties and stipulated that the company would (1) minimize the mine's adverse impacts on communities, economies, and environment; (2) establish and maintain a mechanism for open communication between the parties on issues raised by the council and the residents of the region; (3) allow the council to participate in company decisions that might impact the local communities, economies, or environment; (4) bind the company and its successors to the Agreement for the life of the mining operations; and (5) minimize future

87. *Id.* at 2.
88. *Id.* at 1.
89. Eric Whitney, *Mining and the Middleman*, HIGH COUNTRY NEWS, July 31, 2000, at 1.
90. *Id.* at 2.

litigation between the council and the company by using the processes and mechanisms established in the Agreement.[91]

This precedent-setting agreement allowed citizen groups and their consultants to inspect mines; obtain wastewater, stream, air, and soil samples; and talk with mining company employees. It established a fact-finding committee and an "action committee" jointly charged with reviewing mining practices and emerging technologies for waste management and conservation. With the parties equally represented on the committees, the company agreed to allow the environmental and community groups to participate in management decisions. These groups in turn gave up the right to challenge each permit and regulatory decision the company proposed. The participants agreed to negotiate new approaches and in the event of a deadlock to settle disputes through binding arbitration.[92]

In another case, environmental groups and state regulators in New Mexico worked for more than five years to revise the state's mining laws. In 1989, Governor Bruce King appointed the New Mexico Commission on Hard Rock Mining. Commission membership included the executive director of New Mexico's Mining Association; environmental groups, including the Southwest Research and Information Center and the Rio Grande Chapter of the Sierra Club; and regulators from the state's Mining and Minerals Division. The group met regularly for more than a year under a mandate to determine state-level regulations for New Mexico's Resource Conservation and Recovery Act.

The group's efforts led to a legislative proposal revising the State Mining Act. The consensus-building process they used focused on working with the state legislature to draft the new law. The Commission members worked with the legislature for three consecutive legislative sessions and eventually convinced lawmakers that the legislation ought to hold both new and existing mines to the proposed new reclamation standards. Upon passage of the Mining Law in 1993, the director of the State Mining and Minerals Division appointed a Director's Advisory Committee similar in composition to the Commission on Hard Rock Mining.

The Advisory Committee was charged with developing proposed rules for implementing the law. The Advisory Committee has been unable to reach consensus on final rules because of disagreements over mine closure bonding requirements, but it continues to meet periodically and is a valuable forum for reviewing new mining applications and proposals for rule changes, such as extension of the time

91. Northern Plains Resource Council, *The Good Neighbor Agreement* 1-34, *at http://www.nprcmt.org/goodneighbor/GoodNeighborAgreement.asp* (last visited June 8, 2003).

92. Whitney, *supra* note 89, at 3.

limits for mining companies to submit acceptable mine closure and closeout plans.

The Advisory Committee has three times made key recommendations to extend the date for submission of closure and closeout plans, first from December 1994 to December 1997, then to December 1999, and finally to December 2001. Rules for closure and closeout plans cover individual mines and require acceptable proposals (regulated and reviewed by New Mexico's Environment Department) for addressing existing and potential groundwater contamination and for sustainable land uses (as governed by the Energy and Minerals Department).[93]

D. Mining Regulation Today

In the mid-1980s, western states began revising mining laws and regulations. Most current state-level mining statutes were enacted in the early 1990s, and many are being updated. Today, mining regulation is aimed at preventing surface disturbance, protecting wildlife habitat and natural beauty, and ensuring ground and surface water quality. Pursuing these regulatory aims has resulted in a variety of innovative alliances.

In Taos County, New Mexico, Unical Corporation's mine closure and reclamation plan for the Molycorp Mine was prepared through a facilitated process beginning in 1999. Historically, Molycorp had maintained an adversarial relationship with the local citizens, but after a series of contentious hearings and pressure from local and state governments, the company was prevailed upon to enter into facilitated negotiations with local, state, and environmental groups.[94] The company formed a task force composed of representatives of the New Mexico Energy, Minerals, and Natural Resources Department; the Mineral Policy Center; the Rio Grande Sierra Club; and a local conservation group, the Amigos Bravos. The task force negotiating team is supported by a technical review committee composed of a core group of task force members working on complex issues such as cumulative impact assessment, surface disturbance from road building, and proposed reuse of the area.

Substantial progress has been made, but the final negotiations have been bogged down with the participants' opposing views of the

93. Interview with Paul W. Robinson, Director of Research, Southwest Research and Information Center, Albuquerque, NM (June 15, 2001).

94. Telephone Interview with Brian Shields, Executive Director, Amigos Bravos, in Taos, N.M. (June 11, 2001).

value of the bond the company will have to post.[95] To help clarify the issue, the Amigos Bravos has engaged the University of New Mexico Economics Department to do an economic analysis of the reclamation plan.[96] Except for this help with bond valuation, the participants have not used independent analysts or engaged in fact-finding. The negotiations are ongoing and progress continues.

There are several additional initiatives in collaboration and consensus building underway as the interest in developing energy minerals builds throughout the West. Among these, the Anschutz Corporation, which leases rights from the federal government to drill in the Weatherman Draw near Billings, Montana, is working with Native American tribes in the area to reach an agreement that will allow Anschutz to develop oil reserves on the reservation contingent upon leaving sacred sites in Weatherman Canyon untouched.[97] In Paonia, Colorado, the Forest Service, the BLM, and Garvin Mesa Bowie Industries formed the North Fork Coal Working Group to discuss the environmental impacts of three proposed mines. The discussions, facilitated by an organization called the Public Land Partnership, negotiated standards for rail, automobile, and truck noise as well as for new conveyance technology.[98]

The Sunnyside Mine and local community members initiated a collaborative process in Silverton, Colorado. The community's Upper Animas Stakeholders Group worked with mining officials to develop a monitoring and reclamation plan. As a consequence of this collaboration, Sunnyside Mining Corporation not only agreed to the mining and reclamation plan but also agreed to a partial reclamation and cleanup of several adjacent abandoned mines.[99]

Not all collaborative efforts are successful, the Kensington Coalition in Juneau, Alaska, being a case in point. Citizen and environmental groups negotiated with the owners of the Kensington Mine on a proposed gold mine. Up to a point, negotiations proceeded successfully and included agreements on enhanced water quality and biological monitoring. However, the process floundered on the design of a tailings dam, which opponents asserted would inevitably fail, exposing fish to a flood of pollutants. The Coalition could not endorse the

95. Interview with Paul W. Robinson, *supra* note 93.

96. Telephone Interview with Brian Shields, *supra* note 94.

97. Walter Kirn, *Crossing the Divide: An Oil Company Confronts the Ghosts of Sacred Tribal Land*, TIME, July 16, 2001, at 32.

98. Paul Larmer, *Out of the Darkness: A Western Colorado Community Meets a Coal Boom Halfway*, HIGH COUNTRY NEWS, July 31, 2000, at 1.

99. Ray Ring, *A Radical Approach To Mine Reclamation*, HIGH COUNTRY NEWS, Jan. 19, 1998, *available at* http://www.hcn.org/servlets/hcn.Article?article_id=3884 (last visited June 27, 2003).

proposed design but lacked the funding and legal resources to fight it. Avenues of appeal are possible should the financial and human resources become available. Meanwhile, although the mine has not opened, federal and state regulators have granted the permits without the Kensington Coalition's consent. In a series of lawsuits, the local groups are still struggling with the mine proposal and gaining access to technical information.[100]

A Wisconsin case study provides another example of failed negotiations. In the early 1980s, mining companies, state officials, and two Wisconsin environmental groups joined in a collaborative process to negotiate comprehensive mining laws. The process was flawed, however, in that "outside" groups, including the Sierra Club and the Wisconsin Mining Impact Coalition, were not allowed to participate in the negotiations. They claimed that as a result the industry was able to unduly influence the outcome.[101] Since that time, these groups have chosen to remain outside the process, challenging individual mining proposals.

In another example of flawed negotiations in 1998 in Ladysmith, Wisconsin, a coalition of citizens and environmental groups from across the state requested that the Wisconsin Department of Natural Resources (DNR) hold public hearings on changes to a proposed reclamation plan for the Flambeau copper mine. Getting no satisfaction from the DNR, members of the coalition made an appearance at a stockholder meeting of the mining company. Following the meeting, the Flambeau Mining Company's parent organization withdrew its reclamation proposal, with the chairman of the board asserting that the company would "renege on its offer to lease existing buildings on the site of the now-closed copper and gold mine near Ladysmith, Wisconsin, rather than submit the proposed modification to the mine site reclamation plan to a public hearing."[102]

Under Wisconsin state law, the only formal means of challenging changes in mining plans is a "contested hearing," which has all the weight and rigor of a legal proceeding.[103] Environmental groups, however, expressed concern that the procedures required by state law and DNR rules provided insufficient opportunity for citizen review even of potentially monumental changes in mine permitting plans, such as

100. Telephone Interview with David M. Chambers, Center for Science in Public Participation, Bozeman, Mont. (June 19, 2001).

101. Telephone Interview with Dave Blouin, Coordinator, Mining Impact Coalition of Wisconsin (June 12, 2001).

102. Wisconsin Mine Watch Press Release, London, England, May 14, 1998.

103. WIS. STAT. ANN. § 106.16(c) (West 2002).

that of the Flambeau Mine in Ladysmith.[104] In view of these, environmental groups claim that "a diverse collection of organizations that collaborate against the mine proposals" holds the greatest promise of success in controlling the effects of local mining.[105]

While state and federal regulations set the general framework for local standards, the specific terms under which mining takes place are determined through negotiations between mine operators and state regulators. In most western states, the regulatory framework provides the basis for these negotiations and provides opportunities for local influence through citizen participation. While opportunities for public input may be very limited in some cases, a variety of collaborative approaches, many of them involving citizen input, are now built into state laws, as shown in Table 3.[106]

TABLE 3
State Mining Regulation Opportunities for Participation & Collaboration

State	Primary Regulatory Mechanism	State Hardrock Mining Regulations That Provide Access Points for Dialogue.
Arizona	Groundwater Protection/1994 Surface Reclamation/1996	Aquifer Protection Permit[a,b] Mined Land Reclamation Act[a] Air Pollution Laws[a,b]
California*	Water Quality Protection/1992, 1995 Surface Reclamation 1975	Local County Land Use Permits[c] Porter-Cologne Water Quality Act[a,b] Surface Mining and Reclamation Act[a,b,d] California Coastal Commission Permits[a,b]
Colorado*	Surface Reclamation 1976, 1993	Mined Land Reclamation Act[a,b] Colorado Discharge Permit[a,b] Air Quality Control Act [a,b]
Idaho	Surface Reclamation/1977, 1995 Water Quality Protection/ 1988 (for cyanide facilities)	Idaho Surface Mining Act[a,b] Water Quality (cyanide)[a,e]
State	**Primary Regulatory Mechanism**	**State Hardrock Mining Regulations That Provide Access Points for Dialogue.**
Montana*	Surface Reclamation/1971, 1973, 1993, 1995	Metal Mine Reclamation Act[a,b,d] Montana Clean Air Act[a,b]
	Surface Reclamation/1993	Reclamation Permits[a,b]

104. Press Release, Wisconsin Stewardship Network, Flambeau, D.N.R., Ladysmith and Environmentalists Apparently Reach Consensus on Mine's Future (June 17, 1998) (on file with author).

105. Telephone Interview with Dave Blouin, *supra* note 101.

106. *See generally* JAMES M. MCELFISH JR., ET AL. HARD ROCK MINING: STATE APPROACHES TO ENVIRONMENTAL PROTECTION (1996).

Nevada*	Water Quality Protection/1994	Water Pollution Control Permits[a,b]
South Dakota*	Surface Reclamation/1984, 1995	Mined Land Reclamation Act[a,b,d,f] Mineral Exploration Act[a] Uranium Exploration Act[a,b] Sand and Gravel Act[a]
New Mexico*	Surface Reclamation/1993	New Mexico Mining Act[a,b]

* State has Memorandum of Understanding with federal agencies; a. Public notice required; b. Opportunity for public hearing; c. Opportunity to affect regulation through referendum; d. EA/EIS required by state environmental policy act; e. Requires minimum number of people to request public hearing; f. Opportunity for public to suggest "critical or unique" lands designation during permitting.

IV. IMPLICATIONS AND PRESCRIPTIONS

In the last 20 years, the role of negotiation and collaboration in mining decisions has increased greatly. Mining company representatives, citizens, local and national environmental groups, and state regulators have worked together to develop state policies and local regulations that address the environmental, social, and economic effects of mining. Federal ownership of mining land and the push for new exploration on the one hand and regulations requiring public participation on the other will ensure both continuing conflict and continuing opportunities for collaboration.

A. Implications

There is a substantial reservoir of experience in negotiating environmental impact mitigation and economic compensation; however, traditional mining laws and new pressures to accelerate mineral development pose difficult problems. The traditional right of access to public land as specified in the 1872 General Mining Law remains unchanged. Court decisions have made federal scrutiny of mining patent claims more rigorous, but efforts by the Clinton Administration failed to make any significant changes in federal governance of public lands.[107]

Energy policy under President George W. Bush seems certain to accelerate exploration and production of energy minerals in the West.[108] The administration's policy proposals call for more than 1500 new power plants and increased development of coal, oil, and gas to power them.[109]

107. Press Release, U.S Department of the Interior, Office of the Secretary, Secretary Babbitt Pleased With Court Decision on Mining Law: Circuit Court Decision Supports Tightening Administration of the Antiquated 1872 Mining Law (Jan. 28, 1997) (on file with author).

108. *See* National Energy Policy Development Group, *supra* note 21.

109. Wilkinson, *supra* note 1, at 16.

Under a new initiative, the Secretary of the Interior has proposed that the BLM suspend existing hard rock mining regulations and re-evaluate legal, practical, and policy concerns raised by the states, federal officials, and the regulated community.[110]

While some positive results from this re-evaluation are possible, opinions vary about the likely outcomes. Some environmental scientists and conservation interests, for example, have expressed deep reservations about accelerating the development of energy minerals. Charles Wilkinson, of the University of Colorado, Boulder, and a trustee of the Grand Canyon Trust, points out that the Colorado Plateau contains the greatest concentration of parks and monuments in the world[111] and argues for a reassessment of the use of fossil fuels and redoubled efforts to protect public lands.[112]

Others have noted the substantial increase in the last ten years in community-based lobbying groups, conservation groups, and citizen alliances with mining companies, all working on strategies for conservation and sustainable development.[113] Miners, community members, and civic leaders have a solid foundation to build on, given shared values about local control and a history of collective decision making. Longstanding tradition and the conservationist regulatory initiatives embodied in NEPA and SMCRA provide a framework for negotiated agreements and an important context for citizen participation in mining decisions.

B. Prescriptions

The pressure for energy mineral development, the existing regulatory framework for mine reclamation, and the sophistication of community and environmental groups present new opportunities for collaboration in developing mineral resources on public lands. Building on traditions dating from early Roman times and shaped by the experience of the California mining camps, the mining industry has traditionally been able to work out disputes and make local laws in the context of local customs. As mining regulation continues to evolve, mining companies will do well to continue building on traditions of self-governance to work problems out locally. State and local regulators

110. U.S. Department of the Interior, Office of the Secretary, The first 100 Days Under the Leadership of President George W. Bush and Secretary Gale A. Norton, Apr. 27, 2001, *at* http://www.doi.gov/news/010427.html.

111. This area includes "the Grande Canyon, Arches, Canyonlands, the Grand Staircase-Escalante, Capitol Reef, Bryce Canyon, Zion, Chaco Canyon and Mesa Verde, among others." Wilkinson, *supra* note 1, at 16.

112. *Id.*

113. McCarthy, *supra* note 11, at 21.

should build on past initiatives and the emerging regulatory framework to stimulate dialogue among the interests instead of litigation between the parties. There is guidance and experience in structuring alternative ways to manage competing interests in regulatory negotiations and environmental disputes.[114]

As in the case of the five-year effort to revise New Mexico's mining laws, state governments should broaden requirements for citizen participation in regulatory decision making. Statutory amendments requiring that representatives of all competing interests be involved in a collaborative process would provide balance between powerful mining interests and community and environmental concerns. Such provisions would also help to empower community-based initiatives. Many local participants in mining negotiations are experienced negotiators but will need to acquire training in techniques of consensus building and the designing of collaborative processes in order to further these endeavors.[115]

An effort is needed to develop regional and local institutional capacity to enhance collaborative decision-making processes. As in the case of scoping the Prescott, Arizona, environmental impact statement, this may mean investing resources in conflict management and joint fact finding before regulatory decisions are made. Collaborative decision making is a learned discipline and the benefits can be substantial.[116]

Although SMCRA requires public involvement in drafting and approving mine reclamation and closure plans, the reality is that public meetings and opportunities for public input often lead to a polarization of opinion and stand-offs like the one in Ladysmith, Wisconsin. As demonstrated by the Molycorp Mine negotiations in Taos, New Mexico, and the Stillwater Good Neighbor Agreement in Montana, there is also a need for facilitators educated in mediating environmental issues to ensure open, participatory decision making. To gain the trust of all participants and to ensure a legitimate process, facilitators must be knowledgeable about mining and about the traditions and regulations that frame the issues. The value of this kind of expertise was shown in the facilitated discussions in Paonia, Colorado. In addition, state agencies and other involved government and corporate entities must provide

114. Lawrence Susskind, *An Alternative to Robert's Rules of Order for Groups, Organizations, and Ad Hoc Assemblies that Want to Operate by Consensus* 3-55, *in* THE CONSENSUS BUILDING HANDBOOK (Lawrence Susskind et al. eds., 1999).

115. Susan Carpenter, *Choosing among Appropriate Consensus Building Techniques and Strategies* 61-97, *in* THE CONSENSUS BUILDING HANDBOOK (Lawrence Susskind et al. eds., 1999).

116. Michael L. Poirier Elliot, *The Role of Facilitators, Mediators, and Other Consensus Building Practitioners* 199-238, *in* THE CONSENSUS BUILDING HANDBOOK (Lawrence Susskind et al. eds., 1999).

adequate resources so that participants have access to the technical and scientific information they need.

Since federal regulation and new state mining policies require that most regulatory decision making take place at the state and local level, state regulators should have access to training in consensus building and dispute resolution techniques. Many states have formed state consensus councils or offices of conflict resolution.[117] In addition to these, there are additional opportunities for building consensus in public review and citizen participation requirements in existing state regulations as outlined in Table 3. Given the experience and variety of approaches tested already, and given the current political and economic pressure for accelerated mineral development, opportunities for collaboration on mining issues will continue to be both frequent and increasingly important.

117. WESTERN CONSENSUS COUNCIL, COLLABORATIVE PROBLEM SOLVING: STRATEGIES FOR WESTERN LEGISLATORS 9 (Council of State Governments-WEST, June 2001).